



4 May 2016

AQUACULTURE DECISION REPORT — KPF INVESTMENTS LIMITED, COASTAL PERMIT U150785, CRAIL BAY, CENTRAL PELORUS EAST

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 U150785 will not have an undue adverse effect on:

- recreational fishing — for the reasons set out in this report and summarised in paragraph 42;
- customary fishing — for the reasons set out in this report and summarised in paragraph 63;
- commercial fishing — for the reasons set out in this report and summarised in paragraph 87.

AQUACULTURE DECISION REQUEST DETAILS

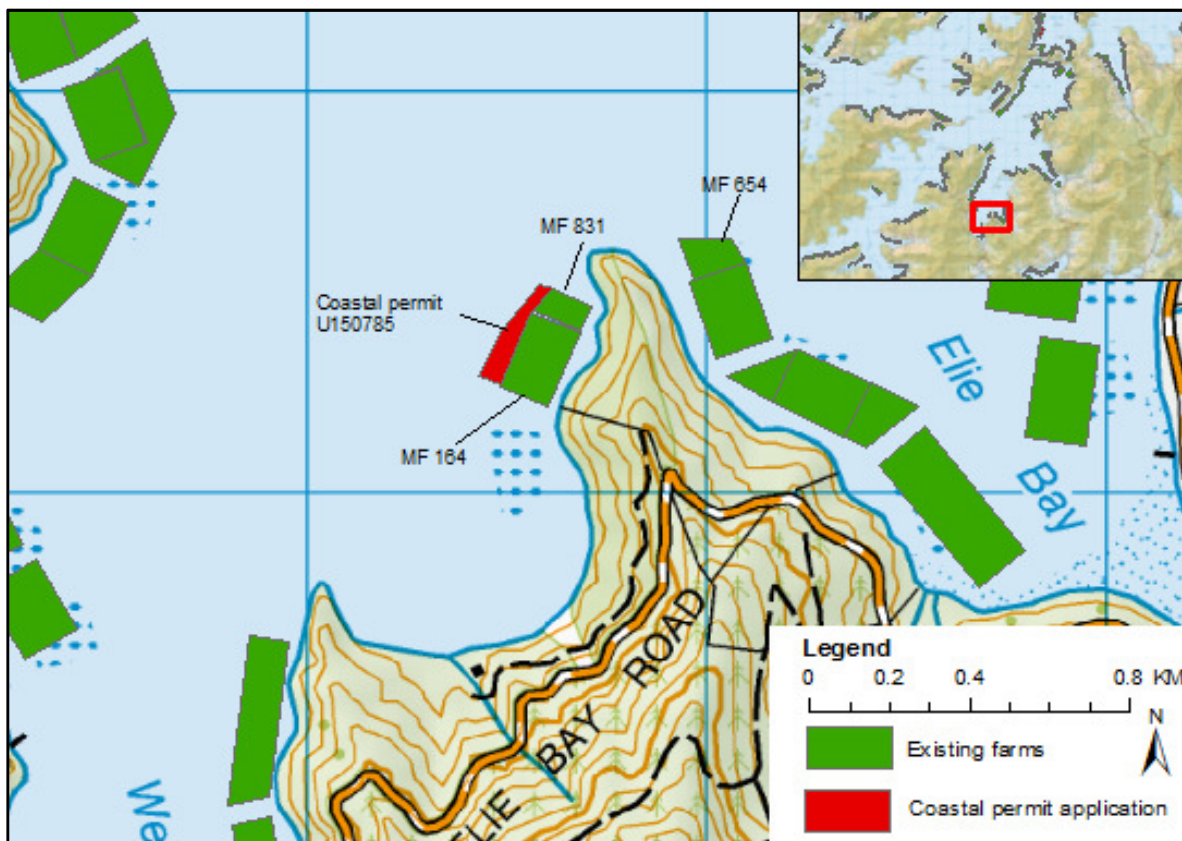
Regional Council:	Marlborough District Council (MDC)
Date of Request:	31 March 2016
Coastal Permit Applicant:	KPF Investments Limited
Location of marine farm site:	Crail Bay, Central Pelorus East
Size of farm:	1.25 hectares (ha) of new space to extend marine farm permits 164 and 831 (MF 164 and MF 831) and relinquish 0.30 ha of the existing areas
Species to be farmed:	Green-lipped mussels (<i>Perna canaliculus</i>), scallops (<i>Pecten novaezelandiae</i>), blue mussels (<i>Mytilus galloprovincialis</i>), dredge oysters (<i>Ostrea chilensis</i>), Pacific oysters (<i>Crassostrea gigas</i>)
Farm structures:	Standard marine farm longlines and anchors with 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

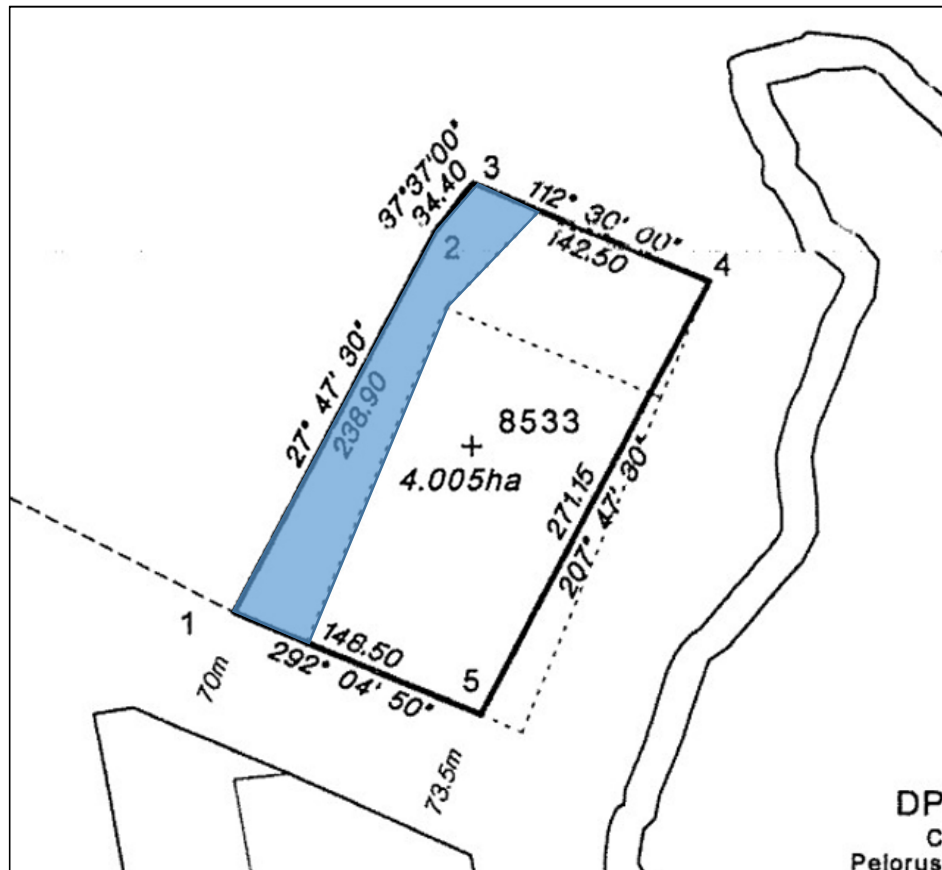
3 Coastal permit U150785 applies to an area at Crail Bay between Elie Bay and Wet Inlet (Map 1). Coastal permit U150785 extends MF 164 and MF 831 by 1.25 ha and overlaps these areas. On commencement of coastal permit U150785, 0.30 ha of inshore area currently authorised by MF 164 and MF 831 would be relinquished (Map 2).

