



24 April 2015

AQUACULTURE DECISION REPORT — TAWHITINUI GREENSHELL LIMITED, COASTAL PERMIT U140534, CAMEL POINT, TENNYSON INLET, CENTRAL PELORUS WEST

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* (**RMA91**). 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 U140534 will not have an undue adverse effect on:

- recreational fishing — for the reasons set out in this report and summarised in paragraph 52;
- customary fishing — for the reasons set out in this report and summarised in paragraph 77;
- commercial fishing — for the reasons set out in this report and summarised in paragraph 105.

AQUACULTURE DECISION REQUEST DETAILS

Regional Council:	Marlborough District Council (MDC)
Date of Request:	30 March 2015
Coastal Permit Applicant:	Tawhitinui Greenshell Limited
Location of marine farm site:	Camel Point, Tennyson Inlet, Central Pelorus West
Size of farm:	5.56 hectare (ha) extension to marine farm permit (MF513)
Species to be farmed:	Green-lipped mussel (<i>Perna canaliculus</i>), scallop (<i>Pecten novaezelandiae</i>), blue mussel (<i>Mytilus galloprovincialis</i>), flat oyster (<i>Tiostrea chilensis</i>), Pacific oyster (<i>Crassostrea gigas</i>), geoduck (<i>Panopea zealandica</i>) and algae (<i>Macrocystis pyrifera</i> , <i>Ecklonia radiata</i> , <i>Gracilaria</i> spp. and <i>Pterocladia lucida</i>)
Farm structures:	Standard mussel farming and spat catching longlines and droppers

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*.

Location

3 Coastal permit U140534 applies to an area at the entrance to Tennyson Inlet, near Tawhitinui Reach in Pelorus Sound (Map 1). Tennyson Inlet is within Fisheries Management Area 7 (FMA7).



Map 1²: Location of coastal permit area U140534 (red dot) in the wider Marlborough Sounds area (MPI, 2015).

² Disclaimer: This map and all information accompanying it (the “Map”) 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 this Map is based on a summary of data obtained from various sources. While all reasonable measures have been taken to ensure the accuracy of the Map, MPI: (a) gives no warranty or representation in relation to the accuracy, completeness, reliability or fitness for purpose of the Map; and (b) accepts no liability whatsoever in relation to any loss, damage or other costs relating to any person’s use of the Map, including but not limited to any compilations, derivative works or modifications of the Map.

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4 Coastal permit U140534 extends the existing 5.70 ha marine farm (MF513) by 5.56 ha. However, if coastal permit U140534 is approved, a 1.20 ha inshore section of MF513 will be surrendered, so the total area covered by the coastal permit will be 10.06 ha (Map 2).³

5 Coastal permit area U140534 is at the southern end of a coastal ribbon of existing marine farms extending into Tawhitinui Reach and Fitzroy Bay. The closest neighbouring marine farm, marine farm permit 19 (MF19) and marine farm permit 817 (MF817), is around 50 m to the north (Map 2).



Map 2: Location of coastal permit area U140534, including existing marine farm area to be surrendered.⁴

6 As shown in Map 2, the extension area is offshore and to the south, of the existing marine farm. The inshore boundary is approximately 130 metres (m) from shore at the closest point, extending to approximately 500 m offshore in the south-eastern corner. Water depths in the extension area are relatively constant, ranging from 24-27m.

7 Brown (2014) reports the coastal permit extension area is characterised by flat or gently sloping mud habitat, which he describes as the most widespread and common subtidal habitat type in the Marlborough Sounds. No reef, or other hard substratum, was recorded within the extension area. Areas of coarser substrate, consisting of shell and sand were observed inshore of the coastal permit area and existing marine farm.

³ If coastal permit U140534 is granted it will include the remaining 4.50 ha marine farm covered by MF534, in addition to the 5.56 ha extension assessed in this report, and the existing coastal permit will be surrendered.

⁴ NZ topo data. Sourced from Land Information New Zealand under CC-By.

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8 Brown (2014) reported the seabed beneath the coastal permit area supports a community of species commonly occurring in the Marlborough Sounds. One scallop and two queen scallops were observed. However, no other species of ecological significance were found.

Structures for coastal permit area U140534

9 Coastal permit area U140534 (including the existing marine farm area) will contain 16 longlines spaced either 23.3 m or 25.0 m apart and ranging in length from 150–182 m. The total longline length is 2,691 m (Figure 1).

