Bea Gregory-5252

From: RCInbox
Sent: Friday, 8 February 2019 2:04 PM
To: RCInbox
Subject: An Application has been submitted

New resource consent application received

An application for a new resource consent has been received by Council on 08/02/2019

Applicant(s): Jeffrey Val Meachen
Consent(s) applied for: Coastal Permit - Activity

Download and review the application.

View the application online.

Version 0

MARLBOROUGH DISTRICT COUNCIL
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Application for Resource Consent

Applicant details

Application for Resource Consent

Sections 88 and 145, Resource Management Act 1991

To

Marlborough District Council

Applicant

I,

Jeffrey Val Meachen

SRHB 2017 Trustee Company Limited
C/- Staples Rodway Hawkes Bay Limited, P O Box 46
Hastings 4156
New Zealand

06-878-7004

AMcivor@stapleshb.co.nz

Apply for the following type(s) of resource consent

Coastal

Agent

Aquaculture Direct Limited

PO Box 213
Blenheim 7240

Bruce Cardwell

021 451 284

bruce@aquaculturedirect.co.nz

Project reference

Marine Farm 8038

Property details

Site and location details

The site at which the proposed activity is to occur is as follows:

Site address

Marine Farm Site 8038, Island Bay, Admiralty Bay
Marlborough

Legal description

Marine Farm Site 8038

Is there locale information in regards to the site?

No - there is no locale information in regards to the site

Site description

Description of the site at which the activity is to occur

The marine farm site is on the south eastern coast of Admiralty Bay, in Island Bay.
“Admiralty Bay is one of the largest bays in the outer Sounds at 8,130 ha stretching from French Pass to Bonne Point and across to Clay Point (excluding Catherine Cove). The coastline and shallow subtidal is mostly rocky and is 50.4 km in length” (Davidson Environmental Report 913).

The farm sits alongside other farms on the south eastern coast of Admiralty Bay. The nearest marine farms to 8038 are the adjacent farms to the south 8037, 8496 and 8036 and the adjacent farm to the north 8039.

The adjacent land is zone Rural 1. The nearest residence is approximately 250 metres to the north east of the site.

The site lies within the boundary of Coastal Marine Zone 2 (CMZ2).

Owners and occupiers of the application site

Applicant is the only owner and occupier?

Yes - the applicant is the only owner and occupier

Proposed activity

Description of the activity

The activity to which the application relates (the proposed activity) is as follows:

Jeffrey Meachen Trust has applied to renew the existing resource consent MFL273 (total 2.3125ha) for the purpose of farming Greenshell mussels (Perna canaliculus) using conventional long line methods. (Refer attached layout diagrams illustrating the site.)

Marine Farm Licence MFL273 was issued to the original consent holder in January 1986 under the Marine Farming Act 1971 and assigned to JV Meachen in December 1990.

MFL273 expires 31 December 2024.

The Applicant seeks a 20-year term.

MFL273 is assessed as a controlled activity in the current Marlborough Sounds Resource Management Plan in accordance with the following provisions;

35.2.5.1 Standards
a) The structures and anchoring systems established on the marine farm shall be those authorised by the current Coastal Permit, Marine Farm Licence or Marine Farm Lease applied for prior to 1 August 1996, except that in the case of marine farms listed in Appendix D, as controlled activities, this standard shall not apply to the replacement of surface structures with sub-surface structures.

b) The marine farm shall occupy only that area and only for the purposes and for the species authorised by the current Coastal Permit, Marine Farm Licence or Marine Farm Lease applied for prior to 1 August 1996.

c) The species to be farmed on any marine farm shall be only those authorised by the current Coastal Permit, Marine Farm Licence or Marine Farm Lease applied for prior to 1 August 1996.

d) The lighting system utilised on the marine farm shall at all times comply with the conditions of the current Coastal Permit, Marine Farm Licence or Marine Farm Lease applied for prior to 1 August 1996.

The renewal complies with the above provisions to be assessed as controlled activity.

The application is for a continuation of the activities currently consented at the site. No changes to the activities are proposed.

The site lies within the boundary of the CMZ2, an area in which marine farming activity is a discretionary activity.

As this is a ‘like for like’ Application by an existing permit holder, the Application should be processed under section 165ZH. The Applicant’s adherence to the codes of practice mentioned above, and its commitment to environmental programmes and activities, along with its compliance with the conditions of the existing Consent, are conduct in the Applicant’s favour in terms of section 165ZJ(1).

The site dimensions are as per the layout plans attached. The application includes 5 long lines, each being approximately 84-125 metres long.

There are currently 5 lines installed and operating at the site that grow Greenshell mussels.

The site layout is attached to the application.

Jeffrey Meachen is a resident of Cissy Bay, French Pass, Marlborough.

The Applicant’s farm is managed by Sanford Limited who adheres to the ‘Greenshell Mussel Industry Environmental Code of Practice’ and its successor, the Environment Management Framework and is an active participant of the Marine Farming Association’s Environmental Programme.

This programme covers the activities of marine farmers “on water” activities. This Programme includes being an active participant in beach clean ups and adhering to the following Codes of Practice:
- ‘Marine Farming Operating Standards Marlborough Sounds, Tasman and Golden Bays’.
- ‘Code of Practice to avoid, remedy or mitigate noise from marine farming activities in the Marlborough Sounds, Golden Bay and Tasman Bay, on other users and residents’.
- ‘Reducing Pollution and Emissions from Marine Farming ‘On Water’ Activities’.
- ‘Reducing Waste taken to Landfill from Marine Farming ‘On water’ Activities’.

Sanford Limited were one of the inaugural recipients of Environmental Certification status from the Marine Farming Association. This is achieved through complying with all requirements of the Marine Farming Association’s

Environmental Programme and having passed audits of the farms and vessels.

Other activities that are part of the proposal to which the application relates

Are there permissions needed which do not relate to the Resource Management Act 1991?

Yes - there are permissions needed which do not relate to the Resource Management Act 1991

Permissions needed which do not relate to the Resource Management Act 1991

Other activities that relate to this application include permissions that do not relate to the Resource Management Act, including;
1. Fish farming licence

Are there permitted activities that are part of this application?

Yes - there are permitted activities that are part of this application

Permitted activities that are part of this application:

The application is for a new consent to replace MFL273 in Island Bay, Admiralty Bay, to seed, cultivate and harvest species Greenshell mussels (Perna canaliculus) using conventional long line methods, including occupation of 2.3125ha of the coastal marine area. Consent is also sought to allow the existing seabed anchoring devices to remain (and be replaced as required), to harvest marine farming product from the marine farm (including the discharging of coastal seawater and discharge of biodegradable and organic waste matter) and all other activities that are ancillary to the operation on site 8038.

The movement of vessels is a permitted activity: s27 Marine and Coastal Area (Takutai Moana) Act 2011. This right includes anything reasonably incidental to vessel movement (s27(2)).
The proposed activity has been assessed against the relevant provisions of the:
1. New Zealand Coastal Policy Statement 2010;
2. Marlborough Regional Policy Statement;
3. Marlborough Sounds Resource Management Plan; and
4. Proposed Marlborough Environment Plan

at Sections 23 and 24/Appendices A – C of this Assessment of Environmental Effects.

Additional resource consents

Are any additional resource consents needed for the proposal to which this application relates?

No - no additional resource consents are needed for the proposal to which this application relates

Consent summary

I apply for the following resource consents.

Consent information

Marine Farm 8038

Consent type

Coastal

Subcategory type

Activity

Description of consent being applied for

Jeffrey Meachen Trust has applied to renew the existing resource consent MFL273 (total 2.3125ha) for the purpose of farming Greenshell mussels (Perna canaliculus) using conventional long line methods. (Refer attached layout diagrams illustrating the site.)

Marine Farm Licence MFL273 was issued to the original consent holder in January 1986 under the Marine Farming Act 1971 and assigned to JV Meachen in December 1990.

MFL273 expires 31 December 2024.

The Applicant seeks a 20-year term.

MFL273 is assessed as a controlled activity in the current Marlborough Sounds Resource Management Plan in accordance with the following provisions;

35.2.5.1 Standards
a) The structures and anchoring systems established on the marine farm shall be those authorised by the current Coastal Permit, Marine Farm Licence or Marine Farm Lease applied for prior to 1 August 1996, except that in the case of marine farms listed in Appendix D, as controlled activities, this standard shall not apply to the replacement of surface structures with sub-surface structures.

b) The marine farm shall occupy only that area and only for the purposes and for the species authorised by the current Coastal Permit, Marine Farm Licence or Marine Farm Lease applied for prior to 1 August 1996.

c) The species to be farmed on any marine farm shall be only those authorised by the current Coastal Permit, Marine Farm Licence or Marine Farm Lease applied for prior to 1 August 1996.

d) The lighting system utilised on the marine farm shall at all times comply with the conditions of the current Coastal Permit, Marine Farm Licence or Marine Farm Lease applied for prior to 1 August 1996.

The renewal complies with the above provisions to be assessed as controlled activity.

The application is for a continuation of the activities currently consented at the site. No changes to the activities are proposed.

The site lies within the boundary of the CMZ2, an area in which marine farming activity is a discretionary activity.

As this is a ‘like for like’ Application by an existing permit holder, the Application should be processed under section 165ZH. The Applicant’s adherence to the codes of practice mentioned above, and its commitment to environmental programmes and activities, along with its compliance with the conditions of the existing Consent, are conduct in the Applicant’s favour in terms of section 165ZJ(1).

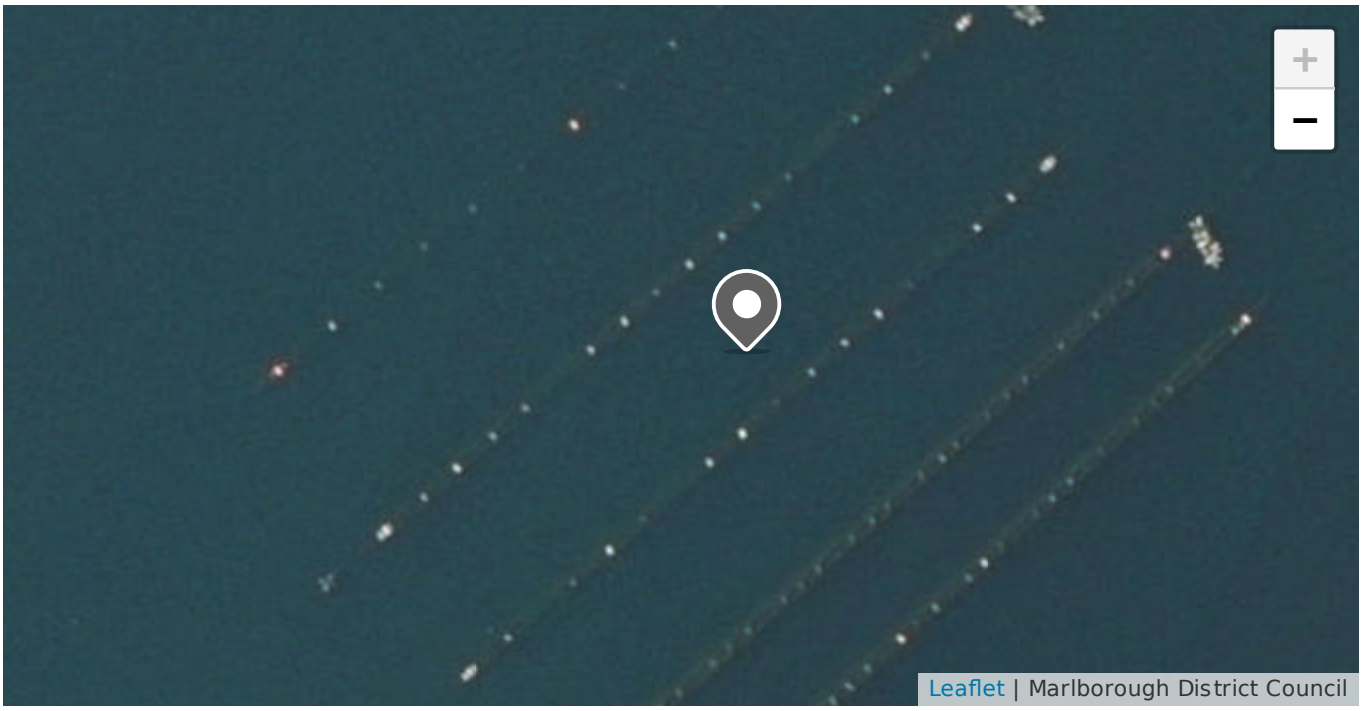
Location of the consent

Easting

1673488.772

Northing

5463976.619



Triggering rules

Rules which trigger the consent

I include an assessment of the proposed activity against any relevant provisions of a document referred to in section 104(1)(b) of the Resource Management Act 1991, including the information required by clause 2(2) of Schedule 4 of that Act.

The assessment under this section must include an assessment of the activity against
(a) Rules in a document; and
(b) Any relevant requirements, conditions, or permission in any rules in a document; and
(c) Any other relevant requirements in a document (for example, in a national environmental standard or other regulations))

Triggering rules assessment

The application is for a new consent to replace MFL273 in Island Bay, Admiralty Bay, to seed, cultivate and harvest species Greenshell mussels (Perna canaliculus) using conventional long line methods, including occupation of 2.3125ha of the coastal marine area. Consent is also sought to allow the existing seabed anchoring devices to remain (and be replaced as required), to harvest marine farming product from the marine farm (including the discharging of coastal seawater and discharge of biodegradable and organic waste matter) and all other activities that are ancillary to the operation on site 8038.

The movement of vessels is a permitted activity: s27 Marine and Coastal Area (Takutai Moana) Act 2011. This right includes anything reasonably incidental to vessel movement (s27(2)).
The proposed activity has been assessed against the relevant provisions of the:
1. New Zealand Coastal Policy Statement 2010;
2. Marlborough Regional Policy Statement;
3. Marlborough Sounds Resource Management Plan; and
4. Proposed Marlborough Environment Plan

at Sections 23 and 24/Appendices A – C of this Assessment of Environmental Effects.

Other activities that relate to this application include permissions that do not relate to the Resource Management Act, including;
1. Fish farming licence

Assessment of Effects on the Environment (AEE)

Clause 6 - Information required in assessment of environmental effects

6.1 An assessment of the activity's effect on the environment must include the following information:

6.1(a) if it is likely that the activity will result in any significant adverse effect on the environment, a description of any possible alternative locations or methods for undertaking the activity

Refer to attached Assessment of Environmental Effects

6.1(b) an assessment of the actual and potential effect on the environment of the activity

The actual and potential effects of the proposed activity on the environment are detailed in the attached Assessment of Environmental Effects

6.1(c) if the activity includes the use of hazardous installations, an assessment of any risks to the environment that are likely to arise from such use

Provision not relevant

6.1(d)(i) if the activity includes the discharge of any contaminant, a description of the nature of the discharge and the sensitivity of the receiving environment to adverse effects

As part of this Application, the Applicant seeks to continue harvesting mussel crops. The right to navigate to and from the farm, and to anchor, moor and load crop is preserved by section 27 of the Marine and Coastal Area (Takutai Moana) Act 2011. However, consent is required for the amount of organic waste matter which is discharged during the harvesting process and for the take and use of coastal water. No significant historical adverse effects have been recorded or are anticipated and any visual evidence of harvesting quickly dissipates in the coastal environment.

Vessels will be required to service the farm on an irregular basis (refer 8.5).

6.1(d)(ii) if the activity includes the discharge of any contaminant, a description of any possible alternative methods of discharge, including discharge into any other receiving environment

See assessment in question 6.1 (d) (i)

6.1(e) a description of the mitigation measures (including safeguards and contingency plans where relevant) to be undertaken to help prevent or reduce the actual or potential effect.

The Applicant's farm is managed by Sanford Limited who adheres to the 'Greenshell Mussel Industry Environmental Code of Practice' and its successor, the Environment Management Framework and is an active participant of the Marine Farming Association's Environmental Programme.

This programme covers the activities of marine farmers "on water" activities. This Programme includes being an active participant in beach clean ups and adhering to the following Codes of Practice:
- 'Marine Farming Operating Standards Marlborough Sounds, Tasman and Golden Bays'.

- ‘Code of Practice to avoid, remedy or mitigate noise from marine farming activities in the Marlborough Sounds, Golden Bay and Tasman Bay, on other users and residents’.
- ‘Reducing Pollution and Emissions from Marine Farming ‘On Water’ Activities’.
- ‘Reducing Waste taken to Landfill from Marine Farming ‘On water’ Activities’.

Sanford Limited were one of the inaugural recipients of Environmental Certification status from the Marine Farming Association. This is achieved through complying with all requirements of the Marine Farming Association’s Environmental Programme and having passed audits of the farms and vessels.

6.1(f) identification of the persons affected by the activity,

An e-mail has been sent to all Iwi listed below identifying the site prior to the application being submitted.

Ngati Koata Trust PO Box 1659, Nelson 7040 (03) 548 1639
Te Runanga a Rangitane o Wairau PO Box 883, Blenheim 7240 (03) 578 6180
Te Runanga O Ngati Kuia PO Box 1046, Blenheim 7240 (03) 579 4328
Ngāti Apa ki te Rā Tō PO Box 708, Blenheim 7240 (03) 578 9695
Te Atiawa Manawhenua Ki Te Tau Ihu Trust PO Box 340, Picton 7250 (03) 573 5170
Ngati Toarangatira Manawhenua Ki Te Tau Ihu Trust PO Box 5061, Blenheim 7240 (03) 577 8801
Ngati Rarua Trust PO Box 1026, Blenheim 7240 (03) 577 8468

A statement from Ngai Kuia has been included in sections 12 and 23.1 of this report.

A consultation meeting will be arranged with Ngati Kuia and Ngati Koata prior to submitting application.

6.1(f cont.) any consultation undertaken,

See assessment in question 6.1 (f)

6.1(f cont.) and any response to the views of any person consulted

See assessment in question 6.1 (f)

6.1(f cont.) and any iwi consultation undertaken

See assessment in question 6.1 (f)

6.1(g) if the scale and significance of the activity’s effects are such that monitoring is required, a description of how and by whom the effects will be monitored if the activity is approved.

7.8 Boundary adjustments, line adjustments and monitoring
No biological communities of particular interest were found during the present survey. Further, most of the consent is located over silt and clay substratum with or without a component of natural shell. This substratum is the most common and widespread habitat type in sheltered shores of the Marlborough Sounds. The impacts associated with mussel farming on muddy habitats characterised by silt and clay are low compared to farm impacts in shallow habitats dominated by rocky or biogenic communities.

Warps are known to have little or no impact on benthic communities (Davidson and Richards, 2014). At this site the benthos under warps appeared relatively natural, with mussel shell debris present in areas closest to droppers.

Surface structures were located within and offshore of the consent over a mud bottom. Rocky substrata were recorded along the inshore corners of the consent. Further, the inshore edge of the consent was well within 50 m of low water (30 m). Relocation of the consent further offshore to fit the existing farm structures would act to place the consent over existing farm structures. The effect on king shag and marine mammals would remain unchanged if the consent was shifted to fit farm structures. If this is not actioned and the consent left at its present location, an exclusion area for production lines is suggested (Figure 13).

No other changes to the present consent boundaries are suggested on biological grounds. Habitats and species associated with the site are typical of sheltered central and outer Sounds Bays and as such no monitoring is

suggested.”

6.1(h) if the activity will, or is likely to, have adverse effects that are more than minor on the exercise of a protected customary right, a description of possible alternative locations or methods for the exercise of the activity (unless written approval for the activity is given by the protected customary rights group).

Policy 2 sets out a number of matters which are relevant to the taking into account of the principles of the Treaty of Waitangi and kaitiakitanga, in relation to the coastal environment.

The applicant recognises that Ngāti Apa ki te Rā Tō, Ngāti Kuia, Rangitāne o Wairau, Ngāti Kōata, Ngāti Rārua, Ngāti Tama ki Te Tau Ihu, Te Ātiawa o Te Waka-a-Māui and Ngati Toa Rangatira have statutory acknowledgments in the area of the application site. Those acknowledgements have been considered during the preparation of this application, as outlined above.

The iwi management plans of Ngāti Kōata and Te Ātiawa o Te Waka-a-Māui have been reviewed.

There are also no established areas of protected customary rights or customary marine title within the meaning of the Marine and Coastal Area (Takutai Moana) Act 2011.

The applicant recognises that Ngati Kuia have a special, long, intergenerational association to Te Taulhu o te waka a Maui/Top of the South Island and consider the Te Hoiere/Pelorus to be at the centre of their spheres of occupation and influence, spanning 1,000 years.

Over many centuries Ngati Kuia and their descendants have built paa, kainga, purakau, mapped mahinga kai and built spiritual connections where their people lived and been laid to rest.

"Te Hoiere awa/moana is Taonga tuku iho ki Tangata Whenua/Ngati Kuia therefore this requires the Crown and its agencies to give recognition to and make provision for the exercise of Kaitiakitanga by whanau, hapu and Iwi who are operating within the Maori Customary and commercial Deeds of Settlement. ”

The Applicant will discuss the proposal further with relevant Iwi representatives.

Clause 7 - Matters that must be addressed by assessment of environmental effects

7.1 An assessment of the activity’s effects on the environment must address the following matters:

7.1(a) any effect on those in the neighbourhood and, where relevant, the wider community, including any social, economic, or cultural effects

8.1 The Shoreline
The distance from the shoreline according to the original Cadastral mapping is inside the conventions established in the Marlborough Sounds Resource Management Plan. However, the proposed plan locates the production droppers over 50 metres from the low tide mark. Refer to layout plan.

8.2 Headlands
There are no headlands immediately adjacent to the site.

8.3 Navigational Routes (Formal/Informal)
The shoreline in which the farm sits is not on a normal navigation route, however, vessels that wish to navigate within the area can proceed through the farm and either inside or outside of the site.

The farm does not impede vessel movements along the coastline or access to the adjacent land.

8.4 Anchorages or Mooring Areas (Formal/Informal)
There is one registered mooring approximately 180 metres to the northeast of the site. Mooring 292.

The site does not impede access to this mooring.

There is a jetty approximately 150 metres to the north east of the site.

The site does not impede access to this jetty.

8.5 Indirect Effects-Servicing vessels at site
The Applicant estimates farming and harvesting vessels will visit the site on an average of 12 - 15 days a year, for periods of 0.5 to 8 hrs to undertake farm maintenance, seeding and harvesting.

The total number of hours spent on these activities is estimated to be 30-40 hrs annually.

8.6 Water Ski Lanes
There are no formal water ski lanes in the vicinity.

8.7 Sub-Marine Cables
There are no sub-marine cables in the immediate vicinity of the farm.

7.1(b) any physical effect on the locality, including any landscape and visual effects

9.1 Land Zoned for Residential Use or Proximity to Residences
The land adjacent to the site is zone Rural 1.

The nearest residence is approximately 250 metres to the north east of the site.

9.2 Scenic Value
The area has not been identified within the current Marlborough Sounds Resource Management Plan as being an area of outstanding natural landscape value.

The area has not been described as an area of outstanding nature landscapes and features in the proposed Plan.

The area has not been described as having outstanding, very high or high natural character in the proposed Plan.

The area is not considered to have a high coastal natural character rating. The 2014 Boffa Miskell study 'Natural Character of the Marlborough Coast', which is reflected in the natural character maps in the proposed Plan, which do not map the waters of the inner Admiralty Bay as having outstanding, very high or high natural character.

9.2.1 Visual Amenity
Section 7(c) of the Act requires decision makers to have particular regard to the maintenance and enhancement of amenity values. The entirety of the Marlborough Sounds Coastal Landscape, is mapped as a High Amenity Landscape in the MEP. The values of this amenity landscape are outlined in Appendix 1. An individual marine farm at this location will not have an impact on a high amenity landscape of the scale mapped in the MEP.
The area adjacent to the site is regenerating bush and pastureland.

The effect of the marine farm on the adjacent area will not have an effect on the flora and fauna of this area.

7.1(c) any effect on ecosystems, including effects on plants or animals and any physical disturbances of habitats in the vicinity

The actual and potential effects of the proposed activity on the environment are detailed in the attached Assessment of Environmental Effects

7.1(d) any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, or cultural value, or other special value, for present or future generations

The actual and potential effects of the proposed activity on the environment are detailed in the attached Assessment of Environmental Effects

7.1(e) any discharge of contaminants into the environment, including any unreasonable emission of noise, and options for the treatment and disposal of contaminants

As part of this Application, the Applicant seeks to continue harvesting mussel crops. The right to navigate to and from the farm, and to anchor, moor and load crop is preserved by section 27 of the Marine and Coastal Area (Takutai Moana) Act 2011. However, consent is required for the amount of organic waste matter which is discharged during

the harvesting process and for the take and use of coastal water. No significant historical adverse effects have been recorded or are anticipated and any visual evidence of harvesting quickly dissipates in the coastal environment.

Vessels will be required to service the farm on an irregular basis (refer 8.5).

The Applicant's farm is managed by Sanford Limited who adheres to the 'Greenshell Mussel Industry Environmental Code of Practice' and its successor, the Environment Management Framework and is an active participant of the Marine Farming Association's Environmental Programme.

This programme covers the activities of marine farmers "on water" activities. This Programme includes being an active participant in beach clean ups and adhering to the following Codes of Practice:
- 'Marine Farming Operating Standards Marlborough Sounds, Tasman and Golden Bays'.
- 'Code of Practice to avoid, remedy or mitigate noise from marine farming activities in the Marlborough Sounds, Golden Bay and Tasman Bay, on other users and residents'.
- 'Reducing Pollution and Emissions from Marine Farming 'On Water' Activities'.
- 'Reducing Waste taken to Landfill from Marine Farming 'On water' Activities'.

Sanford Limited were one of the inaugural recipients of Environmental Certification status from the Marine Farming Association. This is achieved through complying with all requirements of the Marine Farming Association's Environmental Programme and having passed audits of the farms and vessels.

7.1(f) any risk to the neighbourhood, the wider community, or the environment through natural hazards or hazardous installations

8.1 The Shoreline
The distance from the shoreline according to the original Cadastral mapping is inside the conventions established in the Marlborough Sounds Resource Management Plan. However, the proposed plan locates the production droppers over 50 metres from the low tide mark. Refer to layout plan.

8.2 Headlands
There are no headlands immediately adjacent to the site.

8.3 Navigational Routes (Formal/Informal)
The shoreline in which the farm sits is not on a normal navigation route, however, vessels that wish to navigate within the area can proceed through the farm and either inside or outside of the site.

The farm does not impede vessel movements along the coastline or access to the adjacent land.

8.4 Anchorages or Mooring Areas (Formal/Informal)
There is one registered mooring approximately 180 metres to the northeast of the site. Mooring 292.

The site does not impede access to this mooring.

There is a jetty approximately 150 metres to the north east of the site.

The site does not impede access to this jetty.

Applicant's proposed conditions for this activity

Jeffrey Meachen Trust has applied to renew the existing resource consent MFL273 (total 2.3125ha) for the purpose of farming Greenshell mussels (Perna canaliculus) using conventional long line methods. (Refer attached layout diagrams illustrating the site.)

Part 2 RMA

Matters of national importance (Section 6 Resource Management Act 1991)

1. Assess your application against the following matters of national importance:

6.1 (a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:

Section 6(a) is given effect through Policy 13 of the New Zealand Coastal Policy Statement and is considered further below.

6.1 (b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:

The area has not been identified within the current Marlborough Sounds Resource Management Plan as being an area of outstanding natural landscape value. The area has not been described as an area of outstanding nature landscapes and features in the proposed Plan.

6.1 (c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:

The adjacent land next to the farm is regenerating scrub and pastureland.

6.1 (d) the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:

Public access is maintained with good separation from the coast and main navigational routes.

6.1 (e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:

The Applicant will continue to discuss this through consultation with Iwi.

6.1 (f) the protection of historic heritage from inappropriate subdivision, use, and development:

The applicant is unaware of any historical sites on land nearby and will continue to discuss this through consultation with Iwi

6.1 (g) the protection of protected customary rights.

Policy 2 sets out a number of matters which are relevant to the taking into account of the principles of the Treaty of Waitangi and kaitiakitanga, in relation to the coastal environment.

The applicant recognises that Ngāti Apa ki te Rā Tō, Ngāti Kuia, Rangitāne o Wairau, Ngāti Kōata, Ngāti Rārua, Ngāti Tama ki Te Tau Ihu, Te Ātiawa o Te Waka-a-Māui and Ngati Toa Rangatira have statutory acknowledgments in the area of the application site. Those acknowledgements have been considered during the preparation of this application, as outlined above.

The iwi management plans of Ngāti Kōata and Te Ātiawa o Te Waka-a-Māui have been reviewed.

There are also no established areas of protected customary rights or customary marine title within the meaning of the Marine and Coastal Area (Takutai Moana) Act 2011.

The applicant recognises that Ngati Kuia have a special, long, intergenerational association to Te Taulhu o te waka a Maui/Top of the South Island and consider the Te Hoiere/Pelorus to be at the centre of their spheres of occupation and influence, spanning 1,000 years.

Over many centuries Ngati Kuia and their descendants have built paa, kainga, purakau, mapped mahinga kai and built spiritual connections where their people lived and been laid to rest.

"Te Hoiere awa/moana is Taonga tuku iho ki Tangata Whenua/Ngati Kuia therefore this requires the Crown and its agencies to give recognition to and make provision for the exercise of Kaitiakitanga by whanau, hapu and Iwi who are operating within the Maori Customary and commercial Deeds of Settlement. ”

The Applicant will discuss the proposal further with relevant Iwi representatives.

6.1 (h) the management of significant risks from natural hazards.

The industry has developed a tsunami management plan.

Other matters (Section 7 Resource Management Act 1991)

1. Assess your application against the following matters:

7.1 (a) kaitiakitanga:

This matter has been considered earlier in the original proposal. This application is not anticipated to have any additional effects over and above what already exists

7.1 (aa) the ethic of stewardship:

The Applicant's farm is managed by Sanford Limited who adheres to the 'Greenshell Mussel Industry Environmental Code of Practice' and its successor, the Environment Management Framework and is an active participant of the Marine Farming Association's Environmental Programme.

This programme covers the activities of marine farmers "on water" activities. This Programme includes being an active participant in beach clean ups and adhering to the following Codes of Practice:

- 'Marine Farming Operating Standards Marlborough Sounds, Tasman and Golden Bays'.
- 'Code of Practice to avoid, remedy or mitigate noise from marine farming activities in the Marlborough Sounds, Golden Bay and Tasman Bay, on other users and residents'.
- 'Reducing Pollution and Emissions from Marine Farming 'On Water' Activities'.
- 'Reducing Waste taken to Landfill from Marine Farming 'On water' Activities'.

