



28 September 2017

AQUACULTURE DECISION REPORT — MARLBOROUGH AQUACULTURE LIMITED, COASTAL PERMIT U150178, FOUR FATHOM BAY, PELORUS SOUND

PURPOSE

1 This report sets out my aquaculture decision (as the relevant decision maker¹) for an aquaculture decision request made under section 114(4)(c)(ii) of the *Resource Management Act 1991* (**RMA**). The aquaculture decision request is described below. My aquaculture decision is made under section 186E of the *Fisheries Act 1996* (**Fisheries Act**).

SUMMARY

2 I am satisfied the aquaculture activities proposed within the area of coastal permit U150178 will not have an undue adverse effect on:

- recreational fishing - for the reasons set out in this report and summarised in paragraph 43;
- customary fishing - for the reasons set out in this report and summarised in paragraph 65;
- commercial fishing - for the reasons set out in this report and summarised in paragraph 89.

AQUACULTURE DECISION REQUEST DETAILS

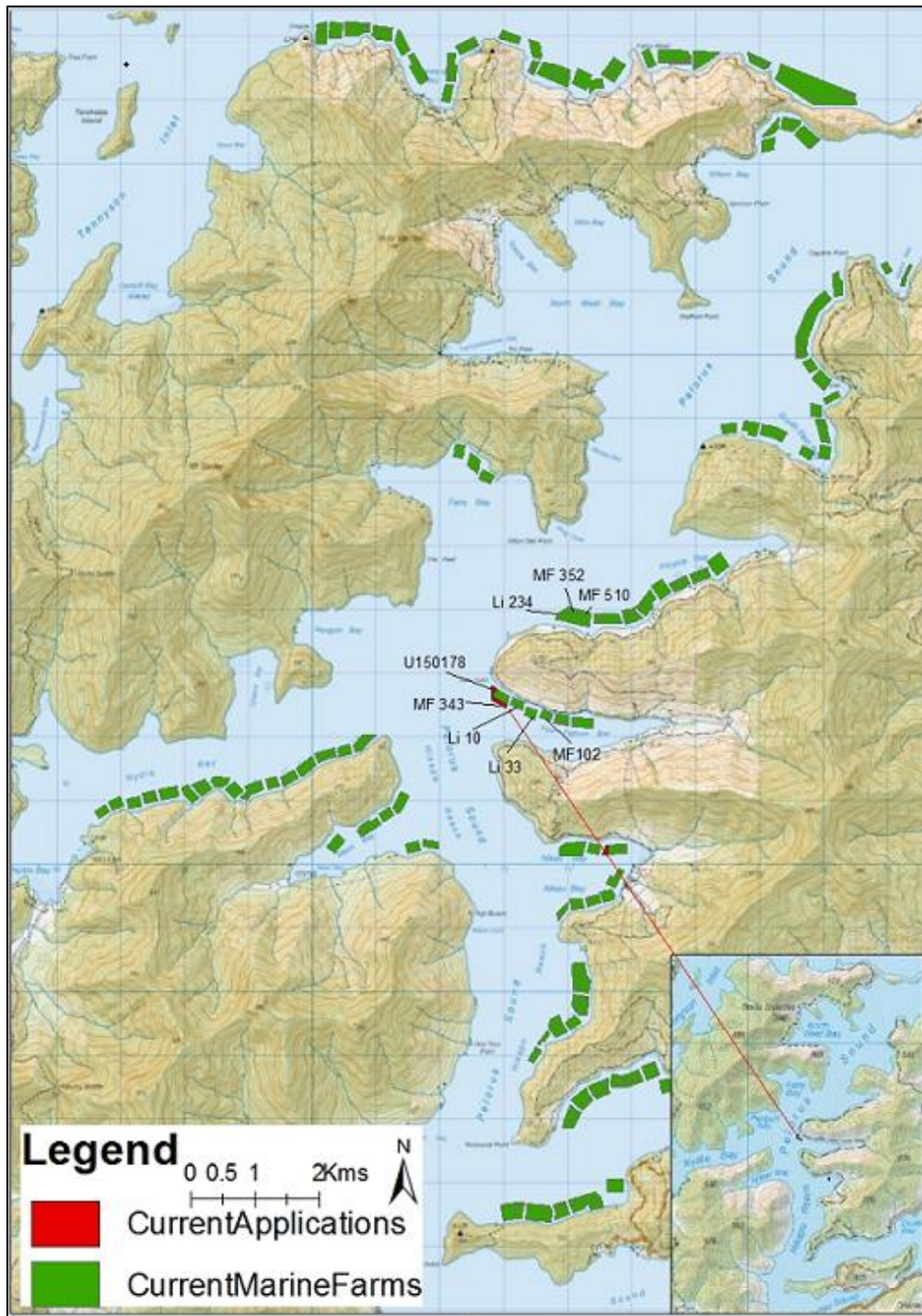
Regional Council:	Marlborough District Council (MDC)
Date of Request:	29 May 2017
Coastal Permit Applicant:	Marlborough Aquaculture Limited
Location of marine farm site:	Four Fathom Bay, Pelorus Sound
Size of farm:	2.2 ha extension to existing marine farming permit 343 (MF 343)
Species to be farmed:	Green-lipped mussels (<i>Perna canaliculus</i>), blue mussel (<i>Mytilus edulis</i>), scallop (<i>Pecten novaezelandiae</i>) and flat oyster (<i>Tiostrea lutaria</i>)
Farm structures:	Standard marine farm longlines and anchors with droppers

Location

3 Coastal permit U150178 applies to an area of Four Fathom Bay, Pelorus Sound (Map 1). Coastal permit U150178 extends the area authorised by MF 343 by 2.2 ha (Map 2).

4 Four Fathom Bay is within Fisheries Management Area 7 (**FMA7**) (Map 3). Aside from MF 343, the closest existing farm to the area of coastal permit U150178 is marine farm licence 10 (**Li 10**) and marine farm licence 33 (**Li 33**). The combined site of marine farm licence 234 (**Li 234**), marine farm licence 352 (**Li 352**) and marine farming permit 510 (**MF 510**) lies around the headland to the north east.

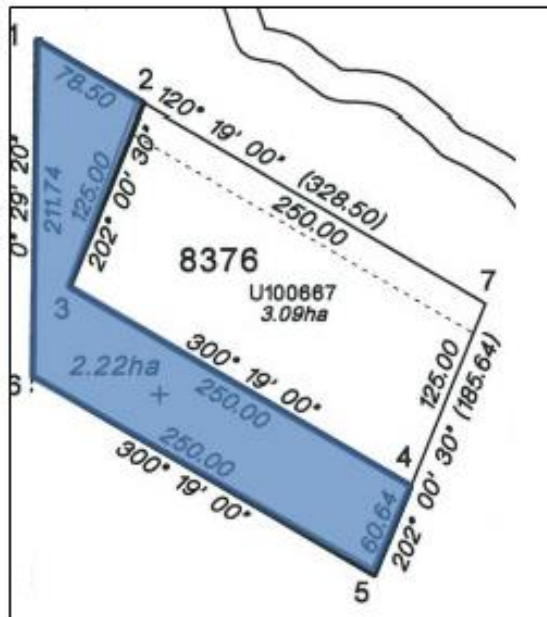
¹ Acting under authority delegated to me by the Director-General of the Ministry for Primary Industries (**MPI**) in accordance with section 41 of the *State Sector Act 1988*.