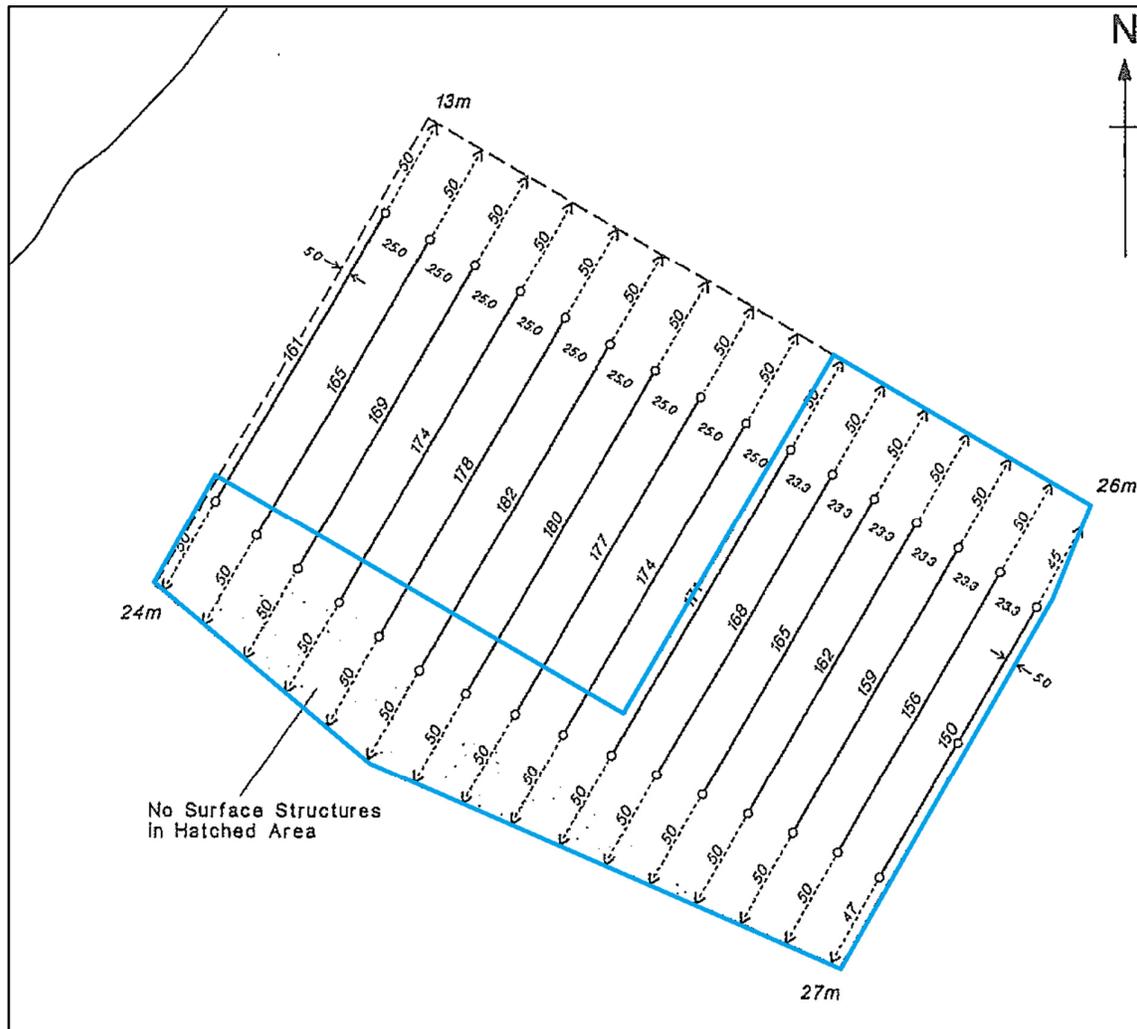


Figure 1: Structures diagram for coastal permit area U140534⁵, extension area outlined blue

Input from stakeholders

10 MPI publicised coastal permit application U140534 on its website on 24 July 2014, with a closing date for providing information to MPI of 11 August 2014. This gave persons and organisations potentially affected by the proposed aquaculture activities an opportunity to provide information on their fishing activities in the area of coastal permit U140534.

11 MPI received no submissions in response to the consultation.

⁵ Figure sourced from the decision of MDC on a resource consent application for Tawhitinui Greenshell Limited approved on 27 February 2015.

STATUTORY CONTEXT

12 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).

13 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.

14 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).

15 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.

16 Section 186E(3) of the Fisheries Act⁶ 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.

17 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.

18 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:

⁶ 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.

- (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;
- (d) the extent to which fishing for a species in the area that the coastal permit relates to can be carried out in other area;
- (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.

19 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 area 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 this coastal permit.

20 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.

21 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 permit area relative to fishing area*.

22 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).

23 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.

24 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 regulation 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

25 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. 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.

26 This assessment relates only to the 5.56 ha of new marine farming space authorised by coastal permit U140534.

Recreational fishing

Location of the coastal permit area relative to fishing area

27 I consider relatively low intensity recreational fishing for snapper, kahawai and barracouta may occur in coastal permit area U140534.

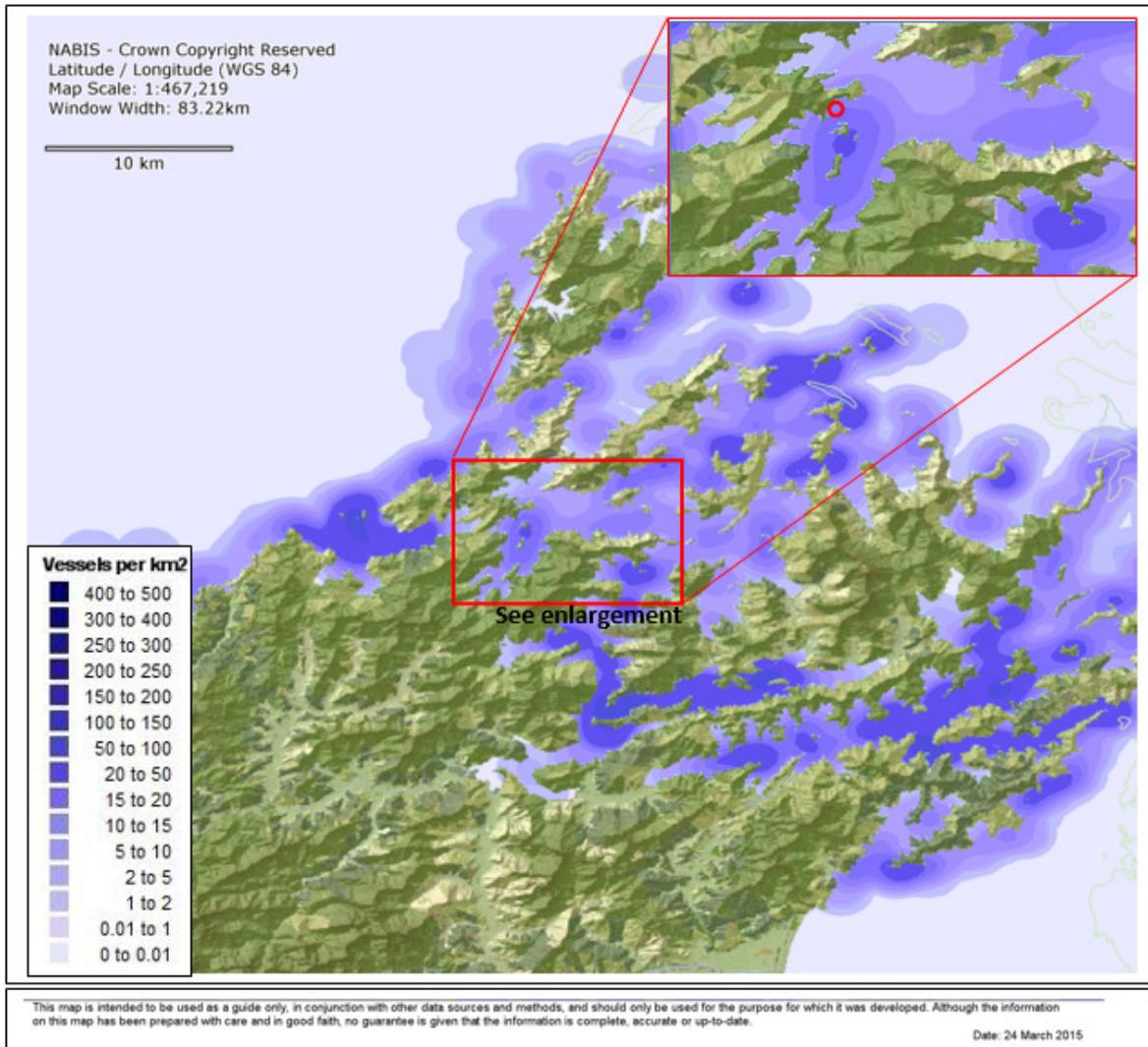
28 To determine the importance of the coastal permit area for recreational fishing MPI uses the following sources of information:

- information provided in submissions;
- fishing surveys⁷;
- MPI information (fisheries officer observations, previous submissions and local knowledge), and
- fishing information provided during the resource consent process.

