



28 January 2016

AQUACULTURE DECISION REPORT — CROISILLES MUSSELS LIMITED, COASTAL PERMIT U150770, RED CLAY POINT, CROISILLES HARBOUR

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 U150770 will not have an undue adverse effect on:

- recreational fishing — for the reasons set out in this report and summarised in paragraph 44;
- customary fishing — for the reasons set out in this report and summarised in paragraph 66;
- commercial fishing — for the reasons set out in this report and summarised in paragraph 90.

AQUACULTURE DECISION REQUEST DETAILS

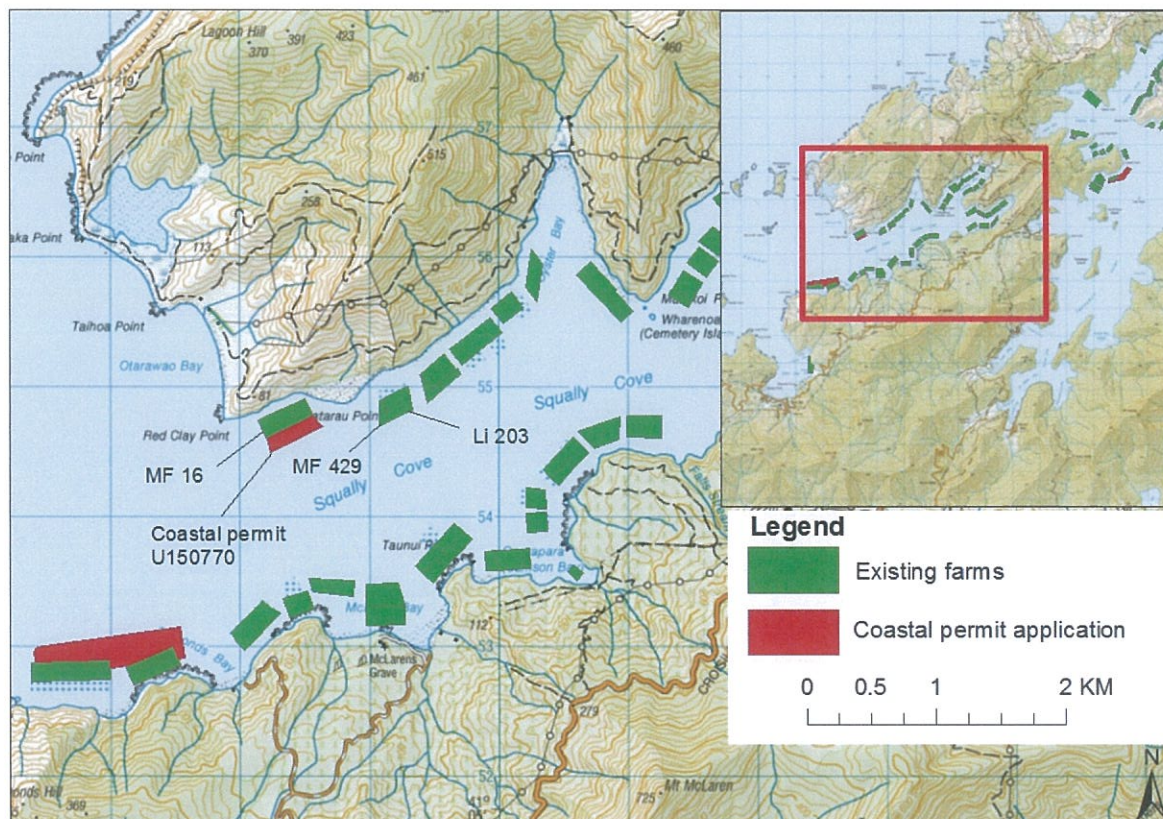
Regional Council:	Marlborough District Council (MDC)
Date of Request:	10 December 2015
Coastal Permit Applicant:	Croisilles Mussels Limited
Location of marine farm site:	Red Clay Point, Croisilles Harbour
Size of farm:	4.78 hectares (ha) of new space to relocate part of marine farm permit 16 (MF 16) with relinquishment of 4.78 ha of MF 16
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>), cockles (<i>Austrovenus stuchburyi</i> and algae (<i>Ulva lactuca</i> , <i>Macrocystis pyrifera</i> , <i>Ecklonia radiata</i> , <i>Lessonia variegata</i> , <i>Pterocladia lucida</i> , <i>Gracilaria sp.</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

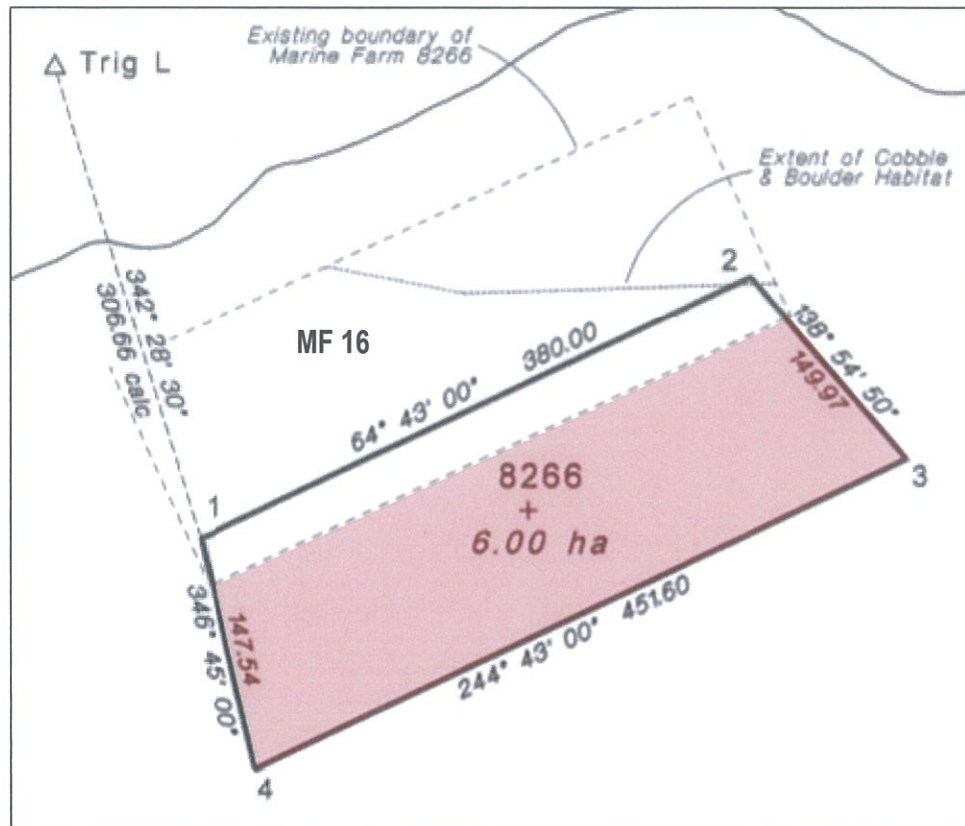
3 Coastal permit U150770 applies to an area at Red Clay Point, Croisilles Harbour (Map 1). Coastal permit U150770 overlaps 1.22 ha of MF 16 to renew and partially relocate the site. The remainder of MF 16 (4.78 ha) will be relinquished (Map 2).