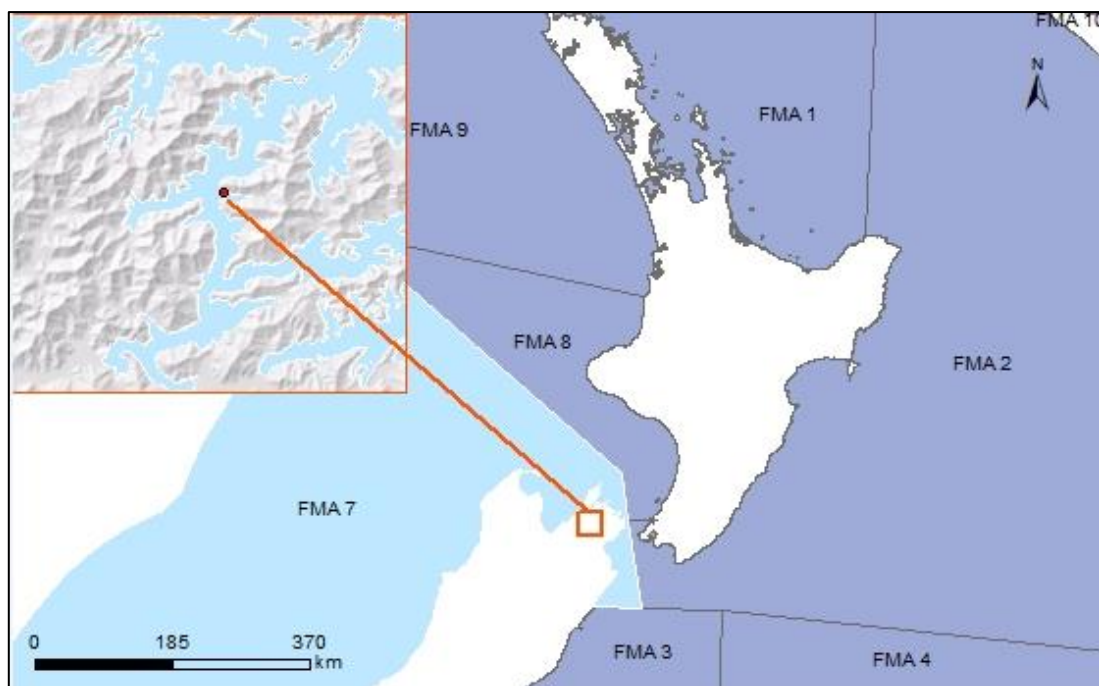
Map 1²: Location of the area authorised by coastal permit U150178 at Four Fathom Bay (MPI, 2017).

² Disclaimer: Maps 1-8 and all information accompanying it (the “Maps”) is intended to be used as a guide only, in conjunction with other data sources and methods, and should only be used for the purpose for which it was developed. The information shown in the Maps is based on a summary of data obtained from various sources. While all reasonable measures have been taken to ensure the accuracy of the Maps, MPI: (a) gives no warranty or representation in relation to the accuracy, completeness, reliability or fitness for purpose of the Maps; and (b) accepts no liability whatsoever in relation to any loss, damage or other costs relating to any person’s use of the Maps, including but not limited to any compilations, derivative works or modifications of the Maps. Crown copyright ©. The maps are subject to Crown copyright administered by Ministry for Primary Industries (MPI). Data Attribution:

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Map 2: Structure layout for coastal permit U150178³. Area shaded blue is the approximate new area proposed.



Map 3: Location of the area of coastal permit U150178 (red circle) within FMA7.

3 The area of coastal permit U150178 is around 60 m from shore at its closest point and ranges from 7.2-17 m deep. The benthic survey of the site (Davidson, 2014) showed the benthos is predominantly uniform silt and clay substrate (mud), with low variety of species, often low in abundance. Red algae in isolated clumps was seen in the proposed extension, however these were not seen in significant volumes as set out in the Department of Conservation's Guidelines for Ecological Investigations of Proposed Marine Farm Areas.

³ Sourced from the MDC's decision on coastal permit application U150178.

Structures

The area of coastal permit U150178 will continue to operate the existing farm layout of 10 longlines that are 100 m in length (Figure 1).

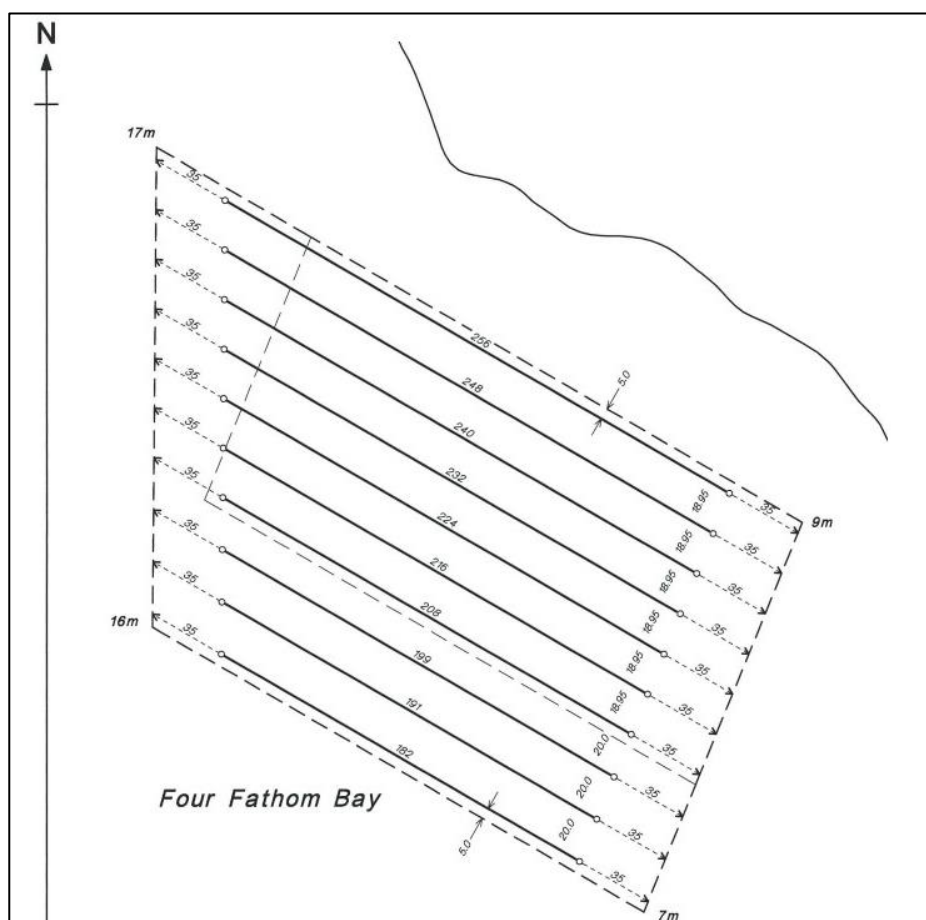


Figure 1: Structures diagram for coastal permit U150178.

Input from stakeholders

4 MPI publicised the application for coastal permit U150178 on its website on 25 May 2016. This gave persons and organisations potentially affected by the proposed aquaculture activities an opportunity to provide information on their fishing activities at the coastal permit area.

5 The submission closing date for those notified via the website was 26 June 2017. MPI did not receive any submissions.

STATUTORY CONTEXT

6 Section 186E(1) of the Fisheries Act requires me to, within 20 working days after receiving a request for an aquaculture decision from a regional council, make a determination or reservation (or one or more of them in relation to different parts of the area to which the request relates).

7 A ‘*determination*’ is a decision that I am satisfied that the aquaculture activities authorised by the coastal permit will not have an undue adverse effect on fishing. A ‘*reservation*’ is a decision that I am not satisfied that the aquaculture activities authorised by the coastal permit will not have an undue adverse effect on fishing.

8 If I make a reservation, I am required to specify whether the reservation relates to customary, recreational or commercial fishing or a combination of them. If the reservation relates to commercial fishing, I must specify the stocks and area concerned—section 186H(4).