29 MPI received no submissions regarding fishing activities that occur in the application area. However, MPI considers that some recreational fishing is likely to occur in the general vicinity of the coastal permit area. This is because recreational fishing surveys⁸ carried out for the Marlborough Sounds indicate a moderate level of recreational fishing occurs in Tennyson Inlet (Map 3).

⁷ Most recreational fishing surveys only indicate spatial use across a region and are typically inaccurate at the scale of small marine farms.

⁸ A recreational fishing diary survey (and an aerial overflight) conducted in 2006 by NIWA (Davey *et al.*, 2008), the Bell recreational fishing diary survey conducted in 1998 (Bell, 2001) and NIWA's national marine recreational fishing survey 1996 (Fisher & Bradford, 1999).



Map 3: Aerial survey results of recreational fishing intensity from 2006—vessels per sq. km (Davey *et al.*, 2008). The red circle indicates the approximate location of coastal permit area U140534 (MPI, 2014)

30 The Davey *et al.* (2008) survey observed 15–20 vessels per sq. km at the area of coastal permit U140534 (Map 3) and ranked Tennyson Inlet eighth most popular out of the 12 zones in the survey. The Bell (2001) survey also indicates some recreational fishing occurs in Tennyson Inlet, predominately by rod and line fishing from private boats, with small amounts of rod and line fishing from shore and set / gill netting.

31 The coastal permit area is positioned over soft substrate which supports species such as snapper, flatfish, gurnard and scallops that are often targeted by recreational fishers. Blue cod, snapper and kahawai were the main species identified in the recreational fishing surveys as being caught in the survey zone including Tennyson Inlet. Barracouta and spotty were also reported as being caught. Although, barracouta and spotty are not typically targeted by recreational fishers and are usually by-catch when targeting other species.

32 I consider that, of the commonly caught species in the survey zone that includes Tennyson Inlet, snapper, kahawai, barracouta and spotty may be caught in the coastal permit area. This is because:

- snapper and spotty are demersal⁹ fish species that are widespread and commonly caught in Pelorus Sound;
- kahawai and barracouta are a pelagic species with a wide home-range that are also commonly caught in Pelorus Sound;
- only one scallop and two queen scallops were observed during the site survey of coastal permit area U140534, and the Bell (2001)¹⁰ survey did not record any scallops being taken in Tennyson Inlet; and
- blue cod inhabit cobble or reef habitat and these habitats do not occur in the coastal permit area.

Exclusion of fishing

33 I consider the aquaculture activities proposed for coastal permit area U140534 will exclude only a small amount of recreational fishing.

34 As mentioned, the substrate in the coastal permit area is silt and clay. Recreational fish species targeted over soft substrate generally are:

- pelagic species — which have a wide home-range and can be caught using mobile methods (e.g. trolling) or stationary methods (e.g. anchored rod and line fishing, set netting, long lining);
- sedentary species — which are taken by dredge or hand gathering methods (e.g. diving, snorkeling); or
- demersal species — which live or feed on or near the bottom. These species often have a small home-range and can be caught using stationary methods (e.g. potting, anchored rod and line fishing, set netting and longlining) and some mobile methods (e.g. drift fishing).

35 Marine farm structures can prevent or impede stationary fishing methods such as set netting or longlining and mobile methods such as dredging, trolling and drift fishing. This is because there is a risk of entanglement of fishing gear in marine farm structures. Of the species possibly caught within coastal permit area U140534, fishing for kahawai (typically caught by trolling and set netting methods) and barracouta (typically caught by trolling) is therefore likely to be excluded.

36 Snapper and spotty are demersal species that could still be caught within marine farm structures by diving or stationary fishing methods such as anchored rod and line fishing (Morrisey *et al.*, 2006).

37 Therefore, I consider the aquaculture activities proposed in coastal permit area U140534 will only exclude a small amount of recreational fishing for kahawai and barracouta, if any.

Availability of other fishing areas

38 I consider there are other areas available for recreational fishing in Tennyson Inlet, Pelorus Sound and the wider Marlborough Sounds.

⁹ Species that live or feed on or near the bottom

¹⁰ Of the recreational fishing surveys available, the Bell (2001) survey has the most detailed site-specific information. The relevant Davey *et al.* (2008), and Fisher and Bradford (1999) survey zones (covering one third and the entirety of the Pelorus Sound respectively) do not provide enough detail to identify if scallops were caught in Tennyson Inlet.

39 The Amateur Regulations provide some method restrictions that affect the availability of other recreational fishing areas in the Marlborough Sounds. These include prohibition of long lining in the inner Pelorus Sound and set netting in Queen Charlotte Sound.

40 However, there are only small area closures¹¹ affecting recreational fishing in the Marlborough Sounds. There are no year-round species prohibitions on the take of any species likely to be targeted by recreational fishers in the coastal permit area.

41 MPI notes the silt and clay substrate found in the coastal permit area is widespread in the Marlborough Sounds. Furthermore, snapper and kahawai (the species likely to be targeted by fishers in the coastal permit area) are widespread and common in Pelorus Sound and can easily be targeted in other areas nearby. I therefore consider that there are other fishing areas available to recreational fishers who may fish in the area of coastal permit U140534.

Increased cost of fishing

42 I consider the aquaculture activities proposed for coastal permit area U140534 will result in a minimal, if any, increase in the cost of recreational fishing.

43 Based on available information, I consider that any fishing excluded from the coastal permit area could be carried out using alternative fishing methods, or by accessing adjacent or nearby fishing areas that could be reached with minimal additional cost.

Likely effect on fishing

44 I consider the aquaculture activities proposed for coastal permit area U140534 will only have a small effect on recreational fishing.

45 MPI can only make an assessment of the effect of the proposed aquaculture activities on recreational fishing based on qualitative information such as submissions, recreational fishing surveys and other information held by MPI, such as Fishery Officer records. MPI is unable to estimate an average annual recreational catch, or proportion of recreational catch, likely to be affected by the proposed aquaculture activities.

