Resource Consent Application

MARLBOROUGH DISTRICT COUNCIL

This application is made under Section 88 of the Resource Management Act 1991

Please read and complete this form thoroughly and provide all details relevant to your proposal. Feel free to discuss any aspect of your proposal, the words used in this form or the application process with Council staff, who are here to help.

This application will be checked before formal acceptance. If further information is required, you will be notified accordingly. When this information is supplied, the application will be formally received and processed further.

You may apply for more than one consent that is needed for the same activity on the same form.

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Consent No:

Case Officer:

Date Received:

RECEIVED
24 FEB 2017
MARLBOROUGH

1. Applicant details *(If a trust, list full names of all trustees.)*

Name: *(full legal name)*
Wendy Mary Walker, David Eric Walker & Tasman No.9 Trustees Limited & David Eric Walker & John Hart

Mailing address: *(including post code)*
4 Rose Street
HAVELOCK

Email Address: dewalker1980@gmail.com

Phone: (Daytime) _____ Phone: (Mobile) 022 574 1160

2. Agent Details *(If your agent is dealing with the application, all communication regarding the application will be sent to the agent.)*

Name: R D Sutherland

Mailing address:
Property and Land Management Services Ltd
PO Box 751
BLENHEIM 7240

Email Address: palmsltd@xtra.co.nz

Phone: (Daytime) (03) 578 1733 Phone: (Mobile) 027 220 7299

3. Consent/Application Details

☑ **Coastal Permit** ☐ **Discharge Permit** ☐ **Land Use** ☐ **Subdivision** ☐ **Water Permit**

4. Brief Description of the Activity

To renew marine farm site 8173 being U000063, MPE 726 (2.80 ha), and to extend the farm by 4.01 ha in Melville Cove, Port Gore.

To cultivate Green Shell mussels (Perna *canaliculus),* Blue Shell Mussels *(Mytilus edulis),* and seaweed and algae species *(Macrocystis pyrifera, Ecklonia radiata, Gracilaria, Pterocladia lucida and Asparayopsis armata).*

Consent is also sought to disturb the seabed with anchoring devices and to take and discharge seawater and organic material at harvest.

5. Supplementary Information Provided? ☐ Yes ☐ No

Council has supplementary forms for some activities, such as moorings, water permits, domestic wastewater, discharge permits, to assist applicants with providing the required information.

6. Property Details

The location to which the application relates is (address): Marine farm site 8173, Melville Cove, Port Gore

Legal description (i.e. Lot 1 DP 1234): _____

(Attach a sketch of the locality and activity points. Describe the location in a manner which will allow it to be readily identified e.g. house number and street address, Grid Reference, the name of any relevant stream, river, or other water body to which application may relate, proximity to any well known landmark, DP number, Valuation Number, Property Number.)
(Please attach a copy of the Certificate of Title that is less than 3 months old (except for coastal or water permits.)

The names and addresses of the owner and occupier of the land (other than the applicant):

Please attach the written approval of affected parties/adjoining property owners and occupiers.

Note: As a matter of good practice and courtesy you should consult your neighbours about your proposal. If you have not consulted your neighbours, please give brief reasons on a separate sheet why you have not.

7. Assessment of Effects on the Environment (AEE) *(Attach separate sheet detailing AEE.)*

I attach, in accordance with the Schedule Four of the Resource Management Act 1991, an assessment of environmental effects in a level of detail that corresponds with the scale and significance of the effects that the proposed activity may have on the environment. Applications also have to include consideration of the provisions of the Resource Management Act 1991 and other relevant planning documents.
Note: Failure to submit an AEE will result in return of this application.

8. Other Information

Are additional resource consents required in relation to this proposal? If so, please list and indicate if they have been obtained or applied for.

I attach any other information required to be included in the application by the relevant Resource Management Plan, Act or regulations. ☑ **Yes** ☐ **No**

9. Fees

1. The applicable lodgement (base) fee is to be paid at the time of lodging this application. If payment is made into Council's bank account 02-0600-0202861-02, please put Applicant Name and either U-number, property number or consent type as a reference. If you require a GST receipt for a bank payment, please tick ☐
2. The final cost of processing the application will be based on actual time and costs in accordance with Council's charging policy. If actual costs exceed the lodgement fee an invoice will be issued (if actual costs are less, a refund will be made). Invoices are due for payment on the 20th of the month following invoice date. Council may stop processing an application until an overdue invoice is paid in full. Council charges interest on overdue invoices at 15% per annum from the date of issue to the date of payment. In the event of non-payment, legal and other costs of recovery will also be charged.
3. Please make invoice out to: ☑ Applicant ☐ Agent
   (if neither is ticked the invoice will be made out to Applicant)

10. Declaration

I *(please print name)* R D Sutherland

Confirm that the information provided in this application and the attachments to it are accurate.

Signature of ~~applicant~~ or authorised agent: RD Sutherland

Date 24-02-2017

Privacy Information

The information you have provided on this 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 IMPACT FOR A COASTAL PERMIT OCCUPANCY, DISTURBANCE OF THE SEABED AND TO TAKE AND DISCHARGE SEAWATER AND ORGANIC MATTER AT HARVEST

APPLICATION BY WENDY MARY WALKER, DAVID ERIC WALKER & TASMAN NO. 9 TRUSTEES LIMITED, & JOHN HART FOR RENEWAL OF U000063, MPE 726 BEING MARINE FARM SITE 8173 AND EXTENSION TO THE SITE IN MELVILLE COVE, PORT GORE

1.0 INTRODUCTION

The Walker Family Trust and John Hart own site 8173 in Melville Cove. The trustees and Mr Hart both have long connections to the Sounds.

David Walker grew up amongst an extended family whose interests included boat building, barging, charter launches, the Sounds mail contract, bull dozing, logging and fishing. He has extensive sea going experience and was a master on the Interislander ferries before ill health forced early retirement.

John Hart is connected to Melville Cove and has land holdings in the bay and an adjacent marine farm.

The Trust also has interests in Marine farm sites in Old Homewood Bay Site 8350 and Yncyca bay site 8350 (in association with Sanford Ltd).

The consent holders are committed to the industry and wish to enhance the production opportunities from their existing farms. They wish to add to their operation with this proposal, so that they maintain sustainable output, while allowing for efficient and sustainable use of space.

It is proposed to renew the 2.80 ha marine farm on the southern shore of Melville Cove and to extend the site by 4.01 ha. See layout diagrams illustrating the proposal, included at Appendix D.

The farm is situated 50m from adjoining marine farms sites 8174 (owned by Messrs Slade and King, and the estate of Ms King) and 8591 (owned by Messrs King and Slade, and Slade King and King Limited) to the east and 88m from site 8626 to the west owned by Tinui Limited (John and Selah Hart).

2.0 SPECIES TO BE GROWN

It is proposed to continue to farm the following species: -

i) Green Shell Mussels *(Perna canaliculus)*
ii) Blue Shell Mussels *(Mytilus edulis)*

It is also proposed to continue to farm the following seaweed and algae species: -

i) *Macrocystis pyrifera*

ii) *Ecklonia radiata*
iii) *Gracilaria sp.*
iv) *Pterocladia lucida*

The applicant also seeks consent to farm the algae *Asparagopsis armata.*

All species will be farmed using conventional longline methods.

3.0 SITE DIMENSIONS

The site dimensions are shown on the site plan at Appendix D. The original site was of oblong shape 140m wide by 200m. This section is sought to be renewed.

The extension and the west boundary is 160m long 235m along the north boundary and 302.82m on the east boundary. A small distance of 12.08m abuts the southern boundary and the eastern end of the site. Total area of the combined site is 6.81 ha.

The inshore boundary is some 50m from mean low water springs while the outer boundary is some 350m from the shore at point 1.

3.1 Site Layout

There will be 16 longlines in total, 8 on the existing site and 8 on the proposed extension; having a line spacing of 18.55m in the renewal zone and 19.95m in the proposed extension, which allows good access between longlines.

Longlines are of variable length, ranging from 117m inshore to 135m offshore. Total longline length is 2097m. Warp longlines are also of variable length dependent on water depth, ranging from 48 – 50m. Screw and block anchors will be utilised.

4.0 STATUS OF THE APPLICATION

The site is located within the Coastal Marine Zone 2 (CMZ2) in the Marlborough Sounds Resource Management Plan (the Plan). The site is one of several marine farms in Melville Cove. Marine farming at the site is currently authorised by coastal permits U000063 and MPE726. The existing farm was applied for after 1 August 1996, so the present application is not for a controlled activity under Rule 35.2.5 of the Plan.

Renewal of only the existing consent would be a discretionary activity, with the site being inside of 200m from shore, in accordance with the discretionary activity standards at rule 35.4.2.9 of the Plan.

The proposed extension extends beyond 200m (350m) from the shore, and is therefore a Non-complying Activity under rule 35.5 in the Plan.

The applicant accepts that it is appropriate to consider the renewal and extension together. The application is therefore for a non-complying activity.

Existing consents U000063 and MPE726 will be relinquished on confirmation of a grant of consent for the existing area and/or for the extended site.

5.0 THE PRESENT ENVIRONMENT

5.1 The Marine Environment

Mr R J Davidson, of Davidson Environmental Ltd undertook the original study of the ecology of the marine area of the site and has followed that up with a further report, which is part of this application. The aims of the investigation were to provide a biological description of the benthos within and adjacent to the farm site, and to identify any potential threats to any sub-tidal ecological values posed by the proposed activity. In the original study, he found that:

"soft shore communities recorded from the present study were dominated by species that occur on subtidal shores swept by light tidal currents in the sheltered outer Marlborough Sounds. Two transects and a free diver swim were conducted within the proposed marine farm area.

The hillsides adjacent to the proposed were dominated by pasture and early regeneration broadleaf scrub.

The intertidal shore was dominated by small boulders and cobble substrata. The intertidal shore was approximately 30 m wide.

All area investigated within the application area were dominated by soft substrata (i.e. silt and clay with a small component of shell material).

No cobble or other hard shore substrata were observed from within the application area.

Based on the initial draft plan (presented in the present investigation), no modifications to the proposed marine farm area are recommended on ecological grounds.

As a result of the ecological investigation and report the proposed marine farm has not required changes to its dimensions."

The most recent assessment undertaken by Davidson Environmental evaluated the parent farm and the proposed extension area. Mr Davidson found that:

<u>The Benthos</u>

Most of the benthos under the existing consent was dominated by silt and clay with little or no natural shell. This type of substrata dominates most of Melville cove…

Cobble shore was detected inshore of the parent farm. No other rocky substrata were detected within the consent or proposed extension.

Mussel shell debris was observed under and close to backbones. When present it was at moderate to high levels and mussels were often alive. Several photos collected close to backbone lines had no benthic mussel shell suggesting shell is often limited to areas very close to dropper lines. It is

also likely dead mussel shell from the farm has sunk into the soft sediment over time, or has been smothered by fine sediment.

The proposed extension was dominated by the same range of habitats as the parent farm, however no mussel shell was observed.

Species and Communities

Relatively few invertebrate species were observed on the silt and clay areas of the consent. Species abundance and diversity increased in the inshore area, but was still relatively low compared to rocky shores in the Marlborough Sounds. All areas under the consent and the proposed extension are likely characterised by infaunal species representative of mud shores in sheltered locations in the Sounds (McKnight and Grange,1991).

No species or communities of scientific, conservation or ecological importance were observed. No scallops were seen… but could be present, but their absence from photos suggests they are uncommon.

Occasional clumps of red algae were observed. Red algae was very patchy and was absent from most photos. Overall, the densities do not constitute a red algae bed.

Benthic Impacts

Benthic mussel shell was recorded from drop camera photos collected under and near backbones. Shell debris impact levels were within the range known for mussel farms in the Marlborough Sounds and towards the low to moderate impact range apart from directly under droppers where it did reach high levels.

Boundary Adjustments

No Boundary adjustments were necessary based on the biological values observed and based on impact levels of the existing activity no monitoring was suggested.

The full report of Davidson Environmental Limited is an integral part of this application and is attached at Appendix E.

5.2 The Land Environment

There are a number of small holdings on the land adjacent, with several dwellings.

The land closest to the coast has been cleared and remains in pasture. Much of the land is reverting to indigenous species while access tracks are visible to a number of the properties.

6.0 NAVIGATION MATTERS

The right to navigate to and from the farm, and to anchor, moor and load crop is preserved by s27 of the Marine and Coastal Area (Takutai Moana) Act 2011.

6.1 The Shoreline

The site holds with the conventions established in the Marlborough Sounds Resource Management Plan. That is, the farm beyond 50m from the mean low water mark. The outer boundary is some 350m of the shore and is therefore a Non-complying Activity in the Plan.

6.2 Headlands

There are no headlands in the vicinity.

6.3 Navigational Routes

The area lies inside of the navigational route along this part of Melville Cove. Vessels can navigate between the site and the shore, through the farm and on the outside of the site. There is minor inconvenience navigating to the shore at the head of the bay due to the existing marine farms.

Access to the lodge used for parties diving on the Mikhail Lermontov is based on the northern arm of Melville cove. This site does not affect that access.

6.4 Anchorages or Moorings Areas

There are two moorings close by to the site. Vessels from time to time do tie up to the marine farm and may travel inside the marine farm to obtain shelter from wind and waves. There is ample room for vessels to navigate to those moorings.

6.5 Water Ski Lanes

There are no water ski lanes in the vicinity.

6.6 Sub-Aqueous Cables

There are no sub-aqueous cables in the vicinity.

7.0 LANDSCAPE AND NATURAL CHARACTER

7.1 Land Zoned For Residential Use or Proximity to Residences.

There are four residences in the vicinity. The land has been subdivided to 12 large sections, and is zoned Rural One Zone in the Plan, with a strip of the Sounds Foreshore Reserve zoned as Conservation Zone.