9 Section 186C of the Fisheries Act defines “adverse effect,” in relation to fishing, as restricting access for fishing or displacing fishing. An “undue adverse effect” is not defined. However, the ordinary meaning of “undue” is an effect that is unjustified or unwarranted in the circumstances. For the purpose of my decision under section 186E, an undue adverse effect will mean the significance of the effect on restricting access for fishing, displacing fishing or increasing the cost of fishing is unjustified or unwarranted in the circumstances.

10 Section 186E(3) of the Fisheries Act⁴ requires me, in making an aquaculture decision, to have regard to any:

- (a) information held by the Ministry for Primary Industries; and
- (b) information supplied, or submissions made, to the Director-General under section 186D(1) or (3) by:
 - i. an applicant for or holder of the coastal permit;
 - ii. any fisher whose interests may be affected;
 - iii. persons or organisations that the Director-General considers represent the classes of persons who have customary, commercial or recreational fishing interests that may be affected by the granting of the coastal permit or change to, or cancellation of, the conditions of the coastal permit; and
- (c) information that is forwarded by the regional council; and
- (d) any other information that the Director-General has requested and obtained.

11 Section 186F of the Fisheries Act specifies an order of processing that must be followed in making aquaculture decisions. But section 186F(5) allows aquaculture decisions to be made in a different order from that specified if I am satisfied that in making an aquaculture decision out of order it will not have an adverse effect on any other aquaculture decision that has been requested. I am so satisfied in this case.

12 Section 186GB(1) of the Fisheries Act specifies the only matters I must have regard to when making an aquaculture decision. These matters are as follows:

- (a) the location of the area that the coastal permit relates to in relation to areas in which fishing is carried out;
- (b) the likely effect of the aquaculture activities in the area that the coastal permit relates to on fishing of any fishery, including the proportion of any fishery likely to become affected;
- (c) the degree to which the aquaculture activities in the area that the coastal permit relates to will lead to the exclusion of fishing;

⁴ Section 186E(3)(a) of the Fisheries Act refers to the ‘Ministry of Fisheries’ which is now the Ministry for Primary Industries. Section 186E(3)(b) and (d) refers to the ‘chief executive’ who is now the director-general.

- (d) the extent to which fishing for a species in the area that the coastal permit relates to can be carried out in other areas;
- (e) the extent to which the occupation of the coastal marine area authorised by the coastal permit will increase the cost of fishing; and
- (f) the cumulative effect on fishing of any authorised aquaculture activities, including any structures authorised before the introduction of any relevant stock to the quota management system.

13 Section 186GB(2) of the Fisheries Act specifies that if a pre-request aquaculture agreement has been registered under section 186ZH in relation to the areas that the coastal permit relates to, I must not have regard to the undue adverse effects on commercial fishing in respect of any stocks covered by the pre-request aquaculture agreement when having regard to the matters specified in section 186GB(1). No pre-request aquaculture agreements have been registered in relation to coastal permit U150178.

14 Section 186GB(1)(b) requires an assessment of the likely effects of the aquaculture activities on fishing of any fishery including the proportion of any fishery likely to be affected. “Fishery” is not defined either in section 186 or elsewhere in the Fisheries Act. However, “stock” is defined in section 2 to mean any fish, aquatic life, or seaweed of one or more species that are treated as a unit for the purposes of fisheries management. Parts (3) and (4) of the Fisheries Act focus on “stocks” for the purpose of setting and allocating Total Allowable Catches and managing species within the quota management system (**QMS**). Sections 186GB(1)(f) and (2) also refer to “stock” with specific regard to adverse effects on commercial fishing.

15 For the purpose of my decision under section 186E, I consider a commercial fishery is a fish stock delineated by a fisheries management area (**FMA**) or quota management area (**QMA**). However, because recreational and customary fishers are not bound to restrict their fishing activity by FMA or QMA, I consider the relevant customary and recreational fishery are as I have described in the assessment below in my consideration of section 186GB(1)(a)—*Location of the coastal areas relative to fishing area*.

16 Section 186C of the Fisheries Act does not define “cumulative effect” beyond what is provided in section 186GB(1)(f) that the effect includes any structures authorised before the introduction of any relevant stock to the QMS. For the purpose of my decision under section 186E, “cumulative effect” on commercial fishing includes the total effect of all authorised aquaculture activities within the relevant QMA or FMA. For customary and recreational fisheries, the relevant areas for considering “cumulative effects” are as I have described in the assessment below in my consideration of section 186GB(1)(a) and (f).

17 The *Fisheries (South Island Customary Fishing) Regulations 1999* (**the South Island Regulations**) define customary food gathering as the traditional rights confirmed by the Treaty of Waitangi and the *Treaty of Waitangi (Fisheries Claims) Settlement Act 1992*, being the taking of fish, aquatic life, or seaweed or managing of fisheries resources, for a purpose authorised by Tangata Tiaki/Kaitiaki, including koha, to the extent that such purpose is consistent with tikanga Māori and is neither commercial in any way nor for pecuniary gain or trade.

18 The South Island Regulations and regulation 50 and 51 of the *Fisheries (Amateur Fishing) Regulations 2013* (**the Amateur Regulations**) provide for Tangata Tiaki/Kaitiaki to determine the customary purpose for which fish, aquatic life, or seaweed may be taken, methods used, seasons fished, size and quantity taken etc. The South Island Regulations and regulations 50 and 51 do not contemplate restrictions under the Fisheries Act on the quantity of fish taken or the methods used

to take fish. Should tangata whenua fish without customary authorisations, all the recreational limits under the Amateur Regulations apply.

ASSESSMENT

19 When making my aquaculture decision under section 186E of the Fisheries Act, I have considered all relevant information before me. The following sections of this paper provide an assessment of the effects of the proposed aquaculture activities on recreational, customary and commercial fishing against the matters set out above.

20 For the purpose of my assessment, customary fishing differs from recreational fishing if it is undertaken outside of the recreational limits provided in the Amateur Regulations and is instead authorised by a customary authorisation.

21 This assessment relates to the 2.2 ha of new marine farming space authorised by coastal permit U150178.

Recreational fishing

Location of the coastal permit area relative to fishing areas

22 I consider the area of coastal permit U150178 is located where there is a relatively small amount of recreational fishing, predominantly by mobile rod/line methods from a private boat, with some set netting. I consider that snapper, flatfish (including flounder and sole), and kahawai are the main species targeted and/or caught.