46 As noted, I consider that fishing intensity at the coastal permit area is relatively low given the presence of the existing marine farms and information from recreational fishing surveys (Map 3). Additionally, the fish species targeted by recreational fishers in the coastal permit area could easily be caught elsewhere in Tawhitinui Reach, Pelorus Sound (and the wider Marlborough Sounds) or within the marine farm structures using stationary or dive fishing methods.

47 For these reasons I consider the proposed aquaculture activities will only have a small effect on recreational fishing.

Cumulative effects

48 I consider the cumulative effects on recreational fishing from authorised aquaculture activities in the Marlborough Sounds are not unduly adverse and that the activities proposed for coastal permit area U140534 will only add slightly to the cumulative effect.

49 There is no quantitative catch data available to assess the cumulative effects of authorised aquaculture activities on recreational fishing catch because recreational fishers are not required to

¹¹ Areas closures in the Marlborough Sounds include prohibitions on all fishing around Long Island and Fighting Bay and the take of finfish at Double Cove and around Maud Island.

report catch or fishing locations. Therefore, MPI can only make an assessment about the cumulative effect of the proposed aquaculture activities, on recreational fishing, based on the likely importance of the coastal permit area for fishing and the amount of aquaculture already authorised in the relevant recreational fishery.

50 There are approximately 3,600 ha of authorised aquaculture activities in the Marlborough Sounds. Approximately 20 ha of this authorised aquaculture space is in Tennyson Inlet. I consider that the existing marine farms have had some cumulative effect on recreational fishing because some recreational fishing methods are excluded from the marine farms. However, overall I consider the cumulative effect on recreational fishing in the Marlborough Sounds is not undue. This is because:

- some recreational fishing (e.g. anchored rod and line fishing) can occur within the existing farms;
- some farms are not located in popular recreational fishing areas; and
- there are other alternative fishing areas open to all fishing methods within the Marlborough Sounds.

51 As mentioned, I consider the adverse effect of the occupation of coastal permit area U140534 on recreational fishing is small. I subsequently consider that the new aquaculture space authorised by coastal permit U140534, added to the existing authorised aquaculture areas, will not cause the cumulative effect on recreational fishing to become undue.

Conclusion on effects on recreational fishing

52 I am satisfied the aquaculture activities proposed within coastal permit area U140534 will not have an undue adverse effect on recreational fishing because:

- no submissions were received from recreational fishers regarding the importance of coastal permit area U140534 for recreational fishing;
- the proposed aquaculture activities will exclude only a small amount of recreational fishing;
- there are other recreational fishing areas available within Tennyson Inlet, 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 recreational fishing;
- the effect on recreational fishing will only be small and the catch that may be taken in the coastal permit area could be caught using alternative fishing methods or taken in other areas nearby;
- the adverse effect of the occupation of coastal permit area U140534 on recreational fishing is only small 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 area

53 I consider coastal permit area U140534 is located in an area where a small amount of customary fishing may occur.

54 Available information on customary fishing includes qualitative information from submissions and some quantitative catch information from customary authorisations.¹² There is limited information on customary catch at the small scale of a marine farm because fishing locations for customary authorisations do not report at a scale finer than the FMA or QMA.

55 I consider that some, if not all, of the eight iwi at the top of the South Island may have customary fishing interests in the coastal permit area.¹³ While there are no existing customary management areas in the Marlborough Sounds (e.g. taiapure-local fishery or mātaitai reserves), the eight iwi have jointly notified their Tangata Tiaki/Kaitiaki for an area/rohe moana that encompasses the coastal permit area. Although, I note the notification is in dispute.¹⁴

56 MPI did not receive any submissions on customary fishing methods or species taken in relation to the coastal permit area. Customary authorisations issued between January 2009 and March 2014 do contain information on species targeted, but site-specific fishing locations are not typically reported.

57 There are no site-specific authorisations for Tennyson Inlet. However, customary authorisations have been issued for Pelorus Sound for a number of shellfish and finfish species. Scallops, blue cod and paua were the main target species for Pelorus Sound. In addition, authorisations were also issued for the collection of small quantities of Pacific oyster, rock lobster, snapper, flatfish, butterfish, blue moki and hapuku.

58 Pacific oyster, rock lobster, paua, blue cod, blue moki and butterfish are typically found over hard substrates or intertidal zones and are unlikely to be caught in the coastal permit area. The coastal permit area is too shallow for hapuku. Just one scallop was observed in the benthic survey of the site (Brown, 2014), suggesting customary fishers are unlikely to harvest scallops from the area.

59 Therefore, of the species listed in customary authorisations, I consider snapper and flatfish are most those likely caught in the coastal permit area. This is because both snapper and flatfish are widespread and common in Pelorus Sound and are associated with the silt and clay habitat found in the coastal permit area.

60 However, I consider customary fishing intensity in the coastal permit area for snapper and flatfish is likely to be low. These species were authorised for collection in relatively small quantities over the whole Pelorus Sound area, which is large in comparison to the coastal permit area. MPI does not hold any further information regarding the importance of the coastal permit area to customary fishing.

Exclusion of fishing

61 I consider the aquaculture activities proposed for coastal permit area U140534 will only exclude a small amount of customary fishing, if any.

¹² Effects on customary fishers who fish within the recreational limits under the Amateur Regulations are considered in the assessment of effects on recreational fishing.

¹³ 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 (**Ngāti Toa**); or Te Atiawa Manawhenua Ki Te Tau Ihu Trust; or Te Runanga A Rangitane o Wairau; or Te Runanga O Ngāti Kuia Trust.

¹⁴ 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.

62 As mentioned above, of the popular fish species known to be targeted by customary fishers in Pelorus Sound, the most likely species to be caught in the coastal permit area are snapper and flatfish. These species are taken using set net, long line and rod and line fishing methods.

63 Marine farm structures can prevent or impede stationary fishing methods such as set netting or longlining and mobile methods such as dredging, trolling and drift fishing. This is because there is a risk of entanglement of fishing gear in marine farm structures. However, snapper could still be caught within marine farm structures by stationary fishing methods such as anchored rod and line fishing.

64 Flatfish are typically caught by spear fishing in shallow water or by set netting. As water depths at the coastal permit area are too deep for wading, and because set netting will be excluded, fishing for flatfish will be excluded from the coastal permit area.

Availability of other fishing areas

65 I consider there are other areas available for customary fishing in Tennyson Inlet, Pelorus Sound and the wider Marlborough Sounds.