Sanford Limited were one of the inaugural recipients of Environmental Certification status from the Marine Farming Association. This is achieved through complying with all requirements of the Marine Farming Association's Environmental Programme and having passed audits of the farms and vessels.

7.1 (b) the efficient use and development of natural and physical resources:

This matter has been considered earlier in the original proposal. This application is not anticipated to have any additional effects over and above what already exists

7.1 (ba) the efficiency of the end use of energy:

Provision not relevant

7.1 (c) the maintenance and enhancement of amenity values:

This matter has been considered earlier in the original proposal. This application is not anticipated to have any additional effects over and above what already exists

7.1 (d) intrinsic values of ecosystems:

This matter has been considered earlier in the original proposal. This application is not anticipated to have any additional effects over and above what already exists

7.1 (f) maintenance and enhancement of the quality of the environment:

This matter has been considered earlier in the original proposal. This application is not anticipated to have any additional effects over and above what already exists

7.1 (g) any finite characteristics of natural and physical resources:

This matter has been considered earlier in the original proposal. This application is not anticipated to have any additional effects over and above what already exists

7.1 (h) the protection of the habitat of trout and salmon:

Provision not relevant

7.1 (i) the effects of climate change:

The effects of climate change on mussel farms is unknown, however, mussels can withstand a large change in temperatures and growing environment. They are currently grown through-out New Zealand from Southland to Coromandel.

7.1 (j) the benefits to be derived from the use and development of renewable energy

Provision not relevant

Treaty of Waitangi (Section 8 Resource Management Act 1991)

Assess your application against the principles of the Treaty of Waitangi (Te Tirti o Waitangi)

The applicant recognises that Ngāti Apa ki te Rā Tō, Ngāti Kuia, Rangitāne o Wairau, Ngāti Kōata, Ngāti Rārua, Ngāti Tama ki Te Tau Ihu, Te Ātiawa o Te Waka-a-Māui and Ngati Toa Rangatira have statutory acknowledgments in the area of the application site. Those acknowledgements have been considered during the preparation of this application, as outlined above.

The iwi management plans of Ngāti Kōata and Te Ātiawa o Te Waka-a-Māui have been reviewed.

There are also no established areas of protected customary rights or customary marine title within the meaning of the Marine and Coastal Area (Takutai Moana) Act 2011.

The applicant recognises that Ngati Kuia have a special, long, intergenerational association to Te Taulhu o te waka a Maui/Top of the South Island and consider the Te Hoiere/Pelorus to be at the centre of their spheres of occupation and influence, spanning 1,000 years.

Over many centuries Ngati Kuia and their descendants have built paa, kainga, purakau, mapped mahinga kai and built spiritual connections where their people lived and been laid to rest.

"Te Hoiere awa/moana is Taonga tuku iho ki Tangata Whenua/Ngati Kuia therefore this requires the Crown and its agencies to give recognition to and make provision for the exercise of Kaitiakitanga by whanau, hapu and Iwi who are operating within the Maori Customary and commercial Deeds of Settlement. ”

The Applicant will discuss the proposal further with relevant Iwi representatives.

Statutory instruments

I include an assessment of the proposed activity against any relevant provisions of a document referred to in section 104(1) (b) of the Resource Management Act 1991, including the information required by clause 2(2) of Schedule 4 of that Act.

The assessment under this section must include an assessment of the activity against –
(a) Any relevant objectives, or policies in a document; and

(b) Any relevant requirements, conditions, or permission in any rules in a document; and
(c) Any other relevant requirements in a document (for example, in a national environmental standard or other regulations)

Statutes that are relevant to your proposed activity

Assessment under the Resource Management Act 1991

Refer to attached Assessment of Environmental Effects and appendices

Assessment under the New Zealand Coastal Policy Statement

Refer to attached Assessment of Environmental Effects and appendices

Assessment under the Marlborough Regional Policy Statement

Refer to attached Assessment of Environmental Effects and appendices

Assessment under the Marlborough Sounds Resource Management Plan

Refer to attached Assessment of Environmental Effects and appendices

Assessment under the Proposed Marlborough Environment Plan

Refer to attached Assessment of Environmental Effects and appendices

Additional information

Applications affected by Section 124 or 165ZH(1)(c) of the Resource Management Act 1991

Does this application relate to an existing consent held by the applicant which is due to expire, and the applicant is to continue the activity?

Yes - this application relates to the following existing consent

Consent number

MFL273

The value of investment of the existing consent holder is

As part of this Application to renew site 8038, the Applicant is seeking to re-consent the site for a period of 20 years. As a result, this is an Application to which section 165ZH(1)(c) applies and the Council must, when considering the application, have regard to the value of the investment of the existing consent holder under section 104(2A).

The original existing site has been held by the applicant since 1990. From that time the applicant has expended significantly on the establishment and maintenance of the farm.

The farm produces approximately 50 tonnes per annum ($1300/ Green Weight Tonne (GWT)) and after processing the final ½ shell product would be sold on the export market at approximately $120,000. Approximately 95% of

mussel products are exported. All lines are restocked after harvest to achieve 50 GWT/per annum harvests.

The mussels are processed in Havelock where they provide a critical part of the production to maintain processing to the factory which employees 163 FTE.

Section 85 of the Marine and Coastal Area (Takutai Moana) Act 2011

Is the proposed activity to occur in an area within the scope of a planning document prepared by a customary marine title group under section 85 of the Marine and Coastal Area (Takutai Moana) Act 2011?

No - the proposed activity does not occur in such an area

Additional information required for subdivision consent

Does your application include one or more consents for subdivision?

No

Additional information required for application for reclamation

Does your application include one or more consents for reclamation?

No

Plans and technical reports

Report type	Report title	Author	External reference	Keywords	Document
Site Plan	-	-	-	-	8038 Renewal Layout Plan.pdf (455 kB)
Site Plan	-	-	-	-	8038 Renewal Locality Map.pdf (3 MB)
Site Plan	-	-	-	-	8038 Renewal Site Plan.pdf (740 kB)
Benthic report	-	-	-	-	8038 Admiralty Bay (Jeff Meachen Trust).pdf (4 MB)
Miscellaneous	-	-	-	-	8038 AEE Renewal January 2019.pdf (676 kB)

Affected person approvals

Have you obtained affected person(s) approvals?

No - I have not obtained affected person(s) approvals

Iwi

Have you obtained approvals from iwi?

No - I have not obtained approvals from iwi

Public notification (Section 95A(2)(b)) of the Resource Management Act 1991

Is public notification of the application requested by the applicant?

No - public notification of application is not requested

Lodgement fee

Please see Marlborough District Council's fees page for more information.

Payment ID Code

00989W

Do you require a GST receipt for a bank payment?

Yes - I do require a GST receipt for a bank payment

If further charges are incurred, please invoice

Applicant

Fee comments

The applicant is to be charged directly for lodgement fees

Declaration

I confirm that the information provided in this application and the attachments are accurate.

Yes

Authorised by (your full name)

Bruce Raymond Cardwell

Authorising person is:

Person authorised to sign on behalf of the applicant

Note to applicant

You must include all information required by this form. The information must be specified in sufficient detail to satisfy the purpose for which it is required.

You may apply for 2 or more resource consents that are needed for the same activity on the same form. If you lodge the application with the Environment Protection Authority, you must also lodge a notice in form 16A at the same time.

You must pay the charge payable to the consent authority for a resource consent application under the Resource Management Act 1991 (if any).

If your application is to the Environment Protection Authority, you may be required to pay actual and reasonable costs incurred in dealing with this matter (see section 149ZD of the Resource Management Act 1991).

Privacy information

The information you have provided on this electronic form is required so that your application can be processed and so that statistics can be collected by Council. The information will be stored on a public register and held by Council. Details may be made available to the public about consents that have been applied for and issued by Council. If you would like access to or make corrections to your details, please contact Council.

ASSESSMENT OF ENVIRONMENTAL EFFECTS
FOR A COASTAL PERMIT
OCCUPANCY AND DISTURBANCE OF THE SEABED

APPLICATION BY JEFFREY MEACHEN TRUST
TO RENEW EXISTING CONSENT FOR MARINE FARM SITE 8038
ISLAND BAY, ADMIRALTY BAY, MARLBOROUGH

1.0 INTRODUCTION – OVERVIEW OF APPLICATION

Jeffrey Meachen Trust has applied to renew the existing resource consent MFL273 (total 2.3125ha) for the purpose of farming Greenshell mussels (Perna canaliculus) using conventional long line methods. (Refer attached layout diagrams illustrating the site.)

Marine Farm Licence MFL273 was issued to the original consent holder in January 1986 under the Marine Farming Act 1971 and assigned to JV Meachen in December 1990.

MFL273 expires 31 December 2024.

The Applicant seeks a 20-year term.

MFL273 is assessed as a controlled activity in the current Marlborough Sounds Resource Management Plan in accordance with the following provisions;

35.2.5.1 Standards

a) The structures and anchoring systems established on the marine farm shall be those authorised by the current Coastal Permit, Marine Farm Licence or Marine Farm Lease applied for prior to 1 August 1996, except that in the case of marine farms listed in Appendix D, as controlled activities, this standard shall not apply to the replacement of surface structures with sub-surface structures.

b) The marine farm shall occupy only that area and only for the purposes and for the species authorised by the current Coastal Permit, Marine Farm Licence or Marine Farm Lease applied for prior to 1 August 1996.

c) The species to be farmed on any marine farm shall be only those authorised by the current Coastal Permit, Marine Farm Licence or Marine Farm Lease applied for prior to 1 August 1996.

d) The lighting system utilised on the marine farm shall at all times comply with the conditions of the current Coastal Permit, Marine Farm Licence or Marine Farm Lease applied for prior to 1 August 1996.

The renewal complies with the above provisions to be assessed as controlled activity.

The application is for a continuation of the activities currently consented at the site. No changes to the activities are proposed.

The site lies within the boundary of the CMZ2, an area in which marine farming activity is a discretionary activity.

As this is a 'like for like' Application by an existing permit holder, the Application should be processed under section 165ZH. The Applicant's adherence to the codes of practice mentioned above, and its commitment to environmental programmes and activities, along with its compliance with the conditions of the existing Consent, are conduct in the Applicant's favour in terms of section 165ZJ(1).

The site dimensions are as per the layout plans attached. The application includes 5 long lines, each being approximately 84-125 metres long.

There are currently 5 lines installed and operating at the site that grow Greenshell mussels.

The site layout is attached to the application.

Jeffrey Meachen is a resident of Cissy Bay, French Pass, Marlborough.

The Applicant's farm is managed by Sanford Limited who adheres to the 'Greenshell Mussel Industry Environmental Code of Practice' and its successor, the Environment Management Framework and is an active participant of the Marine Farming Association's Environmental Programme.

This programme covers the activities of marine farmers "on water" activities. This Programme includes being an active participant in beach clean ups and adhering to the following Codes of Practice:

- 'Marine Farming Operating Standards Marlborough Sounds, Tasman and Golden Bays'.
- 'Code of Practice to avoid, remedy or mitigate noise from marine farming activities in the Marlborough Sounds, Golden Bay and Tasman Bay, on other users and residents'.
- 'Reducing Pollution and Emissions from Marine Farming 'On Water' Activities'.
- 'Reducing Waste taken to Landfill from Marine Farming 'On water' Activities'.

Sanford Limited were one of the inaugural recipients of Environmental Certification status from the Marine Farming Association. This is achieved through complying with all requirements of the Marine Farming Association's Environmental Programme and having passed audits of the farms and vessels.

2.0 INTRODUCTION – THE APPLICATION

2.1 Size: The site is 2.3125 Ha.

2.2 Structures: The site dimensions will be: inshore boundary 200 metres long, outer boundary 170 metres, western boundary 128.55 metres long and eastern boundary 125 metres long (refer attached site plan).

There will be a total of 5 longlines (refer attached layout diagram).

2.3 Species: It is proposed to farm and harvest Greenshell mussels (Perna canaliculus) using conventional long line methods.

The application is for a continuation of the activities currently consented at the site. No changes to the activities are proposed.

3.0 PERMITTED ACTIVITIES

The application is for a new consent to replace MFL273 in Island Bay, Admiralty Bay, to seed, cultivate and harvest species Greenshell mussels (Perna canaliculus) using conventional long line methods, including occupation of 2.3125ha of the coastal marine area. Consent is also sought to allow the existing seabed anchoring devices to remain (and be replaced as required), to harvest marine farming product from the marine farm (including the discharging of coastal seawater and discharge of biodegradable and organic waste matter) and all other activities that are ancillary to the operation on site 8038.

The movement of vessels is a permitted activity: s27 Marine and Coastal Area (Takutai Moana) Act 2011. This right includes anything reasonably incidental to vessel movement (s27(2)).

The proposed activity has been assessed against the relevant provisions of the:

1. New Zealand Coastal Policy Statement 2010;
2. Marlborough Regional Policy Statement;
3. Marlborough Sounds Resource Management Plan; and
4. Proposed Marlborough Environment Plan

at Sections 23 and 24/Appendices A – C of this Assessment of Environmental Effects.

Other activities that relate to this application include permissions that do not relate to the Resource Management Act, including;

1. Fish farming licence

4.0 TERMS OF CONSENT

MFL273 expires 31 December 2024.

The Applicant seeks a 20-year term.

The expiry date of the existing consent is 2024, along with over 300 marine farms located in the Marlborough Sounds.

As there will be a large bottleneck of applications to the Marlborough District Council around this time, the applicant has requested that if the consent is granted, then the commencement date of the new consent could be delayed for 3 years until 2022

The applicant is aware of the impending bottleneck and this is the reason for submitting the application prior to the expiry date. It is believed that this early submission will assist the Marlborough District Councils processing of applications, availability of specialists to complete appropriate reports and be timely for submitters.

5.0 THE SITE - LOCATION

The marine farm site is on the south eastern coast of Admiralty Bay, in Island Bay.
"Admiralty Bay is one of the largest bays in the outer Sounds at 8,130 ha stretching from French Pass to Bonne Point and across to Clay Point (excluding Catherine Cove). The coastline and shallow subtidal is mostly rocky and is 50.4 km in length" (Davidson Environmental Report 913).

The farm sits alongside other farms on the south eastern coast of Admiralty Bay. The nearest marine farms to 8038 are the adjacent farms to the south 8037, 8496 and 8036 and the adjacent farm to the north 8039.

The adjacent land is zone Rural 1. The nearest residence is approximately 250 metres to the north east of the site.

The site lies within the boundary of Coastal Marine Zone 2 (CMZ2).

6.0 THE SITE - DIMENSIONS

The site dimensions have been described above are as per the layout plans attached. The depth of the water at each of the site corners is 25 metres (N), 7 metres (NE), 34 metres (NW), and 8 metres (SW).

The application includes 5 long lines, each being between 84-125 metres long.

There are currently 5 lines installed and operating at the site that grow Greenshell mussels.

The site layout is attached to the application.

The warp lengths are between 30-50 metres from each end of the backbone (see line layout diagram for individual longline lengths). The warp ratio is approximately 1.8:1.

The farm is identified as being partially offsite as shown on the Marlborough District Council website (smart maps). The farm will be repositioned on site using the new structure plan on the replacement of the present anchoring system within the next 5 years.

7.0 THE PRESENT ENVIRONMENT

7.1 The Marine Environment

In October 2018 Mr RJ Davidson, of Davidson Environmental Ltd, undertook a biological study of the ecology of the marine area of site 8038 (Report 913, attached).

The Report indicates that the impact of the existing activity is similar to other mussel farming activities in Marlborough. In particular, the report states the following;

"*7.1 Benthic habitats and substratum*
Substratum and habitat distribution relative to the reconsent area was based on drop camera stations and sonar imaging of the benthos. Most of the consent area was located over a relatively featureless gently sloping benthos dominated by silt and clay substratum with or without a component of natural shell. Coarser soft substratum was observed from inshore parts of the consent. Mud (i.e. silt and clay) is the most common subtidal habitat in sheltered areas of the Marlborough Sounds (McKnight and Grange, 1991) and has been traditionally targeted for marine farming activities. This substratum type is considered suitable for consideration for marine farming activities in the Marlborough Sounds.

Unlike mud and silt, rocky substratum is not traditionally considered suitable for marine farming activities as it is likely smothered by shell debris and may no longer functions as a hard substratum habitat. Rocky substrata in the form of boulders and cobbles were observed at the eastern and southern inshore areas of the consent. Hard substrata were not recorded under existing production droppers.

Areas offshore of the consent where structures were located were over flat and deep silt and clay substrata. This habitat is considered suitable for marine farming activities.

7.2 Species and communities
Species abundance and diversity from most of the consent was low compared to high current locations in the Sounds. Benthic observations within mud dominated areas of the consent confirmed the area supported species typical of silt substratum (e.g. cushion seastars, sea cucumbers). Spotty and spikey dog fish were observed within the consent.

Occasional scallop and horse mussels were observed during the present survey (Appendix 1: Photo 31), however, numbers observed were low suggesting they are not abundant. No species, habitats or communities regarded as ecologically significant (see Davidson et al., 2011) were observed during the present study.

7.7 Mussel farming impacts
7.7.1 Benthic impacts
Mussel shell debris was recorded from 6 of the 24 consent area photos. Mussel debris was most abundant under backbones and was usually 25-75% cover. Mussel shell debris was recorded under warps. Mussel debris was also recorded immediately offshore of the consent, under backbones.
Shell debris impact levels were within the range known for mussel farms in the Marlborough Sounds. This farm impact at this site is at the moderate to high end of the impact range compared to other farms in the Sounds.

It is probable that the impact of continued shellfish farming at this site will result in the deposition of more shell and fine sediment under and near droppers. Based on the literature and assuming the present level of farming activity remains consistent, it is very unlikely that the surface sediments would become anoxic, however, the redox layer is likely shallower compared to sites away from the farm (Hartstein and Rowden, 2004; Keeley et al., 2009;).

Recovery of the benthos takes approximately 5-7 years on deep soft substratum as shell is often smothered thereby reducing recovery times compared to inshore coarser substratum areas (Davidson and Richards, 2014).

7.8 Boundary adjustments, line adjustments and monitoring
No biological communities of particular interest were found during the present survey. Further, most of the consent is located over silt and clay substratum with or without a component of natural shell. This substratum is the most common and widespread habitat type in sheltered shores of the Marlborough Sounds. The impacts associated with mussel farming on muddy habitats characterised by silt and clay are low compared to farm impacts in shallow habitats dominated by rocky or biogenic communities.

Warps are known to have little or no impact on benthic communities (Davidson and Richards, 2014). At this site the benthos under warps appeared relatively natural, with mussel shell debris present in areas closest to droppers.

Surface structures were located within and offshore of the consent over a mud bottom. Rocky substrata were recorded along the inshore corners of the consent. Further, the inshore edge of the consent was well within 50 m of low water (30 m). Relocation of the consent further offshore to fit

the existing farm structures would act to place the consent over existing farm structures. The effect on king shag and marine mammals would remain unchanged if the consent was shifted to fit farm structures. If this is not actioned and the consent left at its present location, an exclusion area for production lines is suggested (Figure 13).

No other changes to the present consent boundaries are suggested on biological grounds. Habitats and species associated with the site are typical of sheltered central and outer Sounds Bays and as such no monitoring is suggested."

The applicant wishes the backbones to remain within the existing consent area and the layout plan identifies an exclusion area within the inshore area of the consent in which production droppers should not be placed. The exclusion area includes a 10-metre buffer zone as identified as the red hatched area on the layout plan.

The report also indicates that the impact of the current activities is in line with expectations of the environmental impacts of mussel farming. In addition, the current study supports the Ministry of Fisheries assessment which was used to assess the sustainability of the farm and its impact on fishing and fishery resources.

7.2 The Land Environment

The marine farm site is on the south eastern coast of Admiralty Bay, in Island Bay.

The adjacent land is zoned Rural 1.

The coastline adjacent consists of steep hill slopes with short to moderately high coastal cliffs. The area is regenerating bush and pastureland.

The beach is dominated by hard rock and boulders, although small beaches have formed along the coastline in this area.

8.0 NAVIGATION MATTERS

8.1 The Shoreline

The distance from the shoreline according to the original Cadastral mapping is inside the conventions established in the Marlborough Sounds Resource Management Plan. However, the proposed plan locates the production droppers over 50 metres from the low tide mark. Refer to layout plan.

8.2 Headlands

There are no headlands immediately adjacent to the site.

8.3 Navigational Routes (Formal/Informal)

The shoreline in which the farm sits is not on a normal navigation route, however, vessels that wish to navigate within the area can proceed through the farm and either inside or outside of the site.

The farm does not impede vessel movements along the coastline or access to the adjacent land.

8.4 Anchorages or Mooring Areas (Formal/Informal)

There is one registered mooring approximately 180 metres to the northeast of the site. Mooring 292.

The site does not impede access to this mooring.

There is a jetty approximately 150 metres to the north east of the site.

The site does not impede access to this jetty.

8.5 Indirect Effects-Servicing vessels at site

The Applicant estimates farming and harvesting vessels will visit the site on an average of 12 - 15 days a year, for periods of 0.5 to 8 hrs to undertake farm maintenance, seeding and harvesting.

The total number of hours spent on these activities is estimated to be 30-40 hrs annually.

8.6 Water Ski Lanes

There are no formal water ski lanes in the vicinity.

8.7 Sub-Marine Cables

There are no sub-marine cables in the immediate vicinity of the farm.

9.0 AESTHETIC

9.1 Land Zoned for Residential Use or Proximity to Residences

The land adjacent to the site is zone Rural 1.

The nearest residence is approximately 250 metres to the north east of the site.

9.2 Scenic Value

The area has not been identified within the current Marlborough Sounds Resource Management Plan as being an area of outstanding natural landscape value.

The area has not been described as an area of outstanding nature landscapes and features in the proposed Plan.

The area has not been described as having outstanding, very high or high natural character in the proposed Plan.

The area is not considered to have a high coastal natural character rating. The 2014 Boffa Miskell study '*Natural Character of the Marlborough* Coast', which is reflected in the natural character maps in the proposed Plan, which do not map the waters of the inner Admiralty Bay as having outstanding, very high or high natural character.

9.2.1 Visual Amenity

Section 7(c) of the Act requires decision makers to have particular regard to the maintenance and enhancement of amenity values. The entirety of the Marlborough Sounds Coastal Landscape, is mapped as a High Amenity Landscape in the MEP. The values of this amenity landscape are outlined in Appendix 1.[1] An individual marine farm at this location will not have an impact on a high amenity landscape of the scale mapped in the MEP.

The area adjacent to the site is regenerating bush and pastureland.

The effect of the marine farm on the adjacent area will not have an effect on the flora and fauna of this area.

10.0 ECOLOGICAL VALUE

There is no ecological value identified in the Marlborough Sounds Resource Management Plan.

10.1 King Shag

The King shag (*Leucocarbo carunculatus*) is a rare seabird, which is endemic to the Marlborough Sounds, and listed as Threatened by the International Union for Conservation of Nature (IUCN). Adverse effects on this species and its habitat are to be avoided in accordance with NZCPS Policy 11(a).

King shags face a number of potential threats in the Marlborough Sounds, including climate change, storm events which can damage roosts and nests, human disturbance, predators, siltation, commercial dredging and trawling, recreational fishing and aquaculture.

A holistic approach is needed to gain a better understanding of this species, and to strategically manage threats. In the past experts have noted that this cannot be done effectively via an individual marine farm consent:[2]

> *There are few useful consent conditions specific to king shag that would be relevant to the operation of a single mussel farm. The only practical suggestion is to minimise the loss of debris, such as dropline ties, entering the water; however, this is already part of the industry's environmental code of practice. Any survey or monitoring of king shag use of mussel farms for the purposes of addressing specific research questions needs to be very well planned and implemented at a much wider scale.*

The industry, via the Marine Farming Association (MFA), is actively involved in a Working Group with the Department of Conservation and key stakeholders which is undertaking research into king shag population and breeding dynamics. The applicant is supportive of this initiative.

The application site near a king shag feeding habitat, being an Area of Ecological Value identified in the Marlborough Sounds Resource Management Plan. The Council's 2011 Significant Marine Sites Report identifies significant marine sites in Marlborough, including sites of significance to seabirds.[3] The four main king shag breeding colonies and a number of satellite colonies are included in this report. These sites are mapped as Ecologically Significant Marine Sites in Volume 4 of the proposed Marlborough Environment Plan (MEP). The closest site to Island Bay is the Stewart Island king shag colony (Davidson Environmental Report 913, attached).

No seabird feeding areas in the coastal marine area are mapped in the MEP. The distribution of king shags foraging within the Sounds has been recorded by Mr Rob Schuckard over many years. The most recent data from 2017, depicted in Figure 1 below, shows that the birds have a foraging range of approximately 25km. The majority of the Marlborough Sounds is within the foraging range of the species, excluding inner Queen Charlotte Sound, most of Kenepuru Sound[4] and Port Underwood. No foraging data exists within Tory Channel. The king shag's physiology means that it is better adapted to diving than flying. They tend not to fly over land, which may account for lack of sightings in Tory Channel.

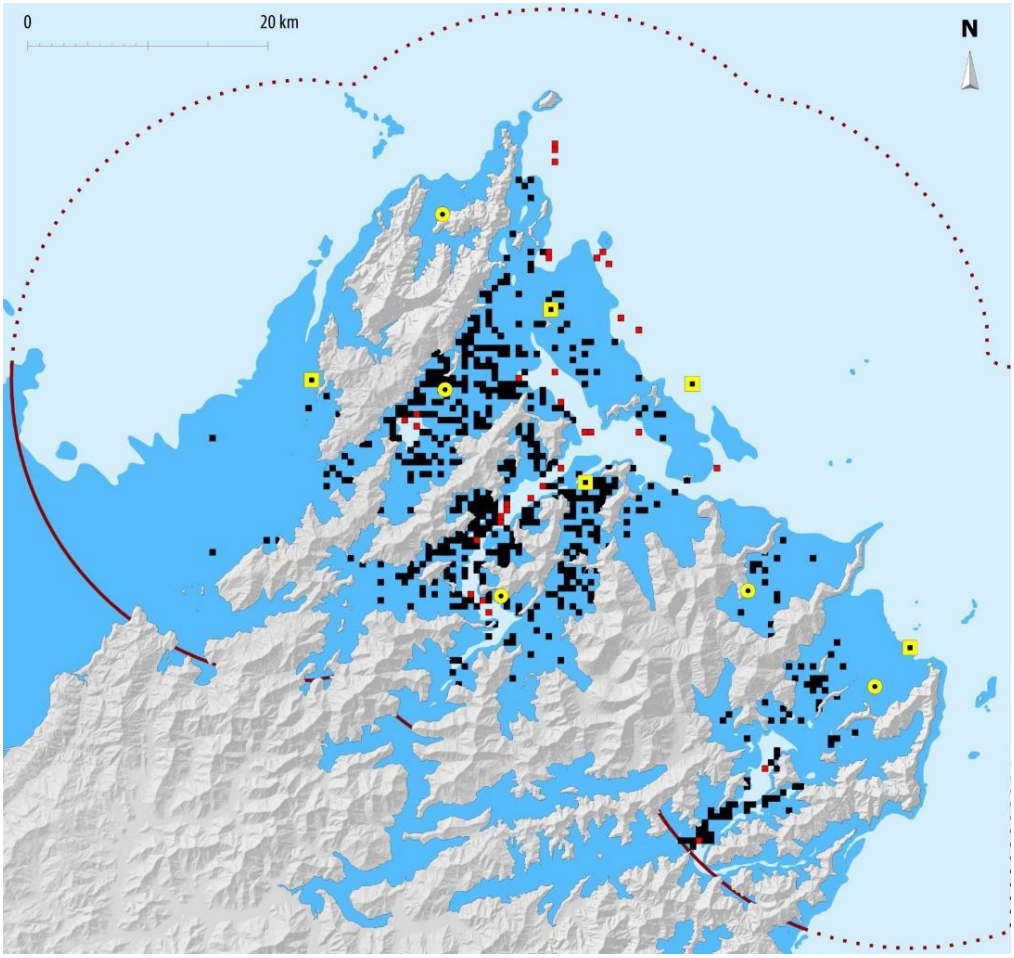
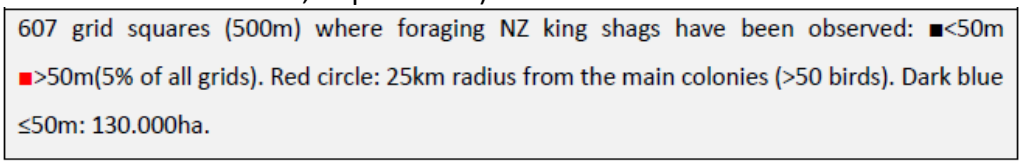


Figure 1. Distribution of foraging NZ king shags in the Marlborough Sounds
(Source: Schuckard 2017, unpublished)[5]



Some biologists are of the view that mussel farms exclude king shag and/or their prey, but experts are divided on this issue, and the data is not conclusive.[6] Rob Davidson and Dr Rachel McClellan note that the low percentage of king shags sighted feeding within mussel farms is consistent with the low percentage of the Sounds covered by marine farming structures.[7] It is unclear whether marine farms have an adverse, positive[8] or neutral effect for King shag foraging, or on King shag prey.[9] Observations suggest that the mere physical presence of marine farm structures does not preclude foraging.[10]

A marine farm has been operating at the application site for many years. The application area comprises a very small proportion of the available foraging habitat within the bay and the Sounds generally. In this context, this marine farm is unlikely to have an adverse effect on king shag.

The Davidson Environmental Report 913 (attached) concludes that "*The present marine farm reconsenting site is in the inner part of Admiralty Bay where king shag foraging intensity is lower compared to the outer Admiralty Bay area (Fisher and Boren, 2012). King shags, do however, forage in inner Admiralty Bay. The present farm site overall size remains unchanged meaning that any impact on king shags will also remain unchanged if the site is reconsented.*"

King shag colonies are at risk of disturbance from commercial, recreational and tourism vessels. At present no exclusion zone has been imposed around colonies. Historically, conservative recommendations for excluding vessels around the species' breeding colonies and roosting sites were 1,000 metres and 300 metres respectively.[11] In 2015 Forest and Bird recommended a code of practice be adopted to apply a buffer of 100m around colonies during the March to August breeding period.[12] A number of standard consent conditions might be imposed, including:

- A requirement to ensure that structures are restrained, secure, and in good working order.[13]
- A requirement that reasonably necessary steps are taken to retrieve non-biodegradable debris.
- A requirement to incorporate Best Management Practice Guidelines to address the cumulative effects of marine farming.