4 Croisilles Harbour is within Fisheries Management Area 7 (**FMA7**) (Map 3). Aside from marine farm MF 16 the closest existing farm to the area of coastal permit U150770 is the site of marine farm permit 429 (**MF 429**) and marine farm licence 203 (**Li 203**), around 430 m to the east (Map 1).

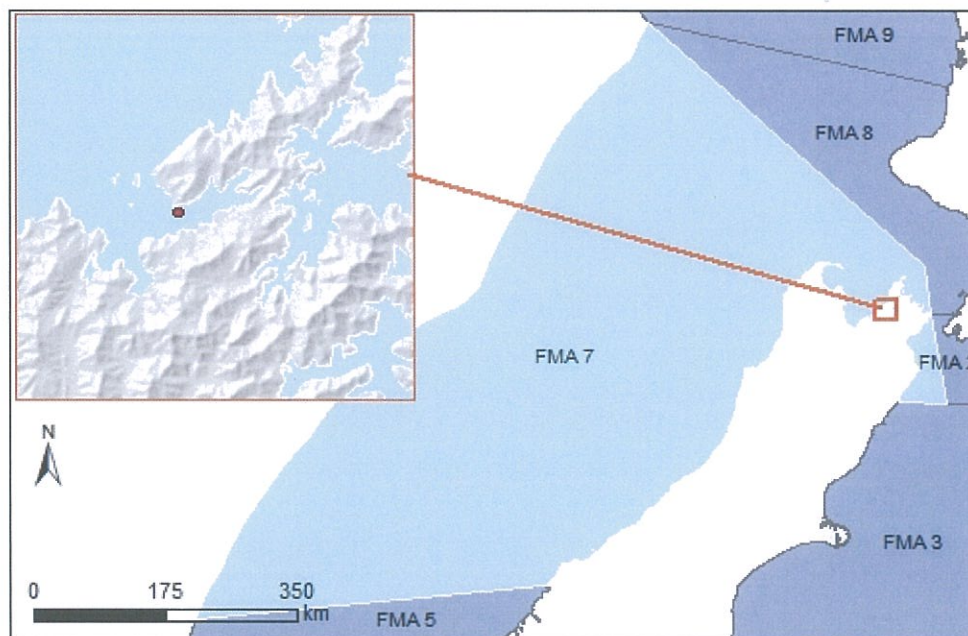


Map 1²: Location of the area authorised by coastal permit U150770 at Red Clay Point, Croisilles Harbour (MPI, 2015).

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 U150770 relative to MF 16. The area shaded red is new area proposed by coastal permit U150770



Map 3: Location of the area of coastal permit U150770 (red circle) within FMA7.

5 The area of coastal permit U150770 is around 130 m from shore at its closest point and ranges from 5-9 m deep. A benthic survey by Davidson (2015) showed the substrate in the coastal permit area is predominantly silt and clay with mussel shell debris and some natural broken shell. No hard substrate (eg, reef or cobble) was observed.

Structures

6 The area of coastal permit U150770 will contain 16 longlines that are 167 m long and spaced about 13.5 m apart (Figure 1).