66 Apart from the Long Island Marine Reserve and Fighting Bay,¹⁵ all of the Marlborough Sounds is available for customary fishing under regulations 50 and 51 of the Amateur Regulations. As noted, the proposed aquaculture activities will only exclude a small amount of customary fishing, if any. I therefore consider there are other customary fishing areas within Tennyson Inlet, Pelorus Sound and the wider Marlborough Sounds that could accommodate any customary fishing displaced from the coastal permit area. Furthermore, I note the silt and clay substrate in the coastal permit area is widespread in the Marlborough Sounds. This means there are lots of similar alternative fishing areas nearby for fishers to target species such as flatfish and snapper. Snapper and flatfish are demersal species and are widespread in the Marlborough Sounds.

Increased cost of fishing

67 I consider the aquaculture activities proposed for coastal permit area U140534 will result in a minimal increase in the cost of customary fishing, if any.

68 Based on available information, I consider that any customary fishing displaced from the coastal permit area could be carried out nearby with minimal additional cost or could still be taken using alternative fishing methods within the coastal permit area.

Likely effect on fishing

69 I consider the likely effect on customary fishing from the aquaculture activities proposed for coastal permit area U140534 will be small.

70 As noted, there is no 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 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.

71 Available information suggests the coastal permit area may be used for customary fishing, but that:

¹⁵ The Cook Strait Submarine Cable Protection Zone (Submarine Cables and Pipelines Protection Act 1996).

- popular fish species likely to be targeted by customary fishers in the coastal permit area are widespread and common throughout Pelorus Sound, and wider Marlborough Sounds; and
- any catch that may be taken in the coastal permit area could be taken nearby or by alternative fishing methods.

72 For the above reasons I consider the proposed aquaculture activities will only have a small effect on customary fishing.

Cumulative effects

73 I consider the cumulative effect on customary fishing from authorised aquaculture activities in the Marlborough Sounds is not unduly adverse and that the activities authorised by coastal permit U140534 will only add slightly to the cumulative effect.

74 There is no quantitative catch data available to MPI to assess the cumulative effects 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 coastal permit area for fishing and the amount of aquaculture activities already authorised in the relevant customary fishery.

75 As noted, existing aquaculture authorisations in Tennyson Inlet total approximately 20 ha. Existing aquaculture authorisations within the Marlborough Sounds total approximately 3,600 ha. MPI considers the existing farms in Tennyson Inlet and elsewhere in the Marlborough Sounds have had some effect on customary fishing. However, I consider the effect is not undue because some customary fishing (e.g. anchored rod and line fishing) can still occur within marine farms and it is unlikely all the farms are located in popular customary fishing areas.

76 As mentioned, I consider the adverse effect of the occupation of coastal permit area U140534 on customary fishing is small. Taking this into account with the existing authorised aquaculture areas, I consider occupation of coastal permit area U140534 will not cause the cumulative effect on customary fishing to become undue.

Conclusion on effects on customary fishing

77 I am satisfied the aquaculture activities proposed within the area of coastal permit U140534 will not have an undue adverse effect on customary fishing because:

- no submissions were received from customary fishers regarding the importance of coastal permit area U140534 for customary fishing;
- the proposed aquaculture activities will exclude only a small amount of customary fishing;
- there are other areas available for customary fishing within Tennyson Inlet, 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;
- the effect on customary fishing will be small and the catch that may be taken in the coastal permit area could be caught using alternative methods or taken in other areas nearby;

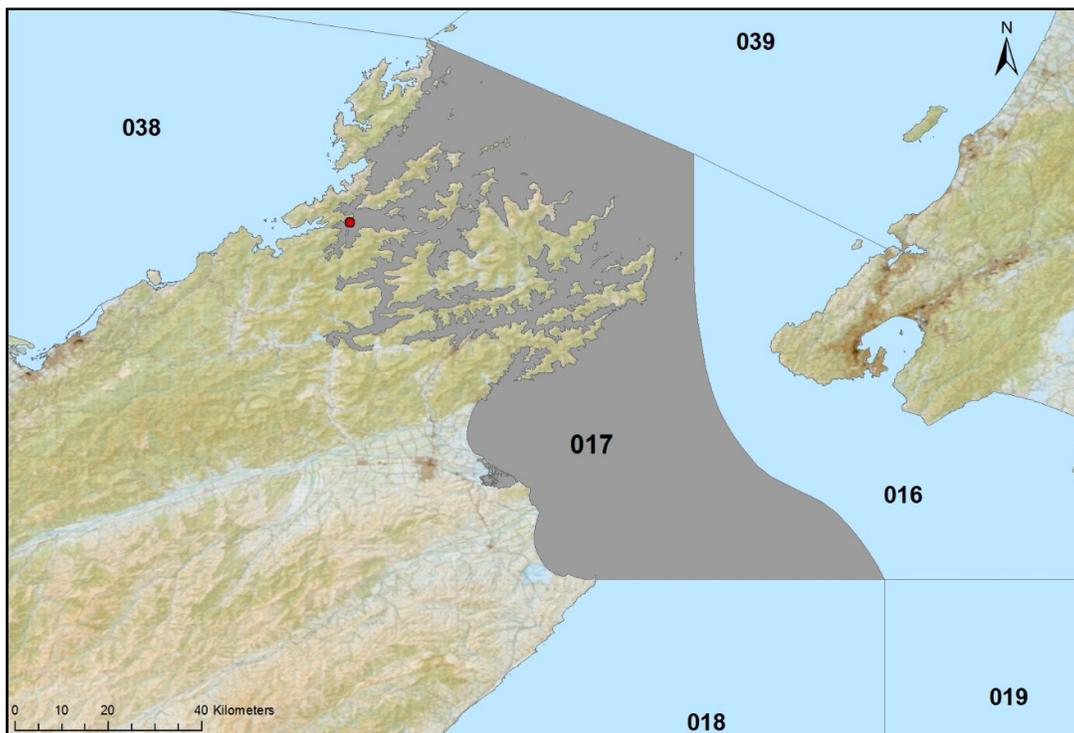
- the adverse effect of the occupation of coastal permit area U140534 on customary fishing is only small and will not cause the cumulative effect on customary fishing to become undue.

Commercial fishing

The location of the coastal permit area relative to fishing area

78 I consider coastal permit area U140534 is located where only a small amount of commercial fishing may occur.

79 Historically, most commercial fishing has been reported by statistical area. Coastal permit area U140534 is located in statistical area 017 (SA017), which extends from d'Urville Island to Cape Campbell (4,149 km²) (Map 4).