The applicant's contract Sanford also adheres to a number of codes of practice:

- The MFA Environmental Certification Programme[14] is designed to recognise active participation in the MFA Environment Programme, including adherence to the standard operating procedures and codes of practice.
- The MFA Standard Operating Procedures[15] includes provisions to maintain farms in good condition and to minimise debris. This reduces entanglement risk.

- The MFA Noise Code of Practice[16] seeks to avoid, remedy or mitigate noise from marine farming activities. Minimising noise is best management practice to reduce the exclusion or attraction of wildlife.
- The MFA Code of Practice to Reduce Pollution and Emissions from Marine Farming 'On Water' Activities[17] deals with storage of chemicals and fuels, use of biodegradable products, and the requirement to be familiar with Regional Oil Spill contingency plans.
- Aquaculture New Zealand's A+ Sustainable Management Framework: New Zealand greenshell mussels[18] (A+) is designed to promote the sustainable management of aquaculture in New Zealand by providing guidance for best environmental and social practice for the industry. One of the aims of A+ is to facilitate best environmental practice through research, risk management, ongoing monitoring and reporting, and promotion of continuous improvement.

10.2 Marine Mammals - Dolphins

Admiralty Bay is mapped as a marine mammal site (dolphins) in the proposed Plan.

Admiralty Bay, Current Basin, outer Queen Charlotte Sound, Port Underwood, and Cloudy and Clifford Bays are mapped as dolphin areas on the Marine Mammal Dolphin Map in the proposed Marlborough Environment Plan (MEP).[19]

Dusky dolphins are widespread in the Southern Hemisphere and are not regarded as endangered nationally or internationally.[20] Admiralty Bay is a winter-feeding area for 6-9% of the Kaikoura dusky population (which is equivalent to 2-4% of the wider New Zealand population).[21] The Bay has gained recognition as an area where the species employs co-operative feeding strategies. Dusky dolphins continue to visit the area despite marine farming being established along the shores of the inner bay since the early 1980s.

The outer part of Queen Charlotte Sound is mapped as an area where one resident population of Hector's dolphins occurs "most frequently."[22] However, a long-term sighting database indicates that Hector's dolphin distribution within Queen Charlotte Sound may have shifted over the previous decades.[23] Cloudy and Clifford Bays are a marine mammal sanctuary, being home to a second resident population of Hector's dolphins.[24] Hector's dolphin is Nationally Endangered, and is considered Endangered by the IUCN. There have been no documented entanglements of Hector's dolphins with mussel farms. It is possible that mussel farms may not be optimal habitat for Hector's. However, authors of a baseline study found that even a 2700ha marine farm in Pegasus Bay was "unlikely to have a catastrophic impact on the dolphins," given the relative availability of habitat in the immediate vicinity.[25] That farm was extended in 2016, with effects on marine mammals assessed as less than minor.[26]

Dolphins are subject to a number of natural and anthropogenic effects. Ongoing research and monitoring requires a strategic approach, which cannot be achieved through farm specific conditions. The industry would support a collaborative approach to monitoring and management, which should involve key stakeholders, such as the Marlborough District Council, the Department of Conservation and other users of the coastal marine area.

The Davidson Environmental Report 913 (attached) concludes that *"The present marine farm utilizes standard mussel farming structures that are under tension and therefore present a low risk of entanglement to marine mammals. This farm is located inshore of the adjacent farms. An offshore shift of the consent to encompass existing structures is therefore unlikely to influence foraging dolphins beyond the existing situation."*

Industry Best Practice

Regardless of where lines are drawn on maps, the aquaculture industry has a number of measures in place to mitigate residual risk to dolphins:

(a) The Marine Farming Association (MFA) Environmental Certification Programme[27] is designed to recognise active participation in the MFA Environment Programme, including adherence to the standard operating procedures and codes of practice.

(b) The MFA Standard Operating Procedures[28] includes provisions to maintain farms in good condition and to minimise debris. This reduces entanglement risk.

(c) The MFA Noise Code of Practice[29] seeks to avoid, remedy or mitigate noise from marine farming activities. Minimising noise is best management practice to reduce the exclusion or attraction of wildlife.

(d) The MFA Code of Practice to Reduce Pollution and Emissions from Marine Farming 'On Water' Activities[30] deals with storage of chemicals and fuels, use of biodegradable products, and the requirement to be familiar with Regional Oil Spill contingency plans.

(e) Aquaculture New Zealand's A+ Sustainable Management Framework: New Zealand greenshell mussels[31] (A+) is designed to promote the sustainable management of aquaculture in New Zealand by providing guidance for best environmental and social practice for the industry. One of the aims of A+ is to facilitate best environmental practice through research, risk management, ongoing monitoring and reporting, and promotion of continuous improvement.

As noted, Sanford who manages this farm actively participates in these programmes and adheres to these codes of practice.

In addition, standard consent conditions often include:

(f) A requirement to ensure that structures are restrained, secure, and in good working order.[32]

(g) A requirement that reasonably necessary steps are taken to retrieve non-biodegradable debris.

(h) A provision for Council to undertake a s 128 review of the consent conditions for the purpose of protecting the extent and/or health of dolphin and/or whale habitat.

(i) A requirement to incorporate Best Management Practice Guidelines to address the cumulative effects of marine farming.

11.0 RECREATIONAL VALUE

The visual impact of the marine farm will not change.

Access to the coast for recreationalists is maintained.

12.0 HISTORICAL, TRADITIONAL AND CULTURAL VALUES

In preparing this Application, the Applicant has had regard to the Te Tau Ihu Statutory Acknowledgments and has reviewed the Statements of Association for each iwi. The Applicant understands that this Application will be notified to Iwi with statutory acknowledgements in the area and will discuss the Application further with Iwi representatives.

The applicant recognises that Ngati Kuia have a special, long, intergenerational association to Te TauIhu o te waka a Maui/Top of the South Island and consider the Te Hoiere/Pelorus to be at the centre of their spheres of occupation and influence, spanning 1,000 years.

Over many centuries Ngati Kuia and their descendants have built paa, kainga, purakau, mapped mahinga kai and built spiritual connections where their people lived and been laid to rest.

"Te Hoiere awa/moana is Taonga tuku iho ki Tangata Whenua/Ngati Kuia therefore this requires the Crown and its agencies to give recognition to and make provision for the exercise of Kaitiakitanga by whanau, hapu and Iwi who are operating within the Maori Customary and commercial Deeds of Settlement.[33]"

13.0 COMMERCIAL AND RECREATIONAL FISHING

Matters impacting on commercial and recreational fishing are controlled by the Ministry of Primary Industry's (MPI) Undue Adverse Effects test (UAE).

13.1 Commercial Fishing

Commercial fishing is not known to occur in Island Bay but may occur offshore. The farm will not interfere with commercial fishing operations. No artificial feed or attractants are added.

13.2 Recreational Fishing

It is the Applicant's view that the marine farm at the site enhances opportunities for recreational fishing, as marine farms generally tend to create an ecosystem which is conducive to the presence of reef fish and other fish species.

14.0 VISUAL EFFECTS OF THE FARM

Visual effects will remain the same as they exist at the present. The farm is consented for 5 long lines and the farm structures presently consist of 5 long lines each being approximately 84-125 metres in length containing black mussel buoys ranging between approximately 4 and 50 per line.

At the end of each longline an orange buoy will be displayed and an orange buoy will be displayed in the middle of each of the seaward most and landward most longlines.

A yellow light, radar reflector and a band of reflective tape will be displayed on the seaward corners and radar reflectors and a band of reflective tape will be displayed on the landward corners or as requested on the lighting plan provided by the Harbour Master.

15.0 EFFECTS ON WATER QUALITY AND ECOLOGY

Water quality of the area is suitable for mussel farming. The site relies on water quality to enable the process of mussel farming to flourish. The site 8038 has a good capacity for mixing of water with regular tidal currents, wind and wave action.

The effect on the ecology of the site from the existing activity is attached in the Davidson Environmental Limited Report 913.

No specific sites of marine ecological significance have been identified in Island Bay in the 'Ecological Significant Marine Sites in Marlborough New Zealand' published by Rob Davidson and others in 2011, however Admiralty Bay has been identified as biological important for dusky dolphins, see 10.2 above.

16.0 EFFECTS ON PRODUCTIVITY

Water quality is unlikely to be a problem for mussel farming in Island Bay. The continuing activity itself is unlikely to create any significant detrimental effects on water quality.
Exert from Davidson Report (Benthic Report 913, refer attached).

"7.7.2 Productivity
Mussel farms can influence adjacent farms by slowing water flow to farms located in downstream positions (Ogilvie, 2000). This is particularly pronounced in quiescent areas of the Sounds. However, published work by Zeldis et al. (2008, 2013) suggests that the major factors influencing productivity in the Marlborough Sounds relate to cyclical weather patterns in the summer (El Nino and La Nina) and river-derived nutrient inputs in winter. Slow crop cycles in some years are therefore a reflection of a weather cycle and much less about the number of farms.

There has been no data presented to show the ecological carrying capacity of the Sounds has been reached, however, this topic is not well researched. There is considerable evidence showing the major drivers of the Pelorus system, for example, naturally leads to large within and between year variability. Relative to this, the impact of mussel farms appears to be material but relatively small compared to major environmental drivers (Broekhuizen et al., 2015).

Tidal flows in inner Admiralty Bay are low (Broekhuizen, 2015). Winds may be a more significant driver of water movement in this area, especially during the predominant north-westerly winds in summer. The proximity of the farm to the main channel through French Pass and Cook Strait means water turnover times are likely to be short compared to bays well distant to main reaches in Pelorus Sound (e.g. Hallam Cove).

Based on these considerations and the existing literature, it is probable the site will likely cause phytoplankton depletion inside its boundaries; however these are expected to return to background levels as water leaves the consent.

The present reconsenting application represent no change to the number of consented lines and therefore represents no change to phytoplankton predation and water flows in the bay."

17.0 THE BENTHIC ENVIRONMENT

In terms of the benthic environment, the ecology of this area has been documented in Davidson Environmental Ltd Report 913 (refer to 7.1 above).

The farm structures are located over habitat considered suitable for this type of activity. No monitoring appeared to be necessary.

The applicant is mindful of the need to consider the cumulative effects of this farm over time and in combination with other effects, as required by s 3(d) of the Act. The effects of a farm at this specific location are assessed elsewhere in this assessment of environmental effects.

The aquaculture industry has contributed and is contributing to a better understanding of cumulative effects on a number of fronts, including:

(a) The Marine Farming Association co-funded the 2017 NIWA history of seabed change in Pelorus Sound project;

(b) A king shag working group has been formed to draft and implement an Action Plan and Research Strategy for the NZ King Shag, which involves several stakeholders, including government departments and industry;

(c) King shag population counts are undertaken by aerial survey as part of New Zealand King Salmon's consent conditions;

(d) Many benthic surveys have been conducted throughout the Sounds as part of marine farm consent applications. This has contributed to our overall understanding of Marlborough's marine environment;
(e) Water quality monitoring is undertaken as part of the Marlborough Shellfish Quality Programme; and
(f) Fisheries Resource Impact Assessments (FRIA) were collective industry-led bay by bay assessments on the impacts of aquaculture on fisheries resources.

The applicant continues to support the industry's collective response to these issues.

Aquaculture is part of the Marlborough Sounds environment. We cannot look at this application in isolation from its wider environment. We know that the marine environment in the Sounds has been modified by human activities, including physical disturbance from historical dredging and trawling, as well as from catchment effects such as historic land clearance. In a relative sense, we know that aquaculture is having less of an impact on the marine environment than many anthropogenic stressors, including climate change, ocean acidification, sedimentation from land-based activities, dredging and trawling, and coastal engineering.

We also know that mussel farms provide benefits or "ecosystem services." Farmed mussels have replaced the natural mussel beds that were present throughout the Pelorus Sound in the 1960s prior to extensive commercial dredging. Mussels remove nutrients derived from land-use practices.

The applicant agrees with other stakeholders who are calling for a strategic assessment of cumulative effects. That exercise is required by policy 7(2) of the New Zealand Coastal Policy Statement 2010. It is more than can be expected of one applicant. It is best undertaken via the proposed Marlborough Environment Plan process, or in partnership with local and central government.

18.0 ALIENATION OF PUBLIC SPACE

The general area of this part of Admiralty Bay has been utilised by marine farmers in excess of 38 years. Recreation and commercial boat owners are aware of marine farms in this area and all vessels have the opportunity to use the site and transit through it. The spacing between the long lines provides opportunity for access by vessels wanting to transit the site.

19.0 HARVESTING

As part of this Application, the Applicant seeks to continue harvesting mussel crops. The right to navigate to and from the farm, and to anchor, moor and load crop is preserved by section 27 of the Marine and Coastal Area (Takutai Moana) Act 2011. However, consent is required for the amount of organic waste matter which is discharged during the harvesting process and for the

take and use of coastal water. No significant historical adverse effects have been recorded or are anticipated and any visual evidence of harvesting quickly dissipates in the coastal environment.

Vessels will be required to service the farm on an irregular basis (refer 8.5).

20.0 ON SHORE FACILITIES

The applicant's farm work and harvesting are completed by Sanford Limited who already has onshore marine farm facilities based in Havelock.

21.0 VALUE OF INVESTMENT

As part of this Application to renew site 8038, the Applicant is seeking to re-consent the site for a period of 20 years. As a result, this is an Application to which section 165ZH(1)(c) applies and the Council must, when considering the application, have regard to the value of the investment of the existing consent holder under section 104(2A).

The original existing site has been held by the applicant since 1990. From that time the applicant has expended significantly on the establishment and maintenance of the farm.

The farm produces approximately 50 tonnes per annum ($1300/ Green Weight Tonne (GWT)) and after processing the final ½ shell product would be sold on the export market at approximately $120,000. Approximately 95% of mussel products are exported. All lines are restocked after harvest to achieve 50 GWT/per annum harvests.

The mussels are processed in Havelock where they provide a critical part of the production to maintain processing to the factory which employees 163 FTE.

22.0 PART II RESOURCE MANAGEMENT ACT ISSUES

22.1 Section 5

Section 5 of the Resource Management Act 1991 is given effect through the New Zealand Coastal Policy Statement, Marlborough Regional Policy Statement and Marlborough Sounds Resource Management Plan.

In terms of the enabling provisions in Section 5 of the Resource Management Act, the marine farm industry has been, and will continue to be, a source of substantial revenue generation and job creation in the Marlborough Sounds and, in the Nelson/Marlborough region.

The majority of mussels produced from the site will be exported, thereby generating foreign exchange earnings for the country. Applications such as this enable the sustainable use of the marine environment.

22.2 Section 6

Matters of national importance have been assessed under the requirements of the Marlborough Sounds Resource Management Plan.

The Proposal recognises:

a. *The preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision use, and development:*

Section 6(a) is given effect through Policy 13 of the New Zealand Coastal Policy Statement and is considered further below.

b. *The protection of outstanding natural features and landscapes from inappropriate Subdivision, use, and development:*

The area has not been identified within the current Marlborough Sounds Resource Management Plan as being an area of outstanding natural landscape value. The area has not been described as an area of outstanding nature landscapes and features in the proposed Plan.

c. *The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:*

The adjacent land next to the farm is regenerating scrub and pastureland.

d. *The maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:*

Public access is maintained with good separation from the coast and main navigational routes.

e. *The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.*

The Applicant will continue to discuss this through consultation with Iwi.

22.3 Section 7

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to:

(a) Kaitiakitanga:

(b) The efficient use and development of natural and physical resources:

(c) The maintenance and enhancement of amenity values:

(d) Intrinsic values of ecosystems:

(e) Recognition and protection of the heritage values of the sites, buildings, place, or areas:

(f) Maintenance and enhancement of quality of the environment:

(g) Any finite characteristics of natural and physical resources:

(h) The protection of the habitat of trout and salmon.

Matters under Section 7 (a - g) have been considered earlier in the original proposal. This Application is not anticipated to have any additional effects over and above what already exists. Section (h) is not relevant to this Application.

23.0 NEW ZEALAND COASTAL POLICY STATEMENT 2010 (NZCPS)

The New Zealand Coastal Policy Statement 2010 is of general relevance to this Application and all policies have been considered in the development of the proposal.

Policies of specific relevance are considered below.

23.1 Policy 2

Policy 2 sets out a number of matters which are relevant to the taking into account of the principles of the Treaty of Waitangi and kaitiakitanga, in relation to the coastal environment.

The applicant recognises that Ngāti Apa ki te Rā Tō, Ngāti Kuia, Rangitāne o Wairau, Ngāti Kōata, Ngāti Rārua, Ngāti Tama ki Te Tau Ihu, Te Ātiawa o Te Waka-a-Māui and Ngati Toa Rangatira have statutory acknowledgments in the area of the application site. Those acknowledgements have been considered during the preparation of this application, as outlined above.

The iwi management plans of Ngāti Kōata and Te Ātiawa o Te Waka-a-Māui have been reviewed.

There are also no established areas of protected customary rights or customary marine title within the meaning of the Marine and Coastal Area (Takutai Moana) Act 2011.

The applicant recognises that Ngati Kuia have a special, long, intergenerational association to Te TauIhu o te waka a Maui/Top of the South Island and consider the Te Hoiere/Pelorus to be at the centre of their spheres of occupation and influence, spanning 1,000 years.

Over many centuries Ngati Kuia and their descendants have built paa, kainga, purakau, mapped mahinga kai and built spiritual connections where their people lived and been laid to rest.

"Te Hoiere awa/moana is Taonga tuku iho ki Tangata Whenua/Ngati Kuia therefore this requires the Crown and its agencies to give recognition to and make provision for the exercise of Kaitiakitanga by whanau, hapu and Iwi who are operating within the Maori Customary and commercial Deeds of Settlement.[34]"

The Applicant will discuss the proposal further with relevant Iwi representatives.

23.2 Policy 6

Policy 6 of the NZCPS is in two parts; the first dealing with activities in the coastal environment more broadly, and the second with those in the coastal marine area more specifically.

The farm is part of the existing built environment, so is in accordance with subpart 1(f), as continuation of the farm would not result in a change in the present character of Island Bay.

No areas of indigenous biodiversity or historic heritage value have been identified in relation to the site, so the farm complies with subpart 1(j).

Subpart 2 of Policy 6 is particularly relevant. Mussel farming clearly has a functional need to be located in the coastal marine area. The farm directly contributes to the social and economic wellbeing of people and communities, in accordance with subpart 2(a). This is discussed in relation to Policy 8 below.

23.3 Policy 8

Policy 8 of the NZCPS provides for the recognition of the significant existing and potential contribution of aquaculture to the social, economic and cultural wellbeing of people and communities by:

> *(a) including in regional policy statements and regional coastal plans provision for aquaculture activities in appropriate places in the coastal environment, recognising that relevant considerations may include:*
>
> *i. The need for high quality water for aquaculture activities; and*
>
> *ii. The need for land-based facilities associated with marine farming.*
>
> *(b) Taking account of the social and economic benefits of aquaculture, including any available assessments of national and regional economic benefits; and*
>
> *(c) Ensuring that development in the coastal environment does not make water quality unfit for aquaculture activities in areas approved for that purpose.*

The Application will enable the continuation of production from the site, contributing to the social and economic benefits of aquaculture to the community. No changes to the impact on water quality are anticipated. This Application satisfies the requirement of Policy 8.

23.4 Policy 11

Policy 11 relates to protecting the indigenous biological diversity of the coastal environment.

The longlines are located over mud habitat and avoids any reef areas or any other areas of significant biodiversity. There will be no adverse modified effects on indigenous biodiversity

23.5 Policy 13

Policy 13 provides for the avoidance of significant adverse effects on areas of the coastal environment with outstanding natural character and the avoidance, remediation and mitigation of other adverse effects on natural character.

The area has not been identified within the Marlborough Sounds Resource Management Plan as being an area of outstanding natural landscape value.

The area has not been described as an area of outstanding or very high or high natural character in the proposed Plan.

23.6 Policy 15

Policy 15(a) provides for the avoidance of adverse effects of activities on outstanding natural features and outstanding natural landscapes in the coastal environment.

Policy 15(b) provides for the avoidance of significant adverse effects and the avoidance, remediation, and mitigation of other adverse effects of activities on other natural features and natural landscapes in the coastal environment.

There will be no further impact on the landscape than those already occurring under the current consent. The effects of the Application on the landscape will be minor and the effects are not likely to impact on the values which contribute to the landscape.

23.7 Policy 18

Policy 18 recognises the need for public open space within and adjacent to the coastal marine area, for public use and appreciation including active and passive recreation.

The visual impact of the marine farm will not change. Access to the coast for recreationalists is maintained.

There is one registered mooring in the vicinity of the site. The site does not impede access to this mooring.

There is a jetty approximately 150 metres to the north east of the site. The site does not impede access to this jetty.

There are no formal water ski lanes.

Opportunities for recreational fishing may be enhanced by the presence of the marine farm.

23.8 Policy 22

Policy 22 requires an assessment of sedimentation levels, and that use will not result in a significant increase in those levels. Davidson's biological report, discussed above, stated that while shell and fine sediment would be deposited under and in proximity to droppers, the farm structures are located over habitat considered suitable for this type of activity. No monitoring appeared to be necessary.

23.9 Policy 23

Subpart 1 of Policy 23, which relates to managing discharges to water in the coastal environment, is relevant to this Application. Silts and organic matter released at harvest are readily assimilated into the water column and seabed. The effects of harvesting mussels are only transitory, and quickly become indistinguishable from background sedimentation.

Conclusion

The effects of the Application on the landscape will be no more than minor and will result in no change to the existing status. The effects are not likely to impact on the values which contribute to the landscape.

24.0 REGIONAL POLICY STATEMENT/MARLBOROUGH SOUNDS RESOURCE MANAGEMENT PLAN

Certain provisions of the Marlborough Regional Policy Statement have relevance to this application and are considered in Appendix A.

The Marlborough Sounds Resource Management Plan contains a number of provisions that are relevant this application. An assessment of the application against the requirements of the plan is contained in Appendix B.

Conclusion

Taken overall, the application is consistent with the relevant objectives and policies of the Regional Policy Statement and Marlborough Sounds Resource Management Plan.

25.0 CONSULTATION

An e-mail has been sent to all Iwi listed below identifying the site prior to the application being submitted.

Name	Address	Phone
Ngati Koata Trust	PO Box 1659, Nelson 7040	(03) 548 1639
Te Runanga a Rangitane o Wairau	PO Box 883, Blenheim 7240	(03) 578 6180
Te Runanga O Ngati Kuia	PO Box 1046, Blenheim 7240	(03) 579 4328
Ngāti Apa ki te Rā Tō	PO Box 708, Blenheim 7240	(03) 578 9695
Te Atiawa Manawhenua Ki Te Tau Ihu Trust	PO Box 340, Picton 7250	(03) 573 5170
Ngati Toarangatira Manawhenua Ki Te Tau Ihu Trust	PO Box 5061, Blenheim 7240	(03) 577 8801
Ngati Rarua Trust	PO Box 1026, Blenheim 7240	(03) 577 8468

A statement from Ngai Kuia has been included in sections 12 and 23.1 of this report.

A consultation meeting will be arranged with Ngati Kuia and Ngati Koata prior to submitting application.

26.0 CONCLUSION

The Applicant considers that the renewal of site 8038 is appropriate, thereby allowing the continued farming of Greenshell mussels at the site.

The site is in that part of the Admiralty Bay where aquaculture has long been present and has no more than a minor impact on other values in the area.

Appendix A: Marlborough Regional Policy Statement – Policy Analysis

Objective	Policy	Assessment
5.3.2: That water quality in the coastal marine area be maintained at a level which provides for the sustainable management of the marine ecosystem	5.3.5: Avoid, remedy or mitigate the reduction of coastal water quality by contaminants arising from activities occurring within the coastal marine area.	No artificial feed or attractants are added. No Chemicals, antibiotics or other theraputants added Any discharges of organic matter associated with harvesting will be transitory.
5.3.10: The natural species diversity and integrity of marine habitats be maintained or enhanced	5.3.11: Avoid, remedy or mitigate habitat disruption arising from activities occurring within the coastal marine area.	Any disruption associated with the existing mooring of the farm is minor in scale and transitory. The seabed is already in a modified state due to terrestrial run off.
7.1.9: To enable present and future generations to provide for their wellbeing by allowing use, development and protection of resources provided any adverse effects of activities are avoided, remedied or mitigated.	7.1.10: To enable appropriate type, scale and location of activities by: • clustering activities with similar effects; • ensuring activities reflect the character and facilities available in the communities in which they are located; • promoting the creation and maintenance of buffer zones (such as stream banks or 'greenbelts'); • locating activities with noxious elements in areas where adverse environmental effects can be avoided, remedied or mitigated.	The marine farm is consistent with the current Policy and the designated consented area is within a bay with other marine farms.
	7.1.12: To ensure that no undue barriers are placed on the establishment of new activities (including new primary production species) provided the life supporting capacity of air, water, soil and ecosystems is safeguarded and any adverse environmental effects are avoided, remedied or mitigated.	The marine farm application is located within the consented area which marine farming is a permitted activity. There will be no change in permitted activity or permitted structures when the consent is renewed.

7.2.7 The subdivision use and development, of the coastal environment, in a sustainable way.	7.2.8: Ensure the appropriate subdivision, use and development of the coastal environment.	The marine farm is within a bay with other marine farms. The marine farm's activity is biologically sustainable.
	7.2.10(a) - (d)	The marine farm is located within the consented area which is permitted for marine farming.
7.3.2: Buildings, sites, trees and locations identified as having significant cultural or heritage value are retained for the continued benefit of the community.	7.3.3: Protect identified significant cultural and heritage features	No sites of cultural or heritage significance have been identified on the area of the application site
8.1.2: The maintenance and enhancement of the visual character of indigenous, working and built landscapes.	8.1.3: Avoid, remedy or mitigate the damage of identified outstanding landscape features arising from the effects of excavation, disturbance of vegetation, or erection of structures.	There will be no further impact on the landscape than those already permitted under the current consent. The effects of the application on the landscape will be minor and the effects are not likely to impact on the values which contribute to the landscape. The farm is well managed and complies with the Greenshell Mussel Environmental Code of Practice.
	8.1.5: Promote enhancement of the nature and character of indigenous, working, and built landscapes by all activities which use land and water.	The marine farm will have no additional impact on landscape values.
	8.1.6: Preserve the natural character of the coastal environment.	The site will have no additional impact on the natural character of the coastal environment.

Appendix B: Marlborough Sounds Resource Management Plan – Policy Analysis

Objective	Policy	Assessment
Ch 2, 2.2, Obj 1: The preservation of the natural character of the coastal environment, wetlands, lakes, and rivers and their margins and the protection of them from inappropriate subdivision, use and development.	Policy 1.1: Avoid the adverse effects of subdivision, use or development within those areas of the coastal environment and freshwater bodies which are predominantly in their natural state and have natural character which has not been compromised.	This application is set in an area which is regenerating scrub and pastureland. The marine farm is within a bay with other marine farms.
	Policy 1.2: Appropriate use and development will be encouraged in areas where the natural character of the coastal environment has already been compromised, and where the adverse effects of such activities can be avoided, remedied or mitigated.	Refer above.
	Policy 1.3: To consider the effects on those qualities, elements and features which contribute to natural character, including: a) Coastal and freshwater landforms; b) Indigenous flora and fauna, and their habitats; c) Water and water quality; d) Scenic or landscape values; e) Cultural heritage values, including historic places, sites of early settlement and sites of significance to iwi; and f) Habitat of trout.	These matters have been considered in the assessment of environmental effects.
	Policy 1.4: In assessing the actual or potential effects of subdivision, use or development on natural character of the coastal and freshwater environments, particular regard shall be had to the policies in Chapters, 3, 4, 5, 6, 12, 13 and Sections 9.2.1, 9.3.2 and 9.4.1 in recognition of the components of natural character.	The application will not have any additional impact on the components of these policies which impact natural character values.

	Policy 1.6: In assessing the appropriateness of subdivision, use or development in coastal and freshwater environments regard shall be had to the ability to restore or rehabilitate natural character in the area subject to the proposal.	Any residual impact on natural character will naturally rehabilitate on removal of the farm.
	Policy 1.7: To adopt a precautionary approach in making decisions where the effects on the natural character of the coastal environment, wetlands, makes and rivers (and their margins) are unknown.	The effects of this application are not unknown and are discussed elsewhere in the assessment of environmental effects. A precautionary approach is not justified.
Ch 4, 4.3, Obj 1: The protection of significant indigenous flora and fauna (including trout and salmon) and their habitats from the adverse effects of use and development	Policy 1.2: Avoid, remedy or mitigate the adverse effects of land and water use on areas of significant ecological value.	The effect of the marine farm on the adjacent area will not have any effect on the flora and fauna of this area.
Ch 5, 5.3, Obj 1: Management of the visual quality of the Sounds and protection of outstanding natural features and landscapes from inappropriate subdivision, use and development	Policy 1.1: Avoid, remedy and mitigate adverse effects of subdivision, use and development, including activities and structures, on the visual quality of outstanding natural features and landscapes, identified according to criteria in Appendix One.	The effects of the application on the landscape will be the same as the current permitted activity and the effects are not likely to impact on the values which contribute to the landscape.
Ch 6, 6.1.2, Obj 1: Recognition and provision for the relationship of Marlborough's Maori to their culture and traditions with their ancestral lands, waters, sites, waahi tapu and other taonga.	Policies 1.1-1.5	In preparing this application, the applicant has had regard to the Statutory Acknowledgments and has reviewed the statements of association for each iwi. An initial letter has been sent to all Iwi identifying the site prior to the application being submitted.
Ch 8, 8.3, Obj 1: That public access *to and along* the coastal marine area, lakes and rivers be maintained and enhanced.	Policy 1.2: Adverse effects on public access caused by the erection of structures, marine farms, works or activities in or along the coastal marine area should as far as practicable be avoided. Where complete avoidance is not practicable, the adverse effects	There are no additional adverse effects on public access caused by the marine farm.

	should be mitigated and provision made for remedying those effects, to the extent practicable.	
	Policy 1.3: To prevent the erection of structures and marine farms that restrict public access in the coastal marine area where it is subjected to high public usage.	There are no additional adverse effects on public access caused by the marine farm.
	Policy 1.8: Public access to and along the coastal marine area should be maintained and enhanced except where it is necessary to [circumstances do not apply].	There are no additional adverse effects on public access caused by the marine farm.
Ch 9, 9.2.1, Obj 1: The accommodation of appropriate activities in the coastal marine area whilst avoiding, remedying or mitigating the adverse effects of those activities.	Policy 1.1: Avoid, remedy and mitigate the adverse effects of use and development of resources in the coastal marine area on any of the following: a) Conservation and ecological values; b) Cultural and iwi values; c) Heritage and amenity values; d) Landscape, seascape and aesthetic values; e) Marine habitats and sustainability; f) Natural character of the coastal environment; g) Navigational safety; h) Other activities, including those on land; i) Public access to and along the coast; j) Public health and safety; k) Recreation values; and l) Water quality.	The way in which adverse effects on the stated values will be avoided, remedied and mitigated is addressed elsewhere in the assessment of environmental effects. Overall, the proposal is consistent with this policy.
	Policy 1.2: Adverse effects of subdivision, use or development in the coastal environment should as far as practicable be avoided. Where complete avoidance is not practicable, the adverse effects should be mitigated and provision made for remedying those effects to the extent practicable.	The marine farm is within a bay with other marine farms. There are no additional adverse effects on the coastal environment from this farm. The navigational lighting requirements will not change from the existing consent.