7.2 Effects on Landscape

The site is not within or adjacent to an Area of Outstanding Landscape Value (AOLV) in the Plan. The proposed Marlborough Environment Plan (MEP) does not identify the waters of Melville Cove as an outstanding natural feature and landscape (ONFL). The adjoining land is mapped as an ONL. The area forms part of the high amenity value Marlborough Sounds Coastal Landscape, which includes all of the Marlborough Sounds.[1]

The waters of Port Gore and southern part of the bay, including Melville Cove, were not mapped as ONFL in the 2009 Boffa Miskell Marlborough Landscape Study.

The site lies within the "working" environment of Melville Cove where marine farming, traditional pastoral farming and forestry have been practiced in the past, and continue.

[1] Based on the 2015 Boffa Miskell Marlborough Landscape Study.

The site lies adjacent to other marine farms to the east and west of the site. The effect of the farm, even in its extended form, is consistent with the scenic values of this part of Melville Cove, given its present use.

The site and the proposed extension will not have an effect on the Marlborough Sounds Coastal Landscape, which is vast compared to this very small area in Melville Cove.

7.3 Effects on Natural Character

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 MEP, does not map the waters of Melville Cove as having outstanding, very high or high natural character. The land immediately adjoining the site has something less than a high natural character rating, although some terrestrial areas in Melville Cove are mapped as having very high or high natural character.

According to Rob Davidson, the marine farm will have limited effect on the marine environment at the site. This limited effect, combined with the productive nature of the cove, means that the farm and the proposed extension will not have a significant effect on the natural character values at that location.

8.0 AMENITY VALUES

Visual and noise effects are considered to be minor. Vessels visit the area to service the farm on an irregular basis. Because this is a remote location vessels working this and the other farms work on a number of sites while they are present.

Given the presence of other marine farms in the cove, the buoys associated with renewal of the existing site and the proposed extension would have only a minor additional impact on visual amenity. The proposed extension will not extend further offshore than the seaward boundary of the existing larger marine farm to the east. In a visual sense the farm will be enclosed by existing marine farming in the Cove. Visual amenity will remain essentially the same for residents or the boating public.

9.0 RECREATIONAL VALUE

In terms of recreational use, there is boat and private road access only to the area. Ship wrecks in Port Gore generally attract divers who often stay at the dive lodge in North arm of Melville Cove. This is well distant from the proposed renewal of the parent farm or the extension. Other marine farms are in place which mask the view of the site from vessels traversing the site.

Some recreationalists may visit Port Gore via the Queen Charlotte Track extension (also known as the Outer Queen Charlotte Track, which is part of the Queen Charlotte Wilderness Park). It is estimated up to 500 people per year could make use of that opportunity. Elevated views of Port Gore can be obtained from that track.

The visual impact of the marine farm will not cause any significant alteration to the physical environment in what is essentially already a commercial marine farming area. Marine farming is consistent with the productive character of this part of Port Gore.

9.1 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 both reef fish, and other fish species such as cod and snapper. Access to the coast for recreationalists is maintained.

Recreational fishing does take place along the coastline utilising the small reefs and rubble shore which is inhabited by fish targeted by recreational fishers. The marine farm itself is located offshore and will encourage the presence of fish species over time. In the long run, as with other marine farms in the Pelorus Sound, fish are drawn to marine farm sites. Recreational fishing is an activity encouraged by the applicant.

10.0 HISTORICAL OR CUTURAL VALUES

The New Zealand Historical Places Trust Inventory has been consulted to identify any sites of significance in this location. None appear in published information.

From the applicant's knowledge no sites of historical or traditional value are present in the area. Given that site has had previous consultation it is not expected that values important to iwi would be affected.

11.0 COMMERCIAL FISHING

Commercial fishing is known to occur in parts of Port Gore. It is unlikely in the head of Melville Cove, due to the line of marine farms along the coast. This area is not subject to, or affected by that activity.

12.0 EFFECTS ON WATER QUALITY AND ECOLOGY

The water quality of the area is high. The site relies on excellent water quality to enable the process of marine farming to flourish. It is a large area with good capacity for mixing of water with tidal current, wind and wave action.

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.

13.0 EFFECTS ON PRODUCTIVITY

Water quality is unlikely to be a problem to marine farming. The activity in itself is unlikely to create any significant detrimental effects on water quality. This renewal and extension has no effect on the productivity of existing marine farms in the general vicinity, because of the separation distances between farms and large water area of this section of Port Gore, with its close proximity to the waters of Cook Strait.

14.0 BENTHIC EFFECTS

Effects on the benthos were assessed by Rob Davidson. His results are attached as the Davidson Environmental Report at Appendix E. Mr Davidson concluded that:

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 activity remains relatively consistent, it is very unlikely that the surface sediments would be anoxic, especially as the site is shallow....It is noted that the benthic impacts of mussel farms are not permanent.

There has been no data presented to show that the ecological carrying capacity of the Sounds has been reached. There is considerable evidence that shows 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).

There were no biological values that would preclude the parent farm or the proposed extension for consideration for mussel farming.

All areas of the consent where structures have been placed are located over a habitat considered suitable for shellfish farming... No reduction to the present farm boundary is therefore recommended on ecological grounds. Based on the substratum located under structures and the impact levels of the existing activity, no monitoring is suggested.

15.0 KING SHAG

King Shag have recently developed a colony on Hunia Rock to the north east of the site (it is likely that the colony at Taratara moved south to Hunia Rock). The colony has developed in the area since aquaculture commenced in Melville Cove. A King Shag was observed perched on a mussel buoy on the site throughout the site investigation.

There is no evidence to suggest that this particular area is important for king shag feeding. No additional effect of note on King Shag feeding habitat is anticipated due to the location of the site and other activities in the area.

16.0 ALIENATION OF PUBLIC SPACE

The Melville Cove area has been utilised by marine farmers for many years. Recreation and commercial boat owners are aware of marine farms in this area and recreational fishermen have the opportunity to use the sites and transit through them. Given the wider than average spacing between the longlines, there are further opportunities for access by vessels wanting to transit the site.

From time to time, vessels utilise the longlines for mooring and overnighting. This process, as far as the applicant is concerned, will continue.

17.0 ON SHORE FACILITIES

The applicant does not require onshore marine farm facilities. Farm work is undertaken by the applicant and contractors.

18.0 VALUE OF INVESTMENT

As part of this application to renew site 8173, the applicant is also seeking to extend the site. It is anticipated they would surrender the existing consents when the application is granted for a period of 20 years. As a result, this is an application to which s165ZH(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 s104(2A).

The site has been held by the applicants since the 2005. Equipment costs were estimated at $10,000.00 per line and total investment of the existing site is $80,000. With the extension it is expected investment on the site will exceed $160,000

Harvest and growth rates reflect climatic conditions and spat source. Kaitaia spat tends to be slower to fatten and has a 20-30 month cycle. Costs of seeding and maintenance per year are $50,000.00 per year cycle.

The farm produces some 20 - 25 tonnes per crop line (Green Weight Tonne) and is sold directly to processing companies for processing.

Returns to the grower have averaged in the order of $550 tonne with a range of $450 to $950 per tonne being essential to return and to the processor.

19.0 PART II RESOURCE MANAGEMENT ACT ISSUES

19.1 Section 5

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 production and in turn employment in the Sounds and in the Nelson/Marlborough regions.

In addition, export income for the nation is generated. Applications such as this enable sustainable use of the marine resources in a way that enables people and communities to provide for their economic and social wellbeing.

The site is in the CMZ2, an area zoned as appropriate for marine farms in the Plan and can meet sustainable use and management of environment criteria. It is in the "working" environment of the Sounds. The site position and distances from other facilities are not detrimental to other uses of the area. Section 5 of the RMA is given effect through the New Zealand Coast Policy Statement 2010 ("NZCPS"), the Marlborough Regional Policy Statement and the Plan. The MEP is still in the notification phase. The application is assessed against the relevant provisions of these documents below, and in Appendix A, B and C.

19.2 Section 6

Matters of national importance have been assessed under the requirements of the Plan.

The proposal recognises the:

(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 NZCPS, which is considered later in this application. The adjacent vegetation is adjacent to pasture over which sheep and cattle graze. Beyond that is regenerating scrub, new habitats are forming. The existing farm and proposed extension do not effect that.

It is difficult to understand why parts of this area are mapped as high – very high natural character along the lower slopes of the Cove and very high to outstanding natural character on the upper slopes given the clear level of human intervention in the area with tracks, logging tracks, housing and regenerating farm land.

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

See above at section 7.2.

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

See above at sections 5.1, 14.0 and 15.0.

(d) *The maintenance and enhancement of public access to an 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 site is not known to be of importance to Maori although Port Gore is important to Iwi. The applicants are unaware of any historical site on land nearby. The site has been positioned to avoid habitat that may be important to Maori. This will be confirmed with consultation with Iwi.

19.3 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:*
A number of iwi are identified as having interests in the Melville Cove area, in particular Ngati Kuia. The proposal has been developed to avoid offending the guardianship and protection of resources valued by Iwi. The notion of care and protection of the environment and resources is also an important concept in management of resources,

which the applicant also holds as important in its day to day management of water space.

(b) *The efficient use and development of natural and physical resources:*
The proposal is confined and concentrated in a locality out of the way of normal public. Being confined and sited together with other marine farms brings efficiencies in applying resources to manage the growing of mussels.

(c) *The maintenance and enhancement of amenity values*:
Amenity values will have moderate change with the extension; however, the parent farm is an existing one surrounded by other farms which shelter and obscure the parent farm and proposed extension.

(d) *Intrinsic values of ecosystems*:
The values of the ecosystems have been identified in the report prepared, to detail the benthic environment. Importantly no significant resources have been identified on the site. The structures are situated over a mud benthos that is widespread in the Marlborough Sounds and is identified as the environment most suited to have aquaculture over it. Species are low in number and diversity.

(e) *Recognition and protection of the heritage values of the sites, buildings, place, or areas*:
There are no heritage sites, buildings or places in the near vicinity.

(f) *Maintenance and enhancement of quality of the environment:*
The quality of the environment will not be endangered by the proposal to grow mussels. The process needs high water quality and, as filter feeders, mussels will enhance water quality by the filtration process during feeding.

(g) Any finite characteristics of natural and physical resources:
The proposal is to occupy a small part of a large bay. Mussels are naturally occurring in the water column and filter feed off naturally occurring phytoplankton and zooplankton.

(h) *The protection of the habitat of trout and salmon.*
Section (h) is not relevant to this application.

19.4 Treaty of Waitangi

Matters of potential concern in relation to the Treaty of Waitangi have also been considered earlier in the original proposals to the site. No matters of concern were raised at that time. See also section 23.1 below.

20.0 NEW ZEALAND COASTAL POLICY STATEMENT 2010 (NZCPS)

The NZCPS 2010 is of general relevance to this application and all policies have been considered in the development of the proposal. The NZCPS policies of immediate relevance to the applications are policies 2, 6, 8, 11, 13, 15, 18, 22 and 23.

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 recognizes 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 acknowledgements in the area of the application site. Those acknowledgements have been considered during the preparation of this application, as outlined above.

The applicant has also reviewed the Iwi management plans of Ngāti Kōata, Te Ātiawa o Te Waka-a-Māui and Ngati Kuia. No areas of conflict have been identified.

There are no taiāpure or mahinga mātaitai in the area of the application. 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 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 consistent with the character of the existing built environment in that part of Port Gore. 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 the Policy 6 is particularly relevant. Mussel farming clearly has a functional need to be located in the coastal marine area. It 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, recognizing that relevant consideration 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 an 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 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 farm is located over mud habitat and avoids any reef areas or any other areas of significant biodiversity. King shags are discussed above at section 15.0. There will be no adverse 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.

See above at section 7.3.

The site lies within a cove with substantial human modification and patterns that dominates the visual environment.

23.6 Policy 15

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

This application is not within an area of outstanding landscape value under the Marlborough Sounds Resource Management Plan. There will be a minor additional impact on the landscape compared with that already occurring under the current consent. The layout of existing adjoining sites is such that the proposed extension will fit well with the existing environment. 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 activities and passive recreation.

There is limited access by road. Most of the access to this area is by boat. Nevertheless, the visual impact of the marine farm will not change significantly. The area has a low viewing audience. Access to the coast for recreationalists is maintained.

There are two registered moorings inshore and to the west of the site, and 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, 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.

21.0 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 Plan contains a number of provisions that are relevant to this application. An assessment of the application against the requirements of that 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.

22.0 PROPOSED MARLBOROUGH ENVIRONMENT PLAN

Rules applying to marine farming have been specifically excluded from the proposed MEP at this stage, hence consideration of the proposal under the operative Plan. However, some recognition does need to be given to the relevant policies in the MEP. An analysis table assessing the proposal against the relevant provisions is included at Appendix C.

The site is located in the Overlay Marlborough Sounds Coastal Landscape. The terrestrial landscape has been classified and graded as an outstanding natural feature or landscape.

MEP objectives and policies relevant to the proposal include:

- Chapter 4 – Natural & Physical Resources
- Chapter 5 – Allocation of Public Resources
- Chapter 6 – Natural Character
- Chapter 9 – Public Access and Open Space
- Chapter 15 – Resource Quality

Note that the provisions of chapter 13, Use of the Coastal Environment, specifically do not apply to marine farms.

All are considered to be relevant to such applications as this and have been generally outlined in this AEE. In my view the proposal provides for the needs of primary production and tourism.

Infrastructure is protected. The nature and character of the Sounds is protected. Access to coastal water is maintained and exclusive occupation of water space is minimized allowing access between lines and the shore.