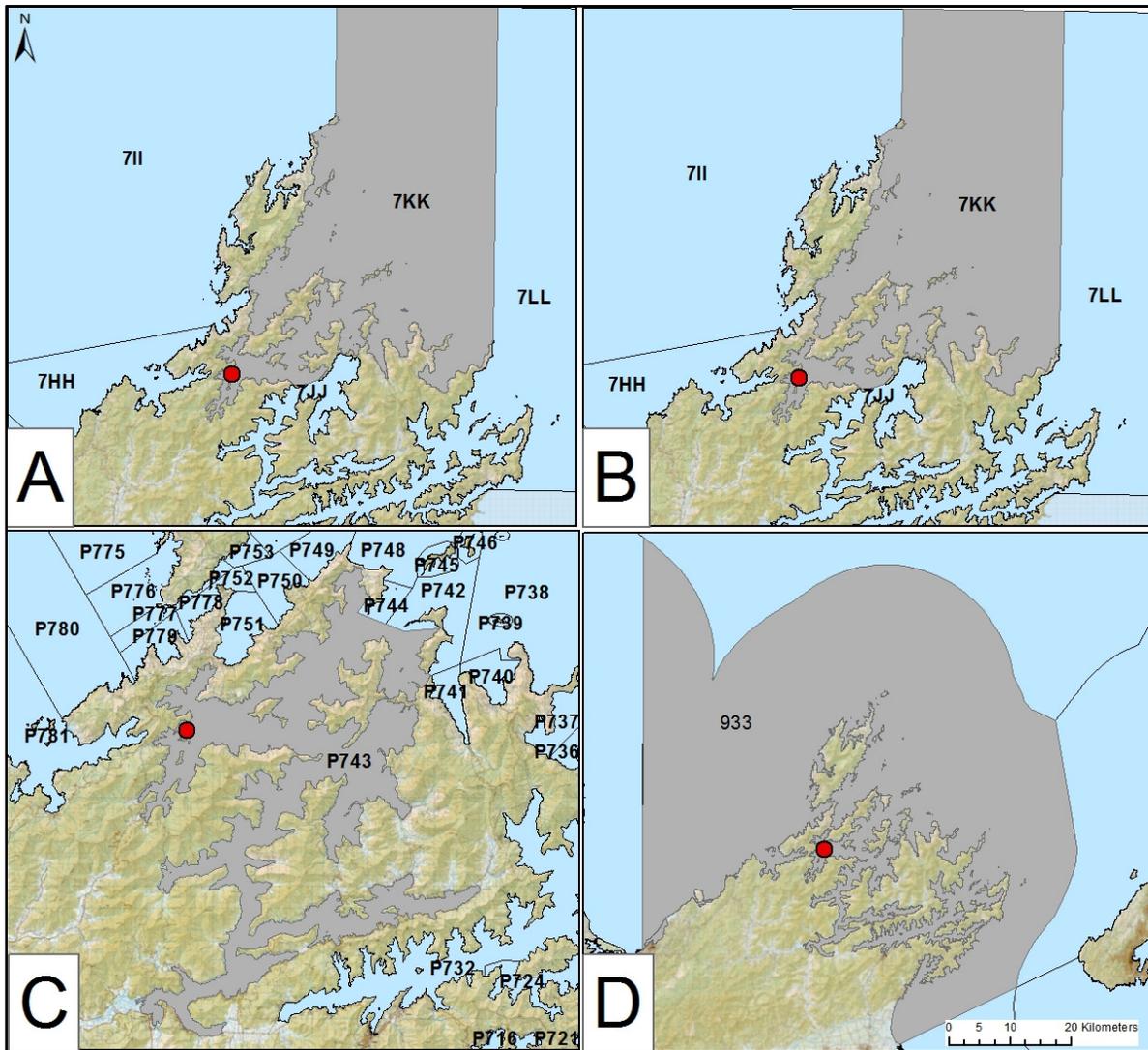
Map 4: Location of SA017. The red dot mark the approximate location of coastal permit area U140534¹⁶.

80 Scallops, oysters, paua and rock lobster are reported by species-specific statistical areas rather than by general statistical area. The coastal permit area falls within statistical area 7KK for oysters and scallops (Maps 5A and 5B), within paua statistical area P743, and within rock lobster statistical area 933 (Maps 5C and 5D).

¹⁶ NZ topo data). Sourced from Land Information New Zealand under CC-By.

<http://creativecommons.org/licenses/by/3.0/nz/>

MPI data: released under CC-By. <http://creativecommons.org/licenses/by/3.0/nz/>



Map 5: Species-specific statistical areas that encompass the coastal permit area. A – Oyster statistical area 7KK. B – Scallop statistical area 7KK. C – Paua statistical area P743. D – Rock lobster statistical area 933¹⁷.

81 Reporting by statistical area only provides coarse-scale information about where commercial fishing occurs. However, since 2007/08 vessels over 6 m long that use trawl or line fishing methods¹⁸ 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 methods (i.e. set netting or drift netting) have had to report to within 2 nm.¹⁹

82 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 considers these small vessels fish in enclosed bays and no more than 3 nm off open coasts.

83 Using the fine scale position data (reporting by position), MPI has modelled and mapped fishing intensity for different segments of fishing characterised by a type of fishing gear and the

¹⁷ NZ topo data). Sourced from Land Information New Zealand under CC-By.

<http://creativecommons.org/licenses/by/3.0/nz/>

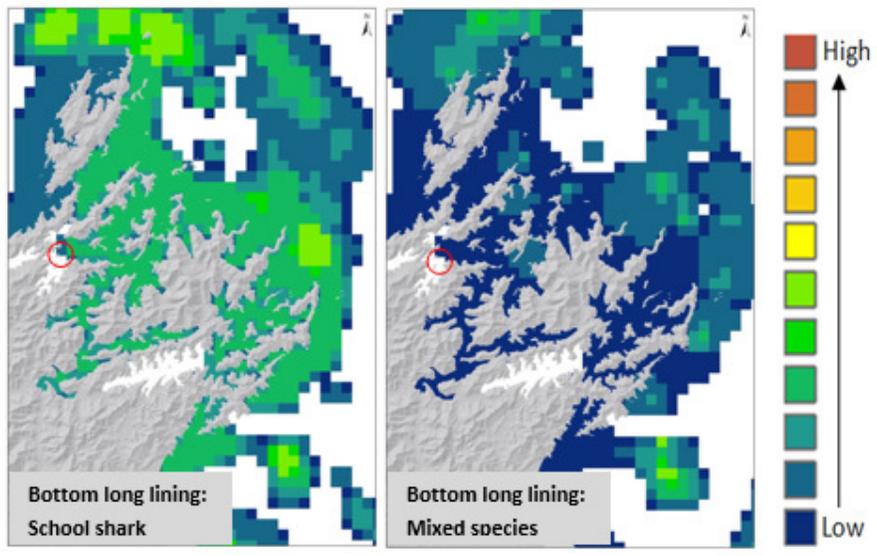
MPI data: released under CC-By. <http://creativecommons.org/licenses/by/3.0/nz/>