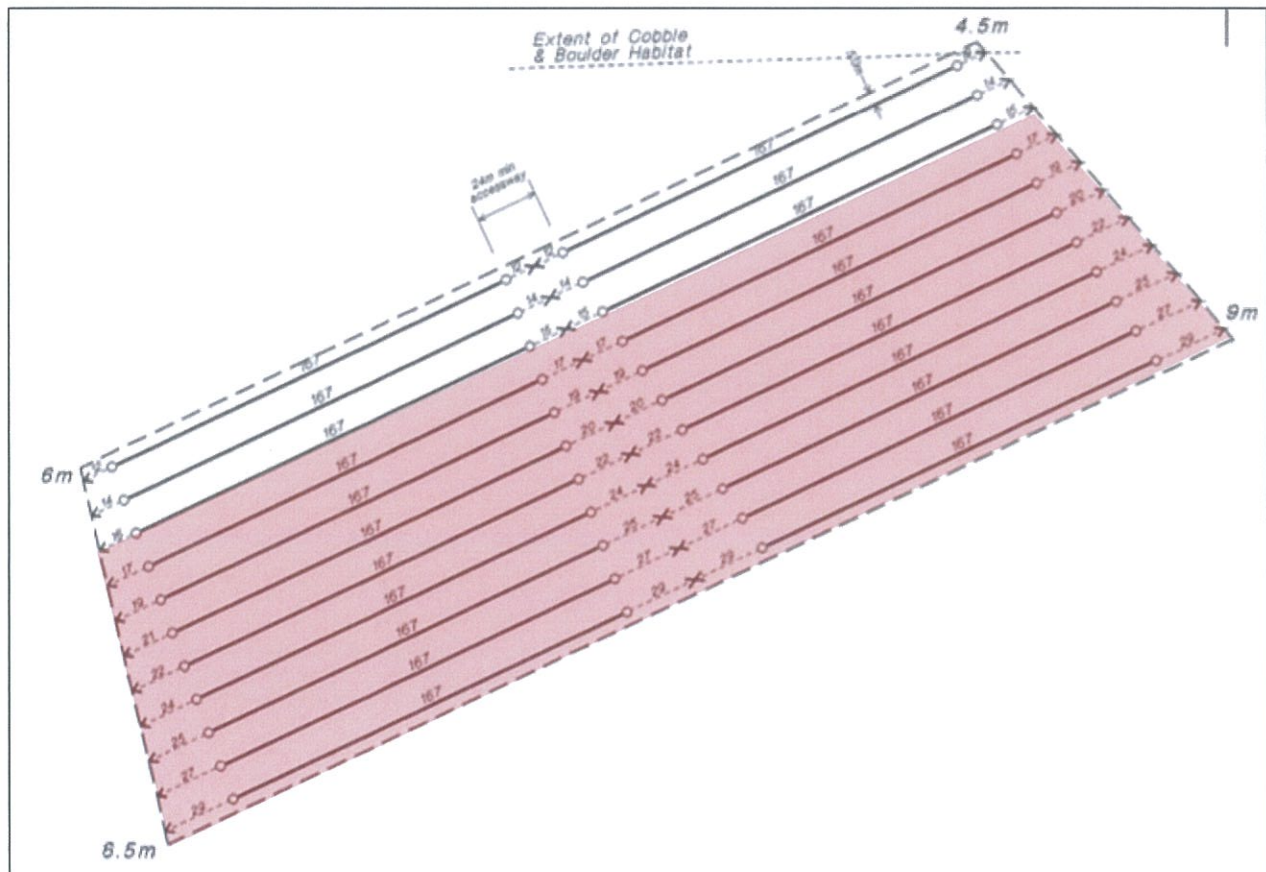


Figure 1: Structures diagram for coastal permit U150770.³ The area shaded red is new area proposed. The white area is area already authorised by MF 16.

Input from stakeholders

7 MPI publicised the application for coastal permit U150770 on its website on 24 September 2015. MPI also wrote to Challenger Scallop Enhancement Company. 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. The submission closing date for Challenger Scallop Enhancement Company was 30 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

³ Sourced from the MDC's decision on coastal permit application U150770.

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 Act⁴ requires me, in making an aquaculture decision, to have regard to any:

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

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;

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

- (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 U150770.

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.

23 This assessment relates to the 4.78 ha of new marine farming space authorised by coastal permit U150770.

Recreational fishing

Location of the coastal permit area relative to fishing areas

24 I consider the area of coastal permit U150770 is located where there is a relatively large 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, tarakihi, barracouta, kingfish, flounder, rig and monkfish are the main species targeted and/or caught.

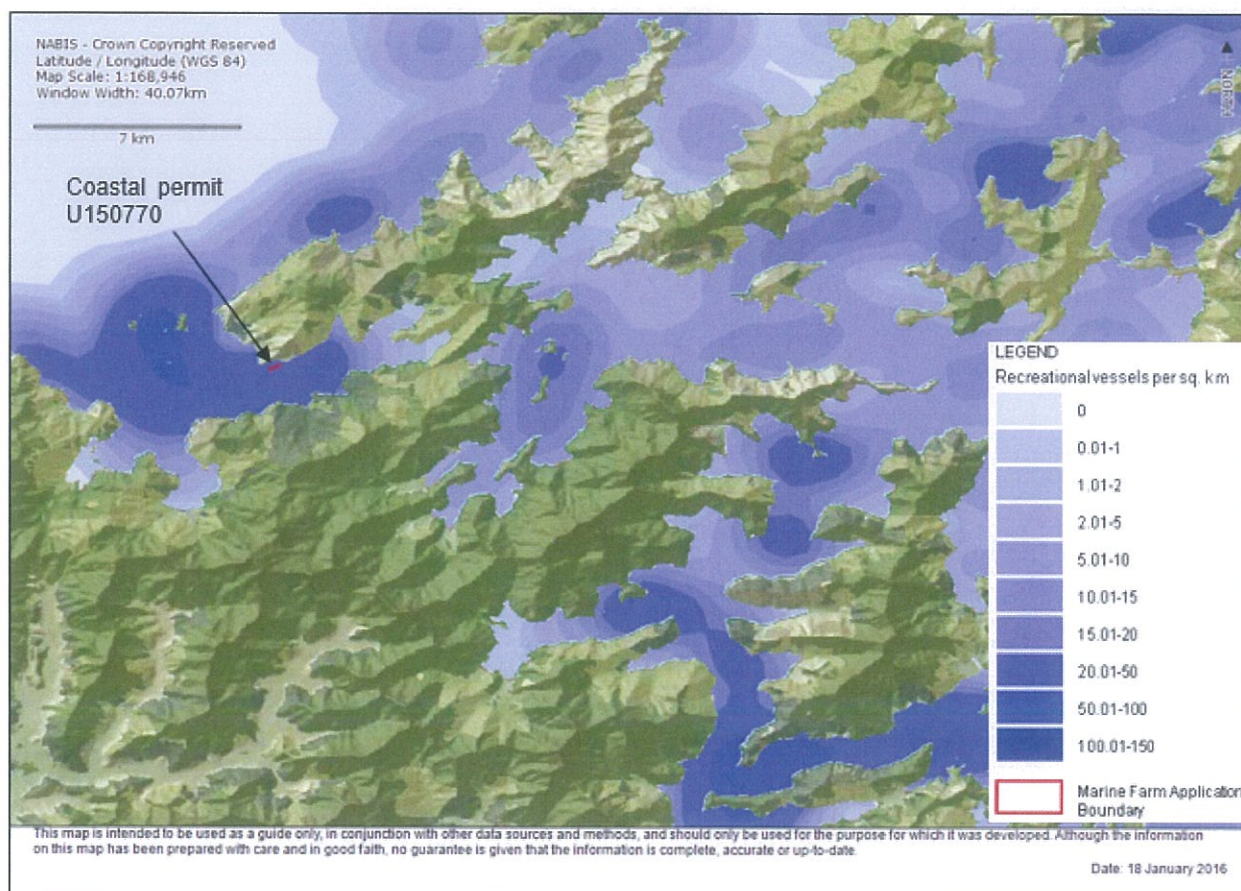
25 Available information on recreational fishing activity in Croisilles Harbour comprises:

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

26 No submissions on the area of coastal permit U150770 were received from recreational fishers. However, previous submissions⁵ received on marine farm applications in Croisilles Harbour suggest this wider area is very important for recreational fishing and receives a lot of fishing pressure.

27 Aerial survey results from the most recent recreational fishing survey of the Marlborough Sounds (in 2006) suggest there is a relatively large amount of recreational fishing at the area of coastal permit U150770. Of the diarised fishing trips sampled in the 2006 survey, 14% occurred in the survey zone containing Croisilles Harbour.

⁵ Information in submissions to the Area-by-Area consultation process for Croisilles Harbour and more recent marine farm applications has been used in preparing this decision paper.



Map 4. Aerial survey results from 2006 of recreational fishing intensity (Davey *et al*, 2008).⁶

28 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 Croisilles Harbour also give an idea of the fishing activity that may occur in the area of coastal permit U150770. Table 1 below summarises my assessment of the main methods used and species caught and targeted in the area of coastal permit U150770 based on the recreational fishing survey, submissions, the benthic survey (Davidson, 2015) and other sources.

29 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, tarakihi, barracouta, kingfish, flounder rig and monkfish are the main species targeted or caught.

⁶ Map sourced from NABIS (MPI, 2016).

Table 1: Recreational fishing methods used and species caught and targeted at the area of coastal permit U150770 based on the available information.

	Davey <i>et al.</i> (2008) results for the survey zone encompassing Croisilles Harbour	Submissions	Other information	My assessment
Methods used	Rod/line from private boat (43% of trips), set netting (28% of trips), diving from private boat (18% of trips), longline from private boat (5% of trips), rod/line from charter boat, drag netting, rod fishing from shore, diving from charter boat, and flounder spearing (each less than 2% of trips)	Set netting, diving, dredging and rod/line fishing	The silt, clay and shell hash in the coastal permit area is suitable for most of the methods identified as occurring in Croisilles Harbour by Davey <i>et al.</i> (2008) Depths at the site are greater than those used for drag netting/beach seining, hand gathering and flatfish spearing No species that are typically taken by dredging were observed at the coastal permit area by Davidson (2015) The new area is seaward of existing marine farm structures	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 Shore-based fishing (eg, by rod/line, drag netting or flatfish spearing) is not possible in the area of coastal permit U150770
Species caught (top 10)	Scallops (6, 325), blue cod (315), snapper (137), lobster (134), kahawai (25), gurnard (21), barracouta (19), sea perch (19), tarakihi (19), blue moki (12)	Flounder, rig, monkfish (stargazer), scallops, snapper	Of the most caught species reported by Davey <i>et al.</i> (2008) it is unlikely that blue cod, sea perch, lobster or blue moki are found over the algae-free, silt, clay and shell hash substrate at the coastal permit area No scallops or oysters were observed by Davidson (2015)	Snapper, kahawai, gurnard, barracouta, tarakihi, flounder, rig and monkfish are likely to be the most commonly caught species at the coastal permit area
Species targeted (top 10)	Scallops (118), blue cod (109), snapper (76), lobster (39), gurnard (18), kahawai (11), blue moki (8), tarakihi (6), kingfish (4), flounder (2)	Flounder, rig, monkfish (stargazer), scallops, snapper	Of the target species reported by Davey <i>et al.</i> (2008) it is unlikely that blue cod, lobster and blue moki, are found over the algae-free, silt, clay and shell hash substrate at the coastal permit area No scallops were observed by Davidson (2015)	Snapper, gurnard, kahawai, tarakihi, kingfish, flounder, rig and monkfish are likely to be the most commonly targeted species at the coastal permit area

Exclusion of fishing

30 I consider the aquaculture activities proposed for the area of coastal permit U150770 will exclude some of the recreational fishing methods that may be used in the area. However, I note the exclusion effects on recreational fishing are unlikely to increase given coastal permit U150770 would merely relocate the existing farm further from shore.

31 Of the recreational fishing likely to occur in the area of coastal permit U150770 it is likely that trolling, drift fishing, set netting and longlining would be excluded. Anecdotal information from recreational fishers⁷ suggests 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.

32 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 moving the existing marine farm structures further offshore will decrease exclusion effects on some methods which are often used near the shore (eg, drift fishing).

Availability of other fishing areas

33 I consider there are other areas available for recreational fishing in Croisilles Harbour and the wider Marlborough Sounds.

34 The Marlborough Sounds region is subject to area closures and various species and method restrictions, particularly for set netting and longlining.⁸ These restrictions limit the availability of alternative recreational fishing areas outside of Croisilles Harbour. However, I consider alternative areas in Croisilles Harbour and elsewhere in the Marlborough Sounds could absorb fishing by most fishers who fish the area of coastal permit U150770 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;
- area inshore of the coastal permit U150770 would become available for fishing with relocation of the existing farm structures;
- the same methods as those used at the site could be used elsewhere in Croisilles Harbour and some 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

35 I consider the aquaculture activities proposed for the area of coastal permit U150770 will result in a minimal, if any, increase in the cost of recreational fishing.