Adverse effects in areas of outstanding natural character, outstanding natural landscapes, and outstanding natural features have been avoided, as has any effect on ecosystems and biodiversity.

Heritage values are recognised, and are unaffected, including Maori Culture and traditions. Structures and activities are "clustered" in Melville Cove and do not diminish amenity values.

The character of Melville Cove is one of modified farmland and regeneration, with large areas of marine farming, while at the head of the Cove limited residential housing exits.

23.0 CONSULTATION

An initial letter has been sent to all Iwi listed below identifying the site.

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	(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

24.0 CONCLUSION

The applicant considers that the use of this area for aquaculture is appropriate, allowing the farming of mussels. The activity enables people and communities to provide for the social, economic and cultural wellbeing, while ensuring the principles of sustainable management are met.

RD Sutherland
Property and Land Management Services Limited,
On behalf of the Applicant

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 therapeutants 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 Cove well established for marine farming.
	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 environment effects are avoided, remedied or mitigated.	This area has a primary production character, and is well suited to marine farming. This policy supports the proposed extension. The life supporting capacity of the area will be safeguarded.

APPENDIX A: MARLBOROUGH REGIONAL POLICY STATEMENT – POLICY ANALYSIS

Objective	Policy	Assessment
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 suitable for marine farming. The marine farm activity is biologically sustainable.
	7.2.10(a) – (d)	The marine farm will be located within the consented area when it is approved 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.	The site is not within an area of outstanding natural landscape and will have no additional impact on landscape values. The farm will well managed and will comply with the Aquaculture New Zealand A+ Sustainable Management Framework for Mussels.
	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 only a minor effect on the already modified 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 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 of 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 dominated by other human modifications, including pastorland farmland, roads, tracks, dwellings and 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.	As 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 and in the Davidson Environment Report.

APPENDIX B: MARLBOROUGH SOUNDS RESOURCE MANAGEMENT PLAN – POLICY ANALYSIS

	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 farm is not sited over an area of significant ecological value.
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 application site is not within an area of outstanding landscape value identified in the Plan. The effects of the application on the landscape will be the similar to other marine farm sites. The effects are not likely to impact on the values which contribute to the landscape.

APPENDIX B: MARLBOROUGH SOUNDS RESOURCE MANAGEMENT PLAN – POLICY ANALYSIS

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 applicants have had regard to the Statutory Acknowledgements and have reviewed the statements of association for each Iwi. No areas of conflict have been identified by the applicants. Consultation will be undertaken with iwi, including sending an initial letter regarding the proposal. The applicants understand there are no known wahi tapu, taiapure, mataitai or other areas of significance to Maori in the vicinity of the application.
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 should be mitigated and provision made for remedying those effects, to the extent practicable.	There are no additional adverse effects on public access caused by the marine farm, as the extension will still not extend as far offshore as the larger adjacent farm to the east. Access inshore and between lines is maintained.
	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.

APPENDIX B: MARLBOROUGH SOUNDS RESOURCE MANAGEMENT PLAN – POLICY ANALYSIS

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 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.	Adverse effects from the proposal and extension will be minor and will be mitigated to the extent practicable.
	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.

APPENDIX B: MARLBOROUGH SOUNDS RESOURCE MANAGEMENT PLAN – POLICY ANALYSIS

	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 recognized casual mooring areas.	Exclusive occupation of the consent area is not sought. The farm will not impede access to the two nearby moorings.
	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. This area is established for marine farming. The benthic assessment shows that this location is appropriate for the activity. Overall, the application is consistent with this policy.
	Policy 1.13: Enable the renewal as controlled activities of marine farms authorized by applications made prior to 1 August 1996 as controlled activities, apart from exceptions in Appendix D2 in the Plan.	This farm is not a controlled activity enabled by this policy.
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).	Policy 1.1 to 1.11:	This application is not anticipated to have any impact on shellfish quality.

APPENDIX B: MARLBOROUGH SOUNDS RESOURCE MANAGEMENT PLAN – POLICY ANALYSIS

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].	Anchor blocks will cause a minor additional disturbance of the seabed. The owners of the farm in Melville Cove will have regular beach clean ups in which the greater percentage of rubbish is from recreational users of the Sounds.
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 environment.	There have been no reported navigational incidences in the Cove. There will be no changes to the existing consent conditions regarding the navigational aids placed on the farm. The navigational lighting requirements will provide better navigational aids within the Cove.
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 activites.	Policy 1.1: Avoid, remedy or mitigate community disturbance, disruption or interference by noise within coastal, rural and urban areas.	The farm is positioned near to an existing residence in the area to the south. The contractors servicing vessel is estimated to spend approximately 65-90 hours 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 on other users and residents.

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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]	No particular customary activities have been identified for the site. However, recognition is given to Māori culture and traditions and confirmation from Iwi will be 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]	The applicant has had regard to Kaitiakitanga and will consult with Iwi, recognising their relationship with the waters of Te Tau Ihu. Consultation on the matter will be with 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, recognising rohe under Statutory Acknowledgment protocols. The applicant has also reviewed the Iwi management plans of Ngāti Kōata and Te Ātiawa o Te Waka-a-Māui and Ngati Kuia. No areas of conflict have been identified. The applicant is aware of the importance of the waters of the Marlborough Sounds to Iwi.
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 above and in the AEE, 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	See above.

MEP Provision	Evaluation
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. [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]	[To be undertaken].
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;	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 Rob Davidson in his report.

MEP Provision	Evaluation
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]	
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 and Ngati Kuia. No areas of conflict have been identified.
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 proposal ensures the sustainability of natural resources, as the adverse effects of aquaculture in Melville Cove are likely to be limited. The effects of marine farming are reversible upon removal of the farms. Therefore, the proposal does not restrict the ability of future generations to decide how they wish to use these resources. Moreover, the farming of algae will assist in countering the effects of ocean acidification. The proposal has economic and employment benefits to the applicants and community.
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 less than minor effects on the quality of the natural resources at Melville Cove, and those effects are reversible upon removal of the farms.

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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 report at Appendix E). The application site is located over a muddy habitat, typical of sheltered muddy areas in the Sounds. The effects of mussel farming are not likely to be significant. The farm would not have adverse effects on the water column. Shellfish farming at the site would have little impact on sediment enrichment and the infauna.
Policy 4.3.1 – Integrate management of the natural and physical resources within the Marlborough Sounds environment. [RPS]	Integrated management is a matter for Council under Policy 4 of the NZCPS.
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 in Melville Cove is zoned as CMZ2 under the operative MSRMP, indicating that aquaculture is appropriate in this location. Policy 9.2.1.1.14 of the MSRMP enables marine farming in appropriate places, with zoning being a key method of implementation. The AEE shows that the proposed farm will have no significant adverse effects on these values.
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. Melville Cove has the capacity to absorb change, particularly given the backdrop of farm land and reverting hillslopes. The appropriateness of the farm can be re-assessed by future generations in the context of the future environment of the Cove through the resource consenting process.

MEP Provision	Evaluation
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 right to occupy and use the coastal marine area, and requires a 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 in respect of the existing site and proposed extension in Melville Cove. The farm is in existence and an extension is proposed that aligns the site with the large marine farm adjacent to the east.
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. Access ways have been provided around the site.
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 would be comfortable paying coastal occupancy charges to reflect the private benefit from occupying space in Melville Cove. However, it is concerned that the level of these charges or at least the method of setting these, is not set out in the MEP.
Policy 5.10.5 – The Marlborough District Council will waive the need for coastal occupancy charges for the following: … (b) monitoring equipment; [C]	If any monitoring equipment is required to be permanently installed at the site as a condition of consent, the applicant agrees that coastal occupancy charges for that equipment should be waived. However, Mr Davidson concluded that there were no biological reasons for site specific monitoring.
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]	The applicant does not request a waiver of coastal occupancy charges.

MEP Provision	Evaluation
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 proposal is appropriate, fits with the existing context and will not adversely compromise the existing values of the area.
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 - Melville Cove 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. The degree of modification is moderate, with no damage, loss or destruction. The effects are reversible upon removal of the farm. This is an existing farm occupying some of the space. The location is resilient to change, as it is able to absorb the proposed farm, given the layout and extent of surrounding marine farms.
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 natural character of the coastal marine area in Melville Cove is not mapped as having high, very high or outstanding natural character in the MEP. Some of the surrounding terrestrial area is mapped as having high to very high natural charcter. The farm will not impact on the terrestrial ecology or the values that lead to that classification.
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]	Assessment of the natural science (biophysical) values of the site as being low-moderate overall. Rob Davidson notes that the application site is located over a mud habitat, typical of sheltered muddy areas in the Sounds. The epibiota and infaunal communities are typical of muddy sheltered areas in the Sounds. It is well established that mussel farming has a less than minor impact on the biophysical attributes of natural character. The site is of mixed character set within a wider working landscape. There are existing structures, but the "managed" character of the context dominates. Vegetation patterns are fragmented. There is some sense of remoteness and enclosure. While the farm would reduce the perceived naturalness and have a moderate effect on natural character, the site is considered able to absorb the proposed

MEP Provision	Evaluation
	level of change.
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 wider Cove has extensive farming that has left highly visible grasslands. There are dwellings scattered throughout the Cove. The proposal is less likely to have an adverse effect on natural character given this existing development. Access roads and old logging tracks traverse the environment.
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]	No enhancement is proposed.
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 marine farms in Melville Cove. There are no significant adverse cumulative effects. Navigational lighting at night would be less intrusive than lighting associated with dwellings. There is a clustering of activity that focuses effects to a confined area of Melville Cove. The proposed extension will infill an obvious gap, but will not extend as far offshore at the adjoining site to the east. Visually, it is not likely to have an adverse effect in that context.
Policy 6.2.9 – Encourage and support private landowners, community groups and others in their efforts to restore the natural character of the coastal environment, wetlands, lakes and rivers. [RPS, R, C, D]	N/A
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 proposal will not have an impact on the values that lead to the entirety of the Marlborough Sounds being mapped as a high amenity landscape. The impacts are localised, and would occur in a bay that is not particularly representative of the values listed in Appendix 1.

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]	The seascape of Melville Cove is not an ONFL.
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, this application proposal must be assessed against the rules applying under the operative MSRMP. This has been done in a separate policy analysis table.
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]	The proposal will not have an effect on this wider landscape nor its values. Melville Cove is capable of absorbing the level of activity.
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]	N/A – Melville Cove seascape is not an ONFL.
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	The structures are already in place for the parent farm. The farm follows the contour of the shoreline. Mussel 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
landscape; (iv) limiting the scale, height and placement of structures to minimise intrusion of built form into the landscape; (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]	Melville Cove seascape is not an ONFL. Existing farming and grazing already occurs within the Cove. 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]	The site is in close proximity to an ONFL (on the terrestrial area of Melville Cove). Policy 7.2.7 has been considered above.
Policy 7.2.10 – Reduce the impact of wilding pines on the landscape by: (a) supporting initiatives to control existing wilding pines and limit their further spread; and... [D]	N/A.
Objective 8.1 – Marlborough's remaining indigenous biodiversity in terrestrial, freshwater and coastal environments is protected.	The applicant has had regard to Objective 8.1 in preparing this application, as outlined in relation to the policies below.

MEP Provision	Evaluation
Objective 8.2 – An increase in area/extent of Marlborough's indigenous biodiversity and restoration or improvement in the condition of areas that have been degraded.	The farm and proposed extension will not result in a decrease in Marlborough's indigenous biodiversity.
Policy 8.1.1 – When assessing whether wetlands, marine or terrestrial ecosystems, habitats and areas have significant indigenous biodiversity value, the following criteria will be used: (a) representativeness; (b) rarity; (c) diversity and pattern; (d) distinctiveness; (e) size and shape; (f) connectivity/ecological context; (g) sustainability; and (h) adjacent catchment modifications. For a site to be considered significant, one of the first four criteria (representativeness, rarity, diversity and pattern or distinctiveness/special ecological characteristics) must rank medium or high.	The applicant has had regard to the significance criteria, and notes that these are based on the criteria in Davidson's 2011 report *Ecologically Significant Marine Sites in Marlborough, New Zealand.* Davidson undertook a biological survey of the proposed Melville Cove farm in 2017, included at Appendix E. Davidson has not identified any ecosystems or marine habitats of note in Melville Cove. The application site is located over a mud habitat, typical of sheltered muddy areas in the Sounds. He concluded that the effects of low intensity farming are not likely to be significant. Occasional patches of red algae were not sufficient to constitute a red algae bed. While there is a king shag colony on Hunia Rock to the north of the farm, the available information does not suggest that this site is significant for king shag.
Policy 8.1.2 – Sites in the coastal marine area and natural wetlands assessed as having significant indigenous biodiversity value will be specifically identified in the Marlborough Environment Plan.	The applicant has had regard to the ecologically significant marine sites mapped in volume 4 of the proposed MEP.
Policy 8.1.3 – Having adequate information on the state of biodiversity in terrestrial, freshwater and coastal environments in Marlborough to enable decision makers to assess the impact on biodiversity values from various activities and uses.	The applicant notes that the Council will continue to undertake surveys to improve knowledge. A site specific assessment was undertaken by Rob Davidson for this proposal. His report will add to the general body of knowledge.