4 Crail Bay is within Fisheries Management Area 7 (FMA 7) (Map 3). There are a current marine farms east of coastal permit U150785 in Elie Bay and to the west in Wet Inlet. Aside from MF 164 and MF 831, the closest existing marine farm to coastal permit U150785 is MF 654, approximately 500 m to the east (Map 1).

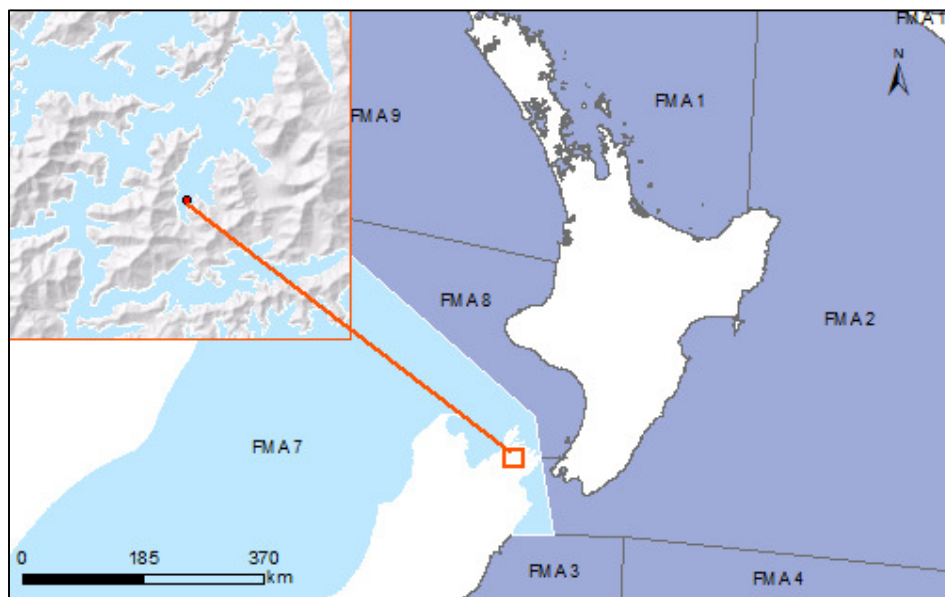


Map 1²: Location of the area authorised by coastal permit U150785 at Crail Bay, Central Pelorus East (MPI, 2016).

² Disclaimer: Maps 1-7B and all information accompanying them are intended to be used as guides only, in conjunction with other data sources and methods, and should only be used for the purpose for which they were 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. The maps are subject to Crown copyright administered by Ministry for Primary Industries (MPI), and are licensed for general use under the Creative Commons Attribution 3.0 New Zealand licence (<http://creativecommons.org/licenses/by/3.0/nz/>). Crown copyright ©. NZ topo data. Sourced from Land Information New Zealand under CC-BY. <http://creativecommons.org/licenses/by/3.0/nz/>



Map 2: Location of the area of coastal permit U150785 relative to MF 164 and MF 831. The area shaded blue is the new area proposed by coastal permit U150785.



Map 3: Location of the area of coastal permit U150785 (red circle) within FMA7.

5 The area of coastal permit U150785 is around 50 m from shore at its closest point and ranges from 15-25 m deep. A benthic report prepared by Davidson Environmental (2015) shows the substrate beneath most of the site comprises silt and clay with a small component of natural shell over reasonably flat seabed. The seabed beneath the eastern edge of the site is composed of sandy mud and shell grit. No hard substrates (eg, cobble, reef) are beneath the site but a report by Brown 1999 shows a shoal lies more than 60 m to the north of the site.

Structures

6 The new area of coastal permit U150785 will contain two or three longlines that are 19.7 m apart and range from 147-158 m (Figure 1).