36 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.

⁷ FMA7 Recreational Fishing Forum, 27 May 2013.

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

Likely effect on fishing

37 I consider the likely effect on recreational fishing from the aquaculture activities proposed in the area of coastal permit U150770 will be small.

38 There is little quantitative data available on recreational catch taken from the coastal permit area, Croisilles Harbour 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.

39 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;
- area inshore of coastal permit U150770 would become available for fishing; and
- alternative areas within Croisilles Harbour and the wider Marlborough Sounds could absorb the recreational fishing displaced from the site.

Cumulative effects

40 I consider effects from the aquaculture activities proposed for the area of coastal permit U150770, added to the effects of existing aquaculture in the Marlborough Sounds, will not have an undue adverse effect on recreational fishing.

41 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.

42 I acknowledge there is already a large amount (approximately 3,700 ha) of authorised aquaculture space in the Marlborough Sounds. Approximately 190 ha of this authorised aquaculture space is in Croisilles Harbour. 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.

43 As noted, I consider the adverse effects of the area of coastal permit U150770 on recreational fishing will be small, particularly as it would merely result in relocation of existing marine farm structures. Subsequently, taking into account the effects of the existing authorised aquaculture areas, I consider the additional effects from the coastal permit area will not cause the cumulative effect on recreational fishing to become undue.

Conclusion on effects on recreational fishing

44 I am satisfied the aquaculture activities proposed within the area of coastal permit U150770 will not have an undue adverse effect on recreational fishing because:

- anchored rod/line fishing and diving could still occur in the area;
- there are other recreational fishing areas available inshore of the site and elsewhere in Croisilles Harbour 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

45 I consider the area of coastal permit U150770 is located where there could be customary fishing for snapper, kahawai, flatfish, rig, red cod, school shark, spiny dogfish, elephant fish, smooth skate, gurnard, yellow-eyed mullet and monkfish, most likely by set netting and diving.

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

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

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

49 From January 2009 to September 2015 no customary authorisations with site-specific information were for Red Clay Point. However, three customary authorisations for Croisilles Harbour was issued for take of scallops, oysters and paua. Customary authorisations for the wider Marlborough Sounds that did not rule out take from Croisilles Harbour were also issued for collection of a large number of other species.

50 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 U150770. The information is based on submissions, customary authorisations, and the benthic survey (Davidson, 2015) of the site and other information. As shown, I consider it likely that set netting and diving are the main methods used and that snapper, kahawai, flatfish, rig, red cod, school shark, spiny dogfish, elephant fish, smooth skate, gurnard, yellow-eyed mullet and monkfish are the main species targeted or caught.

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

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

Table 2: Customary fishing methods used and species caught or targeted at the area of coastal permit U150770 based on submissions, customary authorisations, the benthic survey of the site and other information.

Source of information				
Methods used	Submissions	Customary authorisations	Other information	My assessment
	Set/gill netting, diving, and possibly dredging	N/A	<p>No species that are typically taken by dredging were observed at the coastal permit area by Davidson (2015)</p> <p>Recreational fishers commonly use stationary and mobile rod/line methods and longlining so customary fishers may also use these methods</p>	Set netting and diving are the most commonly used methods at the site. Some stationary and mobile rod/line fishing and longlining may also occur
Species caught or targeted	Rig, flounder, monkfish, and possibly scallops	Scallops, oysters, paua, snapper, kahawai, blue cod, rock lobster, kina, butterfish, flatfish, blue moki, rig, green-lipped mussels, pipi, hapuku, red cod, school shark, spiny dogfish, elephant fish, smooth skate, tuatua, gurnard and yellow-eyed mullet	<p>It is unlikely that paua, blue cod, rock lobster, kina, butterfish, blue moki or green-lipped mussels are found over the reef and algae-free substrate at the coastal permit area</p> <p>Tuatua and pipi are found in beach environments</p> <p>No scallops or oysters were observed by Davidson (2015)</p> <p>The coastal permit area is likely to be too shallow for fishing for hapuku</p>	<p>Snapper, kahawai, flatfish, rig, red cod, school shark, spiny dogfish, elephant fish, smooth skate, gurnard, yellow-eyed mullet and monkfish are likely to be the most commonly caught species at the coastal permit area</p>

Exclusion of fishing

51 I consider the aquaculture activities proposed for the area of coastal permit U150770 will exclude some of the customary fishing methods that may be used in the area.

52 Of the customary fishing methods likely to occur in the coastal permit area it is likely that set netting, longlining, 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.

53 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 moving the existing marine farm structures further offshore will decrease exclusion effects on some methods which are often used near the shore (eg, drift fishing).

Availability of other fishing areas

54 I consider there are some alternative areas for customary fishing in Croisilles Harbour and the wider Marlborough Sounds.

55 Apart from the Long Island Marine Reserve and Fighting Bay, all of the Marlborough Sounds is available for customary fishing under regulations 50 and 51 of the Amateur Regulations.¹¹ A large number of alternative areas are therefore available for customary fishing that may be displaced from the area of coastal permit U150770.

56 I also consider there are alternative areas in Croisilles Harbour 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;
- area inshore of coastal permit U150770 would become available for fishing with relocation of the existing farm structures;
- the same methods as those used at the site could be used elsewhere in Croisilles Harbour and some 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

57 I consider the aquaculture activities proposed for the area of coastal permit U150770 will result in a minimal, if any, increase in the cost of customary fishing.

58 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.

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

Likely effect on fishing

59 I consider the likely effect on customary fishing from the aquaculture activities proposed in the area of coastal permit U150770 will be relatively small.