MEP Provision	Evaluation
Policy 8.2.1 – A variety of means will be used to assist in the protection and enhancement of areas and habitats with indigenous biodiversity value, including partnerships, support and liaison with landowners, regulation, pest management, legal protection, education and the provision of information and guidelines.	The proposal is consistent with policy 8.2.1. It is prepared over habitat appropriate for marine farming.
Policy 8.2.3 – Priority will be given to the protection, maintenance and restoration of habitats, ecosystems and areas that have significant indigenous biodiversity values, particularly those that are legally protected.	N/A
Policy 8.2.7 – A strategic approach to the containment/eradication of undesirable animals and plants that impact on indigenous biodiversity values will be developed and maintained.	N/A
Policy 8.2.8 – Where monitoring of ecosystems, habitats and areas with significant indigenous biodiversity value shows that there is a loss of or deterioration in condition of these sites, then the Marlborough District Council will review the approach to protection.	The applicant is aware of this policy, and acknowledges the Council's role in protecting biodiversity.
Policy 8.2.9 – Maintain, enhance or restore ecosystems, habitats and areas of indigenous biodiversity even where these are not identified as significant in terms of the criteria in Policy 8.1.1, but are important for: (a) the continued functioning of ecological processes; (b) providing connections within or corridors between habitats of indigenous flora and fauna; (c) cultural purposes; (d) providing buffers or filters between land uses and wetlands, lakes or rivers and the coastal marine area; (e) botanical, wildlife, fishery and amenity values; (f) biological and genetic diversity; and (g) water quality, levels and flows.	Marine farming in Melville Cove would not interfere with the continued functioning of ecological processes, biological and genetic diversity or water quality, levels and flows to any noticeable degree. The presence of surface buoys and harvest vessels would have some impact on amenity values, particularly for owners and users of nearby dwellings. The applicant recognises that resources are finite. Future generations could decide to remove the farm, and the effects will be reversible. In particular, amenity would be restored instantly upon removal of the farm. Davidson viewed large live mussels beneath the droppers of the existing farm. Natural beds used to be widespread in the Sounds. It seems that this farm may be assisting in re-establishing mussel beds.

MEP Provision	Evaluation
Policy 8.2.10 – Promote to the general public and landowners the importance of protecting and maintaining indigenous biodiversity because of its intrinsic, conservation, social, economic, scientific, cultural, heritage and educational worth and for its contribution to natural character.	The applicant recognises the importance of protecting and maintaining indigenous biodiversity. Natural character has been considered above in relation to the policies in chapter 6.
Policy 8.2.12 – Encourage and support private landowners, community groups and others in their efforts to protect, restore or re-establish areas of indigenous biodiversity.	N/A
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.	Melville Cove is not specifically recognised as an important area. There is nothing to suggest that the site is significant for king shags.
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	N/A.
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) fragmentation of or a reduction in the size and extent of indigenous ecosystems and habitats; (b) fragmentation or disruption of connections or buffer zones between and around ecosystems or habitats; (c) changes that result in increased threats from pests (both plant and animal) on indigenous biodiversity and ecosystems;	N/A.

MEP Provision	Evaluation
(d) the loss of a rare or threatened species or its habitat; (e) loss or degradation of wetlands, dune systems or coastal forests; (f) loss of mauri or taonga species; (g) impacts on habitats important as breeding, nursery or feeding areas, including for birds; (h) impacts on habitats for fish spawning or the obstruction of the migration of fish species; (i) impacts on any marine mammal sanctuary, marine mammal migration route or breeding, feeding or haul out area; (j) a reduction in the abundance or natural diversity of indigenous vegetation and habitats of indigenous fauna; (k) loss of ecosystem services; (l) effects that contribute to a cumulative loss or degradation of habitats and ecosystems; (m) loss of or damage to ecological mosaics, sequences, processes or integrity; (n) effects on the functioning of estuaries, coastal wetlands and their margins; (o) downstream effects on significant wetlands, rivers, streams and lakes from hydrological changes higher up the catchment; (p) natural flows altered to such an extent that it affects the life supporting capacity of waterbodies; (q) a modification of the viability or value of indigenous vegetation and habitats of indigenous fauna as a result of the use or development of other land, freshwater or coastal resources; (r) a reduction in the value of the historical, cultural and spiritual association with significant indigenous biodiversity held by Marlborough's tangata whenua iwi; (s) a reduction in the value of the historical, cultural and spiritual association with significant indigenous biodiversity held by the wider community; and (t) the destruction of or significant reduction in educational, scientific, amenity, historical, cultural, landscape or natural character values.	

MEP Provision	Evaluation
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.	N/A.
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]	The proposal is sited in a cluster of marine farms. The public will still have access between longlines and inshore of the site. The layout is designed to minimise the visual amenity impact on the few properties that have a view of the site. There are two registered moorings in the vicinity of the site, and no formal water ski lanes. Access to the moorings will be maintained. Opportunities for recreational fishing may be enhanced by the presence of the marine farm.
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: (b) high priority waterbodies for public access on the Wairau Plain and in close proximity to Picton, Waikawa, Havelock, Renwick, Seddon, Ward and Okiwi Bay; (c) coastal marine area, particularly in and near Picton, Waikawa and Havelock, Kaiuma Bay, Queen Charlotte Sound (including Tory Channel), Port Underwood, Kenepuru Sound, Mahau Sound, Mahikipawa Arm and Croiselles Harbour, Rarangi to the Wairau River mouth, Wairau Lagoons, Marfells	Melville Cove is not identified as an area having a high degree of importance for public access. Melville Cove is not frequented by recreationalists and the general public to any significant degree due to its remote location. The public will not be excluded from the area of the proposed site. While Port Gore is recognised as a nationally significant dive site, generally the area is not accessed regularly by members of the public. The area is remote, and even experienced mariners must take care

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Beach and Ward Beach... [RPS]	with accessing the area given the regular difficult weather conditions.
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 applicants' contractors will make use of this existing network of facilities. The proposed farm will not affect access.
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 are no jetties in the vicinity of the site.

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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; (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]	The structures have a functional need to be located in the coastal marine area. The public will have access through and around the site. Exclusive occupation is not sought. There is road access to some of the properties in the Cove, although the site is remote. Access is not "practical" for the general public. The proposed farm will not restrict boat access to any property. 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, 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.
Policy 9.3.3 – Support the management of reserves through strategies and reserve management plans prepared under the Conservation and Reserves Acts. [D]	N/A.

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Objective 10.1 – Retain and protect heritage resources that contribute to the character of Marlborough. [RPS]	The applicant has had regard to historic and cultural sites within the vicinity of the proposed farm. The application will not have an impact on heritage resources.
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]	The Historic Places Inventory notes has been consulted and no sites are recorded nearby. If sites are present the proposed farm will not impact adversely on these sites. The applicant is aware of the importance of the waters of the Marlborough Sounds to Iwi. It recognises that there are Maori archaeological sites within the wider Cove. Iwi have been consulted and will be provided with a final copy of the proposal at lodgement.
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]	Marine farming will not have an adverse effect on water quality within the Cove.

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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 and would assist in removing some anthropogenic nitrogen from the water column.
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 (d) in the flooding of or damage to another person's property. [R, C]	
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]	The February 2017 Davidson Environmental Ltd report assessed the likely sedimentation levels and their impact on the coastal environment. 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.

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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]	No particular customary activities have been identified for the site. However, as above, recognition is given to Māori culture and traditions and confirmation from Iwi is sought to ensure the proposal does not affect these values. The applicant is aware of the importance of the waters of the Marlborough Sounds to Iwi. Iwi will be consulted and will be provided with a final copy of the proposal at lodgement. Discharge during harvest is temporary in nature and sedimentation soon reverts to background levels.
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 of mussels will comply with SG standards in Appendix 5.
Policy 15.1.14 – Except as provided for by Policy 15.1.15, apply a zone of reasonable mixing to the receiving waters for all point source discharges to water. The zone shall not exceed (as measured from the discharge point): (d) For coastal waters, limited to the extent necessary to achieve effective mixing, having regard to: (i) the characteristics of the discharge, including the contaminant type, concentration and volume; (ii) the coastal processes that exist at and near the point of discharge; and	

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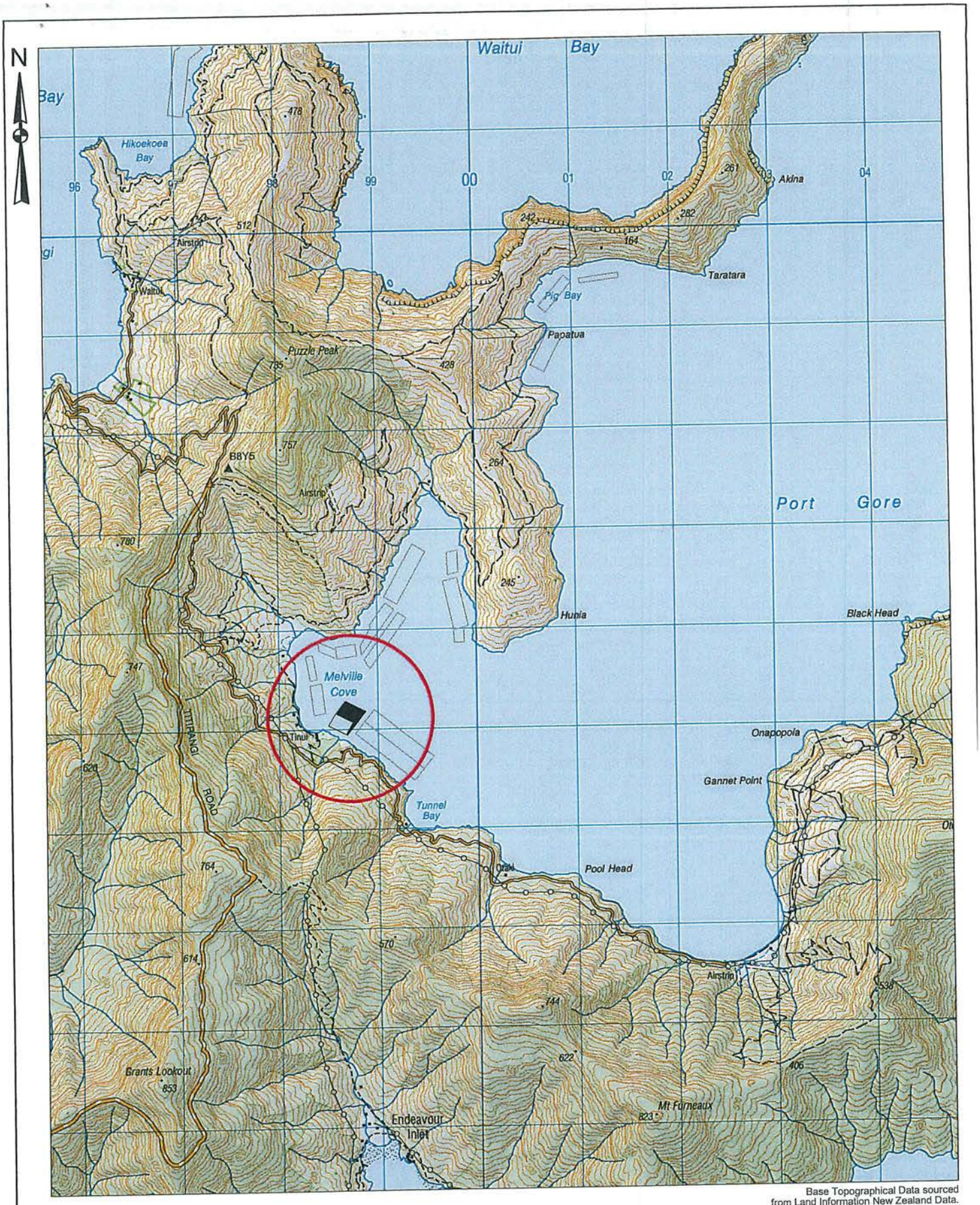
(iii) the nature, sensitivity and use of the coastal waters. [R, C]	
Policy 15.1.16 – The duration of any new discharge permit will be either: (a) Up to a maximum of 15 years for discharges into waterbodies or coastal waters where the discharge will comply with water quality classification standards 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. The applicants seek a 20 year term of consent.
Policy 19.1.3 – Enable primary industries to adapt to the effects of climate change. [R, C, D]	Part of the purpose this application proposal is to enable algae to be cultivated and harvested in Melville Cove to counter the emerging threat of ocean acidification.