	Policy 1.3: Exclusive occupation of the coastal marine area or occupation which effectively excludes the public will only be allowed to the extent reasonably necessary to carry out the activity.	Consistent with other marine farms in the Marlborough Sounds, exclusive occupation of the consent area is not sought, other than for the area physically occupied by the lines and anchoring devices.
	Policy 1.6: Ensure recreational interests retain a dominant status over commercial activities that require occupation of coastal space and which preclude recreational use in Queen Charlotte Sound, including Tory Channel, but excluding Port and Marina Zones.	Not applicable
	Policy 1.7: Avoid adverse effects from the occupation of coastal space in or around recognised casual mooring areas.	Exclusive occupation of the consent area is not sought. There is one mooring located in the Bay. The farm does not impede the navigation to this mooring.
	Policy 1.12: To enable a range of activities in appropriate places in the waters of the Sounds including marine farming, tourism and recreation.	Policy 1.12 enables marine farming in appropriate places. Site 8038 is consented for marine farming, there are other marine farms consented in the adjacent bay.
	Policy 1.13: Enable the renewal as controlled activities of marine farms authorised by applications made prior to 1 August 1996 as controlled activities, apart from exceptions in Appendix D2 in the Plan.	NA
Ch 9, 9.3.2, Obj 1: Management of the effects of activities so that water quality in the coastal marine area is at a level which enables the gathering or cultivating of shellfish for human consumption (Class SG).	Policies 1.1 to 1.11	This application is not anticipated to have any impact on shellfish quality.

Ch 9, 9.4.1, Obj 1:	Policy 1.1: Avoid, remedy or mitigate the adverse effects of activities that disturb or alter the foreshore and/or seabed on any of the following: [criteria specified in Plan].	There will be no additional disturbances of the seabed.
Ch 9, 9.4A.1, Obj 1:	n/a	These policies are no longer relevant due to abolition of AMAs through legislation.
Ch 19, 19.3, Obj 1: Safe, efficient and sustainably managed water transport systems in a manner that avoids, remedies and mitigates adverse effects.	Policy 1.1: Avoid, remedy or mitigate the adverse effects of activities and structures on navigation and safety, within the coastal marine area.	There have been no reported navigational incidences in the bay. There will be no changes to the existing consent conditions regarding the navigational aids placed on the farm.
Ch 22, 22.3, Obj 1: To avoid, remedy and mitigate the adverse effects of unreasonable noise, while allowing for reasonable noise associated with port activities.	Policy 1.1: Avoid, remedy and mitigate community disturbance, disruption or interference by noise within coastal, rural, and urban areas.	There nearest resident is approximately 250 metres from the site. A servicing vessel is estimated to spend approximately 30-40 hours per annum maintaining and harvesting the lines per year. The applicant complies with the 'Code of Practice to avoid, remedy or mitigate noise from marine farming activities in the Marlborough Sounds, Golden Bay and Tasman Bay on other users and residents'

Appendix C: Analysis of Consistency with the Proposed Marlborough Environment Plan (Volume 1)

MEP Provision	Evaluation
Objective 3.2 – Natural and physical resources are managed in a manner that takes into account the spiritual and cultural values of Marlborough's tangata whenua iwi and respects and accommodates tikanga Māori. [RPS]	The applicant has prepared the application in a manner that takes into account the spiritual and cultural values of Marlborough's tangata whenua iwi. Recognition is given to Māori culture and traditions and confirmation from Iwi is sought to ensure the proposal does not affect these values.
Objective 3.3 – The cultural and traditional relationship of Marlborough's tangata whenua iwi with their ancestral lands, water, air, coastal environment, waahi tapu and other sites and taonga are recognised and provided for. [RPS]	See sections 12 and 22 AEE.
Objective 3.5 – Resource management decision making processes that give particular consideration to the cultural and spiritual values of Marlborough's tangata whenua iwi. [RPS]	The applicant has given particular consideration to the matters in objective 3.5, as discussed, the AEE at sections 12 and 22, in order to assist decision makers.
Policy 3.1.1 – Management of natural and physical resources in Marlborough will be carried out in a manner that: (a) takes into account the principles of the Treaty of Waitangi/Te Tiriti o Waitangi, including kāwanatanga, rangatiratanga, partnership, active protection of natural resources and spiritual recognition. (b) recognises that the way in which the principles of the Treaty of Waitangi/Te Tiriti o Waitangi will be applied will continue to evolve; (c) promotes awareness and understanding of the Marlborough District Council's obligations under the Resource Management Act 1991 regarding the principles of the Treaty of Waitangi/Te Tiriti o Waitangi among Council decision makers, staff and the community; (d) recognises that tangata whenua have rights protected by the Treaty of Waitangi/Te Tiriti o Waitangi and that consequently the Resource Management Act 1991 accords iwi a status distinct from that of interest groups and members of the public; and (e) recognises the right of each iwi to define their own preferences for the sustainable management of natural and physical resources, where this is not inconsistent with the Resource Management Act 1991.	See above.

MEP Provision	Evaluation
[RPS]	
Policy 3.1.2 – An applicant will be expected to consult early in the development of a proposal (for resource consent or plan change) so that cultural values of Marlborough's tangata whenua iwi can be taken into account. [RPS]	See above.
Policy 3.1.3 – Where an application for resource consent or plan change is likely to affect the relationship of Marlborough's tangata whenua iwi and their culture and traditions, decision makers shall ensure: (a) the ability for tangata whenua to exercise kaitiakitanga is maintained; (b) mauri is maintained or improved where degraded, particularly in relation to fresh and coastal waters, land and air; (c) mahinga kai and natural resources used for customary purposes are maintained or enhanced and that these resources are healthy and accessible to tangata whenua; (d) for waterbodies, the elements of physical health to be assessed are: i. aesthetic and sensory qualities, e.g. clarity, colour, natural character, smell and sustenance for indigenous flora and fauna; ii. life-supporting capacity, ecosystem robustness and habitat richness; iii. depth and velocity of flow (reflecting the life force of the river through its changing character, flows and fluctuations); iv. continuity of flow from the sources of a river to its mouth at the sea; v. wilderness and natural character; vi. productive capacity; and vii. fitness to support human use, including cultural uses. (e) how traditional Māori uses and practices relating to natural and physical resources such as mahinga maataitai, waahi tapu, papakāinga and taonga raranga are to be recognised and provided for. [RPS]	The applicant has had regard to the matters in Policy 3.1.3, as set out above, and in the AEE. Ecological effects have been assessed by Davidson Environmental in the report annexed to this application.

MEP Provision	Evaluation
Policy 3.1.5 – Ensure iwi management plans are taken into account in resource management decision making processes. [RPS]	The applicant has reviewed the Iwi management plans of Ngāti Kōata and Te Ātiawa o Te Waka-a-Māui.
Objective 4.1 – Marlborough's primary production sector and tourism sector continue to be successful and thrive whilst ensuring the sustainability of natural resources. [RPS]	The application will support the mussel farming industry in Marlborough and provide an opportunity for that industry to grow. The proposal ensures the sustainability of natural resources, as the adverse effects of mussel farming at the site are likely to be limited, as per the Davidson Environmental report. Within months of removing the farms, any trace of their presence will dissipate. Therefore, the proposal does not restrict the ability of future generations to decide how they wish to use these resources.
Policy 4.1.2 – Enable sustainable use of natural resources in the Marlborough environment. [RPS]	As above at Objective 4.1.
Policy 4.1.3 – Maintain and enhance the quality of natural resources. [RPS]	The proposal will have no more than minor effects on the quality of the natural resources at the site, and those effects are reversible upon removal of the farms.
Objective 4.3 – The maintenance and enhancement of the visual, ecological and physical qualities that contribute to the character of the Marlborough Sounds. [RPS]	The ecological character of the site will be maintained (see Davidson Environmental report). The application site is located over a habitat of sandy mud, typical of similar areas in the Sounds. The effects of low intensity farming are not likely to be significant. The relatively strong currents at the site are sufficient to prevent the accumulation of organic deposition. The existing character of the area is a working landscape. It is well-suited to the proposed activity due to the existing level of modification from farming and aquaculture. The proposed renewal is unlikely to adversely affect the existing values of the area.

MEP Provision	Evaluation
Policy 4.3.2 – Identify the qualities and values that contribute to the unique and iconic character of the Marlborough Sounds and protect these from inappropriate subdivision, use and development. [RPS]	The applicant has had regard to the qualities and values identified by the Council in the MEP, as indicated elsewhere in this policy assessment and in the application. Overall, the proposal is appropriate.
Policy 4.3.3 – Provide direction on the appropriateness of resource use activities in the Marlborough Sounds environment. [RPS]	The aquaculture provisions of the MEP have yet to be notified. The proposed site is zoned CMZ2 under the operative MSRMP, which suggests that aquaculture is appropriate in the area.
Policy 4.3.4 – Enhance the qualities and values that contribute to the unique and iconic character of the Marlborough Sounds. [RPS]	The proposal will not have significant effects on the qualities and values of the Sounds, and any effects are reversible upon removal of the farms.
Policy 4.3.5 – Recognise that the Marlborough Sounds is a dynamic environment [RPS]	The applicant recognises that the Sounds is a dynamic environment. The appropriateness of the farm can be re-assessed by future generations in the context of the future environment of the area through the resource consenting process.
Objective 5.10 – Equitable and sustainable allocation of public space within Marlborough's coastal marine area. [RPS, C]	The applicant acknowledges that it is a privilege to occupy public space in the coastal marine area. The public will still have access around and through the site, and the proposal will not affect the ability of future generations to enjoy that public space.
Policy 5.10.1 – Recognition that there are no inherent rights to be able to use, develop or occupy the coastal marine area. [RPS, C]	The applicant recognises that it has no inherent right to occupy and use the coastal marine area and requires resource consent for the proposed activity.
Policy 5.10.2 – The 'first in, first served' method is the default mechanism to be used in the allocation of resources in the coastal marine area. Where competing demand for coastal space becomes apparent, the Marlborough District Council may consider the option of introducing an alternative regime. [RPS, C]	The applicant considers that the first in first served method of allocation is appropriate for applications that meet the statutory requirements.

MEP Provision	Evaluation
Policy 5.10.3 – Where a right to occupy the coastal marine area is sought, the area of exclusive occupation should be minimised to that necessary and reasonable to undertake the activity, having regard to the public interest. [RPS, C]	The design of the site layout ensures the public will have access inshore of and through the farm.
Policy 5.10.4 – Coastal occupancy charges will be imposed on coastal permits where there is greater private than public benefit arising from occupation of the coastal marine area. [C]	The applicant has insufficient information on coastal occupancy charges to understand the implications.
Policy 5.10.5 – The Marlborough District Council will waive the need for coastal occupancy charges for the following: … (b) monitoring equipment; [C]	Davidson Environmental has not indicated that ongoing monitoring is necessary at this site.
Policy 5.10.6 – Where there is an application by a resource consent holder to request a waiver (in whole or in part) of a coastal occupation charge, the following circumstances will be considered: [(a) – (d)] [C]	Refer Policy 5.10.4
Objective 6.2 – Preserve the natural character of the coastal environment, and lakes and rivers and their margins, and protect them from inappropriate subdivision, use and development. [RPS, R, C, D]	The farm will not adversely compromise the existing values of the area and is appropriate development
Policy 6.2.1 – Avoid the adverse effects of subdivision, use or development on areas of the coastal environment with outstanding natural character values… [RPS, R, C, D]	N/A –site is not identified in the MEP has having outstanding natural character values.
Policy 6.2.2 – Avoid significant adverse effects of subdivision, use or development on coastal natural character, having regard to the significance criteria in Appendix 4. [RPS, R, C, D]	The proposal avoids significant adverse effects. There will be no damage, loss or destruction. The effects are reversible upon removal of the farm.

MEP Provision	Evaluation
Policy 6.2.3 – Where natural character is classified as high or very high, avoid any reduction in the degree of natural character of the coastal environment or freshwater bodies. [RPS, R, C, D]	The site is not classified as having high natural character in the MEP. There will be no change in the degree of the biological components of natural character.
Policy 6.2.4 – Where resource consent is required to undertake an activity within coastal or freshwater environments with high, very high or outstanding natural character, regard will be had to the potential adverse effects of the proposal on the elements, patterns, processes and experiential qualities that contribute to natural character. [RPS, R, C, D]	See above and AEE sections 9 and 22.3.
Policy 6.2.5 – Recognise that development in parts of the coastal environment and in those rivers and lakes and their margins that have already been modified by past and present resource use activities is less likely to result in adverse effects on natural character. [RPS, R, C, D]	The proposal is less likely to have an adverse effect on natural character, given existing development in the area.
Policy 6.2.6 – In assessing the appropriateness of subdivision, use or development in coastal or freshwater environments, regard shall be given to the potential to enhance natural character in the area subject to the proposal. [RPS, R, C, D]	The effects are not of a scale to justify an enhancement programme.
Policy 6.2.7 – In assessing the cumulative effects of activities on the natural character of the coastal environment, or in or near lakes or rivers, consideration shall be given to: (a) the effect of allowing more of the same or similar activity; (b) the result of allowing more of a particular effect, whether from the same activity or from other activities causing the same or similar effect; and (c) the combined effects from all activities in the coastal or freshwater environment in the locality. [RPS, R, C, D]	There are existing aquaculture activities in the area and the farm has been operating for a number of years. There are unlikely to be cumulative effects issues.
Objective 7.2 – Protect outstanding natural features and landscapes from inappropriate subdivision, use and development and maintain and enhance landscapes with high amenity value.	The area is not mapped as ONFL (although these maps are subject to challenge through the consultation process on the MEP).

MEP Provision	Evaluation
Policy 7.2.1 – Control activities that have the potential to degrade those values contributing to outstanding natural features and landscapes by requiring activities and structures to be subject to a comprehensive assessment of effects on landscape values through the resource consent process. [R, C, D]	See above and sections 9
Policy 7.2.3 – Control activities that have the potential to degrade the amenity values that contribute to those areas of the Marlborough Sounds Coastal Landscape not identified as being an outstanding natural feature and landscape by: (a) using a non-regulatory approach as the means of maintaining and enhancing landscape values in areas of this landscape zoned as Coastal Living; (b) setting standards/conditions that are consistent with the existing landscape values and that will require greater assessment where proposed activities and structures exceed those standards; and… [C, D]	Policy 7.2.3(b) does not apply to the proposed site, because aquaculture rules have yet to be included in the MEP. As a result, the application must be assessed against the rules applying under the operative MSRMP. This has been done in a separate policy analysis table, at Appendix B.
Policy 7.2.4 – Where resource consent is required to undertake an activity within an outstanding natural feature and landscape or a landscape with high amenity value, regard will be had to the potential adverse effects of the proposal on the values that contribute to the landscape. [R, C, D]	See above.
Policy 7.2.5 – Avoid adverse effects on the values that contribute to outstanding natural features and landscapes in the first instance. Where adverse effects cannot be avoided and the activity is not proposed to take place in the coastal environment, ensure that the adverse effects are remedied. [R, C, D]	See above.
Policy 7.2.7 – Protect the values of outstanding natural features and landscapes and the high amenity values of the Wairau Dry Hills and the Marlborough Sounds Coastal Landscapes by: (a) In respect of structures: (i) avoiding visual intrusion on skylines, particularly when viewed from public places; (ii) avoiding new dwellings in close proximity to the foreshore; (iii) using reflectivity levels and building materials that complement the colours in the surrounding landscape; (iv) limiting the scale, height and placement of structures to minimise intrusion of built form into the landscape;	The applicant will minimise the scale, height and placement of structures to minimise intrusion of built form into the landscape. Buoys are low profile and predominantly black, save for orange navigation buoys required for navigational safety. The remainder of policy 7.2.7 does not apply to marine farming structures.

MEP Provision	Evaluation
(v) recognising that existing structures may contribute to the landscape character of an area and additional structures may complement this contribution; (vi) making use of existing vegetation as a background and utilising new vegetation as a screen to reduce the visual impact of built form on the surrounding landscape, providing that the vegetation used is also in keeping with the surrounding landscape character; and (vii) encouraging utilities to be co-located wherever possible… [R, C, D]	
Policy 7.2.8 – Recognise that some outstanding natural features and landscapes and landscapes with high amenity value will fall within areas in which primary production activities currently occur. [C, D]	Existing farming and aquaculture already occurs within the embayment and general area. The proposal is consistent with this primary production character.
Policy 7.2.9 – When considering resource consent applications for activities in close proximity to outstanding natural features and landscapes, regard may be had to the matters in Policy 7.2.7. [R, C, D]	See above.
Policy 8.3.1 – Manage the effects of subdivision, use or development in the coastal environment by: (a) avoiding adverse effects where the areas, habitats or ecosystems are those set out in Policy 11(a) of the New Zealand Coastal Policy Statement 2010; (b) avoiding adverse effects where the areas, habitats or ecosystems are mapped as significant wetlands or ecologically significant marine sites in the Marlborough Environment Plan; or (c) avoiding significant adverse effects and avoiding, remedying or mitigating other adverse effects where the areas, habitats or ecosystems are those set out in Policy 11(b) of the New Zealand Coastal Policy Statement 2010 or are not identified as significant in terms of Policy 8.1.1 of the Marlborough Environment Plan.	Admiralty Bay is mapped as a marine mammal (dolphin) site and addressed in section 10 of AEE (although these maps are subject to challenge through the consultation process on the MEP). The effect of the marine farm on the adjacent area will not have an effect on the flora and fauna of this area.
Policy 8.3.2 – Where subdivision, use or development requires resource consent, the adverse effects on areas, habitats or ecosystems with indigenous biodiversity value shall be: (a) avoided where it is a significant site in the context of Policy 8.1.1; and (b) avoided, remedied or mitigated where indigenous biodiversity values have not been assessed as being significant in terms of Policy 8.1.1	According to the Davidson Environmental report, the proposed farm is consistent with policy 8.3.2(b).

MEP Provision	Evaluation
Policy 8.3.5 – In the context of Policy 8.3.1 and Policy 8.3.2, adverse effects to be avoided or otherwise remedied or mitigated may include: [(a) – (t)]	See AEE and Davidson Environmental report.
Policy 8.3.8 – With the exception of areas with significant indigenous biodiversity value, where indigenous biodiversity values will be adversely affected through land use or other activities, a biodiversity offset can be considered to mitigate residual adverse effects. Where a biodiversity offset is proposed, the following criteria will apply: (a) the offset will only compensate for residual adverse effects that cannot otherwise be avoided, remedied or mitigated; (b) the residual adverse effects on biodiversity are capable of being offset and will be fully compensated by the offset to ensure no net loss of biodiversity; (c) where the area to be offset is identified as a national priority for protection under Objective 8.1, the offset must deliver a net gain for biodiversity; (d) there is a strong likelihood that the offsets will be achieved in perpetuity; (e) where the offset involves the ongoing protection of a separate site, it will deliver no net loss and preferably a net gain for indigenous biodiversity protection; and (f) offsets should re-establish or protect the same type of ecosystem or habitat that is adversely affected, unless an alternative ecosystem or habitat will provide a net gain for indigenous biodiversity.	Biodiversity offsetting is not justified in this case.
Objective 9.1 – The public are able to enjoy the amenity and recreational opportunities of Marlborough's coastal environment, rivers, lakes, high country and areas of historic interest. [RPS, R, C, D]	See sections 8, 9, 11, 13, 14 and 18 of the AEE.
Policy 9.1.1 – The following areas are identified as having a high degree of importance for public access and the Marlborough District Council will as a priority focus on enhancing access to and within these areas: (a) high priority waterbodies for public access on the Wairau Plain and in close proximity to Picton, Waikawa, Havelock, Renwick, Seddon, Ward and Okiwi Bay; (b) coastal marine area, particularly in and near Picton, Waikawa and Havelock, Kaiuma Bay, Queen Charlotte Sound (including Tory Channel), Admiralty Bay, Pelorus Sound, Mahau Sound, Mahikipawa Arm and Croiselles Harbour, Rarangi to the Wairau River mouth, Wairau Lagoons, Marfells Beach and Ward Beach…	N/A

MEP Provision	Evaluation
[RPS]	
Policy 9.1.2 – In addition to the specified areas in Policy 9.1.1, the need for public access to be enhanced to and along the coastal marine area, lakes and rivers will be considered at the time of subdivision or development, in accordance with the following criteria: (a) there is existing public recreational use of the area in question, or improving access would promote outdoor recreation; (b) connections between existing public areas would be provided; (c) physical access for people with disabilities would be desirable; and (d) providing access to areas or sites of cultural or historic significance is important. [RPS, C, D]	See above. The farm will not prevent access to areas or sites of cultural and historic significance in the area.
Policy 9.1.5 – Acknowledge the importance New Zealander's place on the ability to have free and generally unrestricted access to the coast. [RPS, C, D]	The applicant acknowledges the importance to New Zealanders of having unrestricted access to the coast. The site design ensures that the public will continue to have access through the site and along the shore.
Policy 9.1.7 – Recognise there is an existing network of marinas at Picton, Waikawa and Havelock, publicly owned community jetties, landing areas and launching ramps that make a significant contribution in providing access for the public to Marlborough's coastal areas. [RPS, C]	The proposed farm will be able to be accessed from the existing facilities of a contractor or lessee.
Policy 9.1.8 – Enable public use of jetties for the purposes of access to the Sounds Foreshore Reserve and legal road along the coast. [RPS, C]	There is a jetty approximately 150 metres to the north east of the site. The site does not impede access to this jetty.
Policy 9.1.13 – When considering resource consent applications for activities, subdivision or structures in or adjacent to the coastal marine area, lakes or rivers, the impact on public access shall be assessed against the following: (a) whether the application is in an area identified as having a high degree of importance for public access, as set out in Policy 9.1.1;	The structures have a functional need to be located in the coastal marine area. The public will have access through and around the site. Access to the site is by boat. Any impact on public access would be temporary, being reversible upon removal of the farm. Any restrictions on public access will be consistent with the purpose of a resource consent to farm

MEP Provision	Evaluation
(b) the need for the activity/structure to be located in the coastal marine area and why it cannot be located elsewhere; … (d) the extent to which the activity/subdivision/structure would benefit or adversely affect public access, customary access and recreational use, irrespective of its intended purpose; (e) in the coastal marine area, whether exclusive rights of occupation are being sought as part of the application; (f) for the Marlborough Sounds, whether there is practical road access to the site of the application; (g) how public access around or over any structure sought as part of an application is to be provided for; (h) whether the impact on public access is temporary or permanent and whether there is any alternative public access available; and (i) whether public access is able to be restricted in accordance with Policies 9.2.1 and 9.2.2. [C, D]	mussels, in line with policy 9.2.1. The effects on public access will be no more than minor, in accordance with policy 9.2.2.
Policy 9.3.2 – Seek diversity in the type and size of open spaces and recreational facilities to meet local, district, regional and nationwide needs, by: … (d) recognising and protecting the value of open space in the coastal marine area, high country environments and river beds. [RPS, C, D]	The applicant recognises the value of open space and has designed the site layout with this in mind.
Objective 10.1 – Retain and protect heritage resources that contribute to the character of Marlborough. [RPS]	See section 12 AEE.
Policy 10.1.3 – Identify and provide appropriate protection to Marlborough's heritage resources, including: (a) historic buildings (or parts of buildings), places and sites; (b) heritage trees; (c) places of significance to Marlborough's tangata whenua iwi; (d) archaeological sites; and (e) monuments and plaques. [RPS, C, D]	See above

MEP Provision	Evaluation
Chapter 13 objectives and policies.	N/A – Chapter 13 expressly states that it "does not contain provisions managing marine farming."
Objective 15.1a – Maintain and where necessary enhance water quality in Marlborough's rivers, lakes, wetlands, aquifers and coastal waters, so that: (a) the mauri of wai is protected; (b) water quality at beaches is suitable for contact recreation; (c) people can use the coast, rivers, lakes and wetlands for food gathering, cultural, commercial and other purposes; … (f) coastal waters support healthy ecosystems. [RPS, R, C]	Mussel farming will not have an adverse effect on water quality and may even enhance water quality.
Policy 15.1.1 – As a minimum, the quality of freshwater and coastal waters will be managed so that they are suitable for the following purposes: (a) Coastal waters: protection of marine ecosystems; potential for contact recreation and food gathering/marine farming; and for cultural and aesthetic purposes; … [RPS, R, C]	Aquaculture requires excellent water quality. The proposed farm will not have an adverse effect on water quality.
Policy 15.1.9 – Enable point source discharge of contaminants or water to water where the discharge will not result: (a) in any of the following adverse effects beyond the zone of reasonable mixing: (i) the production of conspicuous oil or grease films, scums, foams or floatable or suspended materials; (ii) any conspicuous change in the colour or significant decrease in the clarity of the receiving waters; (iii) the rendering of freshwater unsuitable for consumption by farm animals; (iv) any significant adverse effect on the growth, reproduction or movement of aquatic life; or (c) in the flooding of or damage to another person's property. [R, C]	Discharge from harvesting will not result in any of the specified adverse effects.

MEP Provision	Evaluation
15.1.10 – Require any applicant applying for a discharge permit that proposes the discharge of contaminants to water to consider all potential receiving environments and adopt the best practicable option, having regard to: (a) the nature of the contaminants; (b) the relative sensitivity of the receiving environment; (c) the financial implications and effects on the environment of each option when compared with the other options; and (d) the current state of technical knowledge and the likelihood that each option can be successfully applied. [RPS, R, C]	See Davidson Environmental report. Discharge occurs during harvesting, and the effects are momentary and insignificant. Contaminants are materials that are already in the water column, such as sediments and organic materials trapped by lines and structures.
15.1.11 – When considering any discharge permit application for the discharge of contaminants to water, regard will be had to: (a) the potential adverse effects of the discharge on spiritual and cultural values of Marlborough's tangata whenua iwi; (b) the extent to which contaminants present in the discharge have been removed or reduced through treatment; and (c) whether the discharge is of a temporary or short term nature and/or whether the discharge is associated with necessary maintenance work for any regionally significant infrastructure. [RPS, R, C]	See above Discharge during harvest is temporary in nature and sedimentation soon reverts to background levels, consistent with policy 15.1.11(c).
15.1.12 – After considering Policies 15.1.10 and 15.1.11, approve discharge permit applications to discharge contaminants into water where: (a) the discharge complies with the water quality classification standards set for the waterbody, after reasonable mixing; or (b) in the case of non-compliance with the water quality classification standards set for the waterbody: (i) the consent holder for an existing discharge can demonstrate a reduction in the concentration of contaminants and a commitment to a staged approach for achieving the water quality classification standards within a period of no longer than five years from the date the consent is granted; and (ii) the degree of non-compliance will not give rise to significant adverse effects. [RPS, R, C]	Water discharged during harvesting will comply with SG standards in Appendix 5.

MEP Provision	Evaluation
Policy 15.1.16 – The duration of any new discharge permit will be either: (a) Up to a maximum of 15 years for discharges into waterbodies or coastal waters where the discharge will comply with water quality classification standards for the waterbody or coastal waters; … (c) no more than five years where the existing discharge will not comply with water quality classification standards for the waterbody or coastal waters. With the exception of regionally significant infrastructure, no discharge permit will be granted subsequent to the one granted under (c), if the discharge still does not meet the water quality classification standards for the waterbody or coastal waters. [R, C]	This policy is inconsistent with s 123A of the Resource Management Act, which provides for a minimum 20-year term for coastal permits authorising aquaculture activities, unless a shorter period is required to ensure that adverse effects on the environment are adequately managed. This high threshold is not met in these circumstances. It is illogical to allow for a marine farming permit for 20 years and restrict a discharge permit for harvesting to 15 years. The applicant is seeking 20-year resource consent. The AEE suggests that this term in appropriate in these circumstances.