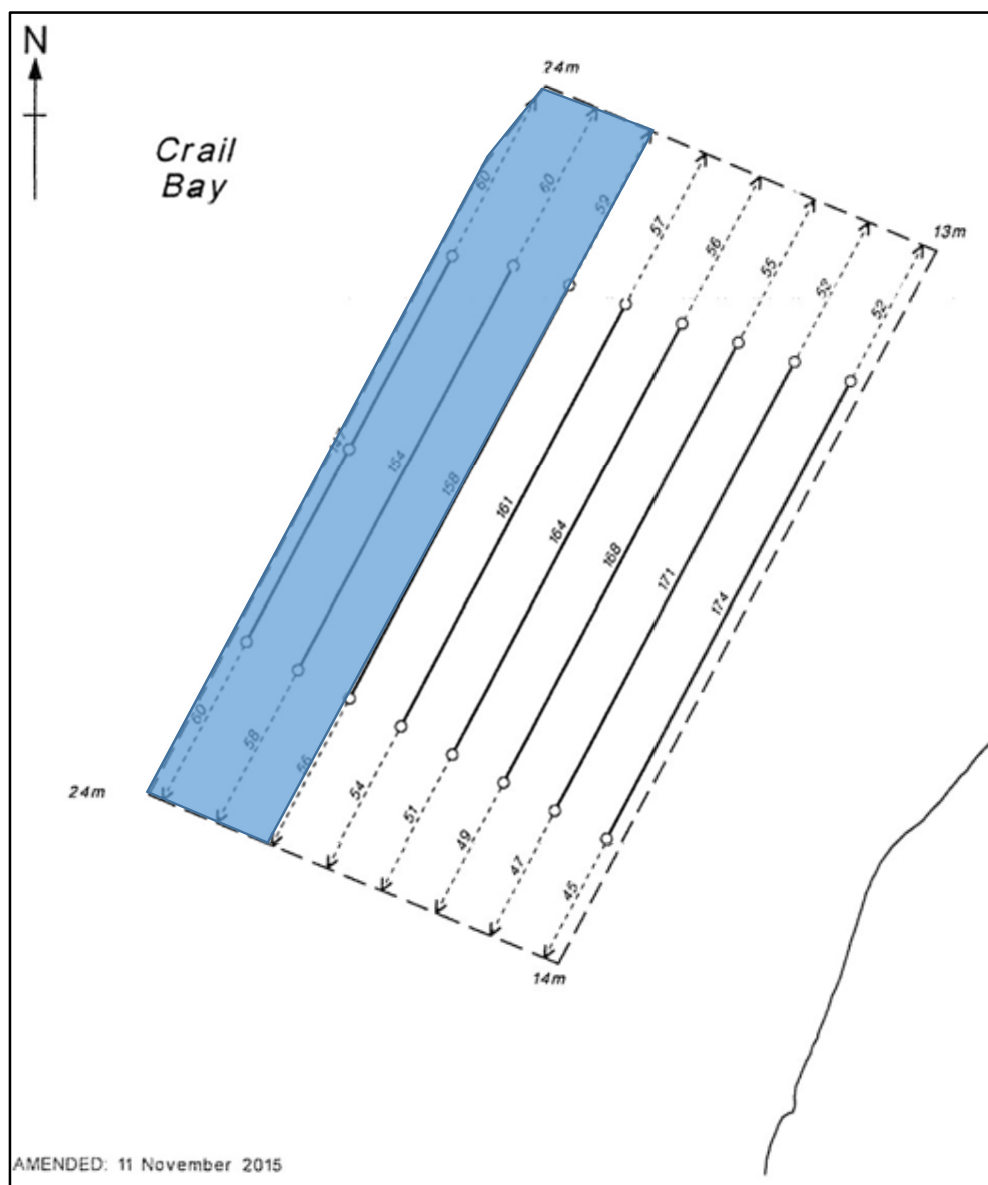


Figure 1: Structures diagram for coastal permit U150785.² The area shaded blue is new area proposed. The white area is area already authorised by MF 164 and MF 831.

² Sourced from the MDC's decision on coastal permit application U150785.

Input from stakeholders

7 MPI publicised the application for coastal permit U150785 on its website on 24 September 2015. 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.

8 The submission closing date for those notified via the website was 23 October 2015. MPI did not receive any submissions.

STATUTORY CONTEXT

9 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).

10 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.

11 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).

12 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.

13 Section 186E(3) of the Fisheries Act³ 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.

³ 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.

14 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.

15 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 areas 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 areas 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 areas that the coastal permit relates to will lead to the exclusion of fishing;
- (d) the extent to which fishing for a species in the areas 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.

16 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 U150785.

17 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.

18 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*.

19 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).

20 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.

21 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

22 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.

19 This assessment relates to the 1.25 ha of new marine farming space authorised by coastal permit U150785.

Recreational fishing

Location of the coastal permit area relative to fishing areas

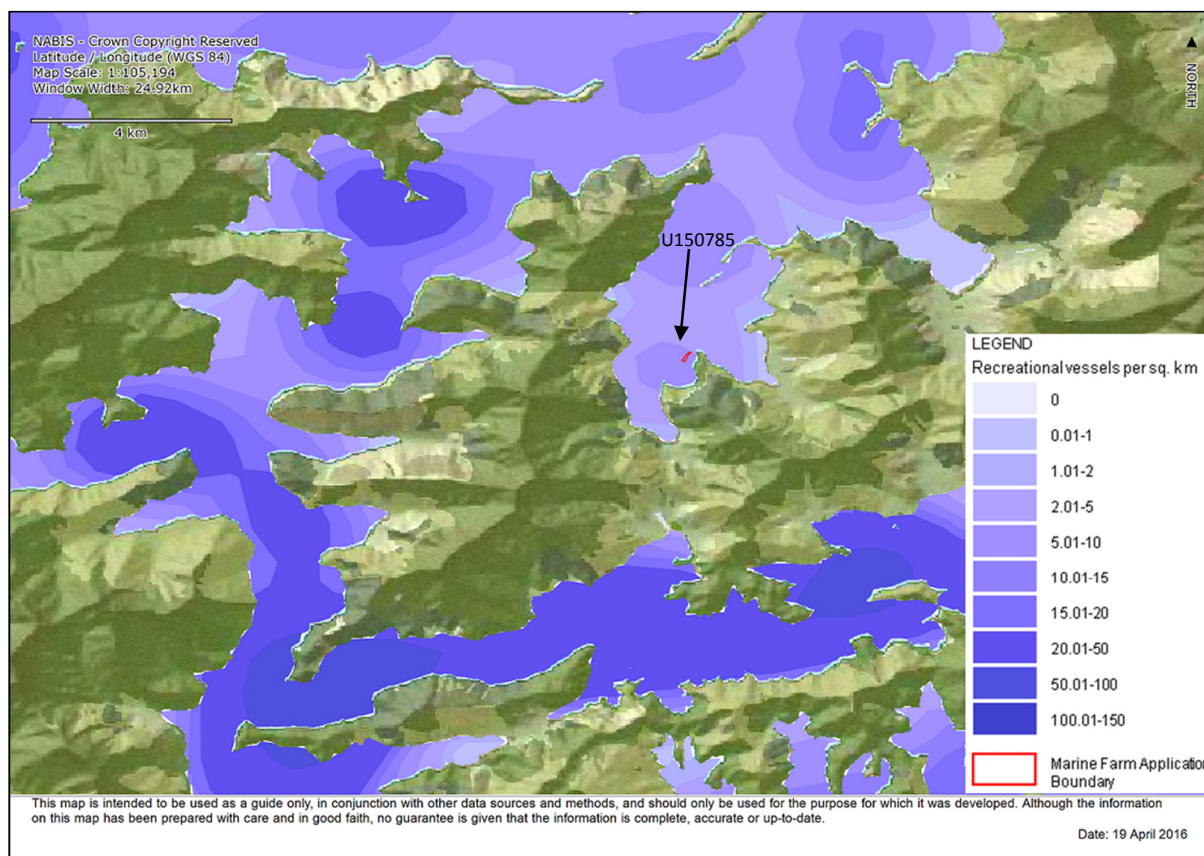
23 I consider the area of coastal permit U150785 is located where there is a relatively small amount of recreational fishing, predominantly by stationary and mobile rod/line methods, set netting, diving, and a small amount of longlining. I consider that snapper, kahawai, gurnard, spotty and mussels are the main species targeted and/or caught.