APPENDIX D MAPS



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Topomap 50 Sheet: BP29

PROPERTY AND LAND MANAGEMENT SERVICES
PALMS

Prepared by
DRAUGHTING PLUS LTD
20 October 2016

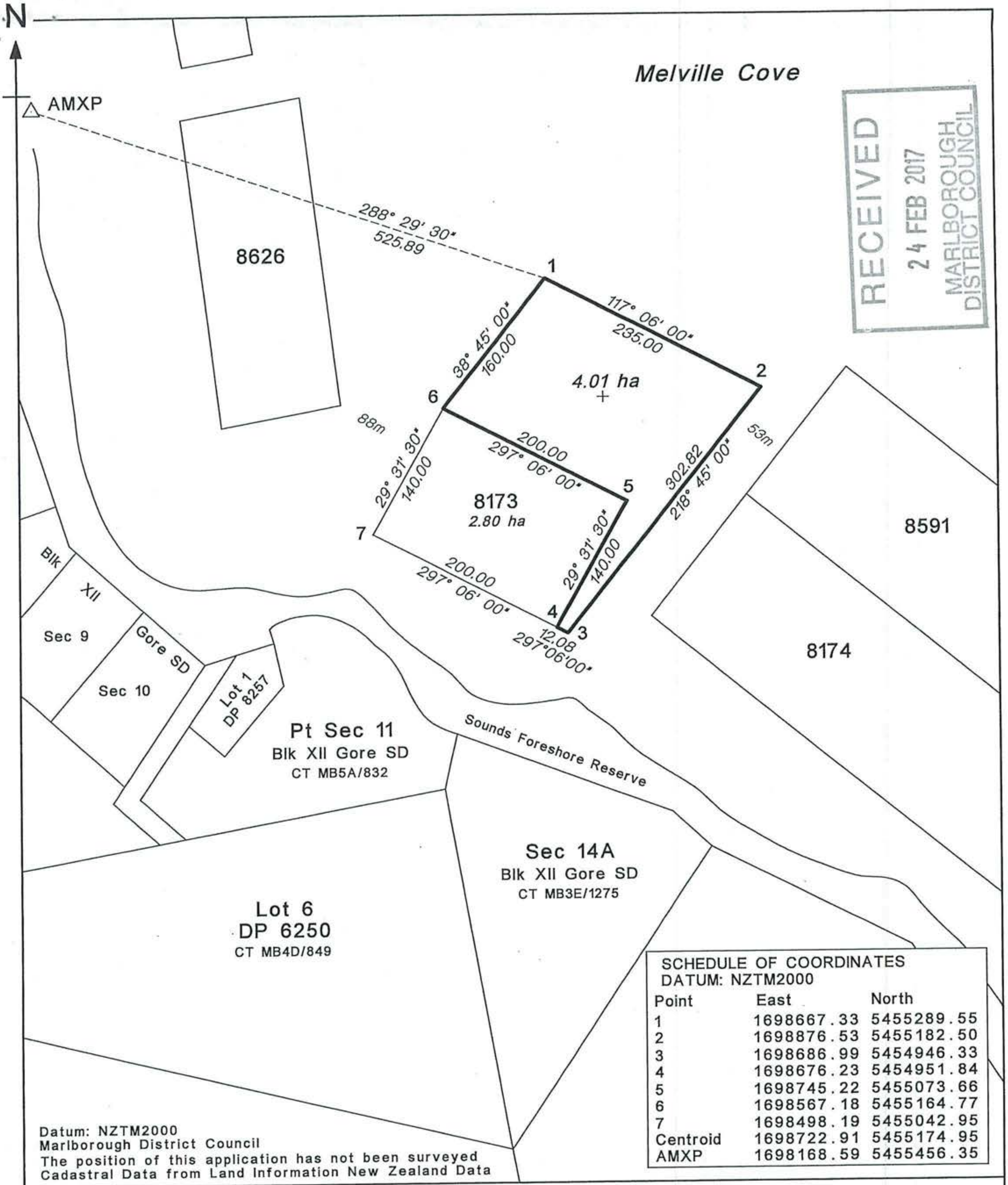
MF_2421b

Locality Map

Extension to Marine Farm 8172
Melville Cove - Port Gore

Scale 1:50,000

500 0 500 1000 1500 2000 2500 3000 3500 Meters



SCHEDULE OF COORDINATES
DATUM: NZTM2000

Point	East	North
1	1698667.33	5455289.55
2	1698876.53	5455182.50
3	1698686.99	5454946.33
4	1698676.23	5454951.84
5	1698745.22	5455073.66
6	1698567.18	5455164.77
7	1698498.19	5455042.95
Centroid	1698722.91	5455174.95
AMXP	1698168.59	5455456.35

PROPERTY AND LAND MANAGEMENT SERVICES

PALMS

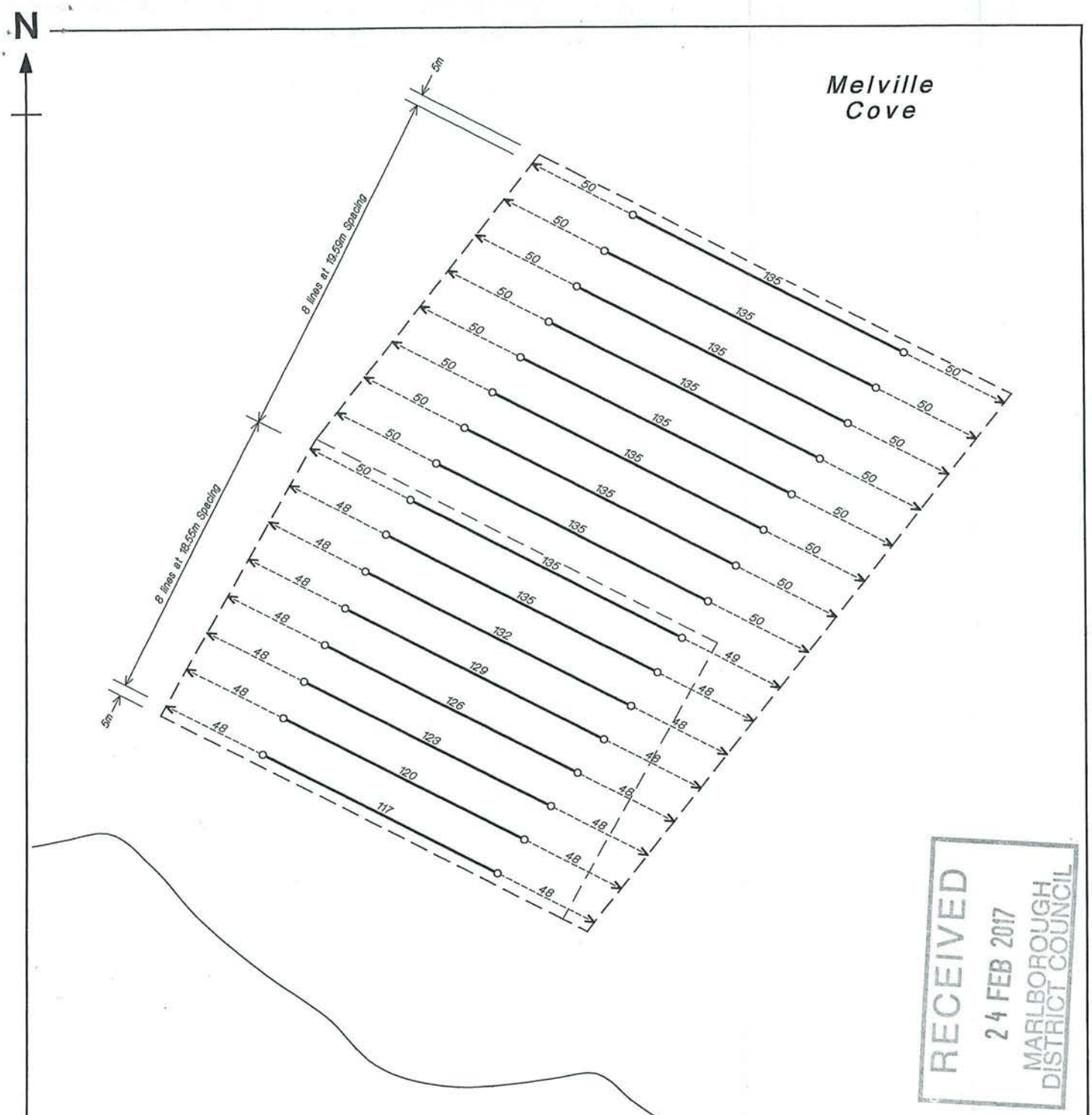
Proposed Coastal Permit
Extension to Marine Farm 8173
Melville Cove - Port Gore

SCALE 1:5,000

50 0 100 200 300 400 500 metres

20 October 2016

MF_2421



RECEIVED
24 FEB 2017
MARLBOROUGH DISTRICT COUNCIL

-Longline Spacing = 18.55m & 19.59m
-Total Longlines = 16
-Backbone Length = as shown
-Total Backbone Length = 2097m
-Warp lengths shown are approximate
-Anchors either blocks or screws

REFERENCE

< Anchor
o Orange Float
—— Backbone
---- Anchor Warp

PROPERTY AND LAND MANAGEMENT SERVICES

PALMS

Structure Layout Plan
Marine Farm 8173 & Proposed Extn
Melville Cove - Port Gore

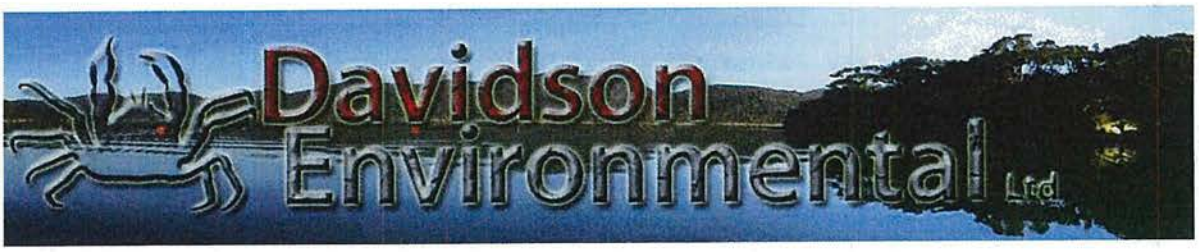
SCALE 1:2,500

25 0 25 50 75 100 125 150 metres

20 October 2016

MF_2421B

APPENDIX E DAVIDSON ENVIRONMENTAL REPORT



Davidson Environmental Limited

Ecological report for the renewal of marine farm 8173 and a proposed extension, Melville Cove, Port Gore

Research, survey and monitoring report number 846

A report prepared for:
For: The Walker Family Trust & John Hart
C/o PALMS Ltd.
P.O. Box 751
Blenheim 7240

February 2017

Bibliographic reference:

Davidson, R.J.; Richards, L.A.; Rayes, C.; Sutherland, R. 2017. Ecological report for the renewal of marine farm 8173 and a proposed extension, Melville Cove, Port Gore. Prepared by Davidson Environmental Ltd. for The Walker Family Trust & John Hart. Survey and monitoring report no. 846.

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Specialists in research, survey and monitoring

Davidson Environmental

Table of Contents

1.0 Introduction

The main aim of the present study was to describe the impact zone and biological features associated with an existing 2.8 ha marine farm (site 8173) located along the south-western shoreline of Melville Cove, Port Gore (Figure 1, Plates 1 and 2). The parent farm expires on 30th June 2017 (U000063, MPE726). The farm owner is applying for a new consent to replace the existing consent.

The owners are also applying for a 4 ha offshore and alongshore extension.

This report was commissioned by Ron Sutherland (Palms Limited) on behalf of the farm owners, The Walker Family Trust & John Hart.

Figure 1. Location of marine farm site 8173 (red circle) in Melville Cove, Port Gore.

Plate 1. Marine farm site 8173, taken from a location east and alongshore of the existing backbones looking northwards into the consent and area proposed as an offshore extension.

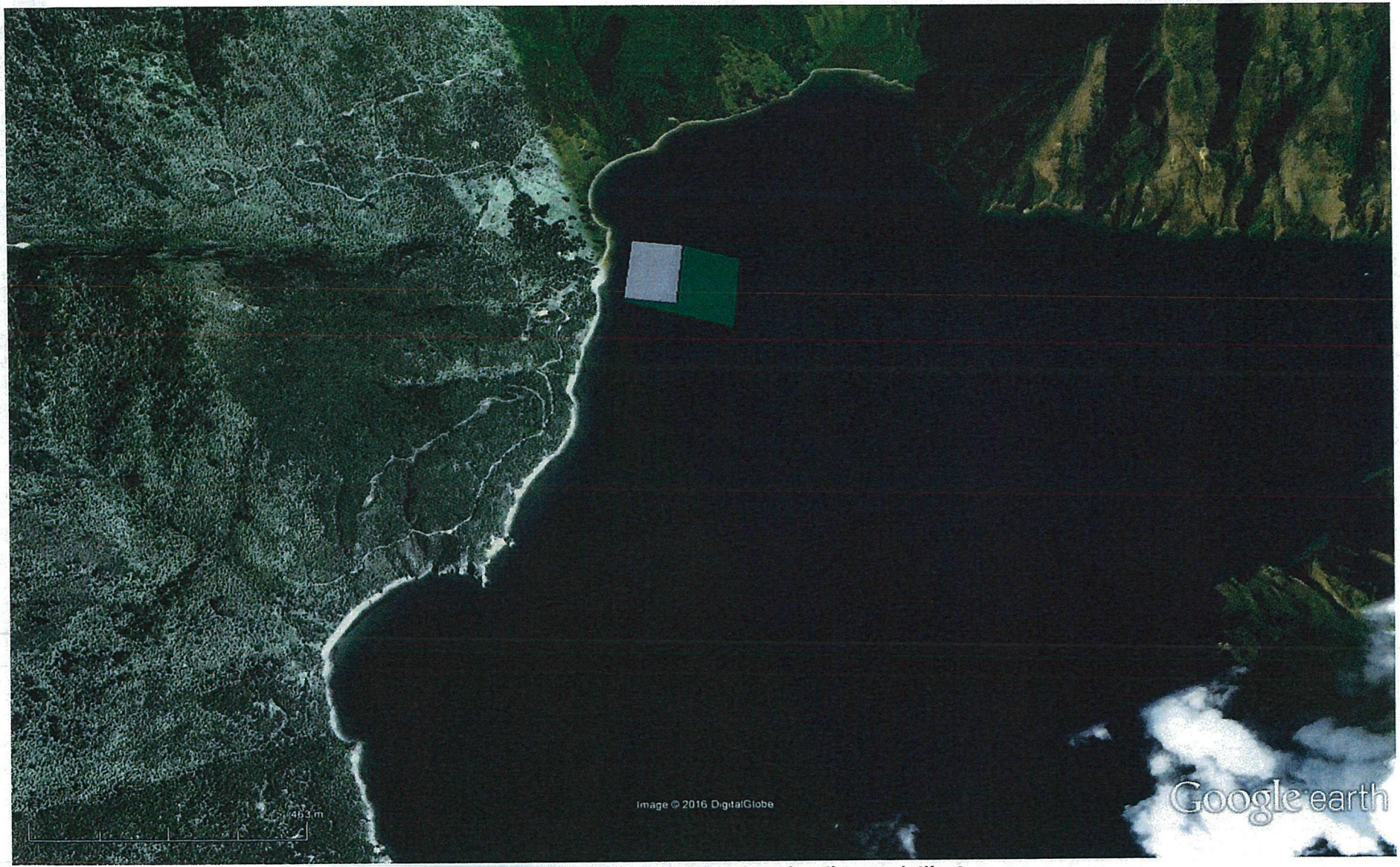

Plate 2. Oblique view of existing consent 8173 (grey) and proposed extension (teal) in Melville Cove.