Footnotes

[1] MEP Volume 3, Appendix 1, pp 1-27 to 1-28.
[2] Dr Rachel McClellan, *King Shag Advice – Effects of Renewal of Outer Admiralty Bay Mussel Farm* (Wildland Consultants, December 2017) at p 4.
[3] R Davidson et al *Ecologically Significant Marine Sites in Marlborough, New Zealand* (September 2011, Davidson Environmental Ltd, Department of Conservation, Marlborough District Council and DuFresne Ecology Ltd).
[4] A new breading colony at Tawhitinui Reach means that inner Pelorus Sound and the Kenepuru entrance are now within the king shag foraging range: Davidson, R.J.; Richards, L.A.; Rayes, C. 2017. Significant marine site survey and monitoring programme (survey 3): Summary report 2016-2017. Prepared by Davidson Environmental Limited for Marlborough District Council. Survey and monitoring report number 859.
[5] Schuckard (2017). MPI Salmon farm relocation proposal - submission on behalf of Friends of Nelson Haven and Tasman Bay Inc. ~n=1,000 sightings over 25 years; cited in Statement of Evidence in Chief of Paul Richard Fisher on behalf of Friends of Nelson Haven and Tasman Bay Inc and Marlborough District Council (4 April 2017) at p 9 (in *Clearwater Mussels Limited v Marlborough District Council* ENV-2016-CHC-40 and 41).
[6] *Clearwater Mussels Limited v Marlborough District Council* [2018] NZEnvC 88 at [85].
[7] Rebuttal Evidence of Rachel Katherine McClellan (28 April 2018) at [15] (in *Clearwater Mussels Limited v Marlborough District Council* ENV-2016-CHC-40 and 41); and Statement of Evidence of Robert James Davidson for the Council Hearing of U170941 for a resource consent in Pigyard Bay, Kenepuru Sound (April 2018) at [56].
[8] Such as providing a safe resting place, or causing changes in benthic communities which may be beneficial for king shag prey species.
[9] *Clearwater Mussels* at [86(a) and (c)].
[10] Ibid at [86(c)(iii)].
[11] Statement of Evidence of Paul Richard Fisher on behalf of Friends of Nelson Haven and Tasman Bay Inc. and Marlborough District Council (4 April 2017) at [90] (in *Clearwater Mussels Limited v Marlborough District Council* ENV-2016-CHC-40 and 41).
12 Forest and Bird 2015: New Zealand Seabirds: sites on land, coastal sites and islands. The Royal Forest and Bird Protection Society of New Zealand, Wellington. 229 pp. This is similar to the recommendation in Taylor, G.A. (2000). Action plan for seabird conservation in New Zealand. Part A. Threatened Seabirds. *Threatened Species Occasional Publication No. 16.* Department of Conservation, Wellington.
[13] While the requirement to secure lines and structures is directed at navigational safety, it will have a corresponding benefit of reducing the risk of entanglement or ingestion of debris by King shag.
[14] Further information about MFA's Environmental Certification Programme can be found here: http://www.marinefarming.co.nz/public/mfa-environmental-certification-programme/
[15] A copy is available here: http://www.marinefarming.co.nz/media/1518/mfa-mussel-standard-operating-procedures-current.pdf.
[16] A copy is available here: http://www.marinefarming.co.nz/media/1303/code-of-practice-noise-2016-current.pdf.
[17] A copy is available here: http://www.marinefarming.co.nz/media/1070/industry-cop-reducing-pollution-on-water.pdf.
[18] A copy is available here: https://static1.squarespace.com/static/55d2b0eee4b0649ae7068665/t/55f7d6afe4b05cc86891dd9f/1442305711334/Greenshell+Mussel+SMF+July+2015+10-9-15.pdf
[19] MEP Volume 4, Map 18. This is based on R Davidson et al *Ecologically Significant Marine Sites in Marlborough, New Zealand* (September 2011, Davidson Environmental Ltd,

Department of Conservation, Marlborough District Council and DuFresne Ecology Ltd), although more up-to-date information is now available.

[20] Davidson et al (2011) at 73.

[21] Markowitz TM, Harlin AD, Wursig B, McFadden CJ 2004. Dusky dolphin foraging habitat: overlap with aquaculture in New Zealand. Aquatic Conservation: Marine and Freshwater Ecosystems 14: 133-149; and Harlin AD, Markowitz T, Baker CS, Würsig B, Honeycutt RL 2003. Genetic structure, diversity, and historical demography of New Zealand's dusky dolphin (*Lagenorhynchus obscurus*).Journal of Mammalogy 84(2):702–717.

[22] Davidson et al (2011), Significant Site 4.17, at 98.

[23] Joint Statement of Evidence of Dr Deanna Marie Clement and Dr Simon John Childerhouse in support of the submissions of the Marine Farming Association Inc and Aquaculture New Zealand Limited (18 December 2017) at [23(b)] and [46]. Copies are available on the MEP Hearings Portal under Topic 6: Indigenous Biodiversity, under the Evidence tab: https://eservices.marlborough.govt.nz/programmes/ListProgrammeEvents?id=705555.

[24] Davidson et al (2011), Significant Site 8.1, at 123.

[25] DuFresne, S.; Mattlin, R.; Clement, D. 2010. Distribution and Abundance of Hector's Dolphin *(Cephalorhynchus hectori hectori)* and observations of other Cetaceans in Pegasus Bay. Final Report to the Marlborough Mussel Company, Baseline Monitoring for Environment Canterbury Consent CRC21013A.

[26] Report and Decision of Hearing Commissioner Greg Ryder on CRC160457 (18 May 2016) at [68].

[27] Further information about MFA's Environmental Certification Programme can be found here: http://www.marinefarming.co.nz/public/mfa-environmental-certification-programme/

[28] A copy is available here: http://www.marinefarming.co.nz/media/1518/mfa-mussel-standard-operating-procedures-current.pdf.

[29] A copy is available here: http://www.marinefarming.co.nz/media/1303/code-of-practice-noise-2016-current.pdf.

[30] A copy is available here: http://www.marinefarming.co.nz/media/1070/industry-cop-reducing-pollution-on-water.pdf.

[31] A copy is available here: https://static1.squarespace.com/static/55d2b0eee4b0649ae7068665/t/55f7d6afe4b05cc86891dd9f/1442305711334/Greenshell+Mussel+SMF+July+2015+10-9-15.pdf

[32] While the requirement to secure lines and structures is directed at navigational safety, it will have a corresponding benefit of reducing the risk of entanglement for marine mammals.

[33] Raymond Smith – Ngai Kuia

Davidson Environmental Limited

Biological report for the reconsenting of marine farm 8038 in Island Bay, Admiralty Bay

Research, survey and monitoring report number 913

A report prepared for:
Jeff Meachen Trust
c/- Bruce Cardwell,
Aquaculture Direct
Blenheim

October 2018

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October 2018

Contents

1.0 Preface

The present report provides biological information for a proposed reconsent of an existing marine farm in Admiralty Bay, outer Marlborough Sounds. The farm is owned by Jeff Meachen Trust.

2.0 Background information

2.1 Admiralty Bay

Admiralty Bay is one of the largest bays in the outer Sounds at 8,130 ha stretching from French Pass to Bonne Point and across to Clay Point (excluding Catherine Cove) (Figure 1). The coastline and shallow subtidal is mostly rocky and is 50.4 km in length. Offshore areas are relatively flat, deep and dominated by mud and mud and shell.

Figure 1. Location of Admiralty Bay.

Admiralty Bay can be divided into two biological biogeographic areas (inner and outer Admiralty Bay) (Figure 2). This division reflects the hydrodynamic properties of these two areas. Inner Admiralty Bay is subjected to less wind and water currents compared to outer Admiralty Bay where wind, wave and water currents are usually recorded at higher intensities (Broekhuizen, *et al*., 2015).

2.2 Marine farming

There are 42 marine farm consents in Admiralty Bay, 41 in the inner Bay and 1 farm in outer Admiralty Bay (Figure 2). Another 9 marine farm consents are located within Catherine Cove. All marine farm consents are predominantly used for farming mussels.

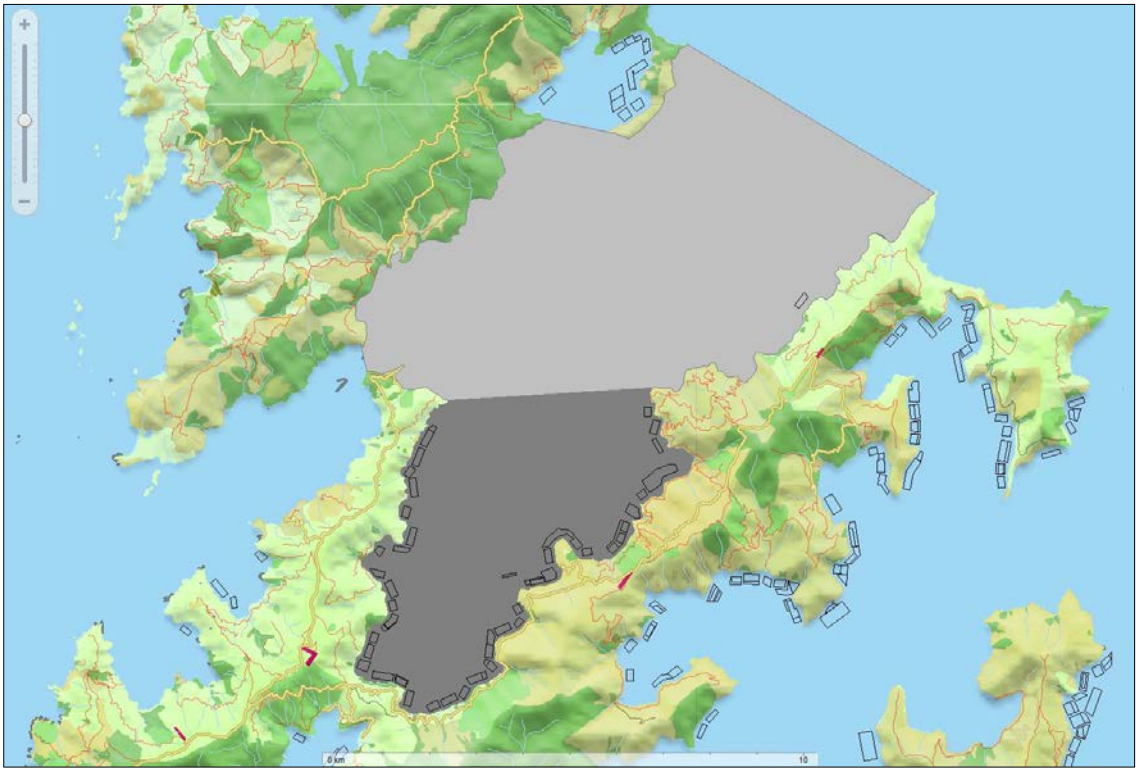

Figure 2. Marine farms located in inner (dark grey) and outer (light grey) Admiralty Bay.

2.3 Catchments

The adjacent land and catchments are mostly pasture or regenerating native vegetation. One small area around French Pass (French Pass Scenic Reserve) and an area south of

Catherine Cove (D'Urville Island Scenic Reserve) are managed by DOC, the remainder is in private ownership. Three small pine plantations also exist along the south-eastern catchments of the Bay.

2.4 Fishing

Commercial trawling regularly occurs throughout much of Admiralty Bay (Figure 3). No data is available on recreational fishing, however, based on observations it is a regular occurrence but at lower low levels compared to around D'Urville and the Chetwode Islands. French Pass is the exception, where fishers can be regularly seen, especially around slack water.

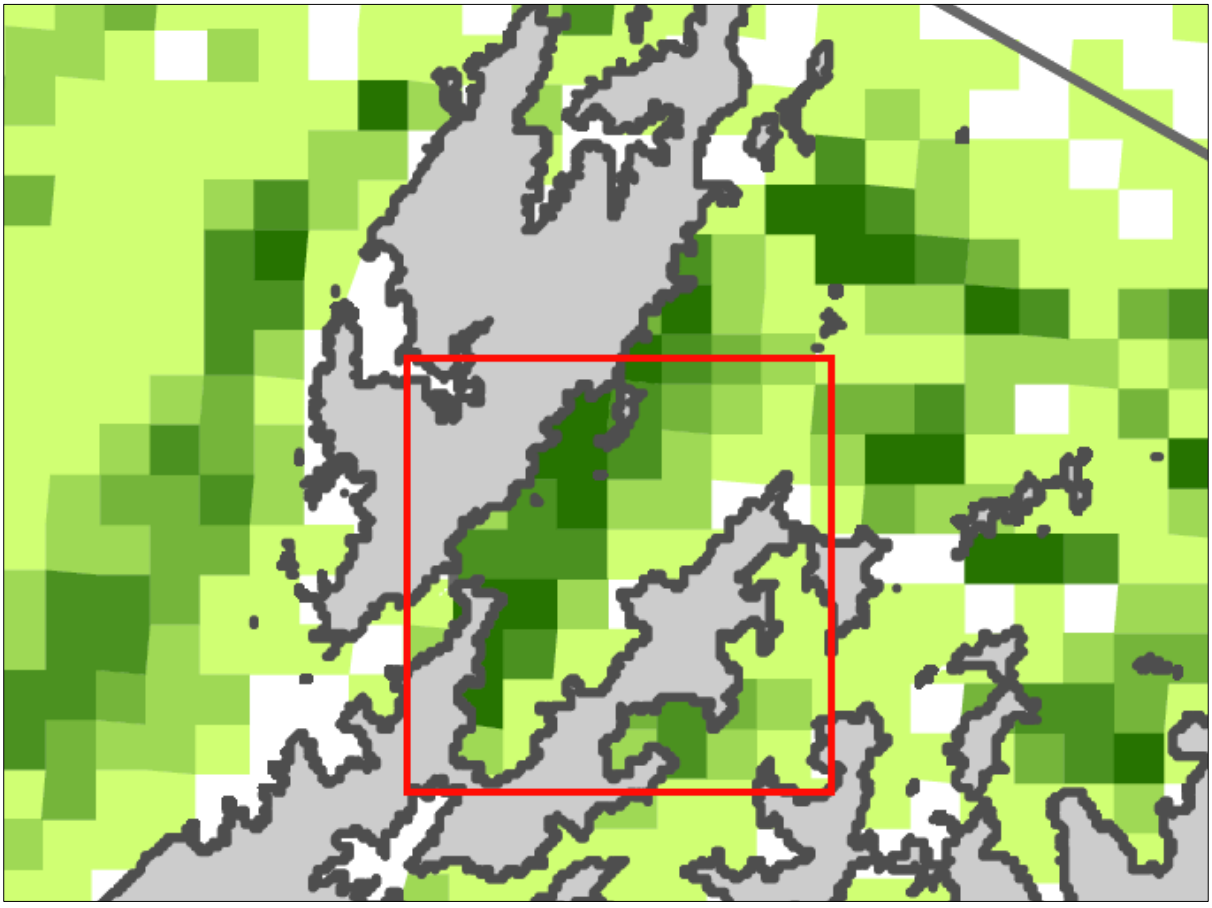

Figure 3. Average annual number of trawl events between 2007 and 2013. Red area = Admiralty Bay. Five colour shades are: lightest green (low number of events) to darkest green (high number of events) = 0-1, 1-2, 2-3, 3-5, and 5-120 trawl events. Source is MPI.

2.5 Existing biological studies and data

Many studies and investigations have occurred in Admiralty Bay (Figure 4). Most data points have been commissioned by the marine farm industry, particularly in relation to new farms and extension applications. There are also a small number of species, habitat or community-based studies (e.g. 539, 1337). Despite the large number of data points in the area, there are only a small number of recognized significant sites.

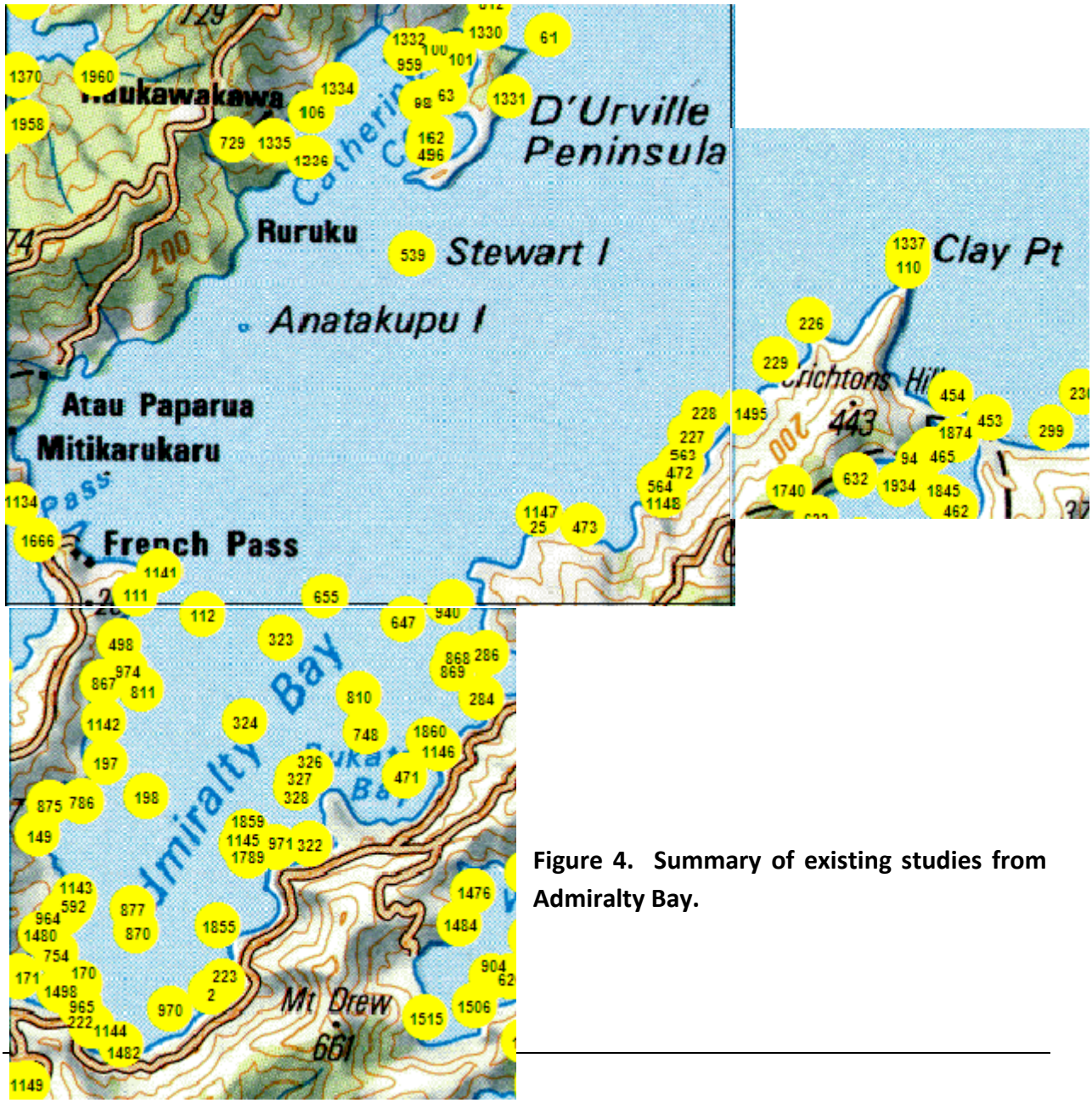

Figure 4. Summary of existing studies from Admiralty Bay.

2.6 Significant sites

There are five known significant sites located within greater Admiralty Bay area (Admiralty Bay, Catherine Cove and Current Basin) and another two sites located immediately adjacent to the boundary of Admiralty Bay (Figure 5). The largest site covers the entire greater Admiralty Bay area while remaining sites are small in comparison.

Significant site 2.17 (Admiralty Bay marine mammals)

Davidson *et al*. (2011) reported the greater Admiralty Bay as an important site for several marine mammal species (Figure 5). The Environment Court, in its W36/2006 and W027/2009 rulings, recognised Admiralty Bay and Current Basin as 'significant' habitat for dusky dolphins, noting "…no other qualifying characteristic is required. It is not, for instance, necessary…that the species for which it is a significant habitat is threatened or even uncommon."

Significant site 2.14 (Stewart Island king shag colony)

Stewart Island (Te Kuru Kuru) is recognized as a king shag colony. The Island is in outer Admiralty Bay, approximately 1 km south of D'Urville Peninsula and 6.7 km west of Clay Point. Stewart island has a circumference of approximately 410m and land area of 0.7 ha. Davidson *et al*. (2011) stated the island has become a regular roost for approximately 20-30 king shags with a few nests being established each season. Authors commented that this was the smallest and most vulnerable of all king shag nesting sites in Marlborough because nests are near sea level and may be damaged or destroyed during storms. They also stated king shags breed at relatively few locations in Marlborough which makes all roosting and breeding sites very important.

Significant site 2.13 (Catherine Cove rhodoliths)

Catherine Cove supports three rhodolith beds recognized as sub-sites (A, B and C) of site 2.13. The three sub-sites (18.8 ha) were surveyed by Davidson and Richards (2016). The authors stated sub-sites were characterised by dense beds of rhodoliths located in depths between 6.7m and 27m. Authors also noted that a mussel farm was located between two of the sub-sites and it was probable this farm has had an impact the seafloor under the farm; however, the adjacent rhodolith beds did not appear to be affected. Davidson and Richards (2016) also

stated that the mussel farm structures likely act as a deterrent to trawling and dredging activities. In the most recent significant site report Davidson *et al*. (2018) stated rhodoliths are known from only 10 sites in Marlborough covering 31.5 ha or 0.0044 % of the marine area of Marlborough.

Significant site 1.5 (Ponganui and Coppermine Bays rhodoliths)

Coppermine and Ponganui Bays are located along the southern coastline of D'Urville Island in Current Basin (2.9 km west of French Pass). These bays support three sub-site rhodolith beds (4.55 ha) that were mapped in detail by Davidson and Richards (2016).

Significant site 2.16 (French Pass)

French Pass is a narrow passage of 518m that separates the mainland and D'Urville Island. There are two main channels through the pass separated by a shallow rocky reef that is exposed at low water. This area supports a community of encrusting filter-feeding organisms that take advantage of food brought daily by fast tidal currents. large beds of mussels, anemones and barnacles grow on rocks on the reef. large sponges and colonies of bryozoans live on near vertical rock walls in and around the northern passage. on the western side of the passage are large areas of shell debris made up of mussel, dog cockle and barnacle shells. The Pass is popular for fishing for blue cod, snapper and kingfish. little is known of the biology of French Pass as it is one of the most difficult areas to dive in New Zealand. Davidson *et al*. (2011) stated French Pass is the best example of a high-current environment in Marlborough. Authors also stated rocky and soft sediment substrata found at a range of depths, combined with the very strong tidal currents, result in a wide variety of habitats.

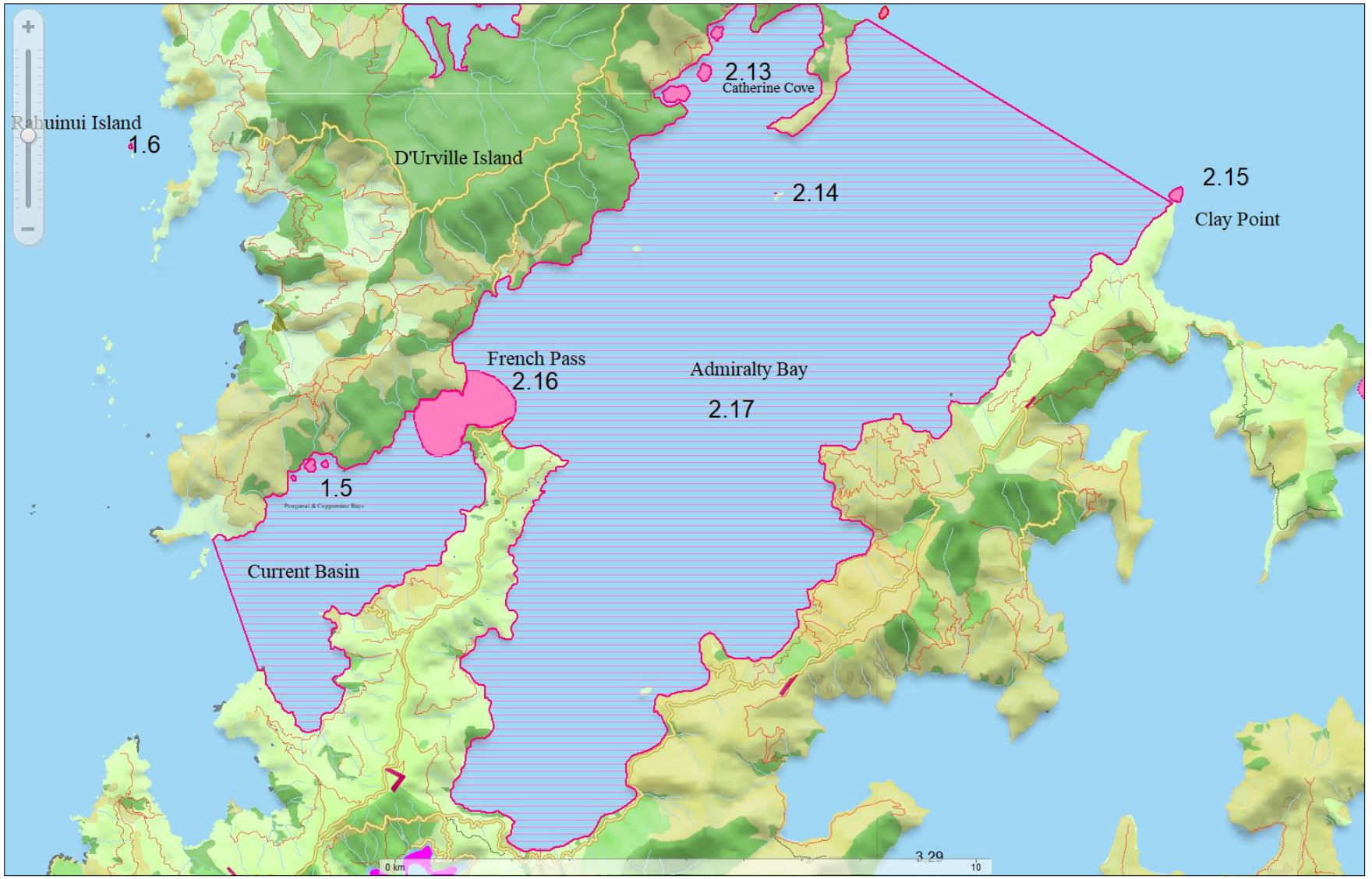

Figure 5. Known significant sites in Admiralty Bay (red polygons). Site 2.17 (marine mammal area) is depicted as horizontal stripes.

2.7 Marine mammals

At least five marine mammal species regularly and/or seasonally transit through western regions of the Sounds (see Slooten *et al*. 2002, Markowitz *et al.* 2004, Merrimen *et al*. 2009, Clement and Halliday 2014), and several of these species concentrate seasonally in the Admiralty Bay region. These species include the New Zealand fur seal (*Arctocephalus forsteri*), bottlenose dolphin (*Tursiops truncatus*), dusky dolphin (*Lagenorhynchus obscurus*), common dolphin (*Delphinus delphis/capensis*) and orca (killer whales - *Orcinus orca*).

Several studies have occurred in the greater Admiralty Bay area aimed at investigating marine mammal use of the area and interactions with aquaculture (Markowitz *et al*., 2004; Vaughn *et al.,* 2007; Pearson *et al.,* 2012), Department of Conservation (e.g. B. Lloyd unpubl. data; Merriman, 2007) and aquaculture-funded research (Clement and Halliday, 2014).

New Zealand fur seals (status = not threatened) can be observed year-round within Admiralty Bay waters, suggesting that this may be the only species considered a true resident of the bay (Clement and Halliday, 2014). It is likely, given Admiralty Bay's proximity to several of the breeding colonies, young animals use this bay as a stepping stone as they slowly begin to explore and eventually move away from breeding colonies (D Clement, pers. comm.). Further, high numbers in May (see Clement & Halliday, 2014) might indicate that fur seals are taking advantage of plentiful prey resources or the cooperative feeding tactics of dusky dolphins, as these two species are observed feeding together cooperatively (Markowitz *et al.,* 2004, Vaughn *et al.,* 2007). Young fur seals have also been observed resting and swimming at mussel farms in Catherine Cove (Davidson and Richards, 2017).

Of all the cetacean species studied, bottlenose dolphins (status = Nationally endangered: Baker *et al*., 2010) is the species most consistently observed within Admiralty Bay waters (D. Clement, pers. comm.). A semi-residential population of animals is known to associate with the Marlborough Sounds region for most of the year, regularly and systematically moving from one end of the Sounds to another (Merriman *et al*., 2009). Clement and Halliday (2014) stated that re-sighting rates indicate that the majority of individual bottlenose dolphins show high and regular use of Admiralty Bay.

Bottlenose dolphins within the Sounds represent one of three isolated subpopulations around New Zealand's coastline; the others are found along the northeast coast of the North Island

and within Fiordland in the south-west of the South Island. This species nationally endangered status is due to their restricted ranges and the fact that the other two sub-populations have reported general population declines over the last decade. Such factors make this species potentially more vulnerable to disturbance or changes within their distribution range (D. Clement, pers. comm.).

Starting in 1998, Markowitz *et al*. (2004) studied dusky dolphin (status – not threatened) presence within the Marlborough Sounds, and in particular Admiralty Bay. The authors found that the number of dusky dolphins observed in Admiralty Bay increased significantly over the winter months. Estimating across the winters of 1998–2004, the dusky dolphin population within Admiralty Bay included 711 (95% CI: 608–844) individuals, with a mean population of 220 dolphins in the bay on any given week (Markowitz *et al*. 2004, 2010). Known individuals were found to re-visit Admiralty Bay in subsequent winters, as 55% of marked individuals photographed in the bay between 1998 and 2002 were identified during more than one winter (Markowitz *et al*., 2004). Admiralty Bay is now recognised as an important wintering and feeding area for dusky dolphins migrating from Kaikoura and other regions around New Zealand (Davidson *et al.,* 2011).

While no studies have focused specifically on the presence of common dolphins (status = not threatened) in Admiralty Bay, Clement and Halliday (2014) suggest that Admiralty Bay may serve as important habitat for at least a proportion of the common dolphin population found around New Zealand. Common dolphins appear most abundant in Admiralty Bay during mid- to late winter and early spring, often coinciding with dusky dolphins while in the region (Clement and Halliday, 2014).

Seasonal trends and the high re-sighting rates of identified individuals within Admiralty Bay over consecutive seasons and years indicates that common dolphins are either seasonally migrating to this region (i.e. like dusky dolphins) or use it as part of a large home range, like bottlenose dolphins (D. Clement, pers. comm.).

2.8 King shag

King shag is one of the world's rarest seabird species. The species is endemic to the Marlborough Sounds, and is seldom observed outside of this region. The species nests at a small number of colonies, usually on rock stacks that are separate from the mainland, however there are two mainland colonies presently used by birds (Hunia and Tawhitinui Bay). Most historical counts have been undertaken by boats, however, most recent surveys have been aerially surveyed and photographed during the breeding seasons of 2016 (2 surveys), 2017 and 2018 (Schuckard *et al*., 2015; 2018; in prep.). The most recent count has shown a 24% decline in the number of adult birds (Schuckard *et al*., in prep.). The total number of nests range from 187 in 2015 to 89 (June 2016), 117 (July 2016) and 153 nests June 2017 (Schuckard *et al*., 2018). No or very few nests have been recorded from the colony in Admiralty Bay at Stewart Island.

Diet studies have shown that king shags feed on a variety of fish. Lalas and Brown (1998) recorded 683 prey items of which flatfish accounted for 90% of items. Schuckard (2015) reported locations where he observed king shags feeding in Admiralty Bay (Figure 6).