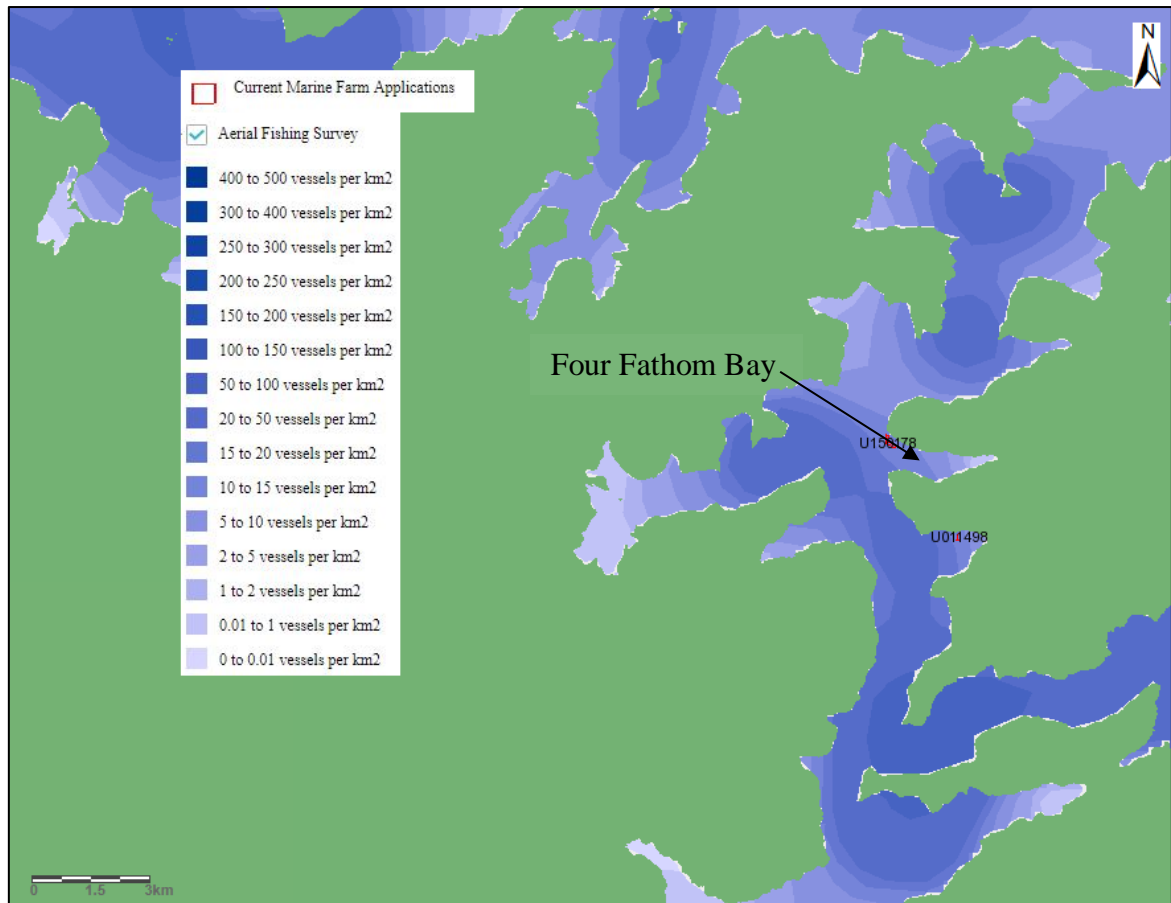
23 Available information on recreational fishing activity in Four Fathom Bay and the inner Pelorus Sound comprises:

- information provided in submissions, if any;
- information provided in the coastal permit application;
- fishing surveys and Amateur Charter Vessel (ACV) reports; and
- MPI information (eg, institutional knowledge).

24 No submissions on the area of coastal permit U150178 were received from recreational fishers.

25 No ACV points have been reported in Four Fathom Bay, but a number have been reported in Pelorus Sound.

26 Aerial survey results from the most recent recreational fishing survey of the Marlborough Sounds (in 2006) (Davey *et al*, 2008) suggest there is a relatively large amount of recreational fishing at the area of coastal permit U150178. Of the diarised fishing trips recorded in the 2006 survey, 10.9% occurred in the survey zone of Pelorus Sound, containing Four Fathom Bay.



Map 4. Aerial survey results from 2006 of recreational fishing intensity (Davey *et al*, 2008).

27 The recreational fishing survey and ACV data identifies methods used and species targeted and caught within zones in the Marlborough Sounds. Table 1 below summarises my assessment of the main methods used and species caught and targeted in the area of coastal permit U150178 based on the recreational fishing survey, ACV data, submissions, the site survey (Davidson, 2014) and other sources.

28 As shown, I consider that stationary and mobile rod/line methods and a small amount of set netting could be used, and that snapper, flatfish, and kahawai are the main species targeted or caught. I consider a relatively small amount of recreational fishing occurs at the coastal permit area given the small area of expansion, mud substrate and the relatively large amount of recreational fishing occurring in the wider area of the inner Pelorus Sound.

Table 1: Recreational fishing methods used and species caught and targeted at the area of coastal permit U150178 based on the available information.

	Davey <i>et al.</i> (2008) results for the survey zone encompassing Four Fathom Bay	Source of Information		
		ACV data for Pelorus Sound	Other information	My assessment
Methods used	Rod/line from private boat (46% of trips), drag netting (37% of trips), set/gill net (7% of trips), shore fishing (6% of trips), rod/line from charter boat, hand gathering and other (<2% of trips)	Rod/line line on anchor or drifting, and some dredging	The muddy and relatively flat seabed is suitable for most of the methods identified as occurring in the survey zone containing Four Fathom Bay by Davey <i>et al.</i> (2008) No species taken by dredging were seen in Davidson's (2014) benthic survey	Stationary and mobile rod/line methods, and set netting may be used at the site Dredging in the coastal permit area is unlikely at present given the current scallop closure. This method may have been used in the past and may be used again in the future.
Species caught⁵	Scallops (584), flatfish (331), snapper(121), blue cod (84), kahawai (77), oyster (45), rig (35), yellow-eyed mullet (24), barracouta (15), spiny dogfish (15)	Snapper, blue cod	No scallops or oysters were seen in Davidson's (2014) benthic survey	Snapper, flatfish and kahawai are likely the most commonly caught species in the coastal permit area Blue cod cannot be ruled out as a species possibly caught at the coastal permit area, but mud seabed makes the likelihood small
Species targeted⁶	Snapper (119), flounder (84), blue cod (34), scallops (17), hapuka (14), kahawhai (4), yellow-eyed mullet (2), sole (2), oyster (2), salmon and kingfish (1)	Snapper	Depths at the site are shallower than those typically fished for hapuku	Snapper, flatfish and kahawai are likely the most commonly targeted species in the coastal permit area

⁵ The number of species caught and kept at Kenepuru Sound, the survey zone covering coastal permit area U150178, over the 12 month survey period.

⁶ Species targeted for n=2784 trips (more than one species may be targeted).

Exclusion of fishing

29 I consider the aquaculture activities proposed for the area of coastal permit U150178 will exclude some of the recreational fishing methods that may be used in the area. However, I consider the exclusion effects on recreational fishing are likely to be very small.

30 Of the recreational fishing likely to occur in the area of coastal permit U150178 it is likely that drift fishing, and set netting would be excluded. Anecdotal information from recreational fishers⁷ suggests that spaces between longlines of mussel farms in the Marlborough Sounds are too narrow for set netting without risk of entanglement. I also consider that drift fishing is unlikely to occur within marine farms because of risk of entanglement.

31 However, it is common for fishers to fish by rod/line within mussel farms so it is possible anchored fishing could continue between the proposed structures.

Availability of other fishing areas

32 I consider there are other areas available for recreational fishing in Four Fathom Bay, Pelorus Sound and the wider Marlborough Sounds.

33 The Marlborough Sounds region is subject to area closures and various species and method restrictions, particularly for set netting and longlining.⁸ These restrictions limit the availability of alternative recreational fishing areas outside of Four Fathom Bay. However, I consider alternative areas in the Marlborough Sounds could absorb fishing by most fishers who fish the area of coastal permit U150178 because:

- the mud substrate beneath the site is widespread in Pelorus Sound and no information suggests the site offers fishing opportunities (eg, habitat, species, methods) specific to it;
- the same methods as those used at the site could be used elsewhere in Four Fathom Bay and some other parts of the Marlborough Sounds;
- the site is only a small area and the amount of fishing that would occur there is likely relatively small; and
- there are sufficient alternative areas, particularly for rod/line fishing which can occur among mussel farms.

Increased cost of fishing

34 I consider the aquaculture activities proposed for the area of coastal permit U150178 will result in a minimal, if any, increase in the cost of recreational fishing.

35 Based on the available information, I consider there is a high likelihood that any recreational fishing excluded from the site could be carried out nearby with minimal additional cost, or that most species targeted at the site can be taken using alternative fishing methods.

Likely effect on fishing

36 I consider the likely effect on recreational fishing from the aquaculture activities proposed in the area of coastal permit U150178 will be negligible.

⁷ FMA7 Recreational Fishing Forum, 27 May 2013.