2.0 Background information

2.1 Study area

Marine farm 8173 is located along the south-western shoreline of Melville Cove (Figure 2). Melville Cove is in the western part of inner Port Gore. The Port is an enclosed body of water bounded by Capes Lambert on the north-east and Cape Jackson on the south-east. The outer Port Gore area opens directly into Cook Strait. Melville Cove (inner Port Gore) has a coastline length of approximately 7230 m and covers an area of sea of approximately 316.2 ha. The mouth of Melville Cove is approximately 1650 m wide.

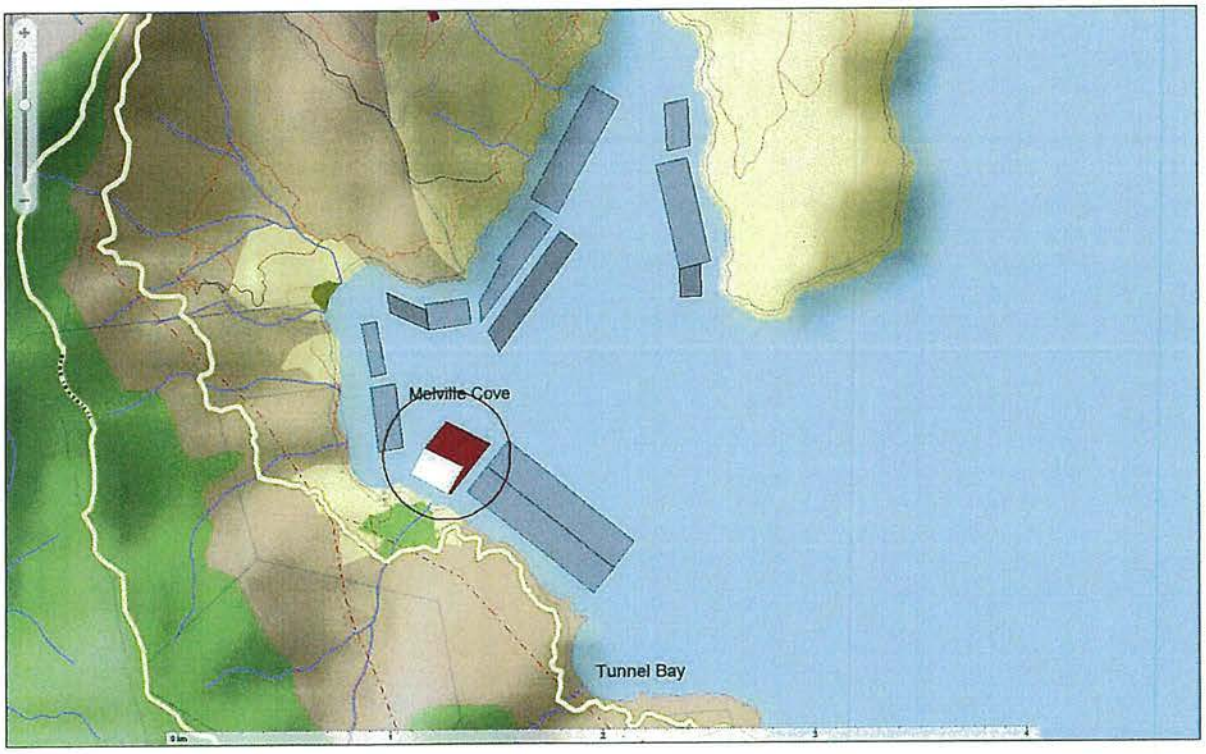

Figure 2. Location of parent farm (light grey), proposed extension (red) and other marine farm consents in the area.

2.2 Historical reports

One historic biological report was found for the original parent farm consent application (U000063; Davidson, 1999). In this report, Davidson recorded the following:

"The subtidal shore was characterised by a relatively narrow cobble shore that extended to approximately 5 m distance from low water. From 5 m to 20 m distance at both transects, a zone of shell over a base of fine sand was recorded. Dead whole shell on a base of silt was recorded from both transects between 20 m to 50 m. Beyond 50 m distance from low water, the benthos was dominated by silt and clay substrata.

The proposed area was dominated soft substrata supporting a relatively low variety of species in relatively low abundance.

No ecological values identified in the Department of Conservation report (DOC, 1995) were recorded in offshore areas above trigger levels during the present study."

3.0 Methods for present study

The area was investigated on 24th January 2017. 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 should be 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.

3.1 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 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 3.2).

3.2 Drop camera stations and site depths

Water visibility during the survey was extremely poor. Summer storms and consistent winds are likely to have reduced water clarity in the Melville Cove area.

Drop camera photographs were collected from the marine farm site during the present study. A total of 27 photographs have been collected from the existing and proposed farm consent area, including under droppers and warps and also areas inshore of the parent farm. 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 benthic mussel shell, Low = 1-30%, Moderate = 31-50%, Moderate to High = 51-75%, and High = 76-100% cover. This assessment is displayed in Table 2 of the present report.

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 locations inshore of the consent. The survey vessel was positioned over the low water mark and the position recorded using the mapping software. Low tide was determined by using the transition between intertidal and subtidal species.

4.0 Results

On the day of the survey, high tide was 0.9 m at 7.07 am and low tide was 0.5 m at 12.52 pm. During the present biological survey, the tide was outgoing.

4.1 Consent corners and surface structures

Corner depths of the existing marine farm consent ranged from 9.4 m to 10.5 m inshore and 24 m to 25.7 m offshore (Figure 3). The bottom topography under the existing consent and the proposed extension comprised a gently sloping shore that increased from inshore to offshore.

Existing surface structures consisted of backbones covering 1.37 ha of the 2.8 ha parent farm consent.

The distance between low tide and the consent boundary was measured from positions established by positioning the survey vessel over low water. Separation distances between the existing consent boundary and the low tide mark were: western = 41 m, central = 35 m and eastern = 47 m (Figure 3, Plate 3).

Table 1. Depths recorded from the corners of mussel farming surface structures, consent corners and low tide positions. Depths adjusted to datum. Coordinates = NZTM (Northing/Easting).

Type	No. & Depth (m)	Coordinates
Extension corner	1, 24m	1698667.33,5455289.55
Extension corner	2, 25.7m	1698876.53,5455182.50
Extension corner	3, 9.4m	1698686.99,5454946.33
Extension corner	4, 9.4m	1698676.23,5454951.84
Extension corner	5, 22.7m	1698745.22,5455073.66
Extension corner	6, 23m	1698567.18,5455164.77
Consent corner	7, 10.5m	1698498.3,5455042.9
Structure corner	A, 12.8m	1698626.7,5454979.1
Structure corner	B, 11.5m	1698536.6,5455025.3
Structure corner	C, 23.4m	1698602.0,5455139.5
Structure corner	D, 22.3m	1698696.8,5455089.4
Low Tide	Low tide	1698607.3,5454934.8
Low Tide	Low tide	1698558.9,5454972.1
Low Tide	Low tide	1698499.0,5454996.5

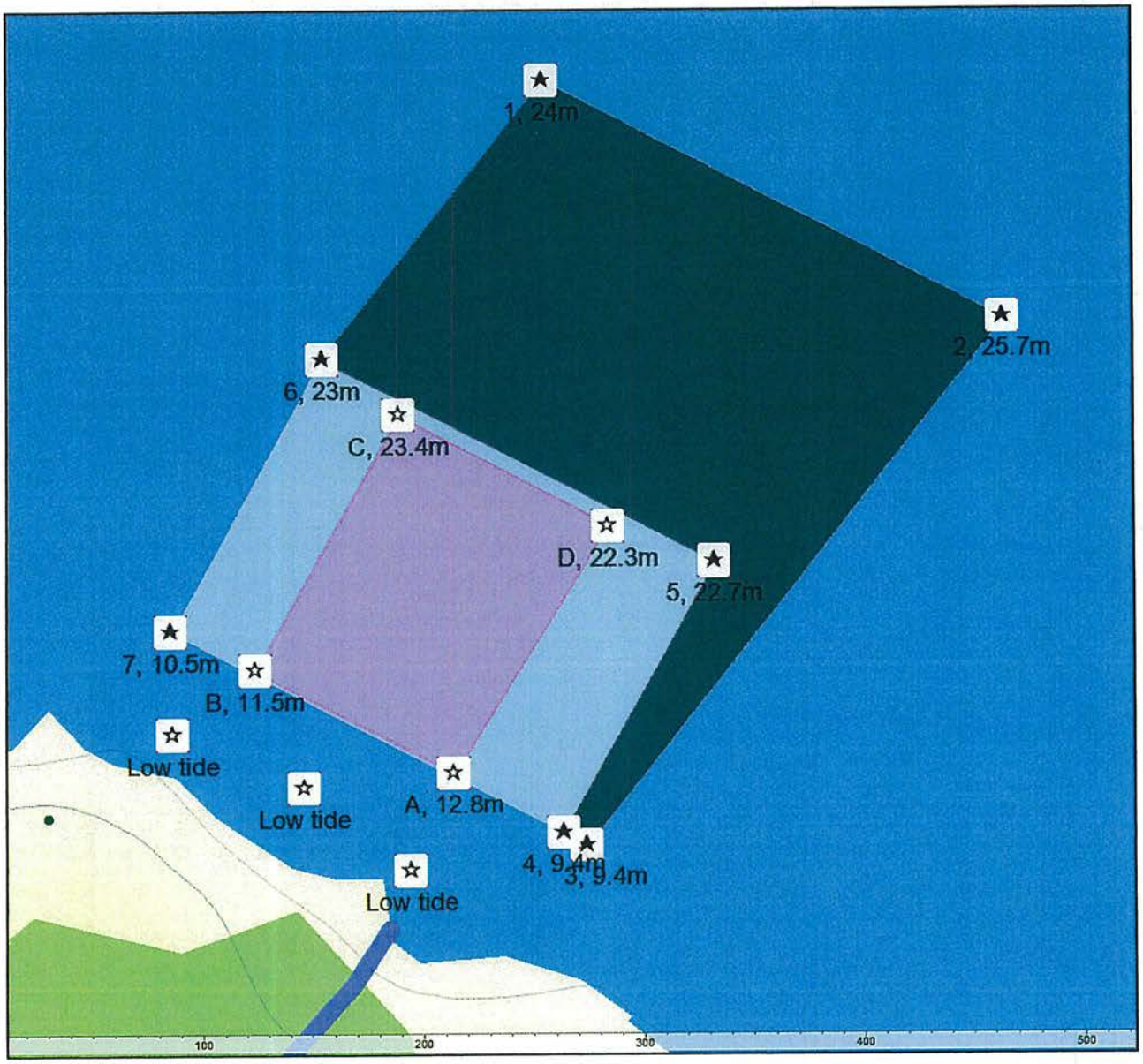

Figure 3. Depths of the existing consent area (grey), proposed extension (teal) and existing surface structures (pink). Low tide positions also included.

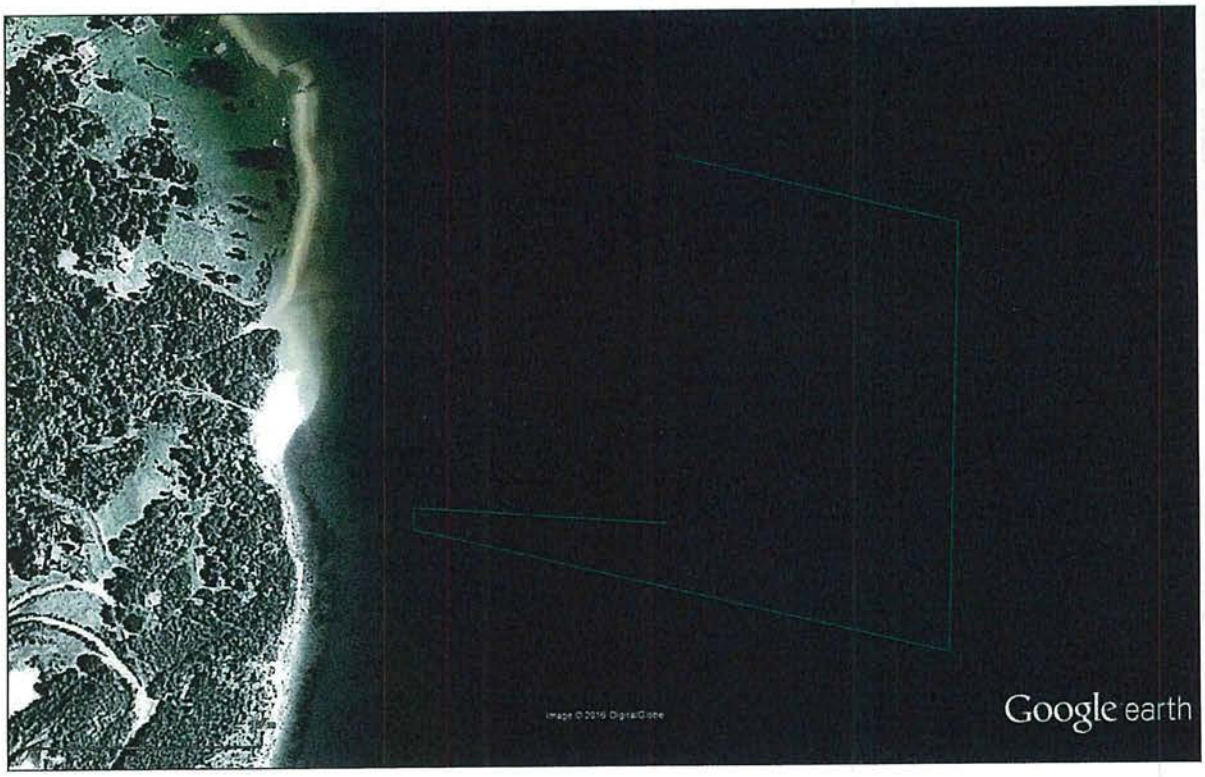

Plate 3. Farm 8173 consent boundary (black line), proposed extension (teal line) relative to the shoreline (Aerial = March 2011).