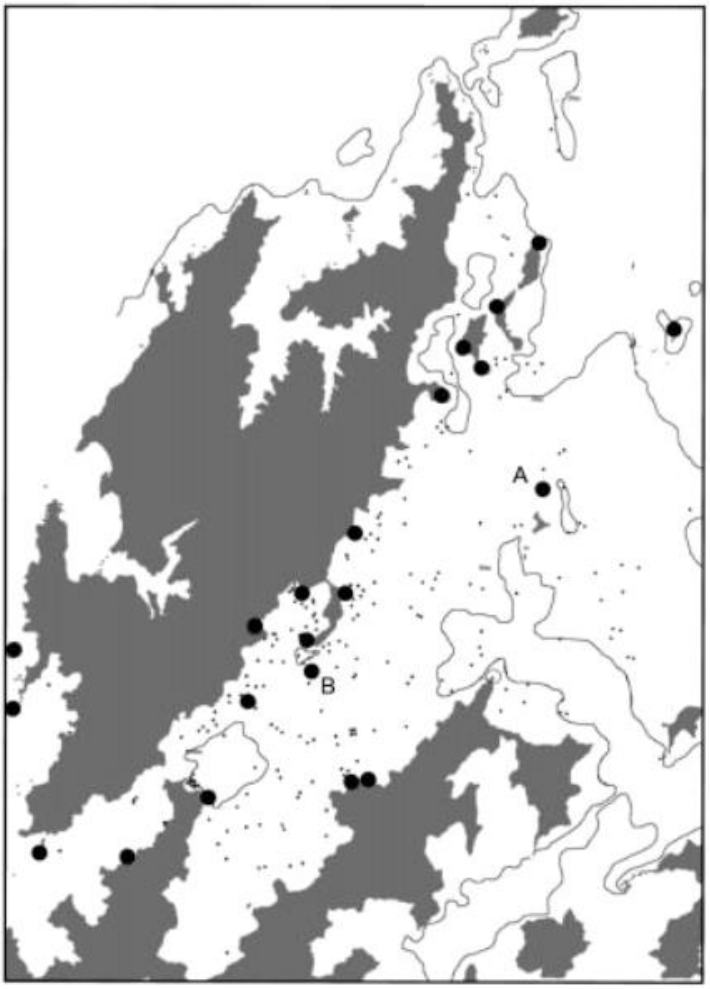

Figure 6. Distribution of foraging king shags in Admiralty Bay (small black circles) and roost site (large filled circles). A – Trio colony, B = Stewart Island colony. Figure from Schuckard (2015).

Fisher and Boren (2012) conducted boat line transects for king shags three times a month from February 2006 to March 2007 (Figure 7). In total, 38 surveys were undertaken with 131 sightings of birds foraging at sea, 65 in flight, 63 roosting in colonies, six resting on mussel floats, and two foraging at sea within 200 m of a farm boundary. The authors reported that most sightings of king shags occurred in outer areas of Admiralty Bay (Figure 7).

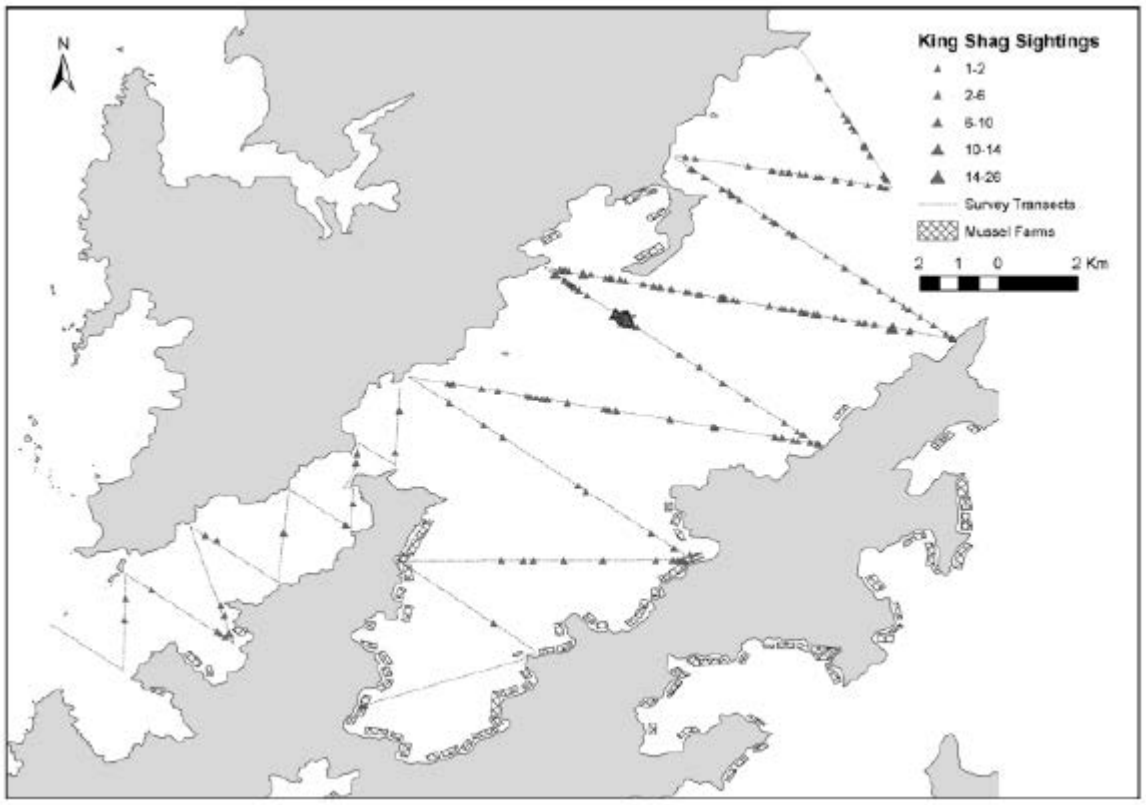

Figure 7. Distribution of king shag sightings in Admiralty Bay during boat transects.

2.9 Benthic

Most benthic studies that have occurred in Admiralty Bay have been in relation to marine farms, however, there have been several other scientific studies.

Davidson and Brown (1997) qualitatively described the biota and habitats from sites located in north-western Admiralty Bay between Hapuku Rock and Clay Point. The authors described the following habitats and communities:

Shallow rock zone: Characterised by a low cover of foliose macroalgae, which was limited to a sublittoral fringe of (*C. maschalocarpum*) and an extensive barren zone dominated by coralline paint and numerous invertebrate herbivores.

Deep rock zone: Characterised by a high cover of encrusting biota and in places where water turbidity was low, a low to moderate cover of foliose algae (eg. *Ecklonia radiata, Caulerpa germinata*). Where good current was present this community type was particularly healthy.

Soft bottoms: Ranged from well sorted rippled sands (e.g. in the Pipitawai area east of Clay Point), to shell/sand mixes and silts. These habitats were colonised by a wide range of communities from a low species diversity through to relatively high diversities.

Davidson and Brown (1997) also described habitats and communities at Hapuku Rock to Clay point coast. Authors stated "the site had a relatively wide boulder habitat in 0-4 metres depth. With increasing depth, boulder habitat graded into soft substrata dominated by cobbles, shells and sands. In some areas, reef habitat was recorded (< 7 m depth). These areas had a low cover of macroalgae (*C. maschalocarpum*) while barnacles and coralline paint provided the dominant rock cover. Large number of herbivorous invertebrates were recorded including kina (*E. chloroticus*), limpets (*Cellana* spp.) and cats-eye snail (*Turbo smaragdus*)."

The authors reported a total of 10 species of fish were recorded including spotty, blue cod and blue moki which were the most abundant species. Of note was the presence of carpet shark (*Cephaloscyllium isabellum*), observed both underwater with another five being caught on hand-line from the boat.

Duffy *et al.* (in prep) qualitatively described the biota from 360 sites around the Marlborough Sounds including Admiralty Bay. Authors stated this coastline is sheltered from large southerly oceanic swells due to its northerly aspect and from oceanic swells from the north and northwest by D'Urville Island. The authors stated the floor of Admiralty Bay is largely flat and varies between 33-46 m depth. Here the benthos is dominated by sandy mud and mud.

Rocky reef sample sites in Admiralty Bay were grouped with their Site Group 1. This was the largest group with 11 sub-groups including Queen Charlotte Sound (34 sites) Pelorus (31 sites), Port Hardy (2), Admiralty Bay (8), Cherry Bay at D'Urville Island (1), Squally Cove in Croisilles (1), Catherine Cove (2), Guards Bay (2), Anakoha Bay (2) and Forsyth Island (5). The

most common rocky habitat type was cobble banks. Although the group had few indicator species, it was the most species-rich of the inner sounds site groups (average 31 species per site). Duffy *et al*. (in prep) stated the best indicator species were *Maoricolpus roseus*, *Galeolaria hystrix* and *Forsterygion lapillum*.

3.0 Marine farm 8038

The present report provides biological information in relation to marine farm 8038 located along the south-eastern coast of Admiralty Bay, in Island Bay (Figure 8, Plate 1).

Figure 8. Proposed reconsenting marine farm site in Admiralty Bay (red circle) and all other marine farms in the bay.

3.1 Summary

Marine farm number:	8038
Owner:	Jeff Meachen Trust
Location:	Island Bay
MPI exclusion area present:	No
Consented size:	2.3 ha
Proposed size:	2.3 ha
Changes proposed:	New mussel growing structures exclusion zone. Potential offshore shift of the consent to achieve 50 m separation to low water.
Reason for proposed changes:	Rocky substrata present. Farm < 50 m from low water.

Plate 1. Looking south-westwards through the existing backbone lines of farm 8038 in Admiralty Bay. Photo taken from a position north-east of the inshore backbone.

4.0 Historical reports

One historical biological report was found in relation to marine farm 8038.

Cole *et al*, (1999) produced a biological report for proposed block F, directly adjacent and offshore of marine farm 8038. Sidescan survey and dredge sampling were used to survey the benthic environment and sample fauna in the proposed area.

The authors stated:

"The substratum at the site was consistently mud and fine shell and lay at depths between 35 m and 44 m. The species occurring in samples are all common in the Marlborough Sounds (McKnight and Grange, 1991), and none of the species identified in the DOC guidelines as sensitive species (DOC, 1995)."

5.0 Methods (present survey)

The area was investigated on 22nd September 2018. Prior to fieldwork, the consent corners were plotted onto mapping software (TUMONZ Professional). The laptop running the mapping software was linked to a Lowrance HDS-12 Gen2 with an external Lowrance Point 1 high sensitivity GPS, allowing real-time plotting of the corners of marine farm surface structures and to pinpoint drop camera stations in the field. This GPS system has a maximum error of +/- 5 m.

The corners of the existing marine farm surface structures were surveyed by positioning the survey vessel immediately adjacent to the corner floats and the position plotted. It is noted that surface structures can move due to environmental variables such as tidal current and wind. The plot of surface structures is variable from day to day and over the duration of tidal cycles. These data should not therefore be regarded as a precise measurement of the position of surface structures, but rather an approximate position.

5.1 Sonar imaging

Sonar investigations of the area were conducted using a Lowrance HDS-12 Gen 2 and HDS-8 Gen2 linked with a Lowrance StructureScan™ Sonar Imaging LSS-1 Module. These units provide right and left side imaging as well as DownScan Imaging™. The unit also allows real time plotting of StructureMap™ overlays onto the installed Platinum underwater chart. A Lowrance HDS 10 Gen 1 unit fitted with a high definition 1kw Airmar transducer was used to collect traditional sonar data from the site.

Prior to the collection of underwater photographs, the boundaries of both the consent area and the marine farm surface structure area were investigated using the sonar. Any bottom abnormalities such as reefs, hard substrata or abrupt changes in depth were noted for inspection using the drop camera (see section 5.2).

5.2 Drop camera stations, mussel debris and low tide

A total of 33 drop camera photographs were collected from the farm (including alongside droppers and warps) and adjacent areas inside and offshore of the consent. At each drop camera station, a Sea Viewer underwater splash camera fixed to an aluminium frame was lowered to the benthos and an oblique still photograph was collected where the frame landed.

The cover of benthic mussel shell from drop camera photographs were ranked as: None = no mussel shell, Low = 1-30%, Moderate = 31-50%, Moderate to High = 51-75%, and High = 76-100% cover. Percentage cover of mussel shell was also estimated by a trained observer viewing drop camera photographs.

The location of photograph stations was selected to obtain a representative range of habitats and depths within the consent. Additional photographs were taken when any features of interest (e.g. mussel shell, reef structures, cobbles) were observed on the remote monitor on-board the survey vessel. All photographs collected during the survey have been included in Appendix 1.

Low tide was determined at strategic locations inshore of the consent. The survey vessel was positioned over the low water mark and the position plotted using the mapping software.

Low tide was visually determined using the transition between intertidal and subtidal species. This process was also guided by the known state of the tide at the time of the inspection.

6.0 Results

On the day of the survey, the tide was high at 6.59 am (2.3 m) and low at 12.46 pm (0.8 m). During fieldwork, the tide was incoming. In general, mean water currents in this part of Admiralty Bay are low and approximately 0.1 m/sec (Broekhuizen *et al.,* 2015). The tidal current at this marine farm is expected to be greatest on the larger tides.

Inner Admiralty Bay opens directly into the main tidal channel flowing through French Pass and connecting to Cook Strait. The marine farm site in inner Admiralty is therefore subjected to low tidal currents but is close to the main Cook Strait water body.

During the present study little or no tidal flow was observed during field work.

6.1 Consent corners and surface structures

The inshore corner depths of the consent area ranged from 7.1 m to 8 m. Offshore boundaries of the consent area ranged from 24.6 m to 33.5 m depth (Table 1, Figure 9). Existing surface structures consisted of one block of backbones covering a total area of approximately 0.82 ha. Surface structures were located inside and offshore of the consent.

The distance between low tide and the consent boundary was measured at three positions along the adjacent shoreline. The distance to the inshore boundary at the position of low tide 1 was 30 m, at low tide 2 was 50 m, and at low tide 3 was 28m (Plate 2, Figure 9).

6.2 Sonar imaging

Sonar runs collected from the benthos under and adjacent to the consent revealed rocky substrata inshore and within the consent (Figure 10). No growing structures were present in the consent area that supported rocky substrata. The remainder of the scanned consent was characterised by low feature terrain (i.e. soft substrata). Areas inshore of the consent supported a boulder and cobble subtidal zone.

Table 1. Depths at the consent corners and existing surface structures. Depths adjusted to datum. Coordinates = NZTM (Northing/Easting).

Type	No. & Depth (m)	Coordinates
Consent corner	1, 8m	1673512.1,5463831.5
Consent corner	2, 33.5m	1673440.7,5463938.3
Consent corner	3, 24.6m	1673555.9,5464063.1
Consent corner	4, 7.1m	1673647.8,5463978.4
Structure corner	A, 36m	1673424.9,5463973.5
Structure corner	B, 31m	1673505.9,5464036.9
Structure corner	C, 26.5m	1673478.5,5463907.4
Structure corner	D, 23.3m	1673559.8,5463982.1
Low tide	Low tide 1	1673665.0,5463952.2
Low tide	Low tide 2	1673600.4,5463853.0
Low tide	Low tide 3	1673514.9,5463803.0

Plate 2. Aerial view of three low tide GPS locations relative to the inshore farm boundary (yellow polygon).

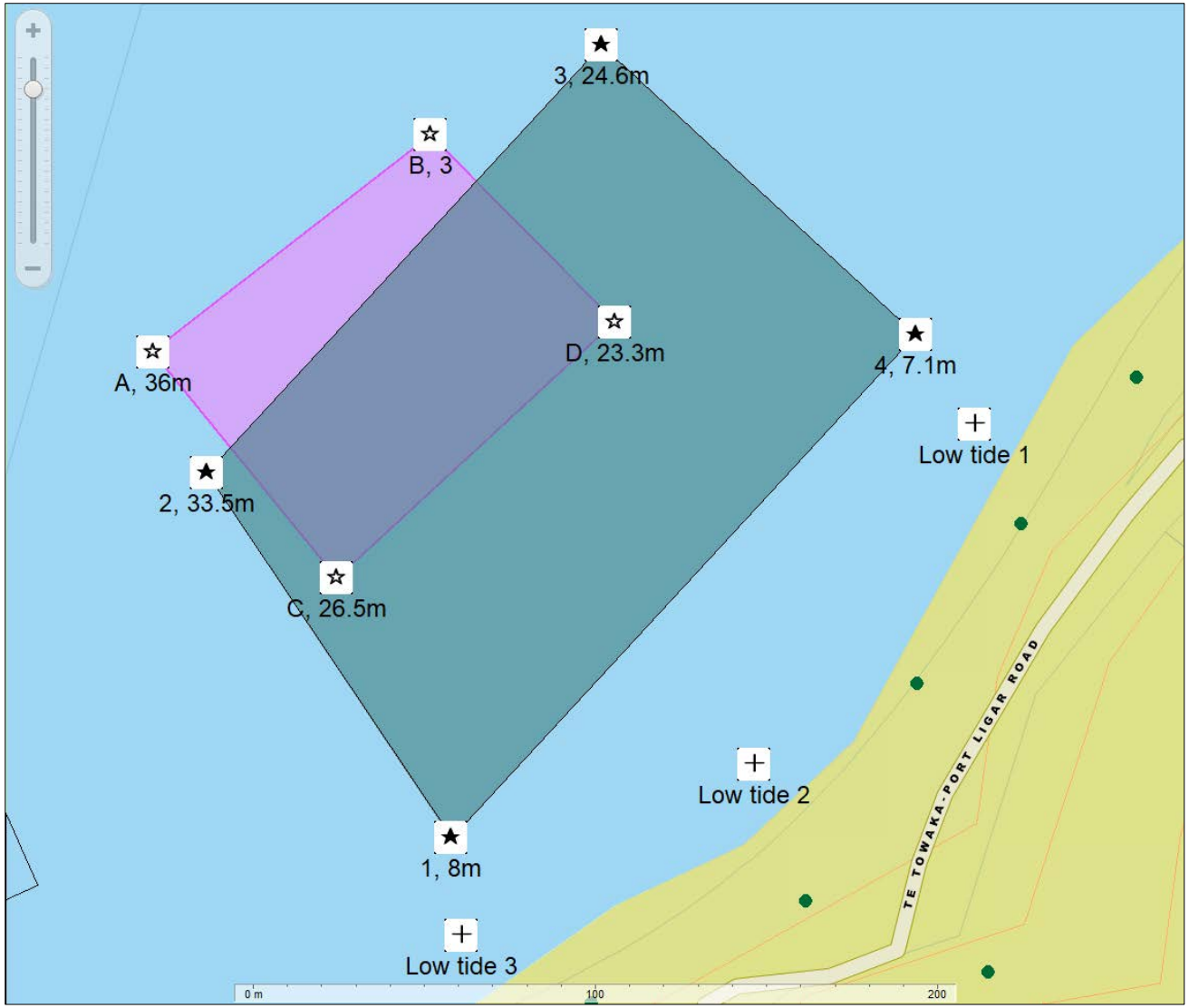

Figure 9. Depths of the proposed reconsent area (grey) and existing marine farm surface structures (pink). Three low tide locations are also plotted (crosses).

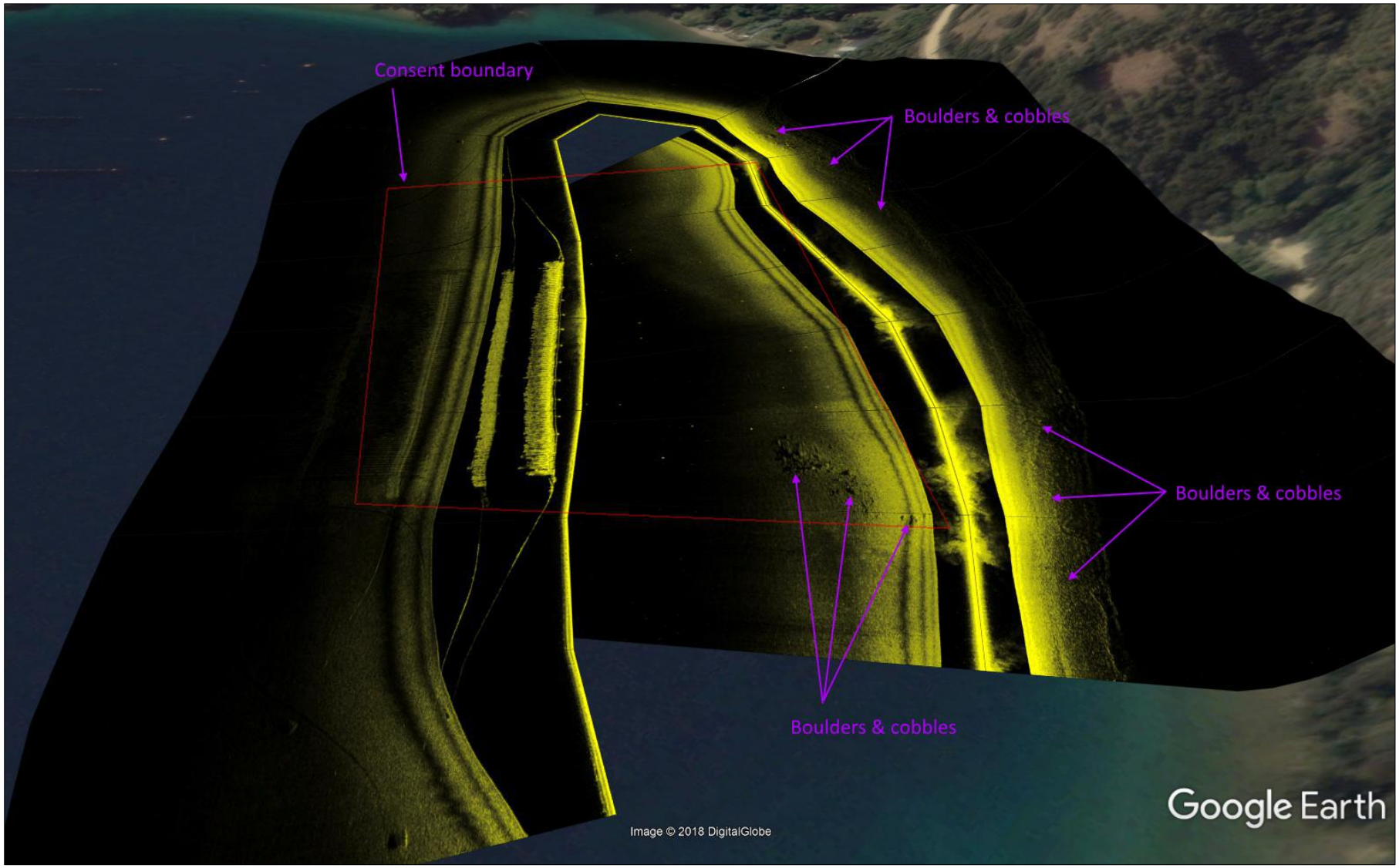

Figure 10. Sonar run at farm site 8038. Red polygon = consent boundary, yellow line = sonar track.

6.3 Drop camera images

Drop camera photographs were taken throughout the existing consent and offshore of the consent (Table 2, Figure 11, Appendix 1). Photographs were used to describe the benthic substratum, mussel shell debris cover and presence of biological characteristics.

Within the consent

Most of the benthos within the offshore deep parts of the consent were characterised by silt and clay (mud) with a component of natural shell (Plate 3). Mussel shell was present in areas occupied by farm structures (Plate 4).

Coarse soft substratum was observed along the inshore areas of the consent. This substratum consisted of silt, fine sand and natural shell (Plate 4). Occasional cobbles were recorded at two locations in the western inshore areas of the consent, however, no farm structures were located in this area (Plate 5, Table 2, Figure 11). Rocky substrata including outcrop rock reef, boulders and cobbles was observed along the eastern strip of the consent, under warps and anchors. No production structures were in this area (Figure 6, Table 2, Figure 11).

Plate 3. Silt and clay representative of deep offshore parts of the consent (photo 1, 36.6 m depth).

Plate 4. Silt, clay and mussel shell from under backbones in the consent (photo 10, 28.4 m depth)

Inshore areas of the consent were characterised by coarser soft substratum (Plate 5) and in places rocky substratum (Plate 6).

Plate 5. Silt, fine sand, whole and broken shell inside the consent (photo 31, 18.8 m depth).

Plate 6. Silt, fine sand, shell, boulders and cobbles inside the consent with no production structures present (photo 29, 16.5 m depth).

Mussel shell

Mussel shell debris was observed from 6 of the 24 consent photos. In the consent, mussel shell debris ranged from 2 to 95% cover under the backbones but when present, was usually between 25-75% (Plates 7) (Table 2). Mussel shell was observed under and close to production lines (Figure 12). Mussel shell debris was also recorded under warp structures close to droppers (Figure 12).

Plate 7. Silt and clay with a high level of mussel shell debris under backbones located in the consent (photo 11, 25.2 m depth).

Offshore of the consent

The benthos offshore of the consent area was characterised by silt and clay. Mussel shell was recorded in offshore areas around and offshore of backbones (Plate 8, Figure 12, Table 2).

Plate 8. Silt and clay with mussel shell offshore of the consent (photo 2, 36.2 m depth).

Table 2. Coordinates of drop camera stations showing location relative to the marine farm consent area (NZTM). Colours are: grey = within consent, pink = under backbones, blue = outside consent. Depth, substratum, level of mussel shell debris are listed.

No. & Depth (m)	Coordinates	Location	Substratum	Shell debris	% mussel shell
1, 36.6m	1673411.1,5463976.0	Offshore of consent, no structures	silt & clay	None	0
2, 36.2m	1673436.2,5463987.8	Offshore of consent, no structures	silt & clay, mussel shell	Low	20
3, 33.7m	1673462.6,5464020.7	Offshore of consent, no structures	silt & clay, natural & mussel shell	Low	2
4, 28.2m	1673528.5,5464041.0	Offshore of consent, under warps	silt & clay, natural shell	None	0
5, 30.9m	1673495.4,5464015.5	Offshore of consent, under backbones	silt & clay, mussel shell	High	75
6, 33.5m	1673455.3,5463977.6	Offshore of consent, under backbones	silt & clay, mussel shell	Low-moderate	25
7, 35.5m	1673417.9,5463951.1	Offshore of consent, under warps	silt & clay	None	0
8, 30m	1673447.2,5463913.3	Alongshore of consent, under warps	silt & clay	None	0
9, 30.5m	1673472.8,5463940.5	In consent, under backbones	silt & clay, mussel shell	Moderate-high	55
10, 28.4m	1673508.4,5463977.3	In consent, under backbones	silt & clay, mussel shell	Low-moderate	25
11, 25.2m	1673549.3,5464005.2	In consent, under warps	silt & clay, mussel shell	High	95
12, 20.7m	1673578.9,5463989.5	In consent, no structures	silt & clay, mussel shell	Low-moderate	25
13, 23.9m	1673547.6,5463963.3	In consent, no structures	silt & clay, mussel shell	Low	15
14, 26.3m	1673503.7,5463927.5	In consent, no structures	silt & clay, mussel shell	High	80
15, 26m	1673466.1,5463888.5	Alongshore of consent, no structures	silt & clay	None	0
16, 6.8m	1673641.3,5463980.2	In consent, no structures	boulder, cobble, fine sand, shell	None	0
17, 8.8m	1673616.5,5463948.1	In consent, no structures	boulder, cobble, fine sand, shell	None	0
18, 14.1m	1673582.0,5463906.4	In consent, no structures	cobble, fine sand, shell	None	0
19, 15.5m	1673544.5,5463868.5	In consent, no structures	fine sand, silet, shell	None	0
20, 8.5m	1673513.9,5463838.5	In consent, no structures	cobble, fine sand, shell	None	0
21, 15.4m	1673503.0,5463851.1	In consent, no structures	fine sand, silt, occ cobble	None	0
22, 19.7m	1673502.3,5463863.7	In consent, no structures	fine sand, silt, shell	None	0
23, 20.1m	1673537.5,5463897.5	In consent, no structures	silt, shell	None	0
24, 18.2m	1673564.2,5463917.6	In consent, no structures	silt, shell	None	0
25, 15.8m	1673598.3,5463950.3	In consent, no structures	silt, fine sand, shell	None	0
26, 16.5m	1673589.8,5463943.9	In consent, no structures	fine sand, silt, occ cobble	None	0
27, 19.1m	1673581.8,5463955.6	In consent, no structures	silt, fine sand, shell	None	0
28, 18.2m	1673585.9,5463951.1	In consent, no structures	fine sand, silt, occ cobble	None	0
29, 16.5m	1673591.4,5463967.2	In consent, no structures	fine sand, silt, occ cobble	None	0
30, 17.2m	1673600.6,5463984.8	In consent, no structures	silt, fine sand, shell, cobbles	None	0
31, 18.8m	1673593.2,5463989.6	In consent, no structures	silt, fine sand, shell	None	0
32, 22m	1673561.5,5463970.7	In consent, no structures	silt, shell	None	0
33, 19.2m	1673577.3,5463967.9	In consent, no structures	silt, fine sand, shell	None	0

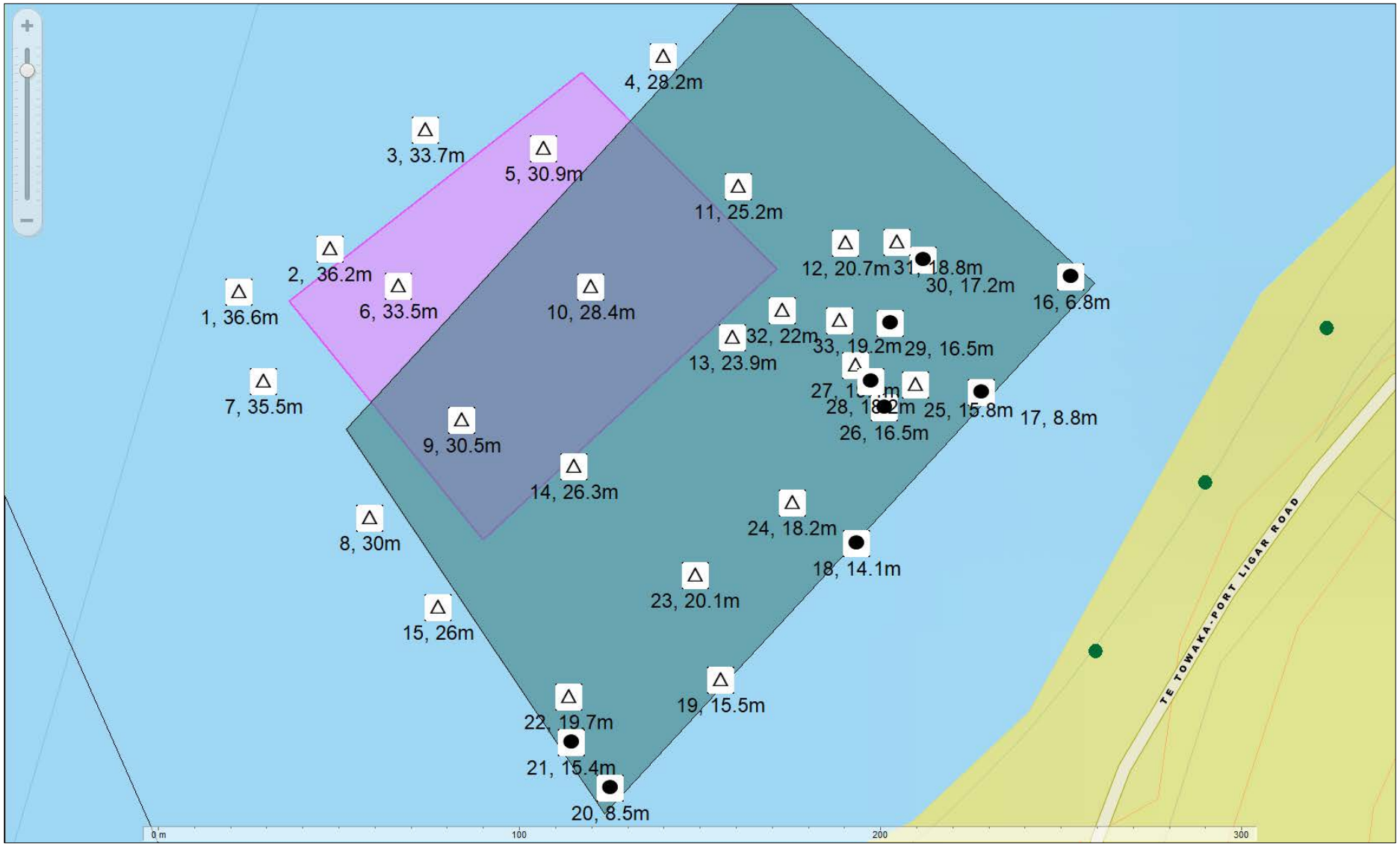

Figure 11. Drop camera stations of the reconsent area (open triangles = soft substrata, dark circles = rocky substrata), consent renewal area (teal) and surface structures (pink). Numbers are the photo number and water depth (m).