⁸ The Amateur Regulations, *Marine Reserves Act 1971* and the *Submarine Cables and Pipelines Protection Act 1996*.

37 There is little quantitative data available on recreational catch taken from the coastal permit area, Four Fathom Bay or the Marlborough Sounds. Recreational fishers are not required to report catch or fishing locations. MPI is therefore unable to estimate an average annual recreational catch or proportion of recreational catch likely to be affected by the proposed aquaculture activities. Rather, MPI can only make an assessment of the effect of the proposed aquaculture activities on recreational fishing based on qualitative information.

38 Overall, I consider the effect on recreational fishing from the proposed aquaculture activities will be small because:

- not all recreational fishing methods would be excluded from the site;
- alternative areas within Four Fathom Bay and the wider Marlborough Sounds could absorb the recreational fishing displaced from the site.

Cumulative effects

39 I consider effects from the aquaculture activities proposed for the area of coastal permit U150178, added to the effects of existing aquaculture in the Marlborough Sounds, will not have an undue adverse effect on recreational fishing.

40 There is no quantitative catch data available to assess the cumulative effects of authorised aquaculture on recreational fishing catch. As noted, recreational fishers are not required to report catch or fishing locations. MPI can therefore only make an assessment about cumulative effects on recreational fishing based on the amount of aquaculture already authorised in the relevant recreational fishery and the likely importance of the coastal permit area for fishing.

41 I acknowledge there is already a large amount (approximately 3,700 ha) of authorised aquaculture space in the Marlborough Sounds. Approximately 12 ha of this authorised aquaculture space is in Four Fathom Bay. However, overall I consider the authorised space has not had an undue adverse effect on recreational fishing. This is because some fishing (eg, anchored rod and line fishing) can occur within the existing farms and not all the authorised aquaculture space is located in popular fishing areas.

42 As noted, I consider the adverse effects of the area of coastal permit U150178 on recreational fishing will be negligible. Subsequently, taking into account the effects of the existing authorised aquaculture areas, I consider the additional effects from the coastal permit area will not cause the cumulative effect on recreational fishing to become undue.

Conclusion on effects on recreational fishing

43 I am satisfied the aquaculture activities proposed within the area of coastal permit U150178 will not have an undue adverse effect on recreational fishing because:

- anchored rod/line fishing and diving could still occur in the area;
- there are other recreational fishing areas available inshore of the site and elsewhere in Four Fathom Bay and the wider Marlborough Sounds;
- occupation of the coastal permit area will result in a minimal, if any, increase in the cost of recreational fishing; and
- the additional adverse effect of the coastal permit area on recreational fishing is negligible and will not cause the cumulative effect on recreational fishing to become undue.

Customary fishing

The location of the coastal permit area relative to fishing areas

44 I consider the area of coastal permit U150178 is located where there is likely to be little, if any, customary fishing. If any customary fishing occurs it is likely to be by rod/line from a boat, or diving. Species targeted and caught may be snapper, flatfish and kahawai.

45 I consider that at least the eight iwi at the top of the South Island may have customary fishing interests in the coastal permit area.⁹ While there are no existing customary management areas in the Marlborough Sounds (eg, taiapure-local fishery or mātaimai reserves), the eight iwi have jointly notified their Tangata Tiaki/Kaitiaki for an area/rohe moana that encompasses the new coastal permit area. Although, I note the notification is in dispute.¹⁰

46 Available information on customary fishing is primarily qualitative information from submissions and quantitative catch information from customary authorisations. There is limited information on customary catch at the scale of small marine farms. Fishing locations for customary authorisations only need to be reported at the FMA or QMA scale, although more specific sites are sometimes identified. Fishing methods are not reported. Furthermore, customary authorisations issued under regulations 50 and 51 of the Amateur Regulations do not need to be routinely reported.

47 From January 2009 to April 2016 no customary authorisations with site-specific information were issued for Four Fathom Bay. Customary authorisations for the wider Marlborough Sounds that did not rule out take from Four Fathom Bay were issued for collection of a large number of species.

48 A submission from Ngāti Toa on a previous marine farm application suggests the general area of Pelorus Sound is important for customary fishing, particularly for scallops.

49 Table 2 below summarises my assessment of the main methods used and species caught and targeted by customary fishers in the area of coastal permit U150178. The information is based on submissions, customary authorisations the benthic survey (Davidson, 2014) of the site and other information. As shown, I consider it likely that rod and line from boat and diving are the main methods used and that snapper, flatfish and kahawai are the main species targeted or caught. Scallops are considered unlikely catch in the deeper part of the bay, and no scallops or oyster were seen by the Davidson 2014 survey.

⁹ The eight iwi, collectively known as Te Tau Ihu o Te Waka o Maui (**Te Tau Ihu Iwi**), include those defined as tangata whenua in regulation 2 of the Fisheries (South Island Customary Fishing) Regulations 1999: the whānau, hapu or iwi that hold manawhenua manamoana over a particular area and are represented by Ngāti Apa Ki Te Waipounamu Trust; or Ngāti Koata No Rangitoto Ki Te Tonga Trust; or Ngāti Rarua Iwi Trust; or Ngāti Tama Manawhenua Ki Te Tau Ihu Trust; or Ngāti Toa Rangitira Manawhenua Ki Te Tau Ihu Trust; or Te Atiawa Manawhenua Ki Te Tau Ihu Trust; or Te Runanga A Rangitane o Wairau; or Te Runanga O Ngāti Kuia Trust.

¹⁰ Because the notification is in dispute, customary authorisations for the top of the South Island are issued under regulations 50 and 51 of the Amateur Regulations.

Table 2: Customary fishing methods used and species caught or targeted at the area of coastal permit U150178 based on submissions, customary authorisations, the benthic survey of the site and other information.

	Source of information		
	Customary authorisations	Other information	My assessment
Methods used	N/A	Recreational and charter fishers commonly use stationary and mobile rod/line methods and set netting so customary fishers may also use these methods	Rod/line from boat and set netting are the most commonly used methods at the site.
Species caught or targeted	Scallops, oysters, paua, pipi, rig, kahawai, blue cod, rock lobster, kina, butterfish, flatfish, blue moki, green-lipped mussels, hapuku, red cod, school shark, spiny dogfish, elephant fish, smooth skate, tuatua, gurnard and yellow-eyed mullet, trumpeter, toheroa, porphyra, smooth skate	<p>It is unlikely that paua, rock lobster, kina, butterfish, blue moki, porphyra, or green-lipped mussels are found over the reef and algae-free substrate at the coastal permit area</p> <p>No shellfish were reported in the benthic survey by Davidson <i>et al.</i> 2012</p> <p>The coastal permit area is likely to be too shallow for fishing for hapuku</p>	<p>Kahawai, snapper and flatfish are likely to be the most commonly caught species at the coastal permit area.</p> <p>Blue cod, and are considered unlikely, but may be present.</p> <p>Other finfish species listed may be caught, but are considered unlikely to be targeted in the coastal permit area.</p>

Exclusion of fishing

50 I consider the aquaculture activities proposed for the area of coastal permit U150178 may exclude some of the customary fishing methods that may be used in the area.

51 Of the customary fishing methods possibly occurring in the coastal permit area it is likely that mobile rod/line methods (eg, drift fishing, trolling) would be excluded. As noted, anecdotal information from recreational fishers suggests that spaces between longlines of mussel farms in the Marlborough Sounds are too narrow for longlining and trolling without risk of entanglement. I consider use of these methods by customary fishers would also be prevented. As noted, I also consider that drift fishing is unlikely to occur within marine farms because of risk of entanglement.

52 However, it is common for fishers to fish by rod/line within mussel farms so it is possible anchored fishing could continue between the proposed structures.

Availability of other fishing areas

53 I consider there are some alternative areas for customary fishing in Four Fathom Bay and the wider Marlborough Sounds.