4.2 Drop camera stations

Substratum and habitat distribution relative to the consent area were based on drop camera images (Table 2, Figure 4, Appendix 1) and sonar.

Substratum under the existing consent and proposed extension was dominated by silt and clay (i.e. mud) (Plate 4, Table 3). Mussel shell was observed under backbones, but was not widespread (Table 2, Plate 5). Very little natural shell material was observed from the consent and when observed it was close to the inshore boundary (Plate 6).

The proposed extension was dominated by silt and clay (Plate 6). Silt and clay with a small component of natural shell was observed near the southern inshore boundary strip of the proposed extension.

Very few surface dwelling species were recorded from the silt and clay dominated areas of the consent (e.g. seastars, sea cucumber). Scallops were not recorded from drop camera images but may be present. No horse mussels were recorded from drop camera images in the present study.

4.3 Sonar

The sonar run revealed a flat, featureless seafloor through the consent (Figures 5 and 6). A zone of cobbles was observed inshore of the consent and proposed extension. No rocky substratum was detected within the parent farm or proposed extension by the sonar. Benthic mussel shell and live mussels were observed on the sonar under and close to droppers.

Table 2. Coordinates of drop camera stations showing depths, substratum and level of benthic mussel shell. Depths adjusted to datum. None = no benthic mussel shell, Low = 1-30%, Moderate = 31-50%, Moderate to High = 51-75%, and High = 76-100% cover.

No. & Depth (m)	Coordinates	Location	Position	Substratum	Shell debris
1, 23m	1698764.1,5455081.3	proposed extension	no structures	silt	none
2, 22.8m	1698693.6,5455105.5	proposed extension	no structures	silt	none
3, 23.1m	1698625.1,5455137.0	proposed extension	no structures	silt	none
4, 23.2m	1698576.2,5455171.6	proposed extension	no structures	silt	none
5, 24m	1698801.0,5455130.3	proposed extension	no structures	silt	none
6, 23.8m	1698747.6,5455143.9	proposed extension	no structures	silt	none
7, 23.6m	1698684.0,5455187.6	proposed extension	no structures	silt	none
8, 22.9m	1698612.0,5455219.3	proposed extension	no structures	silt	none
9, 23.4m	1698673.7,5455264.0	proposed extension	no structures	silt	none
10, 24.2m	1698741.5,5455235.9	proposed extension	no structures	silt	none
11, 24.7m	1698790.6,5455180.0	proposed extension	no structures	silt	none
12, 25.2m	1698846.1,5455181.4	proposed extension	no structures	silt	none
13, 22.2m	1698726.7,5455019.1	proposed extension	no structures	silt	none
14, 15.6m	1698699.5,5454962.9	proposed extension	no structures	silt	none
15, 10.8m	1698678.9,5454945.8	inshore of consent/ extension	no structures	silt, natural shell	none
16, 11.4m	1698628.5,5454970.5	inshore of consent/ extension	no structures	silt, natural shell	none
17, 8.8m	1698589.8,5454987.8	inshore of consent/ extension	no structures	silt, natural shell, filamentous algae	none
18, 5.1m	1698566.7,5454989.3	inshore of consent/ extension	no structures	silt, natural shell, filamentous algae	none
19, 9.8m	1698525.5,5455027.7	inshore of consent/ extension	no structures	silt, natural shell, red algae	none
20, 10.6m	1698483.8,5455043.1	inshore of consent/ extension	no structures	silt, natural shell	none
21, 14.4m	1698558.2,5455034.8	within consent	within backbones	silt, mussel shell	high
22, 16.3m	1698625.9,5455009.4	within consent	within backbones	silt, mussel shell	moderate
23, 20m	1698668.4,5455028.4	within consent	under warp	silt	none
24, 18.2m	1698602.3,5455065.4	within consent	within backbones	silt, mussel shell	moderate
25, 18.1m	1698557.9,5455091.0	within consent	under warp	silt, shell hash	none
26, 22.4m	1698598.1,5455125.0	within consent	within backbones	silt, red algae	none
27, 22m	1698682.3,5455086.6	within consent	within backbones	silt	none

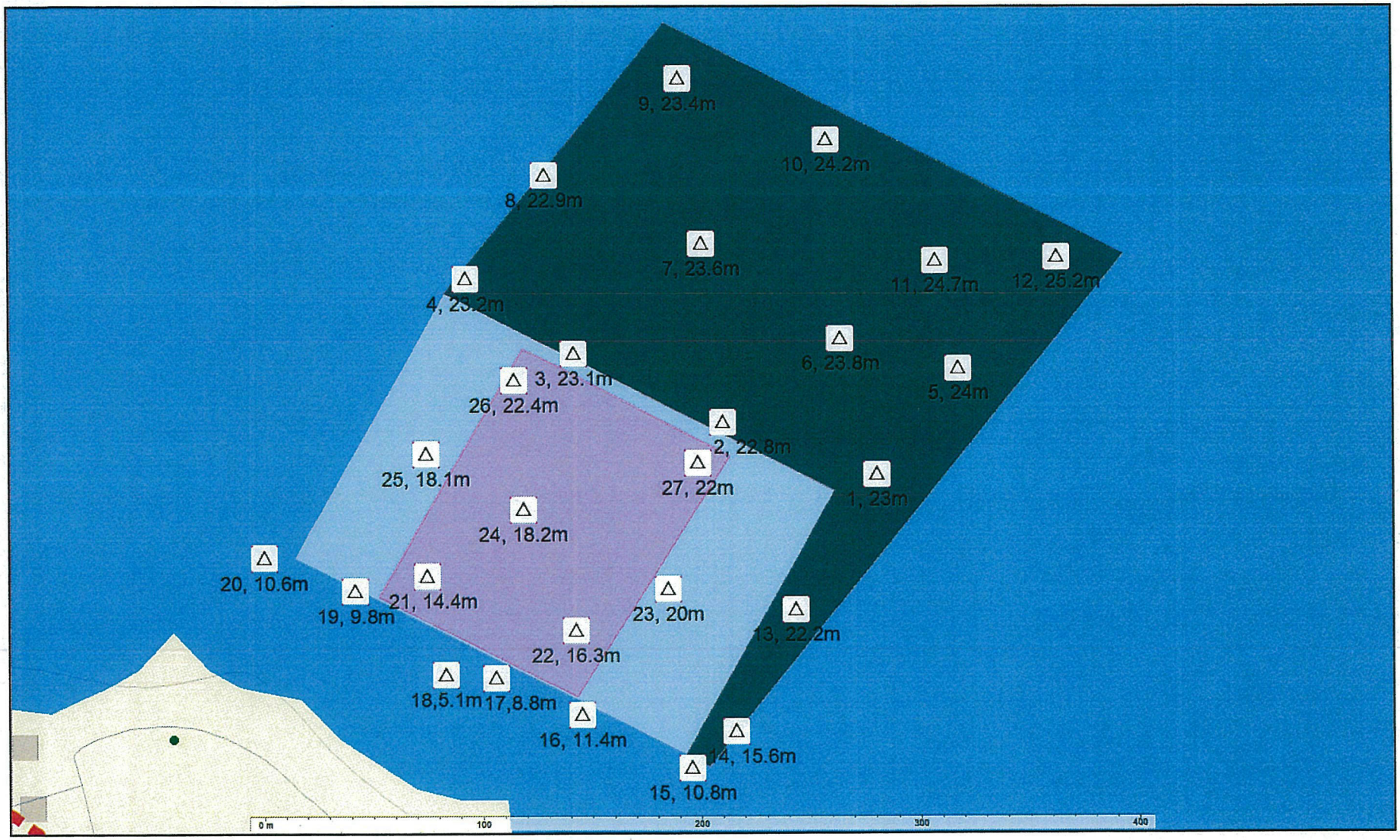

Figure 4. Existing consent (grey), proposed extension (teal), surface structures (pink) and drop camera stations with depths (triangles).

Plate 4. Silt and clay located in the consent away from backbones (photo 25, 18.1 m depth).

Plate 5. Silt and clay with large live mussels and shell under existing backbones (photo 24, 18.2 m depth).

Plate 6. Silt and clay with a small component of natural shell. Note red algae presence (photo 19, 9.8 m depth).

Plate 7. Silt and clay typical of the proposed extension (photo 12, 25.2 m depth).

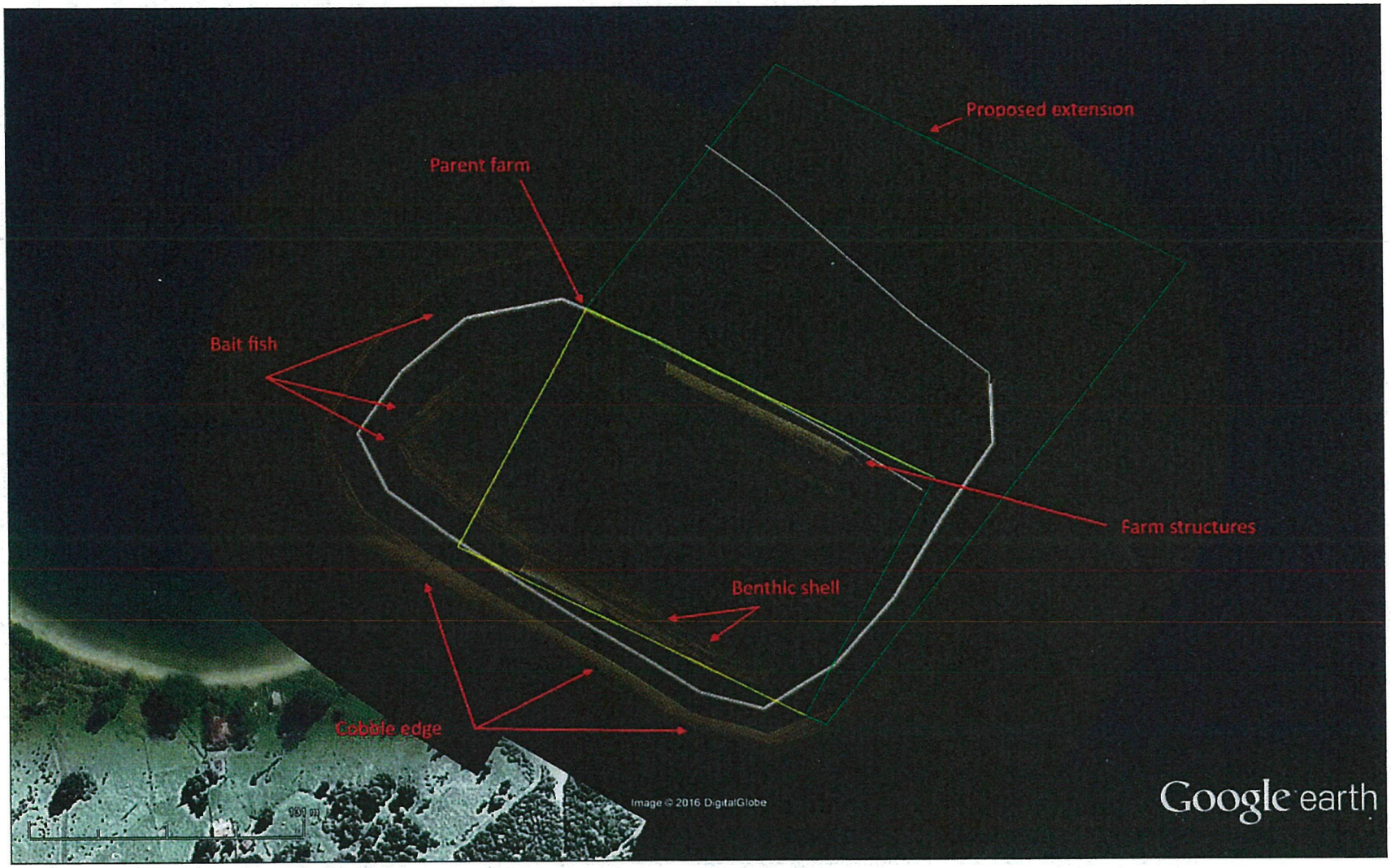

Figure 5. Sonar run at farm 8173. Yellow polygon = consent boundary, teal polygon = extension. White line = sonar track.