60 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.

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

- not all recreational customary fishing methods would be excluded from the site;
- area inshore of the coastal permit U150770 would become available for fishing; and
- alternative areas within Croisilles Harbour and the wider Marlborough Sounds could absorb the customary fishing displaced from the site.

Cumulative effects

62 I consider the effects from the aquaculture activities proposed for the area of coastal permit U150770, added to the effects of existing aquaculture in the Marlborough Sounds, will not have an undue adverse effect on customary fishing.

63 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.

64 As noted, there are approximately 3,700 ha of authorised aquaculture space in the Marlborough Sounds, around 190 ha of which is in Croisilles Harbour. 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.

65 As noted, I consider the adverse effects of the area of coastal permit U150770 on customary fishing will be small, particularly as it would merely result in relocation of existing marine farm structures. 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

66 I am satisfied the aquaculture activities proposed within the area of coastal permit U150770 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 Croisilles Harbour and the wider Marlborough Sounds;

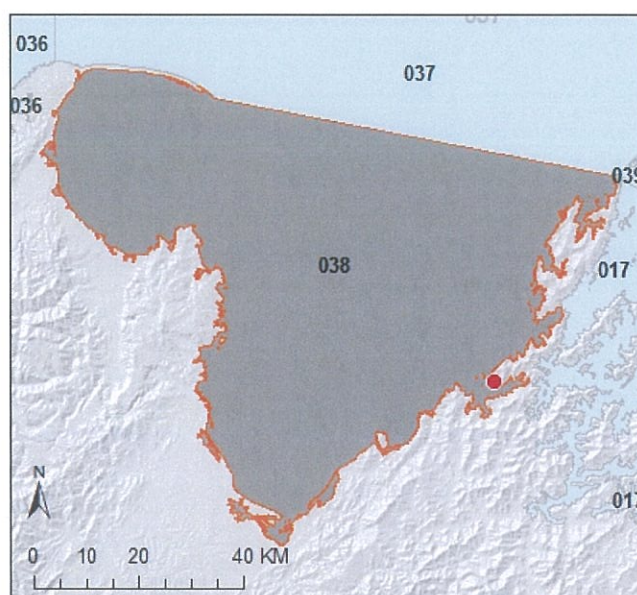
- occupation of the coastal permit area will result in a minimal, if any, increase in the cost of customary fishing; and
- the additional adverse effect of the coastal permit area on recreational fishing is only small and will not cause the cumulative effect on customary fishing to become undue.

Commercial fishing

The location of the coastal permit area relative to fishing areas

67 I consider the area of coastal permit U150770 is located where there is little, if any, commercial fishing.

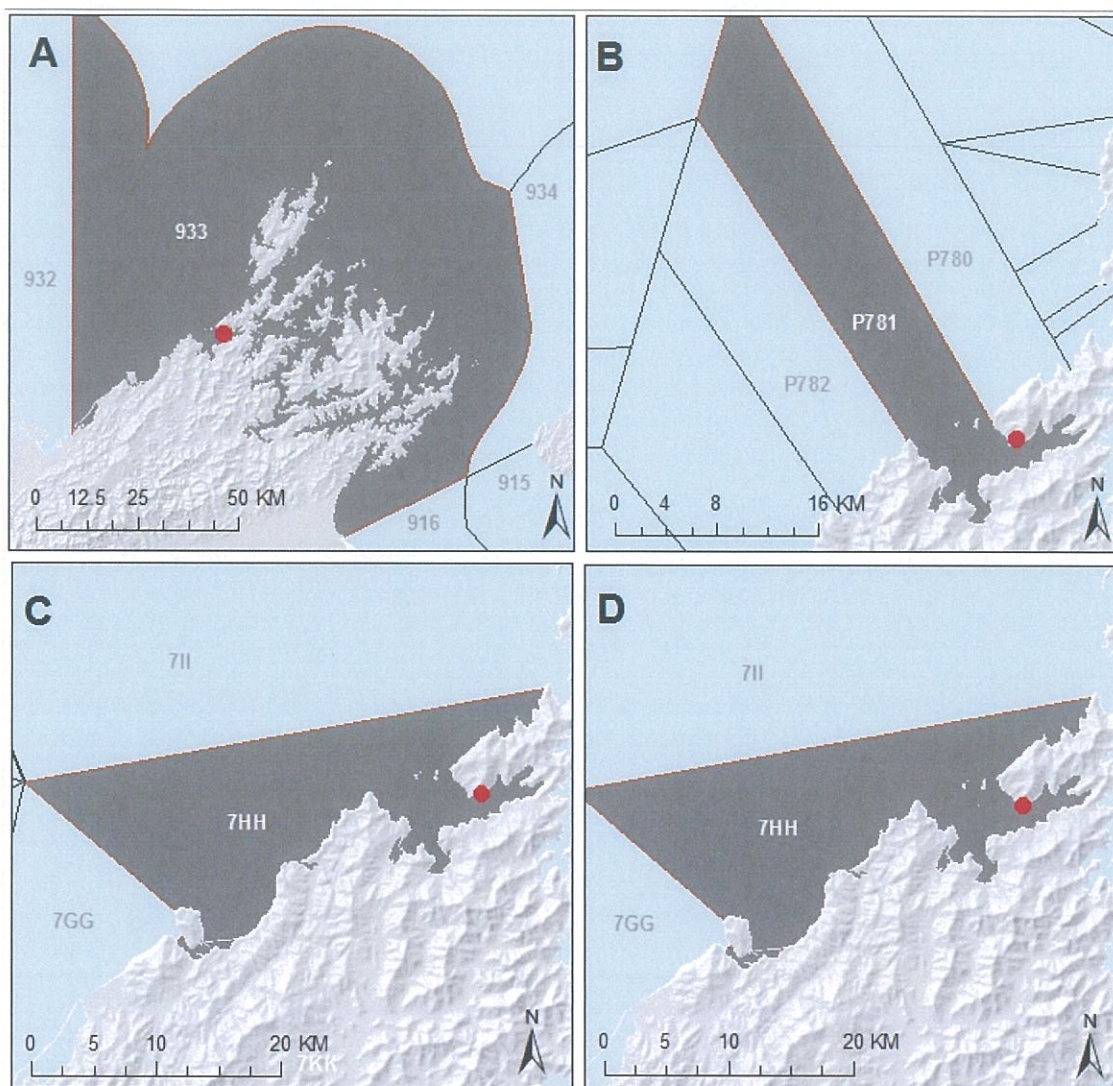
68 Historically, most commercial fishing has been reported by statistical area. The area of coastal permit U150770 is located in general statistical area 038 (SA038), which extends from Farewell Spit to Cape Stephens (4,915 km²) (Map 5).