24 Available information on recreational fishing activity in Crail Bay comprises:

- information provided in past relevant submissions, if any;
- information provided in the coastal permit application;
- fishing surveys; and
- MPI information (eg, institutional knowledge).

25 No submissions on the area of coastal permit U150785 were received from recreational fishers. Submissions on existing farm MF 831, immediately inshore of the new coastal permit area, and from neighbouring farms suggest that little recreational fishing occurs in the area.

26 Aerial survey results from the most recent recreational fishing survey of the Marlborough Sounds (in 2006) suggests there is a low to moderate amount of recreational fishing at the area of coastal permit U150785. Of the fishing trips diarised in the 2006 survey, 6.4% occurred in the survey zone containing Crail Bay.



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

27 The recreational fishing survey identifies methods used, and species targeted and caught within zones in the Marlborough Sounds. Some submissions on previous marine farm applications in Crail Bay also give an idea of the fishing activity that may occur in the area of coastal permit U150785. Table 1 below summaries my assessment of the main methods used and species caught and targeted in the area of coastal permit U150785 based on the recreational fishing survey, submissions, the benthic survey (Davidson 2015) and other sources.

28 As shown, I consider that stationary and mobile rod/line methods, set netting, diving and a small amount of longlining could be used and that snapper, kahawai, gurnard, spotty and mussels are the main species targeted and caught.

⁴ Map sourced from NABIS (MPI, 2016).

Table 1: Recreational fishing methods used and species caught and targeted at the area of coastal permit U150785 based on the available information.

	Davey <i>et al.</i> (2008) results for the survey zone encompassing Crail Bay	Submissions	Other information	My assessment
Methods used	Rod/line from private boat (80% of trips), set netting (28% of trips), diving from private boat (12% longline from private boat (5% of trips), drag netting, rod fishing from shore, diving from charter boat, and flounder spearing (each less than 2% of trips)	Local land owners have been concerned about loss of recreational fishing areas for previous applications in the area	<p>The clay and relatively flat seabed with a shoal 60 m to the north of the site is suitable for most of the methods identified as occurring in the survey zone containing Crail Bay by Davey <i>et al.</i> (2008)</p> <p>No species that are typically taken by dredging, or biological communities of particular interest such as red algae or horse mussels, were observed at the coastal permit area by Davidson (2015)</p> <p>The new area is seaward of existing marine farm structures</p>	<p>Stationary and mobile rod/line methods, set netting and diving are the most commonly used methods at the site. A small amount of longlining may also occur</p> <p>Shore-based fishing (eg, by rod/line, drag netting or flatfish spearing) is minimal in the area of coastal permit U150785</p>
Species caught (top 10)	Blue cod (240), snapper (77), spotty (70), mussels (50), kahawai (30), gurnard (22), jack mackerel (21), spiny dogfish (20), barracouta (15), yellow eyed mullet (7)	No specific species have been mentioned in previous submissions	No scallops or oysters were observed by Davidson (2015)	Snapper, spotty and mussels are the most commonly caught species in the coastal permit area
Species targeted (top 10)	Blue cod (89), snapper (63), kahawai (7), gurnard (5), blue moki (1), kingfish (2), hapuku (2), flounder (2), grey shark (1), scallops (1)	No specific species have been mentioned in previous submissions	Of the target species reported by Davey <i>et al.</i> (2008) it is unlikely that blue cod or blue moki are found over the algae-free, silt, clay and shell hash substrate at the coastal permit area	Snapper, kahawai and gurnard are the most commonly targeted species in the coastal permit area

Exclusion of fishing

28 I consider the aquaculture activities proposed for the area of coastal permit U150785 will exclude some of the recreational fishing methods that may be used in the area. However, I note the exclusion effects on recreational fishing would be small given coastal permit U150785 will increase marine farming area a minimal amount.

29 Of the recreational fishing likely to occur in the area of coastal permit U150785 it is likely that trolling, longlining, set netting and drift fishing would be excluded. Anecdotal information from recreational fishers⁵ suggest that spaces between longlines of mussel farms in the Marlborough Sounds are too narrow for longlining, set netting and trolling without risk of entanglement. I also consider that drift fishing is unlikely to occur within marine farms because of risk of entanglement.

30 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. I do not consider that diving would be excluded from the site. Furthermore, I consider that relinquishing some of the existing marine farm area inshore will decrease exclusion effects on some methods which are often used near the shore (eg, drift fishing).

Availability of other fishing areas

31 I consider there are other areas available for recreational fishing in Crail Bay and the wider Marlborough Sounds.

32 The Marlborough Sounds region is subject to area closures and various species and method restrictions, particularly for set netting and longlining⁶. These restrictions limit the availability of alternative recreational fishing areas outside of Crail Bay. However, I consider alternative areas in Crail Bay and elsewhere in the Marlborough Sounds could absorb fishing by most fishers who fish the area of coastal permit U150785 because:

- the silt, clay and shell hash substrates beneath the site are 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 Crail Bay and most other parts of the Marlborough Sounds; and
- there are sufficient alternative areas, particularly for rod/line fishing which can occur amongst mussel farms.

Increased cost of fishing

33 I consider the aquaculture activities proposed for the area of coastal permit U150785 will result in a minimal, if any, increase in the cost of recreational fishing.

34 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.

⁵ FMA 7 Recreational Fishing Forum, 27 May 2013.

⁶ The Amateur Regulations, *Marine Reserves Act 1971* and the *Submarine Cables and Pipelines Protection Act 1996*.

Likely effect on fishing

35 I consider the likely effect on recreational fishing from the aquaculture activities proposed in the area of coastal permit U150785 will be very small.

36 There is little quantitative data available on recreational catch taken from the coastal permit area, Crail 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.

37 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;
- a small area inshore of coastal permit U150785 would become available for recreational fishing;
- alternative areas within Crail Bay and the wider Marlborough Sounds could absorb the recreational fishing displaced from the site.

Cumulative effects

38 I consider the effects from the aquaculture activities proposed for the area of coastal permit U150785, added to the effects of existing aquaculture in the Marlborough Sounds, will not have an undue adverse effect on recreational fishing.

39 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.

40 I acknowledge there is already a large amount (approximately 3,700 ha) of authorised aquaculture space in the Marlborough Sounds. Approximately 139 ha of this space is in Crail 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.

41 As noted, I consider the adverse effects of the area of coastal permit U150785 on recreational fishing will be small. Taking in to 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

42 I am satisfied the aquaculture activities proposed within the area of coastal permit U150785 will not have an undue adverse effect on recreational fishing because:

- anchored rod/line fishing could still be used in the area;
- there are other recreational fishing areas available in Crail 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 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 areas

43 I consider the area of coastal permit U150785 is located where there could be a small amount of customary fishing for snapper, kahawai, spiny dogfish and blue cod, most probably by stationary and mobile rod/line methods and longlining.