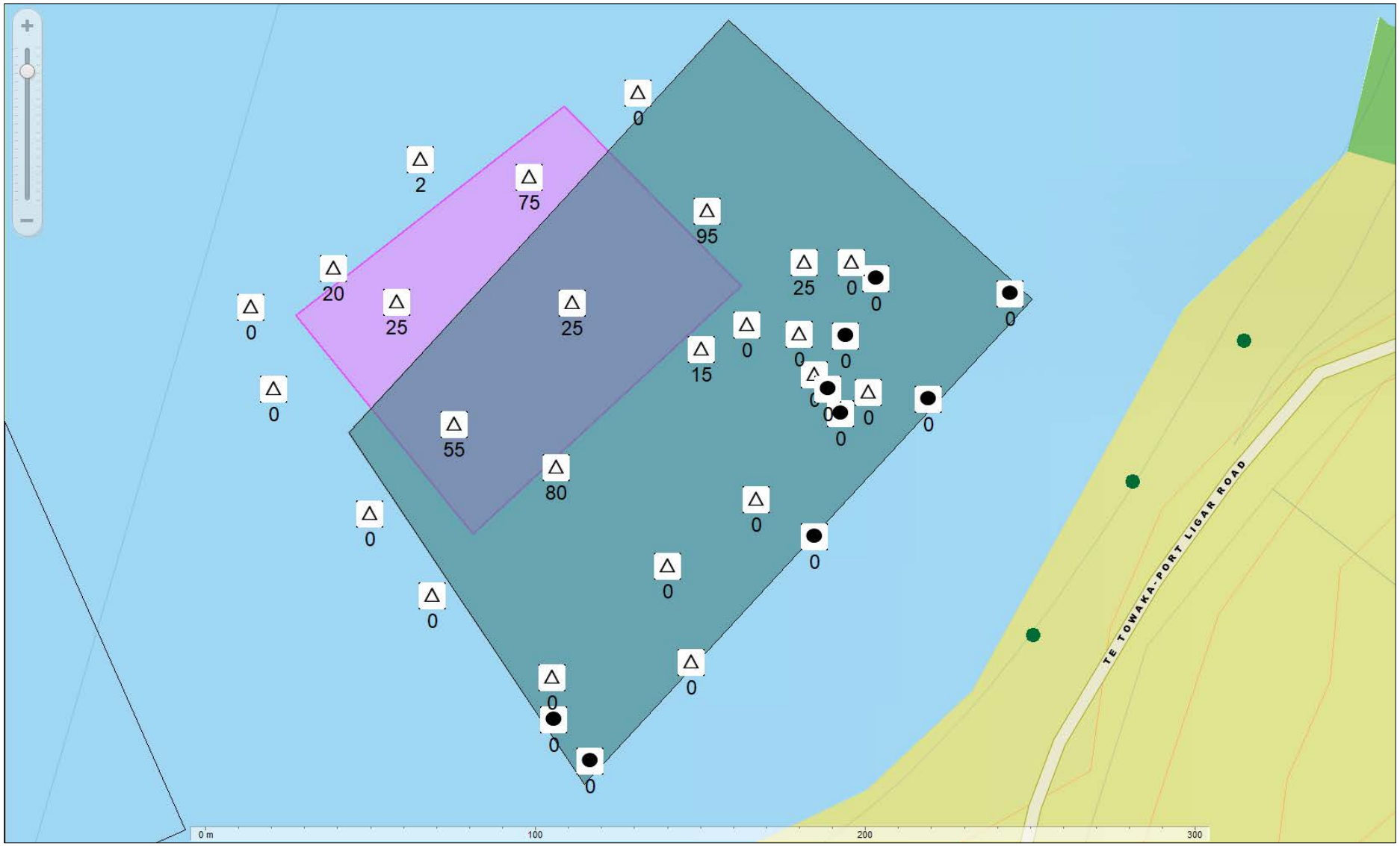

Figure 12. Estimated percentage cover of mussel shell from drop camera stations (open triangles = soft substrata, dark circles = rocky), consent renewal area (teal) and surface structures (pink). Numbers are the estimated % cover of mussel shell.

7.0 Conclusions

7.1 Benthic habitats and substratum

Substratum and habitat distribution relative to the reconsent area was based on drop camera stations and sonar imaging of the benthos. Most of the consent area was located over a relatively featureless gently sloping benthos dominated by silt and clay substratum with or without a component of natural shell. Coarser soft substratum was observed from inshore parts of the consent. Mud (i.e. silt and clay) is the most common subtidal habitat in sheltered areas of the Marlborough Sounds (McKnight and Grange, 1991) and has been traditionally targeted for marine farming activities. This substratum type is considered suitable for consideration for marine farming activities in the Marlborough Sounds.

Unlike mud and silt, rocky substratum is not traditionally considered suitable for marine farming activities as it is likely smothered by shell debris and may no longer functions as a hard substratum habitat. Rocky substrata in the form of boulders and cobbles were observed at the eastern and southern inshore areas of the consent. Hard substrata were not recorded under existing production droppers.

Areas offshore of the consent where structures were located were over flat and deep silt and clay substrata. This habitat is considered suitable for marine farming activities.

7.2 Species and communities

Species abundance and diversity from most of the consent was low compared to high current locations in the Sounds. Benthic observations within mud dominated areas of the consent confirmed the area supported species typical of silt substratum (e.g. cushion seastars, sea cucumbers). Spotty and spikey dog fish were observed within the consent.

Occasional scallop and horse mussels were observed during the present survey (Appendix 1: Photo 31), however, numbers observed were low suggesting they are not abundant. No species, habitats or communities regarded as ecologically significant (see Davidson *et al*., 2011) were observed during the present study.

7.3 Sea birds

Based on the few studies that have investigated the interactions between mussel farms and birds, mussel aquaculture can potentially affect seabirds by altering their food resources, cause physical disturbances (e.g. noise) and/or introduce possible entanglement risks. The

structures associated with aquaculture may also provide benefits including additional perching and feeding opportunities

Overall, New Zealand (Butler, 2003) and overseas studies (Ross *et al*., 2001; Roycroft *et al*., 2004; Kirk *et al*., 2007) suggest that the general attraction of particular seabirds to mussel farms is likely due to increased foraging success on fish and biofouling, and even on the cultured stock itself. The consequences of this attraction will likely depend on the species' dietary preferences and response to both direct and indirect ecosystem changes induced by mussel cultivation.

Birds are potentially at risk from operational by-products of farms, including ties and plastics. Butler (2003) found young and adult Australian gannets (*Sula serrator*) in the Marlborough Sounds entangled in discarded rope ties from mussel farms that had been incorporated into nests by parents. The closest gannet colony is 17 km at Waimaru Peninsula in Beatrix Bay and well within their flight range. A variety of shag species are also present in the area and may potentially use ties as nesting material. It is therefore important that marine farmers minimize the introduction of ties into the marine environment.

The mussel industries Environmental Management System (EMS), formally known as the Environmental Code of Practice seeks to minimise such risks, and they are likely to be minimal on well-maintained farms (Keeley *et al*., (2009).

7.4 King shag

A variety of authors have also outlined human activities that may impact king shags including aquaculture (Schuckard, 2006); commercial fishing (McClellan, 2017), colony disturbance (Butler, 2003; Davidson *et al*., 2018), and predation (Nelson, 1971). Apart from aquaculture, little research has occurred on these topics despite their potential importance on a high-status species.

Butler (2003) undertook the first review of the possible effects of marine farms on king shag. He described the potential effects in three categories: physical effects (structures of farms, lights, debris from farms, and shell waste); effects of activities (disturbance, noise and water pollution); and effects on marine ecology (hydrography, sediment and water column changes, creation of new habitat, exclusion of trawlers, unwanted organisms).

Butler (2003) considered that most king shag feeding occurred in deeper water, and that potential impacts resulting from mussel farms excluding king shag foraging may become apparent if deeper-water mussel farms were developed. Lloyd (2003) reviewed the effects of aquaculture on seabirds and cetaceans. He also appeared to believe the existing pattern of inshore mussel farms was less likely to affect king shag foraging compared to proposals for extensive mid-bay mussel farms in Admiralty Bay. Fisher and Boren (2012), undertook a rigorous study of king shag foraging distribution in Admiralty Bay; see Section 2.4) and concluded that deep water marine farms posed a greater threat compared to inshore sites.

The most recent general review of the ecological effects of aquaculture (Sagar, 2013) only specifically mentioned king shag in relation to disturbance but discussed the main effects of 'filter feeder species' farms on seabirds in general, and their significance. The authors stated the eight key effects were: entanglement with farm structures, habitat exclusion, smothering of benthos, changed abundance of prey, provision of roosts, disturbance by farm activities, ingestion and entanglement with farm debris, and attraction to lights. Sagar (2013) considered that the potential effects of habitat exclusion and smothering of benthos were, in general, insignificant to seabirds given the small area occupied by filter feeder farms. However, he qualified this, noting that the significance of effects "will depend on the spatial scale of the aquaculture facility in relation to the distribution and abundance of prey species", and concluded that effective management could be achieved by avoiding locating farms in key foraging areas of species with restricted habitat requirements (see Sagar, 2013). The review listed "home ranges or location of important feeding and breeding habitats for most populations of seabird species "as being a key information gap for every one of the eight key potential effects."

Of all the threats, most attention had been given to the potential effects of mussel farms on king shags, and the possibility that king shags are excluded from the area under and around a mussel farm due to physical structures inhibiting foraging, and/or changing the habitat causing decreases to key prey species (McClellan, pers comm.). Unfortunately, the extensive data that has been collected on the locations of foraging king shags has, however, not been able to answer this key question.

The present marine farm reconsenting site is in the inner part of Admiralty Bay where king shag foraging intensity is lower compared to the outer Admiralty Bay area (Fisher and Boren, 2012). King shags, do however, forage in inner Admiralty Bay. The present farm site

overall size remains unchanged meaning that any impact on king shags will also remain unchanged if the site is reconsented.

7.5 Marine mammals

International research demonstrates that the nature and scale of any direct displacement or avoidance varies greatly between culture methods and marine mammal species (MPI, 2013). While particular species of whales or dolphins will be highly sensitive to disturbance, other species (such as bottlenose dolphins) and pinnipeds may actually be attracted to the structures (Clement and Halliday, 2014; Davidson and Richards, 2017).

For mussel farming, occupied farm areas may be perceived by some marine mammals (particularly those that echolocate) as a physical, visual or acoustic obstruction within their habitat. Based on research to date in Admiralty Bay, dusky dolphins appear unable to cooperatively herd schooling fish when adjacent to or within mussel farm structures (see Pearson *et al*., 2012). Clement and Halliday (2014) also noted the reluctance of common dolphins to enter or feed near farm structures within the Admiralty Bay region. Over the course of five consecutive winters between 1998 and 2002, Markowitz *et al.* (2004) found that dolphins spent significantly less time in areas occupied by mussel farms than other parts of the inner bay. Pearson *et al*. (2012) also reported similar findings from tracking dolphin groups both inside and outside of mussel farms across all of Admiralty Bay during the winters and springs of 2005-2006. To test specifically whether these results were due to the fact that dusky dolphins might not use habitats closer to shore in general, rather than avoiding the farm areas themselves, Markowitz's study looked at the amount of time groups spent near farms (<200 m) and Pearson's study looked at time spent within the nearshore zone (<400 m of the shoreline) around inner and all of Admiralty Bay, respectively. Both studies found dolphins frequented areas occupied by mussel farms significantly less often than similar areas near farms or within the general nearshore zone.

The significance of such 'disruptions' to their foraging and feeding success over time may range from minor, (i.e. they simply employ other foraging strategies or move to other sources), to major implications (i.e. the loss of a primary food source begins to have population-level effects, such as reduced reproduction rates). It is difficult to assess whether these foraging limitations are impacting on the survival and reproduction of these dolphins at the population level and research can take several decades to determine and population

dynamics (e.g. closed versus open structure) can affect the efficiency with which data can be collected (D. Clement, pers. comm.).

Displacement

For dusky and common dolphins, the existing farm represents an area lost as foraging habitat. It is unknown if this loss is important to these species. The present proposal, however, is applying for no additional water space, therefore the present level of impact on these species will remains unchanged.

Based on migratory patterns and behavour it is unlikely these farms represent a threat to echolocating whales.

Some species such as NZ fur seals, may be attracted to mussel farms as hauling outs (Clement and Halliday, 2014; Davidson and Richards, 2017). Farm structures may also attract bottlenose dolphin, and possibly killer whales, due to these species' curious natures and the associated aggregations of possible prey species under and near farms. Bottlenose dolphins have been frequently recorded 'sweeping' through mussel farms within the greater Admiralty Bay region (D. Clement, pers. comm).

Entanglement

There are two reported incidences of dolphin entanglement and death at a salmon farm in New Zealand, both from the Marlborough Sounds (M. Aviss, MDC). In one, an unidentified dolphin species became trapped while a predator net was being replaced, and in the other case, a Hector's dolphin became trapped under a predator net. Internationally, fatal entanglements of dolphins in predator nets on finfish farms have been reported from Australia (Gibbs and Kemper, 2000; Kemper and Gibbs, 2001; Kemper *et al*., 2003) and Italy (Díaz López and Bernal Shirai, 2007). This may reflect attraction of dolphins to a food source (Kemper and Gibbs, 2001) although such interactions between finfish farms and cetaceans have not been proven (Kemper *et al*., 2003).

There is also one record of a marine mammal becoming trapped or tangled in a mussel farm (i.e. a Bryde's whale) (Wursig and Gailey, 2002). The low incidence of mussel farm entanglements is probably related warps and backbones being under tension thereby reducing the chance of entanglement. This is in stark contrast to lobster pots that have a

single line to the surface. This line is usually under little or no tension. Whales migrating up the east coast of the South Island pass hundreds of lobster lines that present a serious entanglement threat. A humpback first spotted by DOC staff near Banks Peninsula with a cray pot buoy line tangled around its tail stock and flukes then became entangled in mussel floats when it swam alongside a farm in Tory Channel several days later. This animal was cut free from the cray pot lines by a mussel farmer (Scott Madsen) and was released alive.

Wursig and Gailey (2002) stated that entanglements by larger whales in aquaculture facilities are relatively rare events.

The present marine farm utilizes standard mussel farming structures that are under tension and therefore present a low risk of entanglement to marine mammals. This farm is located inshore of the adjacent farms. An offshore shift of the consent to encompass existing structures is therefore unlikely to influence foraging dolphins beyond the existing situation.

7.6 Biosecurity issues

The applicant belongs to mussel industries Environmental Management System (EMS). As a member, the applicant and his contractors are bound by good environmental practices. As well as all aspects of farming such as establishment, seeding, and harvesting, the Code includes guidelines on the transfer of mussel seed and the NZ Mussel Industry Seed Transfer Code. All members of the ECOP are also bound by the Biosecurity Act 1983, as well as the Hazardous Substances and New Organisms Act 1996.

7.7 Mussel farming impacts

7.7.1 Benthic impacts

Mussel shell debris was recorded from 6 of the 24 consent area photos. Mussel debris was most abundant under backbones and was usually 25-75% cover. Mussel shell debris was recorded under warps. Mussel debris was also recorded immediately offshore of the consent, under backbones.

Shell debris impact levels were within the range known for mussel farms in the Marlborough Sounds. This farm impact at this site is at the moderate to high end of the impact range compared to other farms in the Sounds.

It is probable that the impact of continued shellfish farming at this site will result in the deposition of more shell and fine sediment under and near droppers. Based on the literature and assuming the present level of farming activity remains consistent, it is very unlikely that the surface sediments would become anoxic, however, the redox layer is likely shallower compared to sites away from the farm (Hartstein and Rowden, 2004; Keeley *et al*., 2009;).

Recovery of the benthos takes approximately 5-7 years on deep soft substratum as shell is often smothered thereby reducing recovery times compared to inshore coarser substratum areas (Davidson and Richards, 2014).

7.7.2 Productivity

Mussel farms can influence adjacent farms by slowing water flow to farms located in downstream positions (Ogilvie, 2000). This is particularly pronounced in quiescent areas of the Sounds. However, published work by Zeldis *et al*. (2008, 2013) suggests that the major factors influencing productivity in the Marlborough Sounds relate to cyclical weather patterns in the summer (El Nino and La Nina) and river-derived nutrient inputs in winter. Slow crop cycles in some years are therefore a reflection of a weather cycle and much less about the number of farms.

There has been no data presented to show the ecological carrying capacity of the Sounds has been reached, however, this topic is not well researched. There is considerable evidence showing the major drivers of the Pelorus system, for example, naturally leads to large within and between year variability. Relative to this, the impact of mussel farms appears to be material but relatively small compared to major environmental drivers (Broekhuizen *et al*., 2015).

Tidal flows in inner Admiralty Bay are low (Broekhuizen, 2015). Winds may be a more significant driver of water movement in this area, especially during the predominant north-westerly winds in summer. The proximity of the farm to the main channel through French Pass and Cook Strait means water turnover times are likely to be short compared to bays well distant to main reaches in Pelorus Sound (e.g. Hallam Cove).

Based on these considerations and the existing literature, it is probable the site will likely cause phytoplankton depletion inside its boundaries; however these are expected to return to background levels as water leaves the consent.

The present reconsenting application represent no change to the number of consented lines and therefore represents no change to phytoplankton predation and water flows in the bay.

7.8 Boundary adjustments, line adjustments and monitoring

No biological communities of particular interest were found during the present survey. Further, most of the consent is located over silt and clay substratum with or without a component of natural shell. This substratum is the most common and widespread habitat type in sheltered shores of the Marlborough Sounds. The impacts associated with mussel farming on muddy habitats characterised by silt and clay are low compared to farm impacts in shallow habitats dominated by rocky or biogenic communities.

Warps are known to have little or no impact on benthic communities (Davidson and Richards, 2014). At this site the benthos under warps appeared relatively natural, with mussel shell debris present in areas closest to droppers.

Surface structures were located within and offshore of the consent over a mud bottom. Rocky substrata were recorded along the inshore corners of the consent. Further, the inshore edge of the consent was well within 50 m of low water (30 m). Relocation of the consent further offshore to fit the existing farm structures would act to place the consent over existing farm structures. The effect on king shag and marine mammals would remain unchanged if the consent was shifted to fit farm structures. If this is not actioned and the consent left at its present location, an exclusion area for production lines is suggested (Figure 13).

No other changes to the present consent boundaries are suggested on biological grounds. Habitats and species associated with the site are typical of sheltered central and outer Sounds Bays and as such no monitoring is suggested.

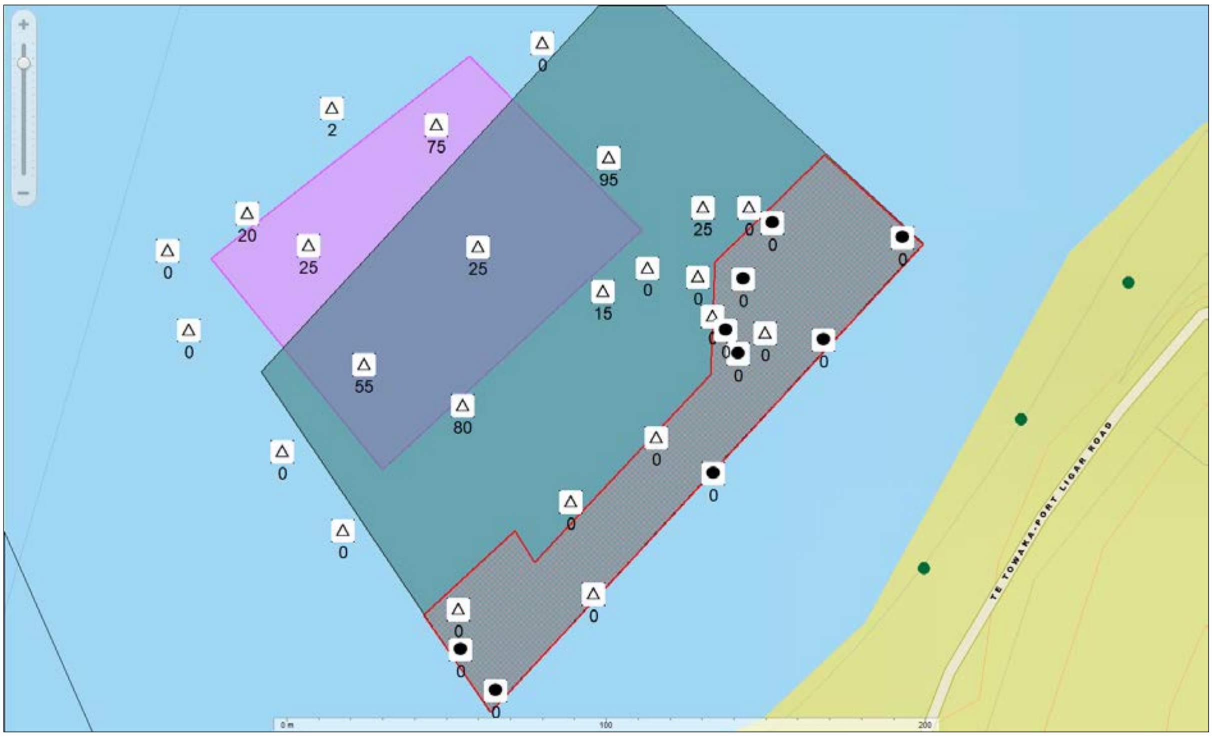

Figure 13. Consent (teal), surface structures (pink) and suggested production dropper exclusion areas (red hatched). Drop camera stations with soft substratum are open triangles, while closed circles are rocky substrata.

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Appendix 1. Drop camera photographs

Photo 1 silt & clay

Photo 2 silt, clay, mussel shell

Photo 3 silt, clay, shell & mussel shell

Photo 4 silt, clay, natural shell

Photo site 5 silt, clay, mussel shell

Photo 6 silt, clay, mussel shell

Photo 7 silt, clay

Photo 8 silt, clay

Photo 9 silt, clay, mussel shell

Photo 10 silt, clay, mussel shell

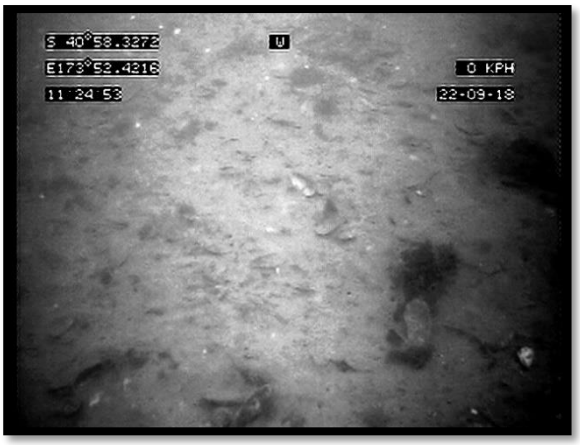
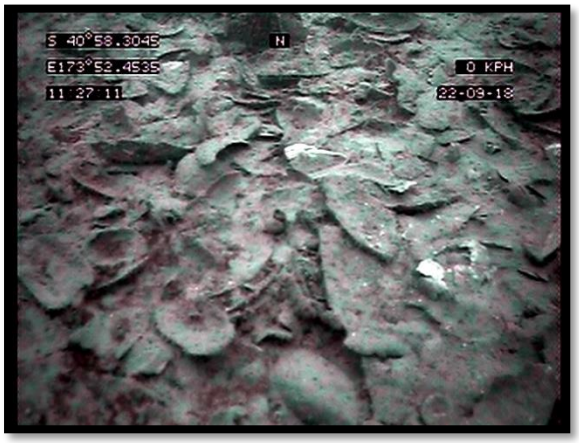


Photo 11 silt, clay, mussel shell



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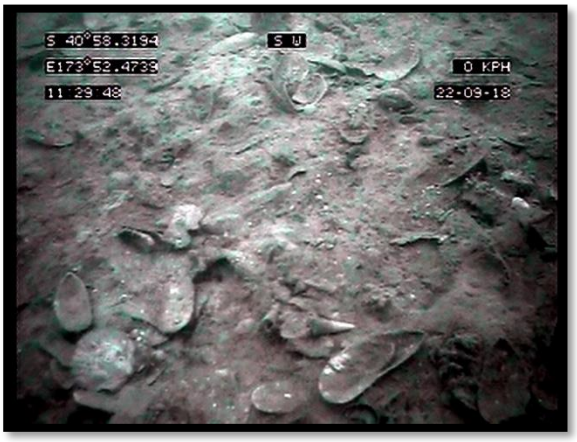