Map 5: General statistical area SA038. The red circle marks the approximate location of coastal permit area U150770.¹²

69 Scallops, oysters, rock lobster and paua are reported by species-specific statistical areas rather than by general statistical area. The area of coastal permit U150770 falls within rock lobster statistical area 933, paua statistical area P781, scallop statistical area 7HH and oyster statistical area 7HH (Maps 6A, 6B, 6C and 6D).

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



Map 6: Species-specific statistical areas that encompass the area of coastal permit U150770 (approximate location as red circle). A – Rock lobster statistical area 933. B – Paua statistical area P781. C – Scallop statistical area 7HH D – Oyster statistical area 7HH.¹³

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

71 The location of fishing by vessels less than 6 m long within SA038 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,

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

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

¹⁵ Set-netting or drift-netting.

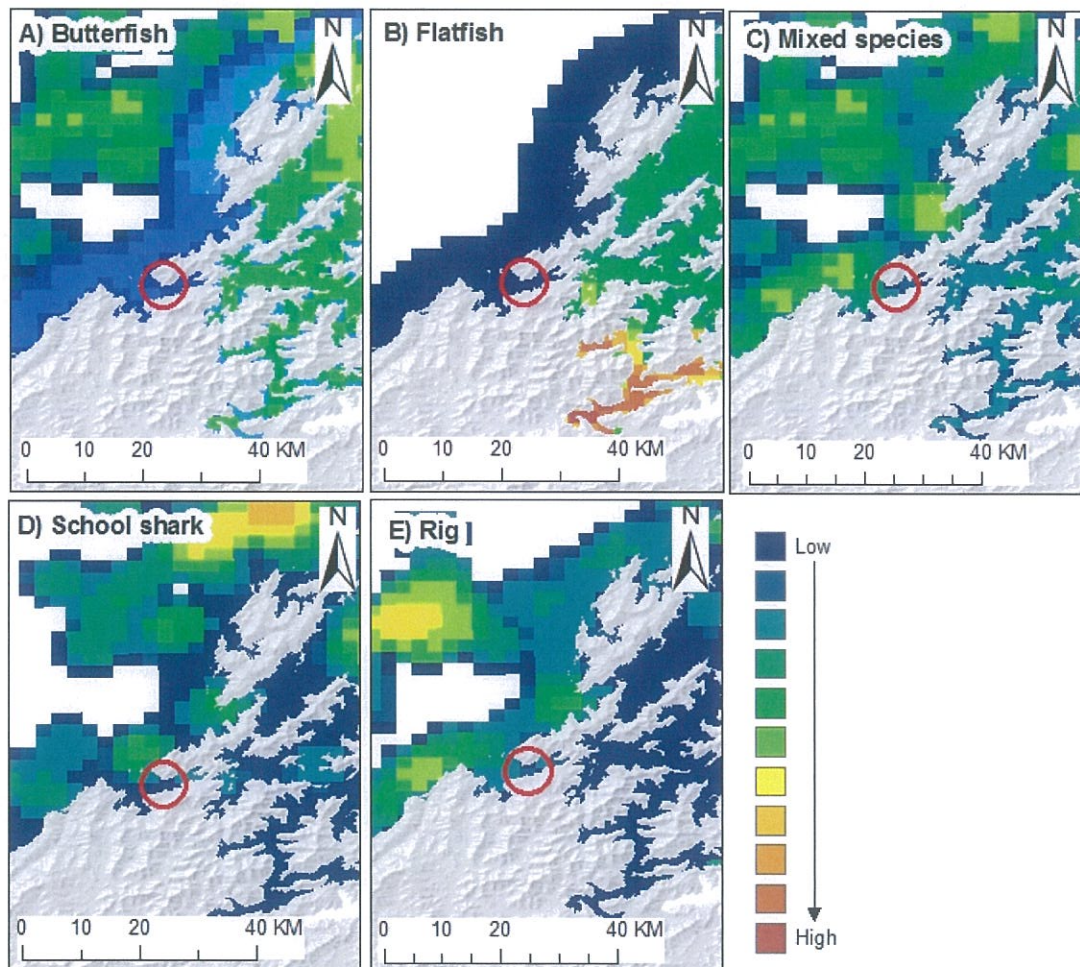
¹⁶ *Fisheries (Reporting) Regulations 2001.*

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

72 Table 3 below lists the main fishery segments known to occur in SA038 and summarises my assessment of which fishery segments are likely to overlap the area of coastal permit U150770. Maps 7A, 7B, 7C, 7D and 7E 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.

73 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 7A, 7B, 7C, 7D and 7E.

74 As noted in Table 3, set netting for finfish and dredging, diving and other methods for taking non-fish species are the only commercial fishing methods permitted in Croisilles Harbour.¹⁷



Map 7: Set net fishery segments reported by latitude and longitude and statistical area that overlap the area of coastal permit U150770 (approximate location marked by red circle).¹⁸

¹⁷ Fisheries (Challenger Area Commercial Fishing) Regulations 1986.