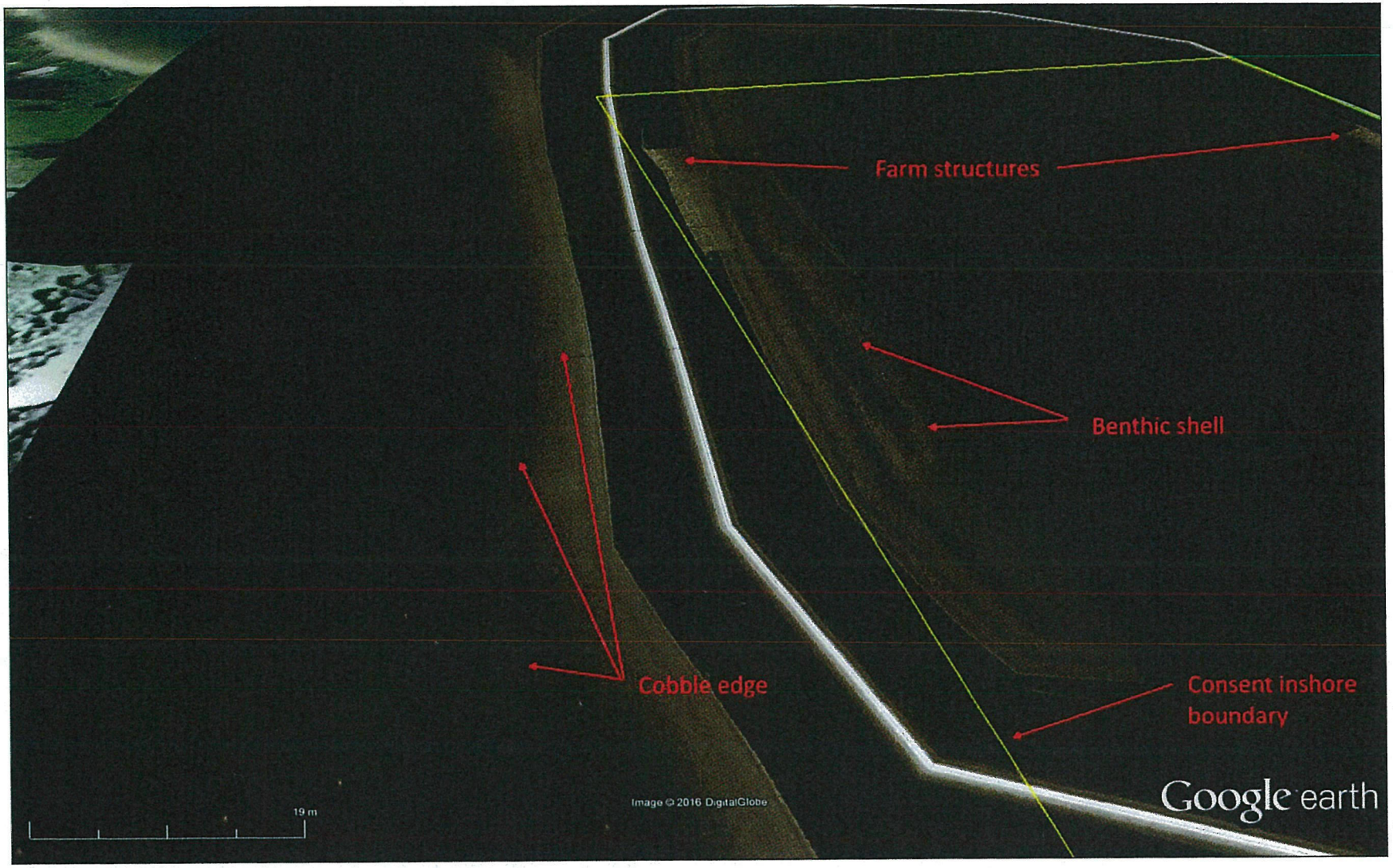

Figure 6. Oblique aspect of sonar runs at farm 8173. Yellow polygon = consent boundary. White line = sonar track.

5.0 Summary and conclusions

5.1 Benthos

Most of the benthos under the existing consent was dominated by silt and clay with little or no natural shell. This type of substrata dominates most of Melville Cove and many areas of the sheltered Marlborough Sounds.

A cobble shore was detected inshore of the parent farm. No other rocky substrata were detected within the consent or proposed extension during the present study.

Mussel shell debris was observed under and close to backbones. When present, it was at moderate to high levels and mussels were often alive. Several photos collected close to backbones lines had no benthic mussel shell suggesting shell is often limited to areas very close to dropper lines. It is also likely dead mussel shell from the farm has sunk into the soft sediment over time, or has been smothered by fine sediment.

The proposed extension was dominated by the same range of habitats as the parent farm, however, no mussel shell was observed.

5.2 Species and communities

Relatively few invertebrate species were observed on the silt and clay areas of the consent. Species abundance and diversity increased in the inshore area, but was still relatively low compared to rocky shores in the Marlborough Sounds. All areas under the consent and the proposed extension are likely characterised by infaunal species representative of mud shores in sheltered locations in the Sounds (McKnight and Grange, 1991).

No species or communities of scientific, conservation or ecological importance were observed during the present study (see Davidson *et al.*, 2011 for criteria and biological features). No scallops were seen under the Consent or proposed extension. Scallops could be present, but their absence from photos suggests they were uncommon.

Occasional clumps of red algae were observed. Red algae was very patchy and was absent from most photos. Overall, the densities observed do not constitute a red algae bed.

5.3 Mussel farming impacts

5.3.1 Benthic impacts

Benthic mussel shell was recorded from drop camera photos collected under and near backbones. Shell debris impact levels were within the range known for mussel farms in the Marlborough Sounds and towards the low to moderate impact range apart from directly under droppers where it did reach high levels.

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 activity remains relatively consistent, it is very unlikely that the surface sediments would become anoxic, especially as the site is shallow (<10 m depth) (Hartstein and Rowden, 2004; Keeley *et al.*, 2009; Davidson and Richards, 2014). Tidal flows are expected to be low; however, winds are likely to be an important driver of water movement in this area.

It is noted that benthic impacts of mussel farms are not permanent. If structures are removed, the benthos recovers over a period of approximately 10 years (Davidson and Richards, 2014).

5.3.2 Productivity

Mussel farms can influence adjacent farms by slowing water flow to farms located in downstream positions. 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 that the ecological carrying capacity of the Sounds has been reached. There is considerable evidence that shows 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).

Port Gore is near Cook Strait, however, the waters of Melville Cove appear greener and likely have longer turn-over times compared to areas in outer Port Gore where water appears more oceanic. It is likely that Cook Strait delivers nutrients to the inner area and algae primary production occurs during the longer residence times compared to the outer Port Gore area.

5.3.3 11 arm seastars

Inglis and Gust (2013) raised a concern that because 11 arm sea stars can reach densities 39 times those outside farms, this elevated population could lead to recruitment of these predators into the wider population. In a long-term investigation of the recovery of a mussel farm, Davidson and Richards (2014) sampled sites under retired backbones, retired warps and four control sites located away from mussel farms. The 11 arm sea star population was indeed elevated under the retired backbones, but their numbers quickly declined to background levels and remained low and stable throughout the remainder of the study after the farm was removed. Data from this long-term study suggests that 11 arm sea star numbers increase under farms (most likely in response to food availability), however, their densities at control sites and under retired warps remained at low levels throughout the study despite concerns that sea stars recruit into adjacent areas by either migration or juvenile settlement.

5.4 King shags

One king shag was observed resting on a float in the parent farm for much of the survey duration. Where, and what the bird was doing prior to resting on the float was not observed. The colony where this bird originated is also unknown, however, a colony is known from a rock located near Hunia (Davidson and Richards, 2015; 2016). Once the present survey was completed an inspection of that king shag site nesting was conducted at approximately 1 pm. No king shags were observed at the site. Birds may have all been feeding or the site may be abandoned.

A second king shag was observed on a float in Pig Bay. This bird left the float and dived within the mussel lines. The bird surfaced a short time later and was still within the farm. This behaviour was not caused due to our presence as the boat was positioned well inshore of the shag. No other king shags were observed in Port Gore during the investigation.

5.5 Boundary adjustments, recommendations and monitoring

There were no biological values that would preclude the parent farm or the proposed extension for consideration for mussel farming.

All areas of the consent where structures have been placed are located over a habitat considered suitable for shellfish farming. This substratum is the most common and widespread habitat type in sheltered shore of the Marlborough Sounds and the sheltered outer Sounds bays like Admiralty, Anakoha Bay and Catherine Cove. The impacts for mussel farming on muddy habitats characterised by silt, clay and natural shell are usually low compared to farm impacts in shallow, habitats dominated by rocky or biogenic communities. The present structures are therefore situated over habitats traditionally considered suitable for the activity of farming mussels. No reduction to the present farm boundary is therefore recommended on ecological grounds.

Based on the substratum located under structures and the impact levels of the existing activity, no monitoring is suggested.

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Zeldis, J.R.; Hadfield, M.G.; Booker, D.J. 2013. Influence of climate on Pelorus Sound mussel aquaculture yields: predictive models and underlying mechanisms. Aquaculture Environmental Interactions, Vol. 4, 1-15.

Appendix 1. Drop camera photographs

Photo site 1

Photo 2

Photo site 3

Photo 4

Photo site 5

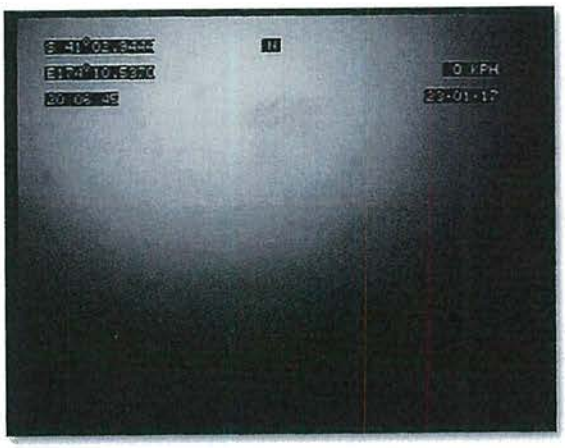

Photo site 6

Photo site 7

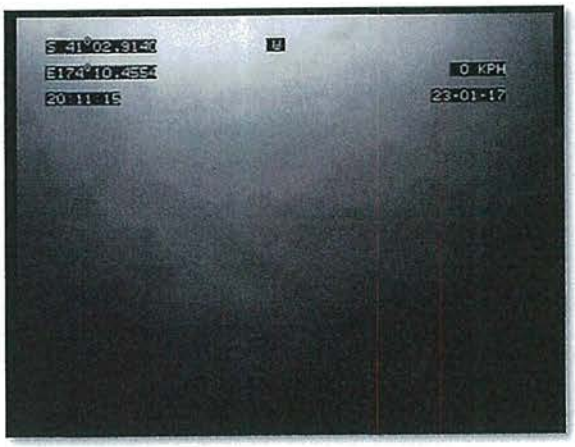

Photo 8

Photo site 9

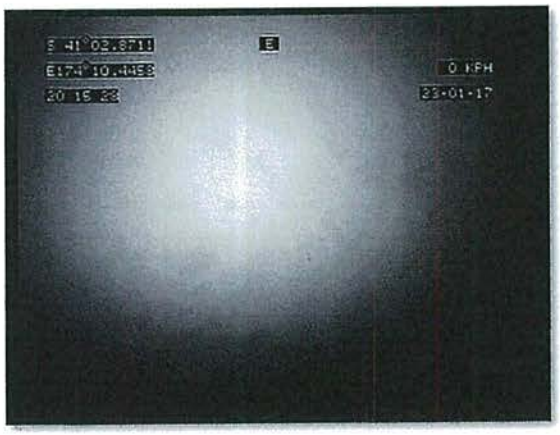

Photo site 10

Photo site 11

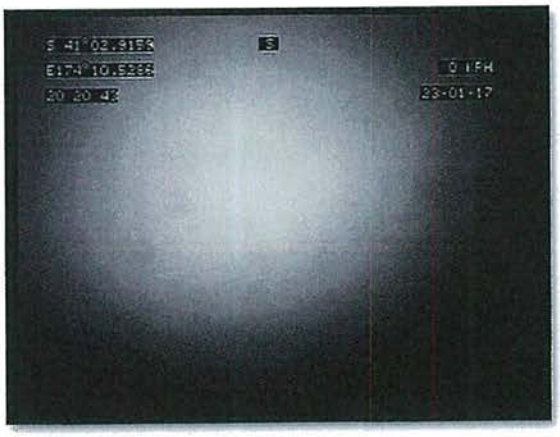

Photo site 12

Photo site 13

Photo 14

Photo site 15

Photo site 16

Photo site 17

Photo site 18

Photo site 19

Photo 20

Photo site 21

Photo 22

Photo site 23

Photo 24

Photo site 25

Photo 26

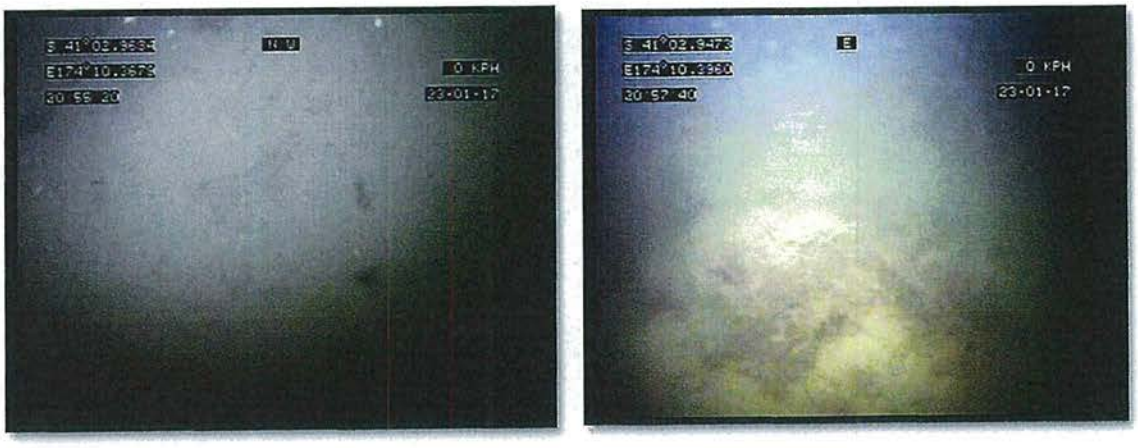

Photo site 27