54 Apart from the Long Island Marine Reserve and Fighting Bay, all of the Marlborough Sounds is available for customary fishing under regulations 50 and 51 of the Amateur Regulations.¹¹ A large number of alternative areas are therefore available for customary fishing that may be displaced from the area of coastal permit U150178.

55 I also consider there are alternative areas in Four Fathom Bay and the wider Marlborough Sounds for customary fishers because:

- the predominantly mud substrate beneath the site is widespread in the Marlborough Sounds and no information suggests the site offers fishing opportunities (eg, habitat, species, methods) specific to it;
- the same methods as those used at the site could be used elsewhere in Four Fathom Bay and some other parts of the Marlborough Sounds; and
- there are sufficient alternative areas, particularly for rod/line fishing which can occur among mussel farms.

Increased cost of fishing

56 I consider the aquaculture activities proposed for the area of coastal permit U150178 will result in a minimal, if any, increase in the cost of customary fishing.

57 Based on the available information, I consider that any customary fishing displaced from the coastal permit area can be carried out nearby with minimal additional cost and that most species targeted in the coastal permit area can be taken using alternative fishing methods.

Likely effect on fishing

58 I consider the likely effect on customary fishing from the aquaculture activities proposed in the area of coastal permit U150178 will be small.

59 As noted, there is little available quantitative data on customary catch taken from the coastal permit area. MPI is therefore unable to estimate an average annual customary catch or proportion of

¹¹ *The Marine Reserves Act 1971* and the *Submarine Cables and Pipelines Protection Act 1996*.

customary catch likely to be affected by the proposed aquaculture activities. Rather, MPI can only make an assessment of the effect of the proposed aquaculture activities on customary fishing based on qualitative information.

60 Overall, I consider the effect on customary fishing from the proposed aquaculture activities will be relatively small because:

- not all customary fishing methods would be excluded from the site;
- alternative areas within Four Fathom Bay and the wider Marlborough Sounds could absorb the customary fishing displaced from the site.

Cumulative effects

61 I consider the effects from the aquaculture activities proposed for the area of coastal permit U150178, added to the effects of existing aquaculture in the Marlborough Sounds, will not have an undue adverse effect on customary fishing.

62 There is no quantitative catch data available to MPI to assess the cumulative effect of authorised aquaculture activities on customary fishing. As noted, site-specific fishing locations are not typically reported with customary authorisations. Therefore, MPI can only make an assessment of the cumulative effect of the proposed aquaculture activities on customary fishing based on the likely importance of the application site for fishing and the amount of aquaculture activities already authorised in the relevant customary fishery.

63 As noted, there are approximately 3,700 ha of authorised aquaculture space in the Marlborough Sounds, around 12 ha of which is in Four Fathom Bay. I consider the authorised aquaculture space has had some effect on customary fishing. However, I do not consider that the effect is undue because some customary fishing (eg, anchored rod/line fishing) can still occur within marine farms and it is unlikely all the farms are located in popular customary fishing areas.

64 As noted, I consider the adverse effects of the area of coastal permit U150178 on customary fishing will be small. Taking into account the effects of the existing authorised aquaculture areas, I consider the additional effects from the coastal permit area will not cause the cumulative effect on customary fishing to become undue.

Conclusion on effects on customary fishing

65 I am satisfied the aquaculture activities proposed within the area of coastal permit U150178 will not have an undue adverse effect on customary fishing because:

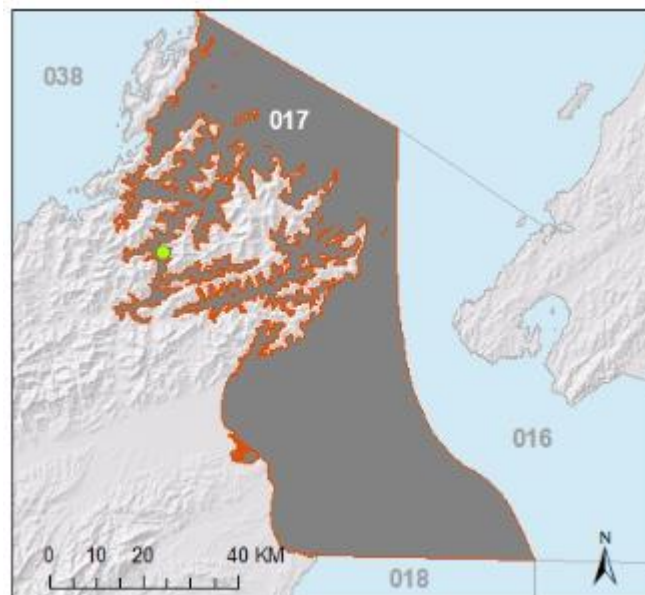
- little, if any, customary fishing is likely to occur in the area
- anchored rod/line fishing and diving could still occur in the area;
- there are other areas available for customary fishing elsewhere in Pelorus Sound and the wider Marlborough Sounds;
- occupation of the coastal permit area will result in a minimal, if any, increase in the cost of customary fishing; and
- the additional adverse effect of the coastal permit area on customary fishing is negligible and will not cause the cumulative effect on customary fishing to become undue.

Commercial fishing

The location of the coastal permit area relative to fishing areas

66 I consider the area of coastal permit U150178 is located where there is little, if any, commercial fishing.

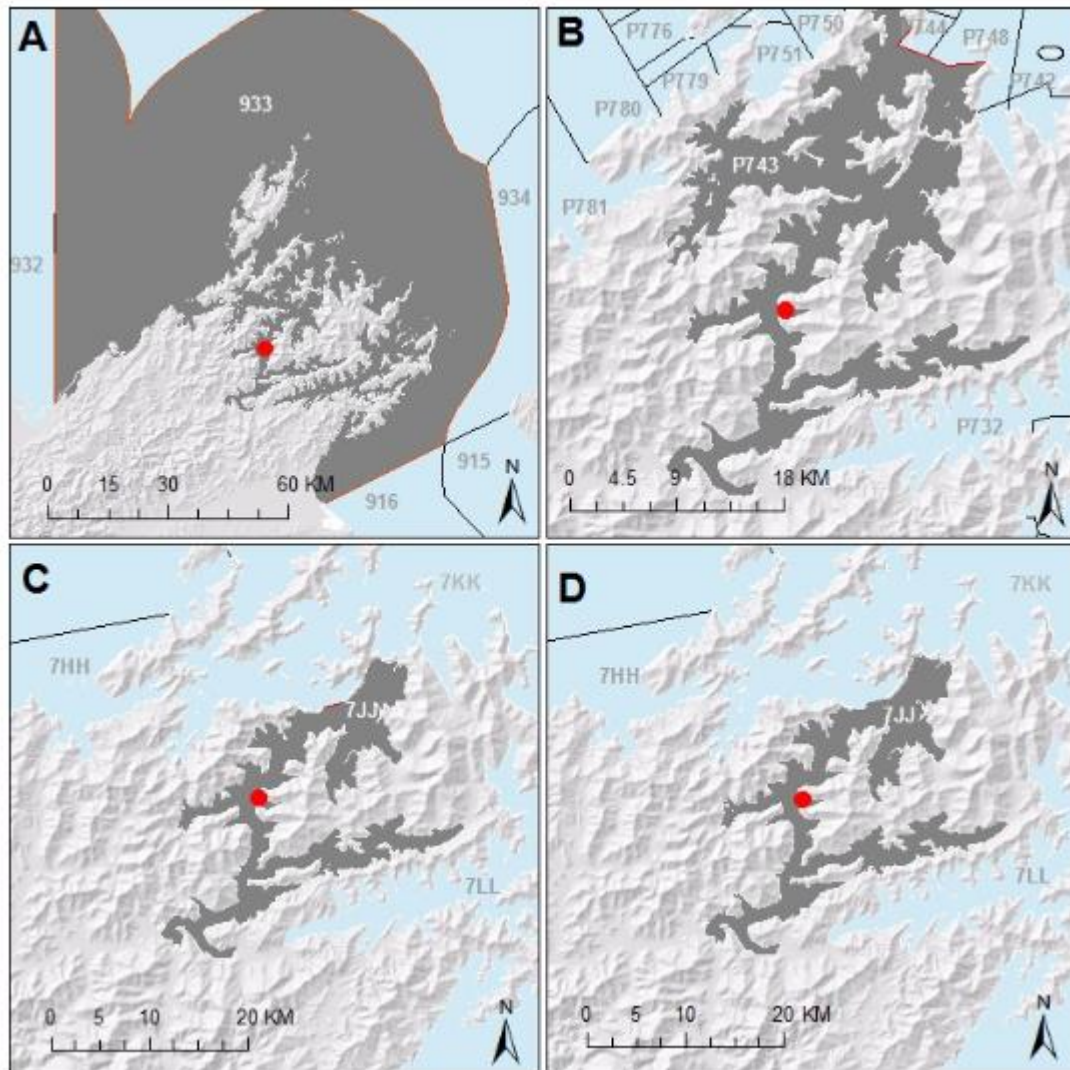
67 Historically, most commercial fishing has been reported by statistical area. The area of coastal permit U150178 is located in general statistical area 017 (**SA017**), which extends from the eastern edge of D'Urville Island to Cape Campbell (415,286 ha) (Map 5).