44 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.⁷ While there are no existing customary management areas in the Marlborough Sounds (eg, taiapure-local fishery or mātaihai 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.⁸

45 Available information on customary fishing is primarily qualitative information from submissions and quantitative catch information from customary authorisations. However, 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.

46 MPI has not received any submissions on customary fishing methods or species taken at any locations near the coastal permit area. However, from January 2009 to September 2015, customary authorisations were issued for Pelorus Sound which may include Crail Bay. In the Pelorus Sound authorisations, blue cod, paua, rock lobster, scallops, butterflyfish, blue moki, flatfish, snapper, hapuku and Pacific oyster were the species collected.

47 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 U150785. The information is based on submissions, customary authorisations, and the benthic survey (Davidson, 2015) of the site and other information. I consider that, based on methods used by recreational fishers, the methods most probably used by customary fishers at the coastal permit area are stationary and mobile rod/line methods, set netting, long lining, and perhaps a small amount of diving.

⁷ The eight iwi, collectively known as Te Tau Ihu o Te Waka o Maui (**Te Tau Ihu Iwi**), include those recently settled with a deed of agreement to be included in the definition of 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 1. Ngati Apa ki Te Ra Ro Trust; or 2. Ngati Koata Iwi Trust; or 3. Ngati Tama ki Te Waipounamu Trust; or 4. Te Atiawa o Te Waka a Maui trust; or 5. Te runanga o Ngati kuia Trust; or 6. Te Runanga o Ngati Rarua; or 7. Te Runanga a Rangitane o Wairau; and 8. Te Runanga o Toa Rangatira Incorporated.

⁸ 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 U150785 based on submissions, customary authorisations, the benthic survey of the site and other information.

	Source of information			
	Submissions	Customary authorisations	Other information	My assessment
Methods used	No submissions	N/A	<p>No species that are typically taken by hand gathering were observed at the coastal permit area by Davidson (2015)</p> <p>Stationary and mobile rod/line methods, set netting, diving and longlining are the most common recreational fishing methods used at the site so customary fishers may also use these methods</p>	Stationary and mobile rod/line methods, set netting, diving and longlining are the most commonly used methods at the site
Species caught or targeted	No submissions	Blue cod, paua, rock lobster, scallops, butterfish, blue moki, flatfish, snapper, hapuku and Pacific oyster	<p>It is unlikely that paua, blue cod, rock lobster, butterfish, blue moki and Pacific oyster are found over the reef-free and algae-free substrate at the coastal permit area</p> <p>No scallops were observed by Davidson (2015)</p> <p>The coastal permit area is likely to be too shallow for fishing for hapuku</p>	Flatfish and snapper could be taken by customary fishers in the coastal permit area. It is unlikely that there is much customary fishing in the coastal permit area

Exclusion of fishing

48 I consider the aquaculture activities proposed for the area of coastal permit U150785 will exclude some of the customary fishing methods that may be used in the area.

49 Of the customary fishing methods likely to occur in the coastal permit area, it is likely that longlining, set netting, trolling and drift fishing would be excluded. As noted, anecdotal information from recreational fishers suggests that spaces between longlines of mussel farms in the Sounds are too narrow for set netting, longlining and trolling without risk of entanglement. I therefore 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.

50 I do not consider that stationary rod/line fishing or diving by customary fishers would be excluded from the site. Furthermore, I consider that relinquishing some of the existing marine farm area inshore will mitigate exclusion effects on some methods which are often used near the shore.

Availability of other fishing areas

51 I consider there are some alternative areas for customary fishing in Crail Bay and the wider Marlborough Sounds.

52 Apart from the Long Island Marine Reserve and Fighting Bay, all of the Marlborough Sounds is available for customary fishing under regulations 20 and 51 of the Amateur Regulations.⁹ A large number of alternative areas are therefore available for customary fishing that may be displaced from the area of coastal permit U150785.

53 I also consider there are alternative areas in Crail Bay and the wider Marlborough Sounds for customary fishers because:

- the silt and clay 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 coastal permit area could be used elsewhere in Crail Bay or some other parts of the Marlborough Sounds;
- there are sufficient alternative areas, particularly for rod/line fishing which can occur amongst mussel farms; and
- the amount of fishing displaced is likely to be relatively small.

Increased cost of fishing

54 I consider the aquaculture activities proposed for the area of coastal permit U150785 will result in minimal, if any, increase in the cost of customary fishing.

55 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, or that most species targeted in the coastal permit area can be taken using alternative fishing methods.

⁹ The Marine Reserves Act 1971 and the Submarine Cables and Pipelines Protection Act 1996.

Likely effect on fishing

56 I consider the likely effect on customary fishing from the aquaculture activities proposed in the area of coastal permit U150785 will be very small.

57 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 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.

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

- not all customary fishing methods would be excluded from the site;
- area inshore of the coastal permit U150785 would become available for customary fishing; and
- alternative areas within Crail Bay and the wider Marlborough Sounds could absorb the customary fishing displaced from the site.

Cumulative effects

59 I consider the effects from the aquaculture activities proposed for the area of coastal permit U150785, added to the effects of existing aquaculture in the Marlborough Sounds, will not have an undue adverse effect on customary fishing.

60 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.

61 As noted, there are approximately 3,700 ha of authorised aquaculture space in the Marlborough Sounds, around 139 ha of which is in Crail 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.

62 As noted, I consider the adverse effects of the area of coastal permit U150785 on customary fishing will be small. 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 customary fishing to become undue.