¹⁸ Bottom long lining, surface long lining or trot lines

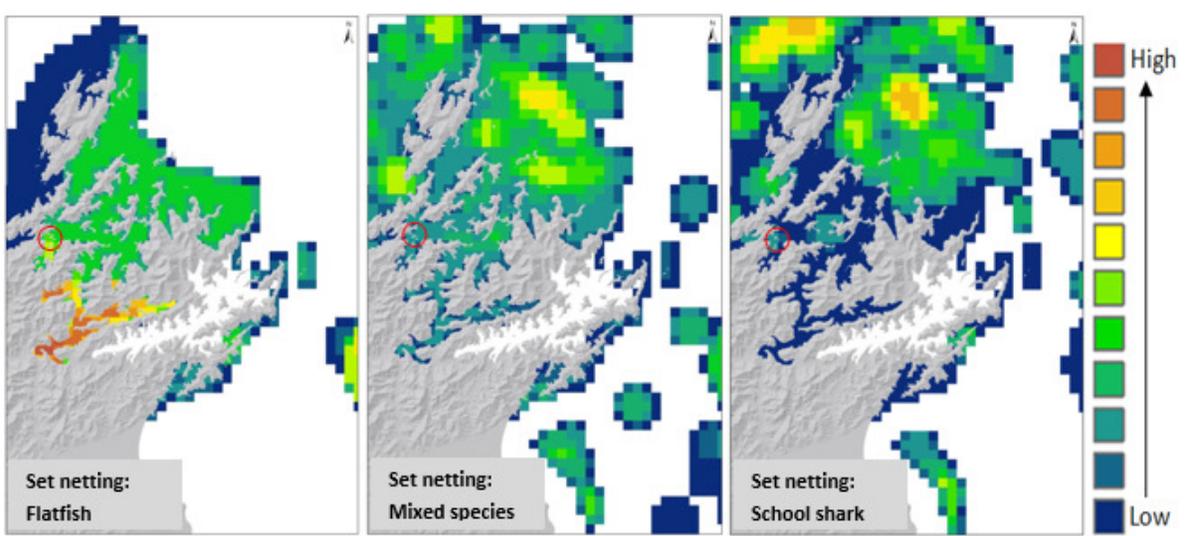
¹⁹ Fisheries (Reporting) Regulations 2001.

main species caught in the Marlborough Sounds. Maps 6A and 6B below show the annual average fishing effort per ha (for fishing years 2007/08–2011/12) for the main fishery segments that overlap coastal permit area U140534.

84 Maps 6A and 6B also include coarse-scale information, from vessels less than 6 m, which has been evenly apportioned across the area available for fishing (i.e. within enclosed bays and 3 nm of open coasts). This is the best information available from reported fisheries information. Additionally, knowledge about species, habitat and bathymetry can also help to determine whether specific types of fishing are likely to occur in the area.



Map 6A: Fishing intensity of long line fishery segments. The red circle indicates the approximate location of coastal permit area U140534.²⁰



Map 6B: Fishing intensity of set net fishery segments. The red circle indicates the approximate location of coastal permit area U140534.

²⁰ Hillshade imagery produced by Geographx. Sourced from www.koordinates.com under CC-By. <http://creativecommons.org/licenses/by/3.0/nz/>
 MPI data: released under CC-By. <http://creativecommons.org/licenses/by/3.0/nz/>

85 Table 1 below lists the main fishery segments known to occur in SA017 and summarises those included in the commercial fishing assessment for coastal permit area U140534. The table also gives the relative amounts of trawl, line and net fishing that report by start position. The higher the proportion of vessels reporting by start position, the greater confidence in the location of fishing as depicted in Maps 6A and 6B.

86 Trawl, box net and teichi net fishing methods are prohibited in the area of the coastal permit. In addition, the coastal permit area is not located in the scallop fishery. As a result, these fishing methods have not been included in the commercial fishing assessment for coastal permit area U140534.

Table 1: 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 area from 2007/2008 to 2011/2012.

Fishery segment (Main fishstock or depth range and main fishing method) ²¹	Statistical area	% of fine scale fishing events	Average annual no. fishing days ²²	% of main fishstock caught in statistical area	Included in the proposed farm assessment?	Rationale for excluding a fishery from proposed farm assessment ²³
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	
Mixed fishery, Long Lining	017	82%	17	N/A	Yes	
School shark (SCH7), Set Net	017	98%	15	14%	Yes	
Rock Lobster (CRA5), Lobster Pot	933	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	This method is prohibited in the coastal permit area.
Scallops (SCA7), Dredge	7KK	0%	218	47%	No	The coastal permit area is not located within a scallop fishery
Ghost shark (GSH7), Trawl	017	99%	214	57%	No	This method is prohibited in the coastal permit area.
Sea Urchin (SUR7A), Diving	017	0%	209	84%	No	Sea urchins are mainly fished from areas of rocky reef. The coastal permit area does not include this habitat type
Inshore Mix <80m depth, Trawl	017	98%	204	N/A	No	This method is prohibited in the coastal permit area.
Butter fish (BUT7), Set Net	017	40%	183	27%	No	Butterfish are a reef dwelling, algae feeding species. These habitats do not occur in the coastal permit area
Red Cod (RCO7), Trawl	017	100%	176	18%	No	This method is prohibited in the coastal permit area.
Inshore Mix >80m <300m, Trawl	017	100%	149	N/A	No	This method is prohibited in the coastal permit area.
Blue cod (BCO7), Cod Pot	017	0%	134	40%	No	Blue cod are commonly targeted over rock reef/cobble substrate. These habitats do not occur in the coastal permit area

²¹ Main fishstock refers to the species most often caught by the relevant method, it does not include all species taken by that method.

²² Excludes segments with less than 10 days fishing per year.

²³ 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.