Map 5: General statistical area SA017. The green circle marks the approximate location of coastal permit area U150178.¹²

68 Scallops, oysters, rock lobster and paua are reported by species-specific statistical areas rather than by general statistical area. The area of coastal permit U150178 falls within rock lobster statistical area 933, paua statistical area P743, scallop statistical area 7JJ and oyster statistical area 7JJ (Maps 6A, 6B, 6C and 6D).

¹² Hillshade imagery produced by Geographx. Sourced from www.koordinates.com under CC-By. <http://creativecommons.org/licenses/by/3.0/nz/>



Map 6:
Species-specific statistical areas that encompass the area of coastal permit U150178 (approximate location as red circle). A – Rock lobster statistical area 933. B – Paua statistical area P743. C – Scallop statistical area 7JJ. D – Oyster statistical area 7JJ.¹³

69 Reporting by statistical area only provides coarse-scale information about where commercial fishing occurs. However, since 2007/08 vessels over 6 m long that have used trawl or line fishing methods¹⁴ have had to report the start position of each fishing event by latitude and longitude to within 1 minute, which equates to around 1 nautical mile (nm). Since 2006/07, start positions for netting methods¹⁵ have had to report to within 2 nm.¹⁶ Using this fine scale position data, MPI has modelled and mapped fishing intensity for different segments of fishing, characterised by a type of fishing gear and the main species caught.

70 The location of fishing by vessels less than 6 m long within SA017 is unknown. However, based on information from fisheries officers and Maritime New Zealand, MPI has mapped long lining, bottom trawling and set netting by vessels less than 6 m as being within enclosed bays and within 3 nm

¹³ Hillshade imagery produced by Geographx. Sourced from www.koordinates.com under CC-BY. <http://creativecommons.org/licenses/by/3.0/nz/>

¹⁴ Bottom long lining, surface long lining or trot lines.

¹⁵ Set-netting or drift-netting.

¹⁶ *Fisheries (Reporting) Regulations 2001.*

of open coasts. The fishing by vessels less than 6 m is included in the maps of fine scale position data, which is the best information available from fisheries statistics. Although, knowledge about species and information from commercial fishers can also help to determine whether specific types of fishing are likely to occur in an area.

71 Table 3 below lists the main fishery segments known to occur in SA017 and summarises my assessment of which fishery segments are likely to overlap the area of coastal permit U150178. Table 3 also gives the relative amounts of fishing that report by start position.

72 As noted in Table 3, set netting and lining for finfish, and dredging, diving and other methods for taking non-fish species are the only commercial fishing methods permitted in Four Fathom Bay.¹⁷ A year round trawl closure exists in Four Fathom Bay.

¹⁷ *Fisheries (Challenger Area Commercial Fishing) Regulations 1986.*

Table 3: Fishery segments that are included in the commercial fishing assessment: Summary of the main fishery segments, defined by fishing method and main fishstock caught or fishing depth range, in relevant statistical areas from 2007/08 to 2011/12.

Fishery segment (Main fishstock or depth range and main fishing method) ¹⁸	Statistical area	% of fine scale fishing events	Average annual no. fishing days ¹⁹	% of main fishstock caught in statistical area	Included in the proposed farm assessment?	Rationale for excluding a fishery from proposed farm assessment ²⁰
Flatfish (FLA7), Set Net	017	72%	155	6%	Yes	
School shark (SCH7), Long Lining	017	23%	95	14%	Yes	
Mixed fishery, Set Net	017	71%	63	N/A	Yes	
Sea cucumber (SCC7A), Diving	017	0%	33	90%	Yes	
Mixed fishery, Long Lining	017	82%	17	N/A	Yes	
School shark (SCH7), Set Net	017	98%	15	14%	Yes	
Other species, Diving	017	0%	13	N/A	Yes	
Mixed fishery, Hand Lining	017	0%	10	N/A	Yes	
Rock Lobster (CRA5), Lobster Pot	017	0%	731	14%	No	Rock lobsters concentrate in areas of rocky reef, although they may move across an open sandy bottom at certain times of the year. There is no rocky reef in the coastal permit area
Hoki (HOK1), Trawl	017	100%	421	22%	No	A year round trawl closure exists in the area
Scallops (SCA7), Dredge	7JJ	0%	218	47%	No	Available information suggests the new coastal permit area is not in an area used for commercial scallop fishing
Ghost shark (GSH7), Trawl	017	99%	214	57%	No	A year round trawl closure exists in the area
Sea Urchin (SUR7A), Diving	017	0%	209	84%	No	This type of fishing is highly unlikely to be affected. Kina are found on rock substrate. There is no rock substrate in the coastal permit area
Inshore Mix <80m depth, Trawl	017	98%	204	N/A	No	A year round trawl closure exists in the area
Butterfish (BUT7), Set Net	017	40%	183	27%	No	Butterfish are unlikely to be found over the mud bottom water of the coastal permit area
Red Cod (RCO7), Trawl	017	100%	176	18%	No	A year round trawl closure exists in the area

¹⁸ Main fishstock refers to the species most often caught by the relevant method, it does not include all species taken by that method.

¹⁹ Excludes segments with less than 10 days fishing per year.

²⁰ Unless otherwise stated, fishing is permitted and MPI has no information to indicate it does not occur in the vicinity of the coastal permit areas.