Conclusion on effects on customary fishing

63 I am satisfied the aquaculture activities proposed within the area of coastal permit U150785 will not have an undue adverse effect on customary fishing because:

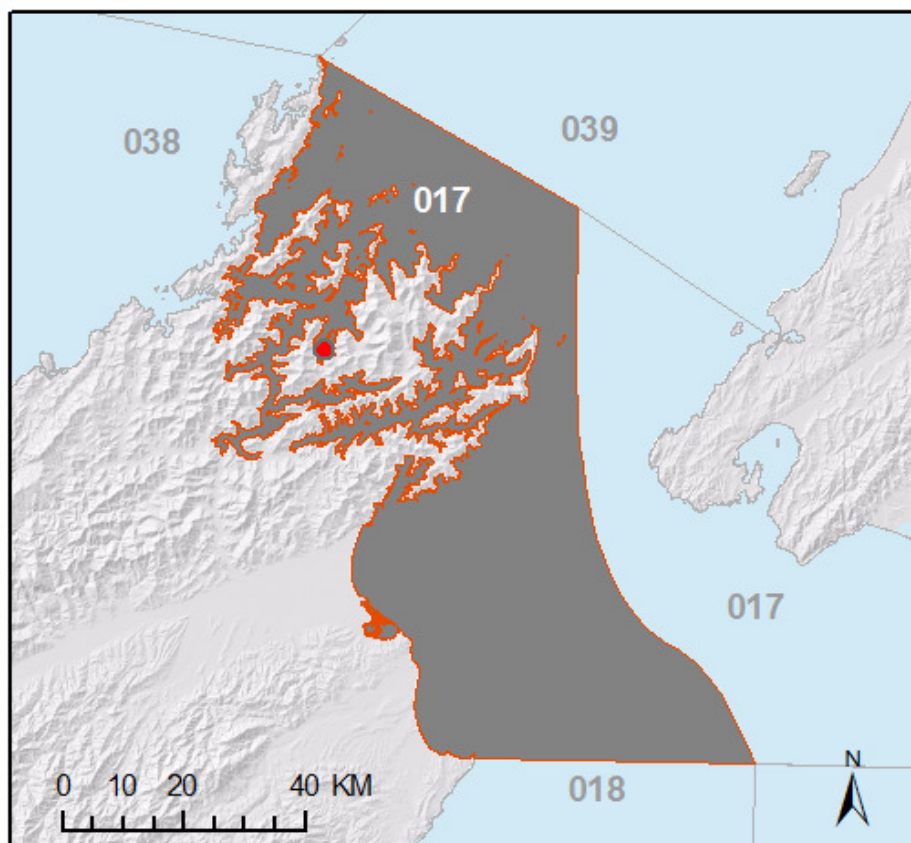
- anchored rod/line fishing and diving could still occur in the area;
- there are other customary fishing areas available inshore of the site and elsewhere in Crail Bay and the wider Marlborough Sounds;

- 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 only small and will not cause the cumulative effect on customary fishing to become undue.

Commercial fishing

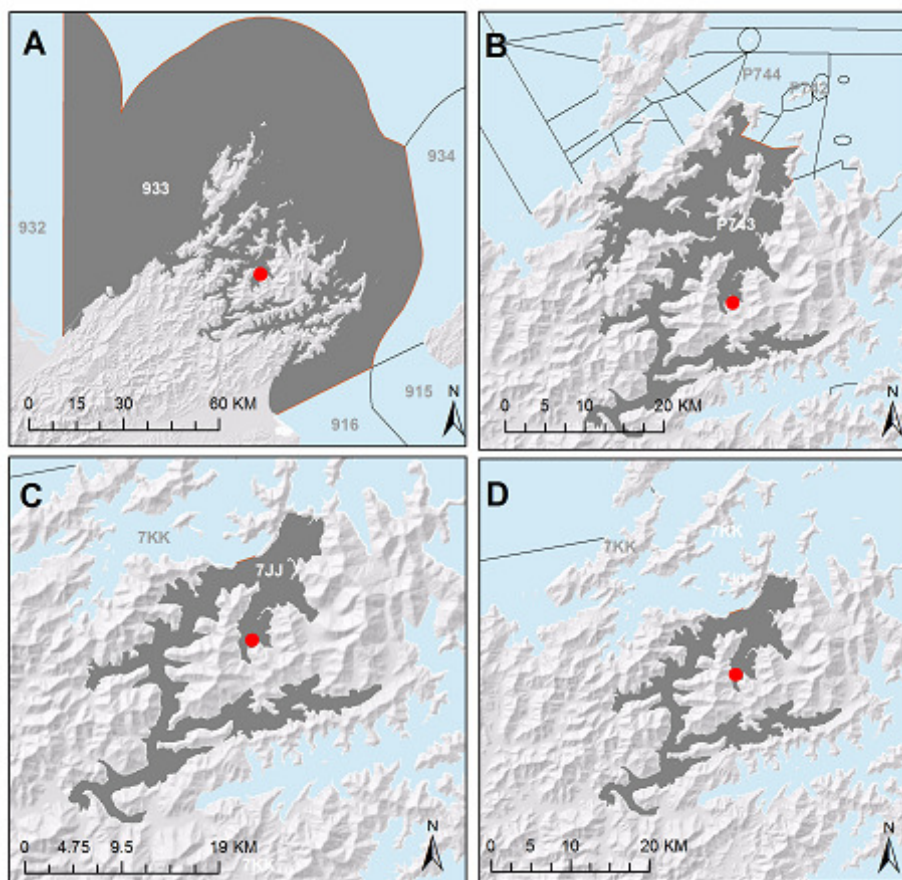
The location of the coastal permit area relative to fishing areas

- 64 I consider the area of coastal permit U150785 is located where there is little, if any, commercial fishing.
- 65 Historically, most commercial fishing has been reported by statistical area. The area of coastal permit U150785 is located in general statistical area 017 (SA017), which extends from Cape Stephens on d'Urville Island to Cape Campbell (4,149 km²) (Map 5).



Map 5: General statistical area SA 017. The red circle marks the approximate location of coastal permit area U150785.

- 66 Scallops, oysters, rock lobster and paua are reported by species-specific statistical areas rather than by general statistical area. The area of coastal permit U150785 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).



Map 6: Species-specific statistical areas that encompass the area of coastal permit U150770 (approximate location as red circle). A – Rock lobster statistical area 934. B – Paua statistical area P743. C – Scallop statistical area 7JJ. D – Oyster statistical area 7JJ.¹⁰

67 Reporting by statistical area only provides coarse-scale information about where commercial fishing occurs. However, since 2007/2008 vessels over 6 m long that have used trawl or line fishing methods¹¹ 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 netting¹² methods have had to report to within 2 nm¹³. 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.

68 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 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

¹⁰ Hillshade imagery produced by Geographx. Sourced from www.koordinates.com under CC-By. <http://creativecommons.org/licenses/by/3.0/nz>.

¹¹ Bottom long lining, surface long lining or trot lines.

¹² Set-netting or drift-netting.