Table 1 continued:

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
Hapuku and Bass (HPB7), Long Lining	017	52%	132	32%	No	The coastal permit area is too shallow for targeting these species
Spiny Dogfish (SPD7), Trawl	017	99%	81	24%	No	This method is prohibited in the coastal permit area.
Flatfish (FLA7), Trawl	017	99%	68	6%	No	This method is prohibited in the coastal permit area.
Barracouta (BAR7), Trawl	017	99%	62	2%	No	This method is prohibited in the coastal permit area.
Gurnard (GUR7), Trawl	017	99%	62	8%	No	This method is prohibited in the coastal permit area.
Tarakihi (TAR7), Trawl	017	100%	54	17%	No	This method is prohibited in the coastal permit area.
Blue cod (BCO7), Hand Lining	017	0%	36	40%	No	Blue cod are mainly fished from areas of rock reef/cobble substrate. The coastal permit area does not overlap these habitat types
Surf clams, Dredge (PDO7)	017	0%	34	0%	No	Surf clams (tuatua) are generally found in sandy intertidal zones. The coastal permit area does not overlap this substrate
Sea cucumber (SCC7A), Diving	017	0%	33	90%	No	This type of fishing is unlikely to be excluded from the coastal permit area.
Other species, Potting	017	0%	19	N/A	No	This type of fishing is likely to be bycatch from potting targeting blue cod or rock lobster, which are unlikely to be targeted in the coastal permit area
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 located in a scallop fishery
Snapper (SNA7), Trawl	017	98%	17	10%	No	This method is prohibited in the coastal permit area.
Mixed fishery, Beach Seine	017	0%	13	N/A	No	The coastal permit area is too deep for this fishing method
Other species, Diving	017	0%	13	N/A	Yes	This type of fishing is unlikely to be excluded from the coastal permit area.
Blue Warehau (WAR7), Trawl	017	100%	11	6%	No	This method is prohibited in the coastal permit area.
Mixed fishery, hand Lining	017	0%	10	N/A	No	Given the low number of fishing days over a year it is unlikely the coastal permit area is going to be significant for this fishing method

Exclusion of fishing

87 I consider the aquaculture activities proposed for coastal permit area U140534 will exclude only a small amount of commercial fishing.

88 The exclusion zone for commercial fishing methods in this assessment is coastal permit area U140534 (i.e. 5.56 ha). As the coastal permit area is not located in the commercial scallop dredge fishery no additional exclusion zone is required for this fishing method.

89 As Table 1 illustrates, a small amount of set netting and longlining for a range of species including school shark and flatfish may occur in the coastal permit area. These types of commercial fishing will be excluded from the area of the proposed marine farm, but could occur immediately adjacent.

Availability of other fishing areas

90 I consider that any commercial fishing displaced from coastal permit area U140534 could occur in other commercial fishing areas in SA017 and in the wider QMAs or FMA7.

91 As stated above, Tennyson Inlet is open to all commercial fishing methods except trawl, box and teichi nets, although some gear and deployment restrictions apply.

92 There are commercial closures or restrictions in other parts of SA017, the relevant QMAs or FMA7 (including various species, method, time period, fishing gear, or a combination of these criteria)²⁴. However, I consider the extent of the closures does not significantly limit the potential for alternative fishing grounds. I therefore consider there are other fishing areas available within SA017 and the relevant QMAs or FMA7 that could absorb any fishing that may be displaced from the coastal permit area.

93 I recognise areas of authorised aquaculture space have reduced the availability of other commercial fishing areas over time. As noted, there is approximately 20 ha of authorised aquaculture activities in Tennyson Inlet, and in SA017 there are approximately 3,400 ha of marine farms. The existing aquaculture space in SA017 makes up more than 30% of the aquaculture in FMA7. The cumulative effect of the existing aquaculture is considered further below.

Increased cost of fishing

94 I consider that the aquaculture activities proposed in coastal permit area U140534 will not increase the cost of commercial fishing.

95 While the coastal permit area is located within a region used for commercial fishing, I consider the use of alternative commercial fishing grounds will 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.

Likely effect on fishing

96 I consider the proposed aquaculture activities in coastal permit area U140534 will have a small, if any, adverse effect on any commercial fishery.

97 MPI has estimated the amount of fishing effort displaced by the activities proposed in coastal permit area U140534 is negligible. The effect on any single fish stock is less than 0.01 % of its

²⁴ *Fisheries (Challenger Area Commercial Fishing) Regulations 1986.*

fishery. The total amount of catch affected over all fish stocks is estimated to be approximately 2 kg per year, compared to a total of 25,000 tonnes caught per year from SA017.

98 These estimates are the average annual catch likely to be affected by the proposed aquaculture activities for the methods indicated in Table 1. Maps of fishing intensity (effort per ha) for each fishery segment were used to calculate the average annual amount of fishing effort that is likely to be displaced from the exclusion zone 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 from the coastal permit area.

99 Fishing effort that is reported by statistical area was apportioned evenly across the area available for fishing. 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.

100 The amount of fishing was averaged over October fishing years 2007/08 to 2011/12. Five 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.

101 Given the very small catch quantities likely to be affected by the proposed aquaculture activities, MPI has not attempted to determine the 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 will be lost from the affected fisheries and not caught elsewhere.

Cumulative effect

102 I consider the cumulative effect on commercial fishing from authorised aquaculture activities in FMA7 is not unduly adverse and that occupation of coastal permit area U140534 will only add slightly to the cumulative effect.

103 Approximately 10,200 ha of authorised aquaculture activities in FMA7 have previously been assessed for their total cumulative effect on fishing. The highest cumulative effect to date on any individual fish stock potentially affected by coastal permit U140534 is approximately 1.6% and not undue.

104 As noted, approximately 2 kg of average annual catch is likely to be affected by the proposed aquaculture activities at coastal permit U140534. 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

105 I am satisfied the aquaculture activities proposed within coastal permit area U140534 will not have an undue adverse effect on commercial fishing because:

- no submissions were received by commercial fishers regarding the importance of coastal permit area U140534 to commercial fishing;
- the proposed aquaculture activities will only exclude commercial fishing from a small area;
- occupation of the coastal permit area will not result in an increase in the cost of commercial fishing;

- effects on commercial fishing will be small and the catch that may be taken in the coastal permit area could be caught in other areas nearby;
- the additional adverse effect on commercial fishing for any fish stock is only small and will not cause the cumulative effect on commercial fishing for any fish stock to become undue.

Aquaculture decision

106 I am satisfied – based on all relevant information available to me – the activities proposed for coastal permit area U140534 will not have an undue adverse effect on:

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

107 Accordingly, my decision is a determination for coastal permit U140534 with regard to:

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

108 The area of the determination on recreational, customary and commercial fishing is a 5.56 ha area with the following coordinates (NZTM2000):

<u>Point</u>	<u>Easting</u>	<u>Northing</u>
1	1666652.83	5456418.02
2	1666683.21	5456470.22
3	1667077.88	5456357.05
4	1667178.28	5456529.91
5	1667302.35	5456457.71
6	1667281.56	5456409.14
7	1667181.17	5456236.68
8	1666958.80	5456330.61

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



David Scranney
Spatial Allocations Manager
Ministry for Primary Industries

Dated this 24th April 2015

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