Photo 13 silt, clay, mussel shell

Photo 14 silt, clay, mussel shell

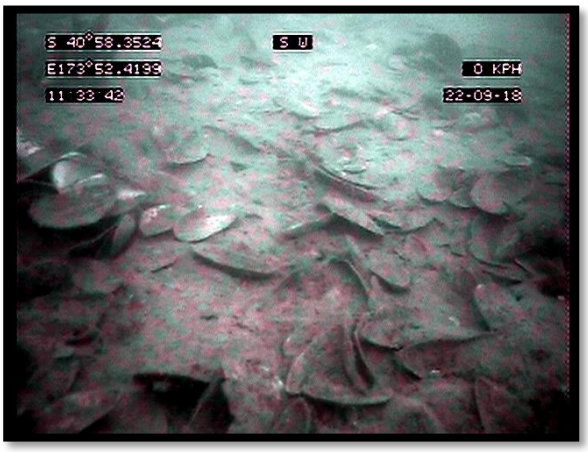


Photo 15 silt, clay

Photo 16 boulder, cobble, fine sand, shell

Photo 17 boulder, cobble, fine sand, shell

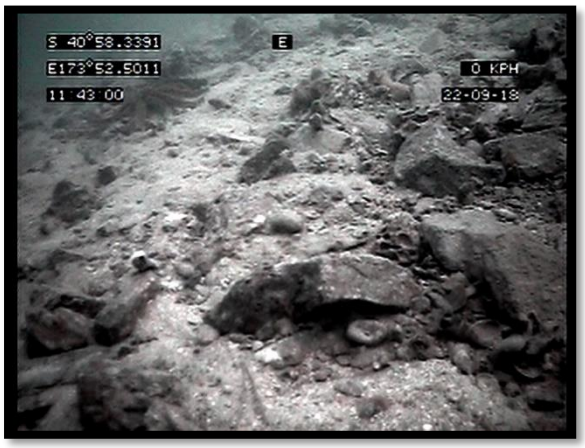


Photo 18 cobble, fine sand, shell

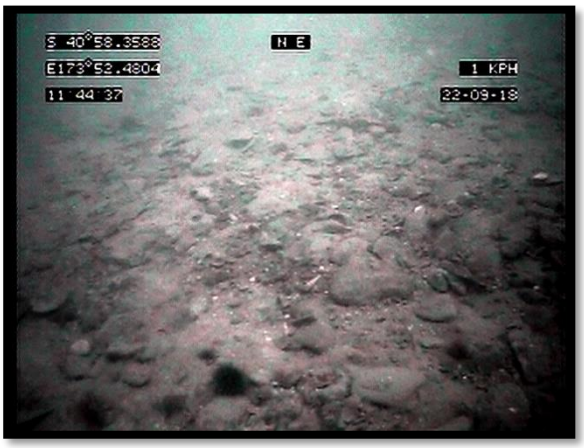


Photo 19 fine sand, silt, shell

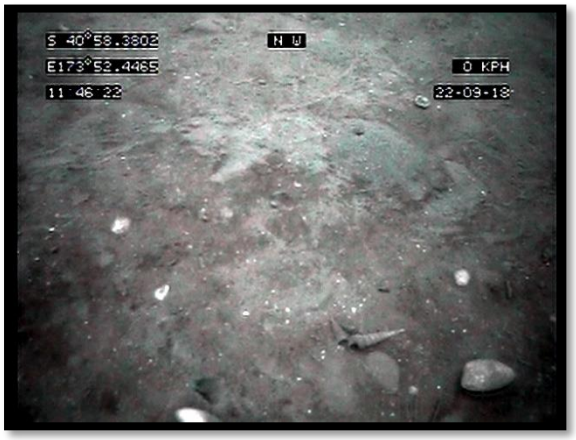


Photo 20 cobble, fine sand, shell

Photo 21 fine sand, silt, occ cobble

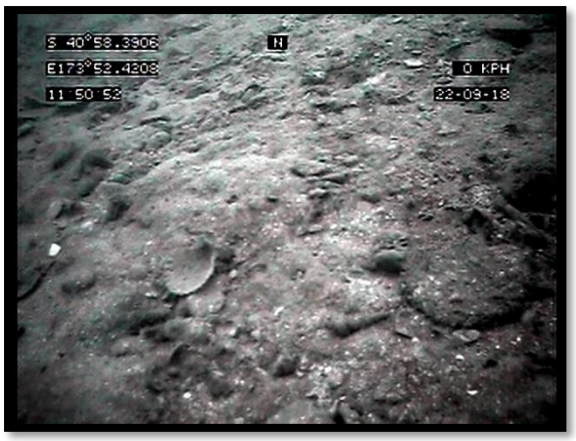


Photo 22 fine sand, silt, shell

Photo 23 silt, shell

Photo 24 silt, shell

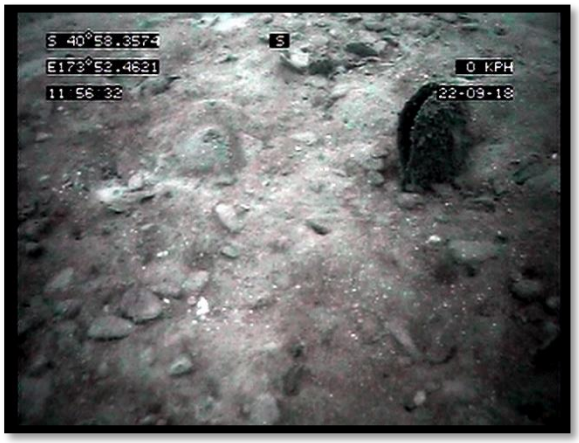


Photo 25 silt, fine sand, shell

Photo 26 fine sand, silt, occ cobble

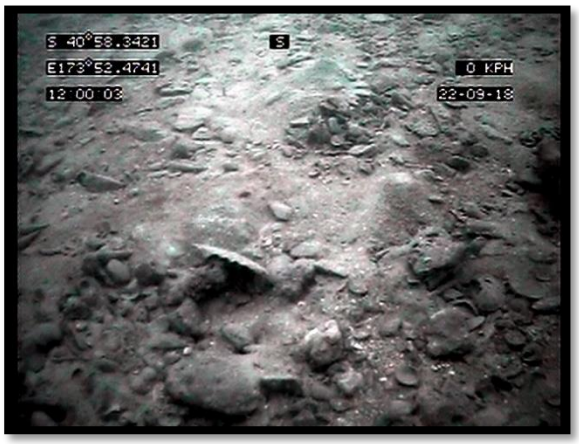


Photo 27 silt, fine sand, shell

Photo 28 fine sand, silt, occ cobble

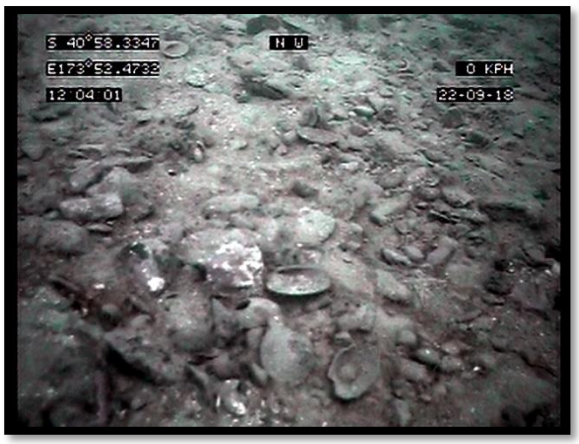


Photo 29 fine sand, silt, occ cobble

Photo 30 silt, fine sand, shell, cobbles

Photo 31 silt, fine sand, shell

Photo 32 silt, shell

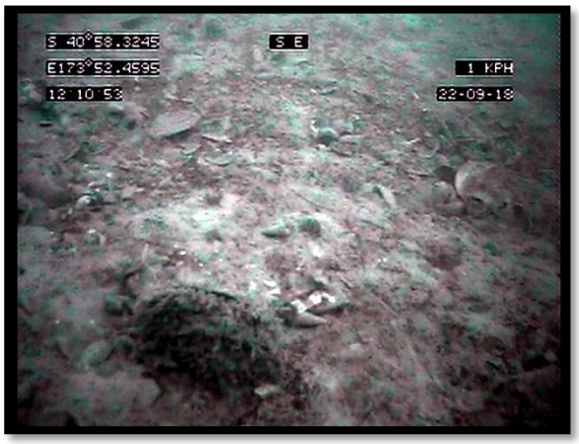
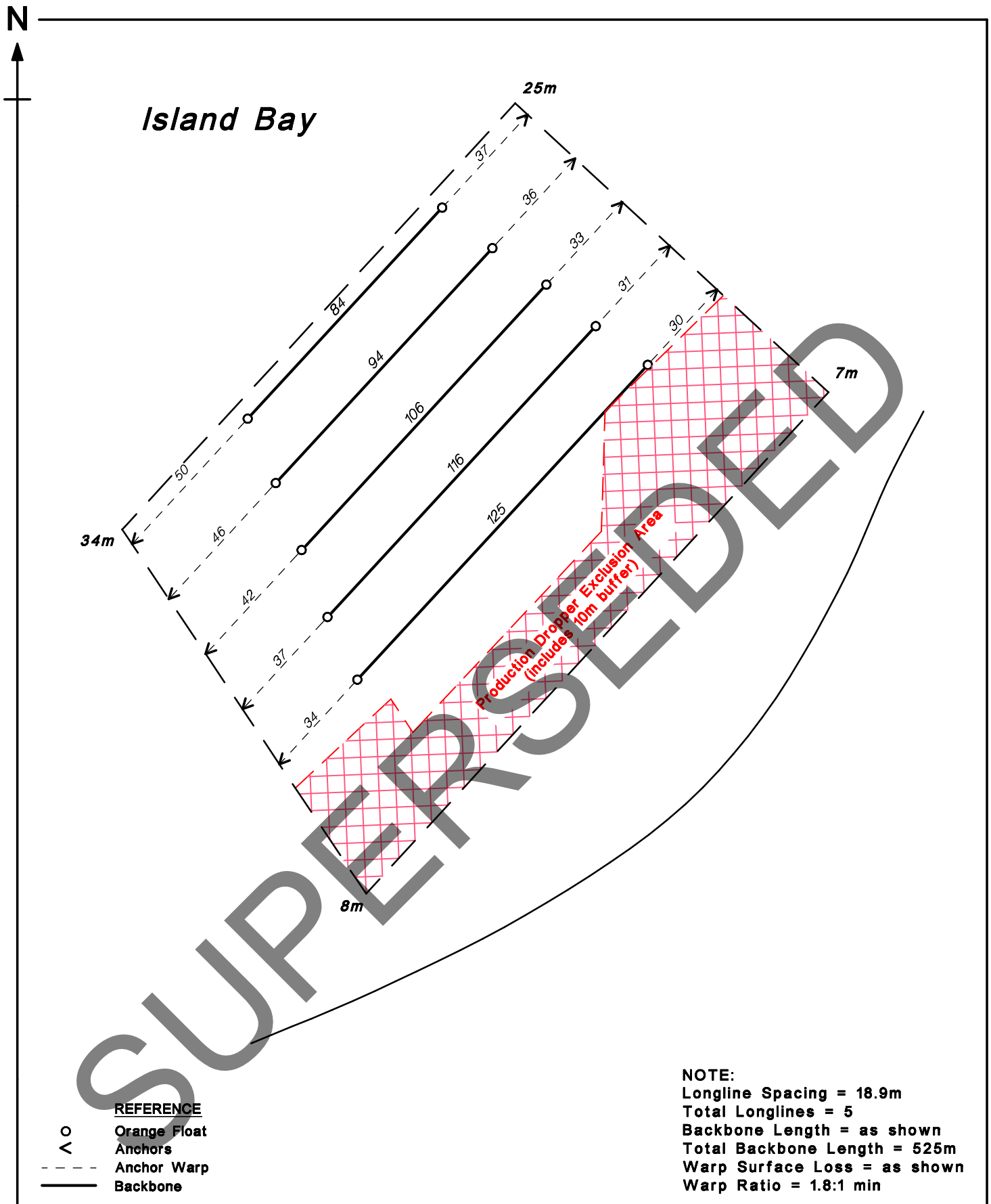


Photo 33 silt, fine sand, shell



REFERENCE

- Orange Float
- Anchors
- Anchor Warp
- Backbone

NOTE:
Longline Spacing = 18.9m
Total Longlines = 5
Backbone Length = as shown
Total Backbone Length = 525m
Warp Surface Loss = as shown
Warp Ratio = 1.8:1 min

aquaculture direct

Layout Details

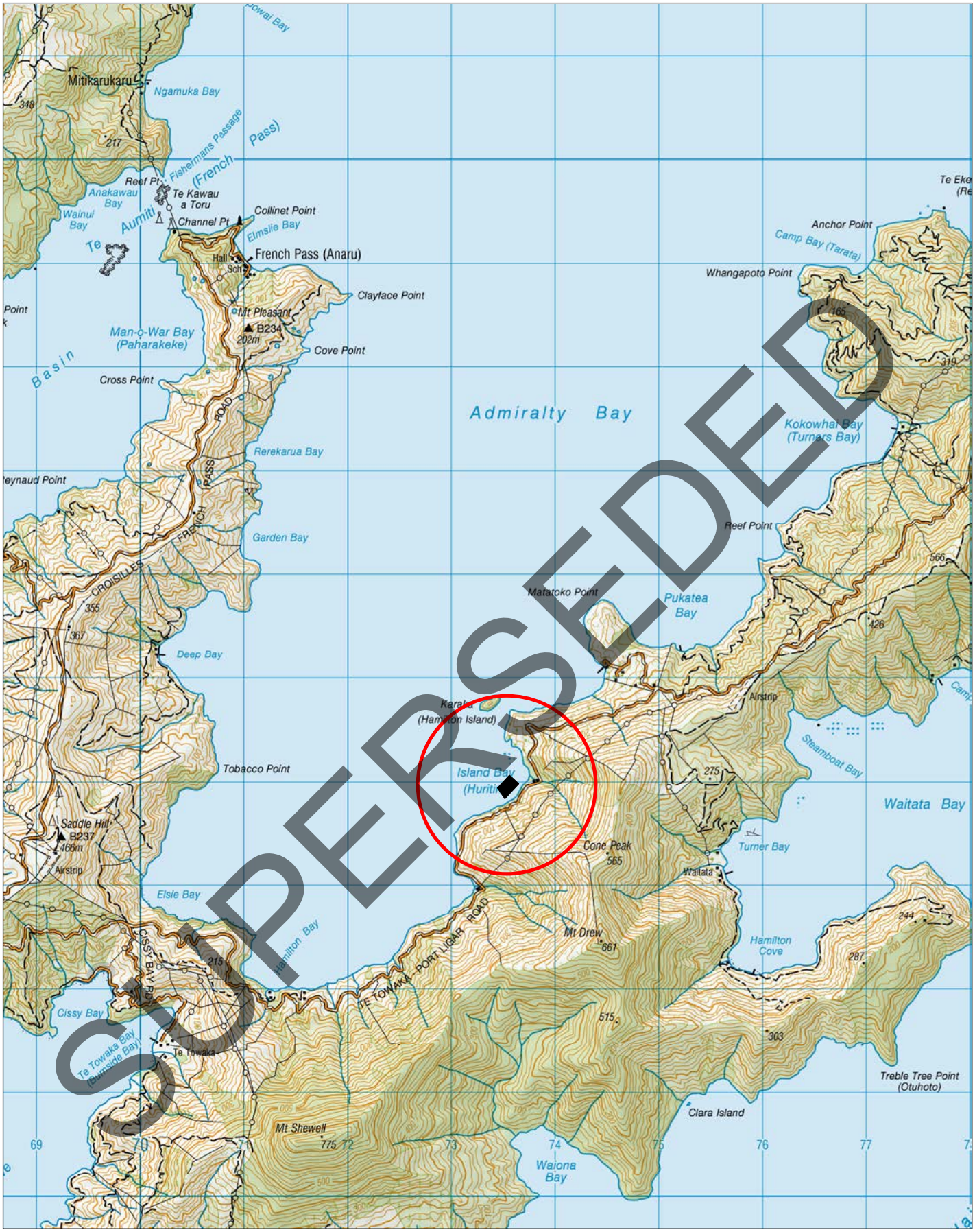
Renewal of Marine Farm 8038

Island Bay, Admiralty bay

SCALE 1:1,500

20 0 20 40 60 80 100

MF_2588a
21 December 2018



Topomap 50 Sheet: BP28

aquaculture direct

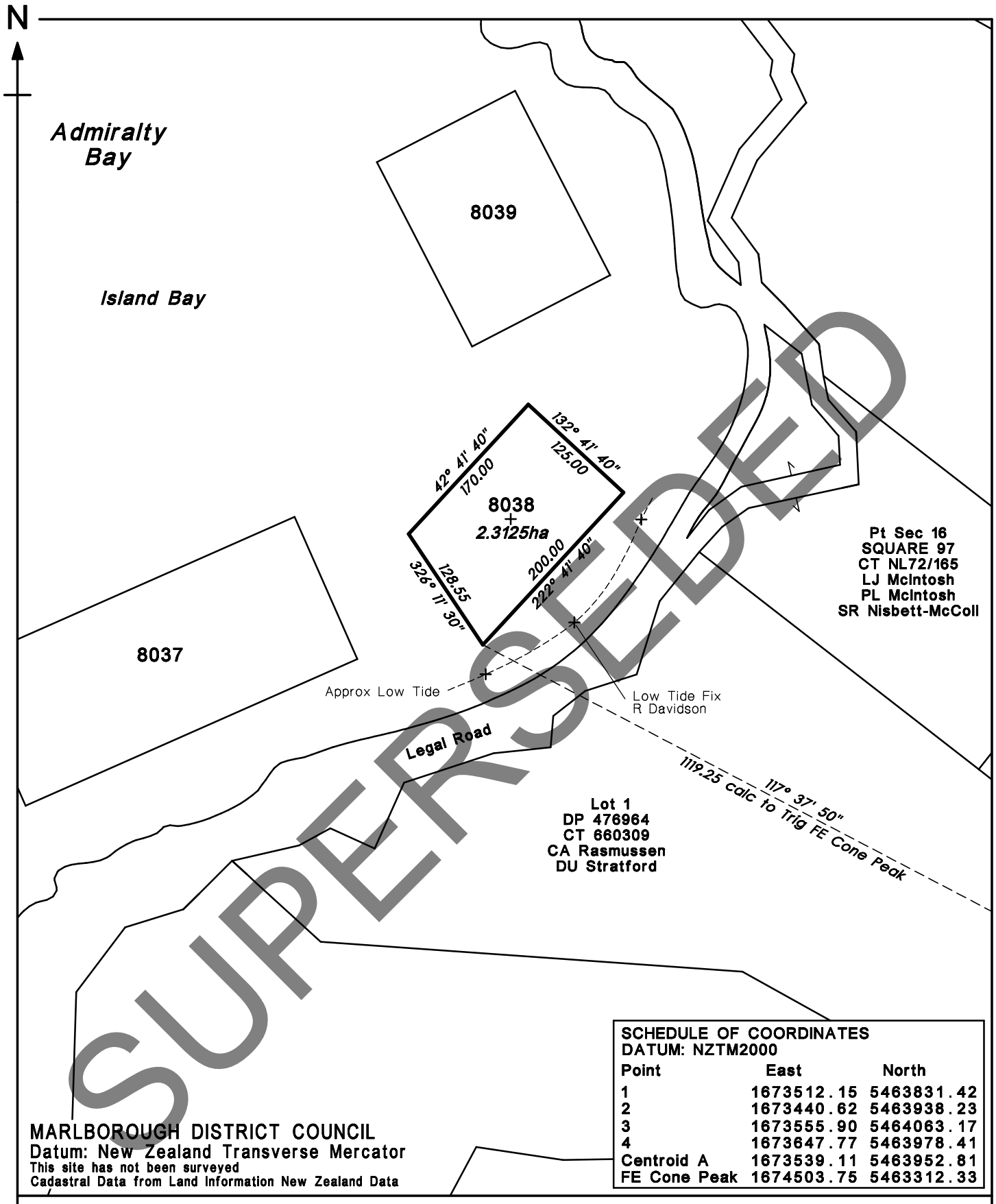
Prepared
21 December 2018

Locality Map

Renewal of Marine Farm 8038
Island Bay, Admiralty Bay

Scale 1:50,000

500 0 500 1000 1500 2000 2500 3000 3500 Meters



SCHEDULE OF COORDINATES DATUM: NZTM2000		
Point	East	North
1	1673512.15	5463831.42
2	1673440.62	5463938.23
3	1673555.90	5464063.17
4	1673647.77	5463978.41
Centroid A	1673539.11	5463952.81
FE Cone Peak	1674503.75	5463312.33

MARLBOROUGH DISTRICT COUNCIL
Datum: New Zealand Transverse Mercator
This site has not been surveyed
Cadastral Data from Land Information New Zealand Data

aquaculture direct

Renewal of Marine Farm 8038

Island Bay, Admiralty Bay

SCALE 1:5,000

50 0 100 200 300 400 metres

21 December 2018
MF_2588a

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Peter Johnson-5472

From: Jeffrey Meachen <jeff_meachen@email.com>
Sent: Monday, 15 July 2019 4:55 PM
To: Peter Johnson-5472
Cc: Caroline Cefarley7
Subject: Fw: 8038 ISLAND BAY
Attachments: 8038 Realignment Aerial Overlay (2018 Aerial).pdf; 8038 Realignment Layout Plan.pdf; 8038 Realignment Locality Map.pdf; 8038 Realignment Site Plan.pdf

Hi Peter,

Regarding the 8038 Island Bay renewal:

As discussed with you Russell Silcock has drawn up a structure layout plan that will:
1. Leave the existing five longlines in situ.
2. Elongate the farm area to encompass the existing anchors and warp lines at an approximate 2.5:1 to 3:1 ratio for the water depths.
3. The proposed farm area is shorter in width but longer in length.

This alternative proposal is a compromise to moving back to 8038's consented area which Paul McIntosh, our one submitter against does not want.

Do you need any more information or documentation before approving the proposed layout plan for the amended application?

If not we then submit to Paul McIntosh and ask him to withdraw his submission against our application.

Kind Regards,
Jeff.

Jeffrey Meachen,
NZ Mobile Phone: 021 916 562

> **Sent:** Thursday, July 04, 2019 at 8:01 AM
> **From:** "Jeffrey Meachen" <jeff_meachen@email.com>
> **To:** "Peter Johnson-5472" <Peter.Johnson@marlborough.govt.nz>
> **Cc:** "Bruce Cardwell" <bruce@aquaculturedirect.co.nz>, "Caroline Cefarley7" <cefarley7@gmail.com>
> **Subject:** Fw: 8038 ISLAND BAY
>
> Hi Peter,
>
> Regarding the 8038 Island Bay renewal:
>
> We had a two meetings on Thursday the 13th of June with first yourself Peter, then Russell Silcock and the outcome was:
> 1. A realignment of 8038 Island Bay marine farm in it's existing surface position with existing anchors and 2.5:1 to 3:1 warp ratios (industry standard).
> 2. To support a realignment Rob Davidson will supply Russell Silcock with as much benthic survey and depths ASAP, both North-East and South-West of the existing five in situ longlines of 8038.
> 3. Russell will use that information to draw up a new structure layout plan, leaving the 5 longlines in situ and including the new warp and anchor areas.
> 4. Assuming we do not need more benthic surveys to support Russell's new structure layout plan, site plan, and a location plan, we then submit to yourself Peter for approval, then to our one submitter against, Paul McIntosh, and request a withdrawal of his submission against our application.
> 5. After MDC issue the new Decision Document we then have to apply for a new fisheries permit from MPI because the original one only applies to the original consented area; the wait time for this is about 4 months and the standard fee for an MPI aquaculture decision is $2008.20 (including GST).
>
> N.B. We were waiting on Russell Silcock to complete the three necessary plans, there is about a five week lag time due to his busy schedule.
> Attached are Russel's three necessary realignment plans and an aerial photo of the realignment.

Kind Regards,
Jeff.

Jeffrey Meachen,
NZ Mobile Phone: 021 916 562

Sent: Thursday, July 04, 2019 at 3:01 PM
From: "Russell Silcock" <dplrussell@gmail.com>
To: "'Jeffrey Meachen'" <jeff_meachen@email.com>, "'Caroline Cefarley7'" <cefarley7@gmail.com>
Subject: 8038 ISLAND BAY

Hi Jeff

Attached are plans for 8038 in Island Bay

I have not drawn up at 3:1 warp ratio as that puts line 5 west anchor into adjoining marine farm.

I have dawn up keeping new site boundary just clear of 8037.

See what you think of these plans. Can make any edits you deem appropriate.

Regards,

Russell

DPL
Draughting Plus Limited

17 Wynen Street

Blenheim

Ph 03 577 8099

Topomap 50 Sheet: BP28

DPL
Draughting Plus Limited

Prepared
4 July 2019

Locality Map

Realignment of Marine Farm 8038
Island Bay, Admiralty Bay

Scale 1:50,000

500 0 500 1000 1500 2000 2500 3000 3500 Meters

DPL
Draughting Plus Limited

Prepared: 4 July 2019

KEY

Marine Farm Boundary (existing)

Proposed Realigned Marine Farm

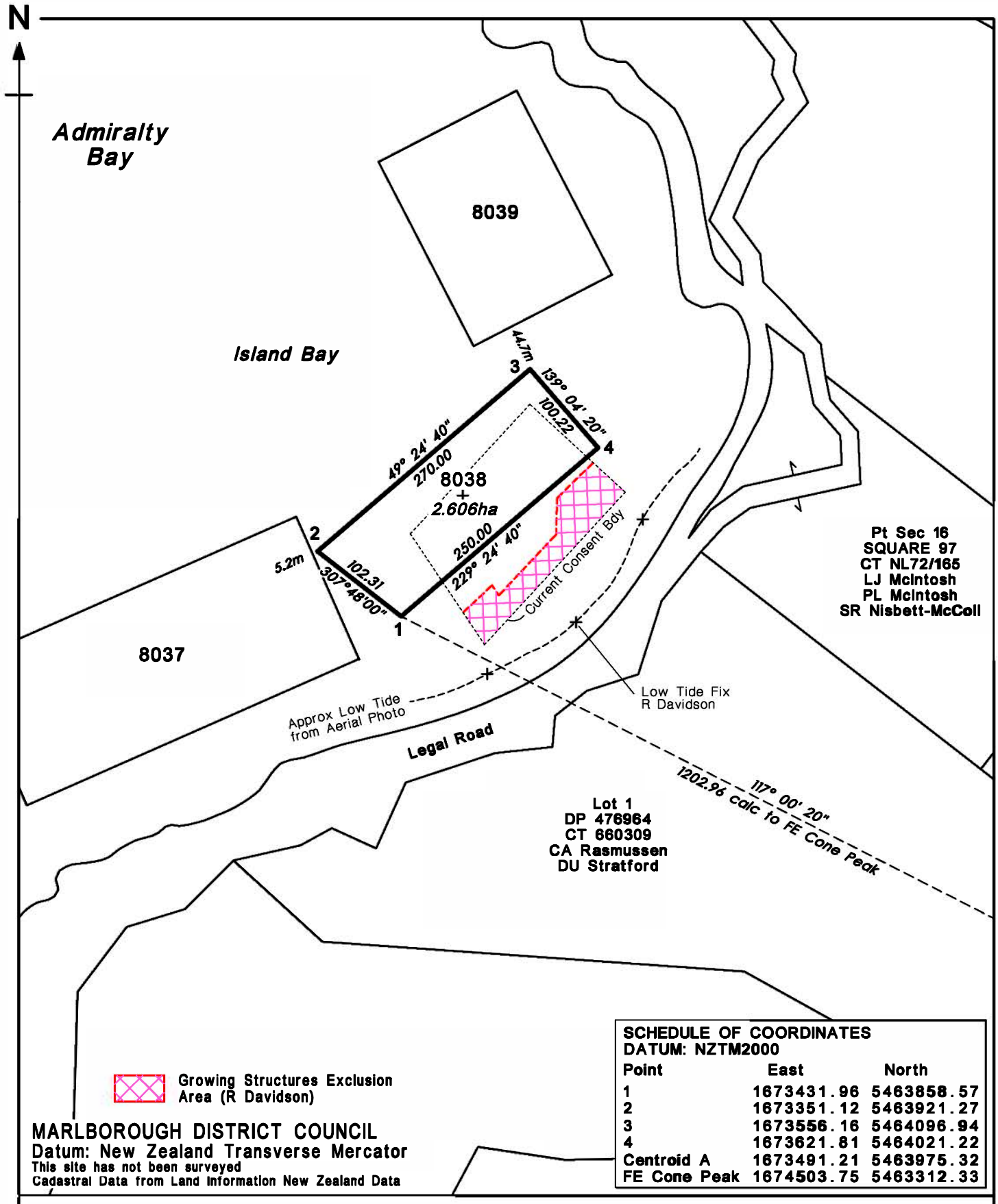
Marine Farm 8038

Brightlands Bay, Tawhitinui Reach

Realigned Marine Farm

Scale 1:3,000

25 0 25 50 75 100 125 150 Meters



SCHEDULE OF COORDINATES
DATUM: NZTM2000

Point	East	North
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2	1673351.12	5463921.27
3	1673556.16	5464096.94
4	1673621.81	5464021.22
Centroid A	1673491.21	5463975.32
FE Cone Peak	1674503.75	5463312.33

Proposed Coastal Permit

Being realignment and renewal of Marine Farm 8038

Island Bay, Admiralty Bay

SCALE 1:5,000

50 0 100 200 300 400 metres

Prepared by:
DRAUGHTING PLUS LTD
4 July 2019
MF_2588b

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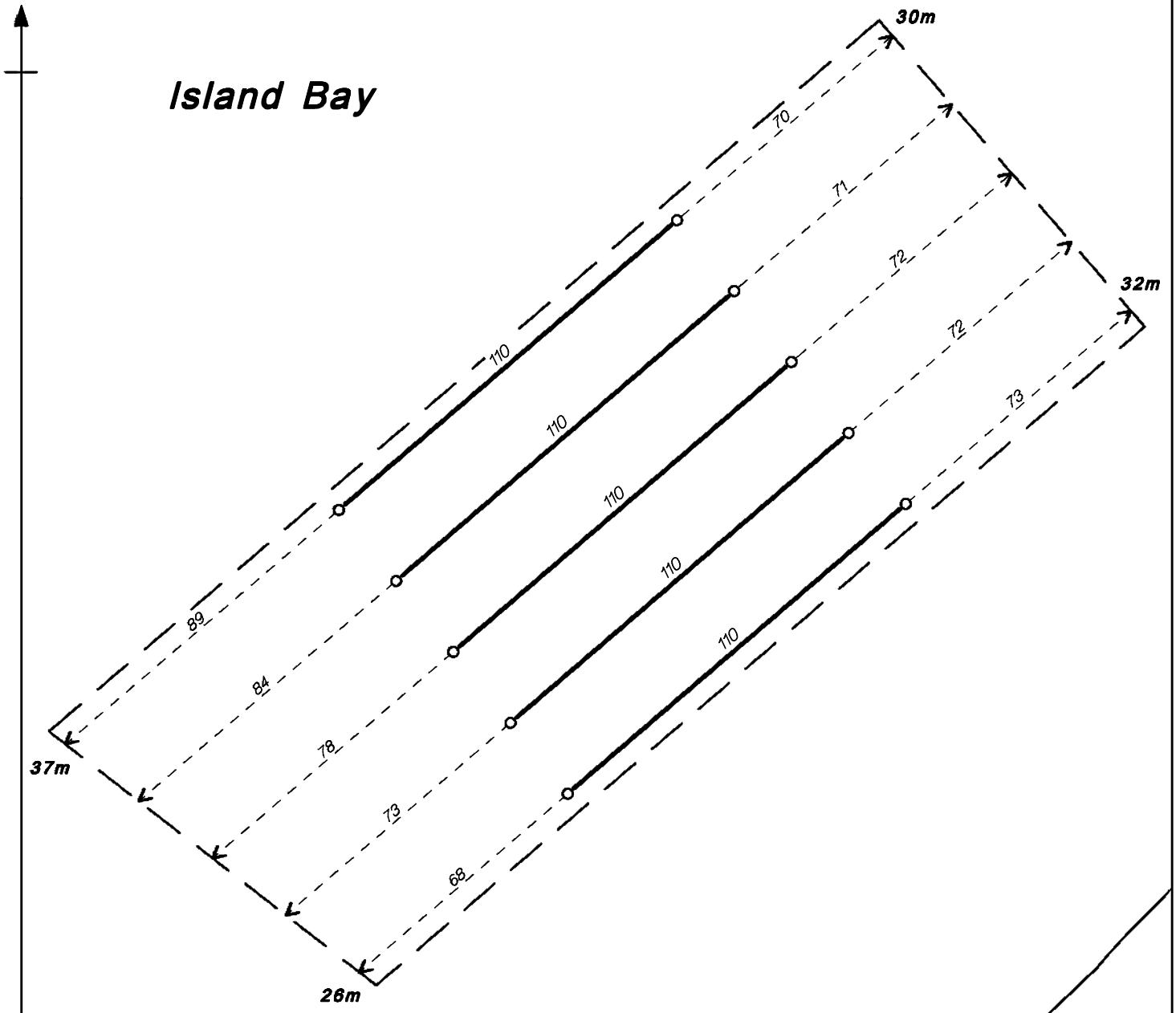

REFERENCE

- Orange Float
- Anchors
- Anchor Warp
- Backbone

NOTE:
Longline Spacing = 22.5m
Total Longlines = 5
Backbone Length = 110m
Total Backbone Length = 550m
Warp Surface Loss = as shown
Warp Ratio = 2.6:1 min
Depths are approximate

Layout Details

Realignment and renewal of Marine Farm 8038

Island Bay, Admiralty bay

SCALE 1:1,500

20 0 20 40 60 80 100

Prepared by:
DRAUGHTING PLUS LTD
Prepared by:
DRAUGHTING PLUS LTD
MF_2588b
4 July 2019

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