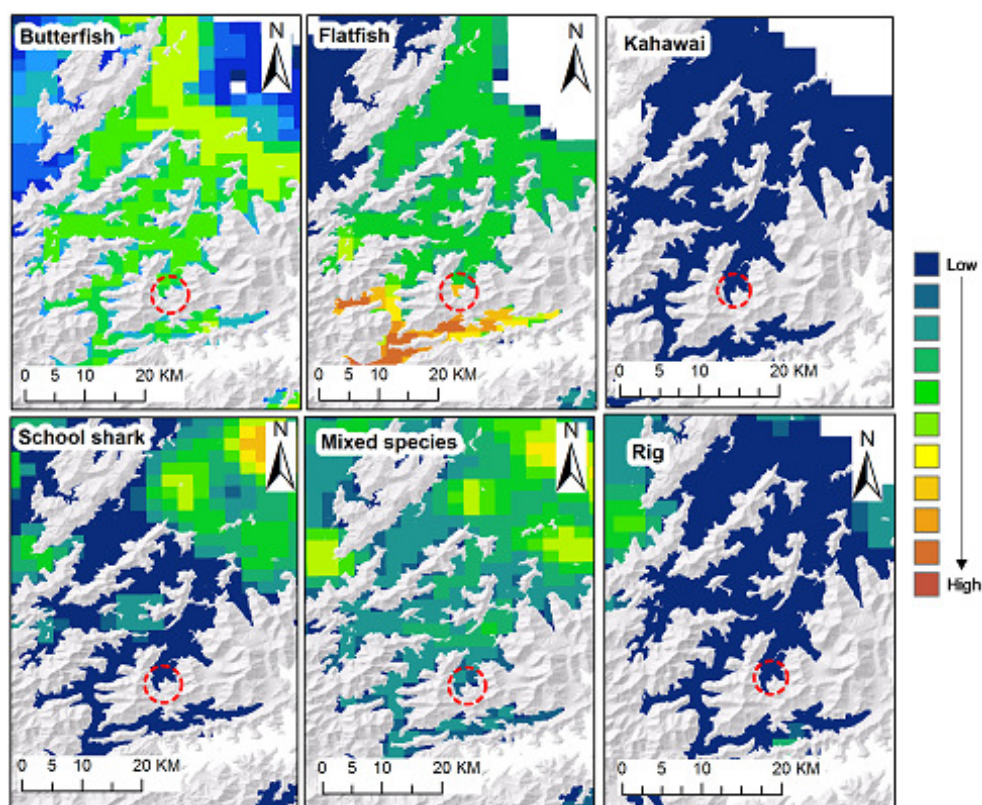
¹³ *Fisheries (Reporting) Regulations 2001*.

about species and information from commercial fishers can also help to determine whether specific types of fishing are likely to occur in an area.

69 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 U150785. Maps 7, 8 and 9 below show the annual average fishing effort per ha (for fishing years 2007/08-2011/12) for overlapping fishery segments with fishing reported by latitude and longitude and by statistical area.

70 Table 3 also gives the relative amounts of 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 7, 8 and 9.

71 As noted in Table 3, the area of coastal permit U150785 is located where Danish seining and.¹⁴ Use of box nets and teichi nets and take of kina, oysters or cockles is also prohibited at the coastal permit area.¹⁵

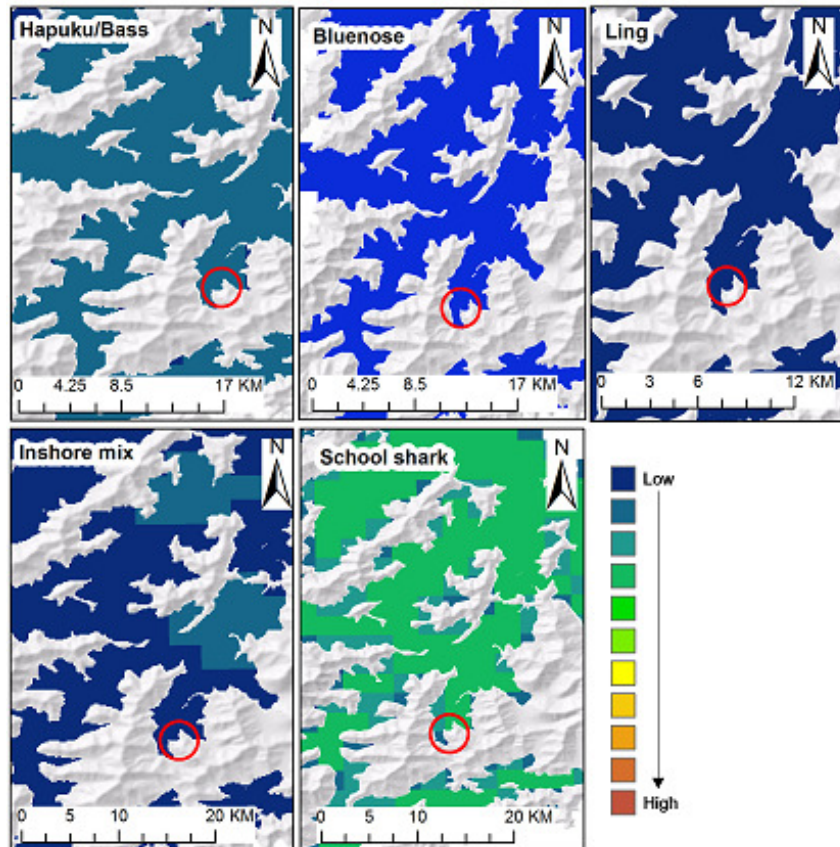


Map 7: Set net fishery segments reported by latitude and longitude and statistical area that overlap the area of coastal permit U150785 (approximate location marked by red circle).¹⁶

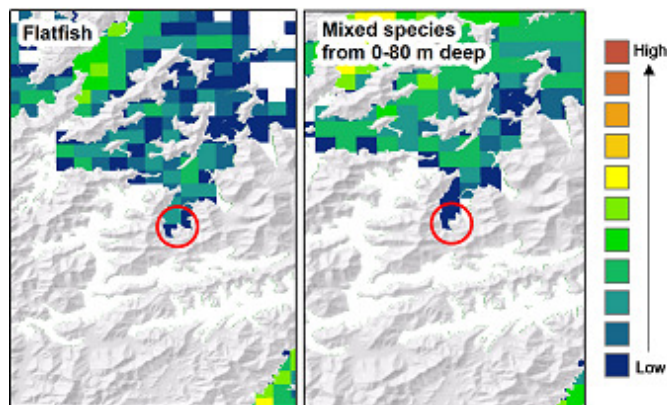
¹⁴ Fisheries (Commercial Fishing) Regulations 2001.

¹⁵ Fisheries (Challenger Area Commercial Fishing) Regulations 1986.