Fishery segment (Main fishstock or depth range and main fishing method)	Statistical area	% of fine scale fishing events	Average annual no. fishing days	% of main fishstock caught in statistical area	Included in the proposed farm assessment?	Rationale for excluding a fishery from proposed farm assessment
Inshore Mix >80m <300m, Trawl	017	100%	149	N/A	No	A year round trawl closure exists in the area
Blue cod (BCO7), Cod Pot	017	0%	134	40%	No	Blue cod potting is highly unlikely to be affected as fishers are unlikely to set pots over soft substrate
Hapuku and Bass (HPB7), Long Lining	017	52%	132	32%	No	Hapuku and bass are unlikely to be found in the shallow waters of the coastal permit area
Spiny Dogfish (SPD7), Trawl	017	99%	81	24%	No	A year round trawl closure exists in the area
Flatfish (FLA7), Trawl	017	99%	68	6%	No	A year round trawl closure exists in the area
Barracouta (BAR7), Trawl	017	99%	62	2%	No	A year round trawl closure exists in the area
Gurnard (GUR7), Trawl	017	99%	62	8%	No	A year round trawl closure exists in the area
Tarakihi (TAR7), Trawl	017	100%	54	17%	No	A year round trawl closure exists in the area
Blue cod (BCO7), Hand Lining	017	0%	36	40%	Yes	Blue cod are commonly targeted over rock reef/cobble substrate. These habitats do not occur in the coastal permit area
Surf clams, Dredge (PDO7)	017	0%	34	0%	No	Surf clams are generally found in sandy intertidal zones. The coastal permit area does not overlap this substrate
Other species, Potting	017	0%	19	N/A	No	It is likely these species are bycatch from rock lobster or blue cod potting. Rock lobster and blue cod pots are unlikely to be set over soft substrate
Other species, Dredging	017	0%	18	N/A	No	This type of fishing is likely to be bycatch from scallop dredging. The coastal permit area is not and is unlikely to occur in the coastal permit area
Snapper (SNA7), Trawl	017	98%	17	10%	No	A year round trawl closure exists in the area
Blue Warehou (WAR7), Trawl	017	100%	11	6%	No	A year round trawl closure exists in the area

Exclusion of fishing

72 I consider the aquaculture activities proposed in the area of coastal permit U150178 will exclude only a small amount of commercial fishing, if any.

73 For the purpose of assessing commercial fishing methods, the exclusion zone for fishing methods included in this assessment is deemed to be the new coastal permit area (ie, 2.2 ha). I consider commercial set net fishing and longlining could occur immediately adjacent to the area of coastal permit U150178 and that diving could occur within the area of the coastal permit.

Availability of other fishing areas

74 I consider that any commercial fishing displaced from the area of coastal permit U150178 could occur in other areas.

75 Commercial fishing closures or restrictions in the relevant QMAs or FMA7 limit the availability for alternative areas for commercial fishing.²¹ Few closures or restrictions in SA017 limit alternative areas for methods permitted in Four Fathom Bay (ie, set netting and lining for taking finfish, and dredging, diving and other methods for taking non-fish species) but closures elsewhere in FMA7 limit areas available for set netting in particular. Regardless, I consider alternative areas in Four Fathom Bay and other parts of SA017 could absorb any commercial fishing displaced from the area of coastal permit U150178 because:

- the same methods as those possibly used at the coastal permit area could be used elsewhere in Four Fathom Bay or other parts of SA017;
- the species potentially targeted by commercial fishers within the area of coastal permit U150178 are typically found over silt and clay substrate which is common throughout the rest of Four Fathom Bay, elsewhere in SA017 and in the relevant QMAs or FMA7; and
- the area excluded to commercial fishing would be small compared to the available area.

76 I recognise areas of authorised aquaculture space have reduced the availability of other commercial fishing areas over time. As noted, there are around 12 ha of authorised aquaculture space in Four Fathom Bay. In SA017 there are approximately 4200 ha of marine farms that make up about 33% of the 12300 ha of aquaculture in FMA7.²² The cumulative effect of the existing aquaculture is considered further below.

Increased cost of fishing

77 I consider that the aquaculture activities proposed in the area of coastal permit U150178 will not increase the cost of commercial fishing.

78 While the coastal permit area may be located within a region used for commercial fishing, I consider that using alternative commercial fishing grounds would not result in an increase in the cost of commercial fishing. This is because the coastal permit area will only exclude a small area from commercial fishing and there are equally productive fishing grounds available nearby.

²¹ The *Marine Reserves Act 1971*, *Fisheries (Challenger Area Commercial Fishing) Regulations 1986* and *Fisheries (Commercial Fishing) Regulations 2001* contain closures and restrictions that affect various species, method, time period, fishing gear, or a combination of these criteria.

²² The 3,450 ha and 10,300 ha of authorised aquaculture space includes recent aquaculture decisions that may still be in the judicial review period.

Likely effect on fishing

79 I consider the aquaculture activities proposed in the area of coastal permit U150178 will have a negligible effect on any commercial fishery.

80 The amount of fishing effort estimated to be displaced by the activities proposed in the area of coastal permit U150178 is negligible. Less than 2 kg of average annual catch is likely to be affected by the proposed aquaculture activities for fishing as assessed in Table 3. The maps of fishing intensity (effort per ha) for each fishing sector were used to calculate the average annual amounts of fishing effort that is likely to be displaced from the exclusion zone²³ of the coastal permit area. Average landings per unit effort for all species caught in each fishery segment were then used to estimate the amount of fish likely to have been landed.

81 Fishing effort that is only reported by statistical area was apportioned evenly across the area available for fishing although some areas are likely to include more productive habitats than others. The parts of the statistical area available for fishing for each type of fishing method are defined by using all available information (including regulated closures, bathymetry, seabed substrate, and consultation with fishers) about where the method is likely to be used. Where fishing is reported to the statistical area level, there is increased uncertainty as to where fishing events have taken place within the statistical area.

82 The amount of fishing was averaged over October fishing years 2007/08 to 2014/15. Eight years is long enough to take into account natural variation in the abundance and distribution of fish stocks and fishing effort so that likely average future fishing is fairly represented.

83 Given the very small catch quantities likely to be affected by the proposed aquaculture activities, MPI has not attempted to determine the likely changes in catch rates for the displaced fishing in order to estimate the net effect on commercial fishing. This assessment is based on the worst-case scenario that all of the catch displaced from the coastal permit area would be lost from the affected fisheries and no new catch would be available from the vacated area.

Cumulative effects

84 I consider the addition to the cumulative effect on commercial fishing from the aquaculture activities proposed in the area of coastal permit U150178 is negligible.

85 Around 10,300 ha of authorised aquaculture activities in FMA7 have been previously assessed for their total cumulative effect on commercial fishing. For any fish stocks potentially affected by the new area of coastal permit U150178, the cumulative effect has previously been assessed as a maximum of approximately 1.3% effect on any fishery and not undue.

86 As noted, the coastal permit area would affect less than 2kg of average annual catch for fishing indicated as assessed in Table 3. I consider this negligible increase will not cause the new level of cumulative effect on any fishery to become undue.

Conclusion on effects on commercial fishing

87 I am satisfied the aquaculture activities proposed within the area of coastal permit U150178 will not have an undue adverse effect on commercial fishing because:

- there are alternate fishing grounds in Four Fathom Bay, SA017 and the relevant QMAs or FMA7;

²³ The “exclusion zone” used for the methods assessed was the new coastal permit area (i.e. 2.2 ha).

- occupation of the new coastal permit area will result in a minimal, if any, increase in the cost of commercial fishing;
- effects on commercial fishing catch will negligible; and
- the additional adverse effect on commercial fishing for any fish stock will not cause the cumulative effect on commercial fishing for any fish stock to become undue.

Aquaculture decision

88 I am satisfied – based on all relevant information available to me – the activities proposed for coastal permit area U150178 will not have an undue adverse effect on:

- a) recreational fishing, and
- b) customary fishing, and
- c) commercial fishing.

89 Accordingly, my decision is a determination for coastal permit U150178 with regard to:

- a) recreational fishing, and
- b) customary fishing, and
- c) commercial fishing.

90 The area of the determination on recreational, customary and commercial fishing is 2.2 ha comprising an area with the following coordinates (NZTM2000):

<u>Point</u>	<u>Easting</u>	<u>Northing</u>
1	1672801.450	5444804.890
2	1672869.220	5444765.270
3	1672822.370	5444649.380
4	1673038.180	5444523.180
5	1673015.460	5444466.970
6	1672799.640	5444593.160

91 The reasons for my decision are set out in the conclusions for recreational, customary and commercial fishing in this report.



David Scranney
Manager Customary Fisheries and Spatial Allocations
Ministry for Primary Industries

Dated 28 September 2017

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