¹⁶ Hillshade imagery produced by Geographx. Sourced from www.koordinates.com under CC-By. <http://creativecommons.org/licenses/by/3.0/nz/>



Map 8: Line fishery segments reported by latitude and longitude and statistical area that overlap the area of coastal permit U150785 (approximate location marked by red circle).¹⁷



Map 9: Trawl fishery segments reported by latitude and longitude and statistical area that overlap the area of coastal permit U150785 (approximate location marked by red circle).¹⁸

¹⁷ Hillshade imagery produced by Geographx. Sourced from www.koordinates.com under CC-By. <http://creativecommons.org/licenses/by/3.0/nz/>

¹⁸ Hillshade imagery produced by Geographx. Sourced from www.koordinates.com under CC-By. <http://creativecommons.org/licenses/by/3.0/nz/>

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)¹⁹	Statistical area	% of fine scale fishing events	Average annual no. fishing days²⁰	% of main fishstock caught in statistical area	Included in the proposed farm assessment?	Rationale for excluding a fishery from proposed farm assessment²¹
Inshore Mix <80m depth, Trawl	017	98%	204	N/A	Yes	
Flatfish (FLA7), Set Net	017	72%	155	6%	Yes	
School shark (SCH7), Long Lining	017	23%	95	14%	Yes	
Flatfish (FLA7), Trawl	017	99%	68	6%	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	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 type of fishing is unlikely to occur in the coastal permit area as no fine scale trawl events were recorded in the vicinity of the site
Scallops (SCA7), Dredge	7JJ	0%	218	47%	No	Available information suggests the new coastal permit area is not in area used for commercial scallop fishing
Ghost shark (GSH7), Trawl	017	99%	214	57%	No	This type of fishing is unlikely to occur in the coastal permit area as no fine scale trawl events were recorded in the vicinity of the site

¹⁹ Main fishstock refers to the species most often caught by the relevant method, it does not include all species taken by that method.

²⁰ Excludes segments with less than 10 days fishing per year.

²¹ 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
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
Butterfish (BUT7), Set Net	017	40%	183	27%	No	Butterfish are a reef dwelling, algae feeding species. The coastal permit area does not overlap these habitats
Red Cod (RCO7), Trawl	017	100%	176	18%	No	This type of fishing is unlikely to occur in the coastal permit area as no fine scale trawl events were recorded in the vicinity of the site
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 typically targeted in depths greater than those of the coastal permit area
Spiny Dogfish (SPD7), Trawl	017	99%	81	24%	No	This type of fishing is unlikely to occur in the coastal permit area as no fine scale trawl events were recorded in the vicinity of the site
Barracouta (BAR7), Trawl	017	99%	62	2%	No	This type of fishing is unlikely to occur in the coastal permit area as no fine scale trawl events were recorded in the vicinity of the site
Snapper (SNA7), Trawl	017	98%	17	10%	No	This type of fishing is unlikely to occur in the coastal permit area as no fine scale trawl events were recorded in the vicinity of the site
Gurnard (GUR7), Trawl	017	99%	62	8%	No	This type of fishing is unlikely to occur in the new coastal permit area as no fine scale trawl events were recorded in the vicinity of the site
Tarakihi (TAR7), Trawl	017	100%	54	17%	No	This type of fishing is unlikely to occur in the coastal permit area as no fine scale trawl events were recorded in the vicinity of the site
Blue cod (BCO7), Hand Lining	017	0%	36	40%	No	Hand lining for blue cod is highly unlikely in the coastal permit area as fishers are unlikely to fish over soft substrate
Surf clams, Dredge (PDO7)	017	0%	34	0%	No	Tuatua 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 and is unlikely to occur 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 and is offshore of an existing marine farm
Blue Warehou (WAR7), Trawl	017	100%	11	6%	No	This type of fishing is unlikely to occur in the new coastal permit area as no fine scale trawl events were recorded in the vicinity of the site

Exclusion of fishing

72 I consider the aquaculture activities proposed in the area of coastal permit U150785 will exclude only a small amount of commercial fishing, if any.

73 With the exception of trawling, the exclusion zone for commercial fishing methods in this assessment (as identified in Table 3) is the new area of coastal permit U150785 (ie, 1.25 ha). This is because the methods could occur immediately adjacent to but not within the new coastal permit area. However, for trawl fishing a 250 m exclusion zone was added to the new coastal permit area to reflect the minimum distance commercial trawl vessels can operate from marine farm structures. Taking into account area already excluded by existing marine farms, the new coastal permit area would exclude 1.84 ha from trawling.

Availability of other fishing areas

74 I consider that any commercial fishing displaced from the area of coastal permit U150785 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.²² Few closures or restrictions in SA017 limit alternative areas for methods permitted in Crail Bay but closures elsewhere in FMA7 limit areas available for set netting in particular. Regardless, I consider alternative areas in Crail Bay and other parts of SA017 could absorb any commercial fishing displaced from the area of coastal permit U150785 because:

- the same methods as those possibly used at the coastal permit area could be used elsewhere in Crail Bay or other parts of SA017;
- the species potentially targeted by commercial fishers within the area of coastal permit U150785 are typically found over silt and clay substrate which is common throughout the rest of Crail Bay and elsewhere in SA017; and
- the area excluded to commercial fishing would be relatively 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 139 ha of authorised aquaculture space in Crail Bay. In SA017 there are approximately 3453 ha of marine farms that make up more than 33% of the 10,300 ha of aquaculture in FMA7.²³ 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 U150785 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

²² 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.

²³ The 10,300 ha of authorised aquaculture space includes recent aquaculture decisions that may still be in the judicial review period.

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

79 I consider the aquaculture activities proposed in the area of coastal permit U150785 will only have a small adverse effect on any commercial fishery, if any.

80 The amount of fishing effort estimated to be displaced by the activities proposed in the area of coastal permit U150785 is negligible. Less than 1 kg of average annual catch is likely to be affected by the proposed aquaculture activities for fishing indicated as assessed 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 zones²⁴ 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 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.

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 U150785 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 U150785, the cumulative effect has previously been assessed as a maximum of approximately 1.6% effect on any fishery and not undue.

86 As noted, the coastal permit area would affect less than 1 kg 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 U150785 will not have an undue adverse effect on commercial fishing because:

²⁴ The “exclusion zone” used for the methods assessed was the new coastal permit area (i.e. 1.25 ha).

- there are alternate fishing grounds in Crail Bay, SA017, and the relevant QMAs or FMA7;
- 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 only be small; and
- 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

88 I am satisfied – based on all relevant information available to me – the activities proposed for coastal permit area U150785 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 U150785 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 1.25 ha comprising an area with the following coordinates (NZTM2000):

<u>Point</u>	<u>Easting</u>	<u>Northing</u>
1	1681576.195	5446525.570
2	1681613.145	5446510.240
3	1681560.990	5446456.091
4	1681558.541	5446454.781
5	1681482.546	5446271.269
6	1681425.275	5446294.500
7	1681484.745	5446406.890

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 this 4 May 2016

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