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) ^A	Statistical area	% reported by position	Average annual no. fishing days ^B	% of main fishstock caught in statistical area	Potentially affected by coastal permit?	Rationale for excluding fishery from proposed farm assessment
Inshore Mix <80m depth, Trawl	038	99%	1017	N/A	No	Finfish take by trawling is not permitted in Croisilles Harbour.
Rock Lobster (CRA5), Lobster Pot	933, 932	0%	733	3%	No	Rock lobsters are associated with reef habitat – this habitat is not in the coastal permit area.
Flatfish (FLA7), Trawl	038	99%	610	34%	No	Finfish take by trawling is not permitted in Croisilles Harbour.
Red Cod (RCO7), Trawl	038	97%	366	17%	No	Finfish take by trawling is not permitted in Croisilles Harbour.
Paddle Crab (PAD7), Pot	038	0%	317	90%	No	Information from fishery officers suggests no potting for paddle crabs occurs in Croisilles Harbour.
Snapper (SNA7), Trawl	038	99%	229	77%	No	Finfish take by trawling is not permitted in Croisilles Harbour.
Gurnard (GUR7), Trawl	038	100%	204	28%	No	Finfish take by trawling is not permitted in Croisilles Harbour.
Barracouta (BAR7), Trawl	038	99%	176	3%	No	Finfish take by trawling is not permitted in Croisilles Harbour.
Flatfish (FLA7), Danish Seine	038	1%	174	34%	No	Finfish take by Danish seining is not permitted in Croisilles Harbour.
Mixed Fishery, Danish Seine	038	1%	123	N/A	No	Finfish take by Danish seining is not permitted in Croisilles Harbour.
Spiny Dogfish (SPD7), Trawl	038	99%	108	8%	No	Finfish take by trawling is not permitted in Croisilles Harbour.
Cockles (COC7A), Mechanical Harvest	038	0%	102	100%	No	Commercial cockle fishing only occurs in a couple of very discrete areas that do not include Croisilles Harbour.
Rig (SPO7), Set Net	038	95%	95	44%	Yes	Rig may be found in the habitat of the coastal permit area and a submission on another site says rig can be caught in Croisilles Harbour.
Mixed Fishery, Set Net	038	95%	58	N/A	Yes	As this fishery includes a range of species MPI cannot be certain fishing does not occur in the coastal permit area.
Blue Warehau (WAR7), Trawl	038	100%	38	10%	No	Finfish take by trawling is not permitted in Croisilles Harbour.
Albacore (ALB1), Trawl	038	0%	36	0%	No	Finfish take by trawling is not permitted in Croisilles Harbour.
Paua (PAU7), Diving	765, 766, 767, 768, 769, 771, 772, 773	0%	31	3%	No	Paua are associated with reef habitat – this habitat is not in the coastal permit area.

Table 3 continued:

Geoduck (PZL7), Diving	038	0%	25	71%	No	Commercial geoduck fishing only occurs in a couple of very discrete areas that do not include Croisilles Harbour.
School shark (SCH7), Set Net	038	95%	22	11%	Yes	Given the seasonal distribution of school sharks and their potential nursery grounds this type of fishing could overlap with the coastal permit area.
Sea cucumber (SCC7B), Diving	038	0%	21	84%	Yes	This type of fishing could occur in the coastal permit area as this species can be found in the habitat of the coastal permit area.
Blue Cod (BCO7), Pot	038	0%	19	24%	No	Finfish take by potting is not permitted in Croisilles Harbour.
School shark (SCH7), Long Line	038	46%	16	11%	No	Finfish take by long lining is not permitted in Croisilles Harbour.
Other species, Potting	038	0%	14	N/A	No	Finfish take by potting is not permitted in Croisilles Harbour.
Butterfish (BUT7), Set Net	038	30%	13	4%	No	Butterfish are associated with reef and kelp habitat – this habitat is not in the coastal permit area.
Other, Diving	038	0%	12	N/A	No	Diving is usually carried out in reef areas - this habitat is not in the coastal permit area.
Tarakihi (TAR7), Trawl	038	98%	11	4%	No	Finfish take by trawling is not permitted in Croisilles Harbour.

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

^B Excludes segments with less than five days fishing per year.

Exclusion of fishing

75 I consider the aquaculture activities proposed in the area of coastal permit U150770 will exclude only a small amount of commercial fishing, if any.

76 For the purpose of assessing commercial fishing methods, the exclusion zone for fishing methods included in this assessment is deemed to be the new coastal permit area (ie, 4.78 ha). I consider commercial set netting could occur immediately adjacent to but not within the area of coastal permit U150770.

Availability of other fishing areas

77 I consider that any commercial fishing displaced from the area of coastal permit U150770 could occur in other areas.

78 Commercial fishing closures or restrictions in the relevant QMAs or FMA7 limit the availability for alternative areas for commercial fishing.¹⁹ Few closures or restrictions in SA038 limit alternative areas for methods permitted in Croisilles Harbour (ie, set netting for taking finfish and dredging, diving and other methods for taking non-finish species) but closures elsewhere in FMA7 limit areas available for set netting in particular. Regardless, I consider alternative areas in Croisilles Harbour and other parts of SA038 could absorb any commercial fishing displaced from the area of coastal permit U150770 because:

- the same methods as those possibly used at the coastal permit area could be used elsewhere in Croisilles Harbour or other parts of SA038;
- the species potentially targeted by commercial fishers within the area of coastal permit U150770 are typically found over silt and clay substrate which is common throughout the rest of Croisilles Harbour and elsewhere in SA038; and
- the area excluded to commercial fishing would be relatively small compared to the available area.

79 I recognise areas of authorised aquaculture space have reduced the availability of other commercial fishing areas over time. As noted, there are around 180 ha of authorised aquaculture space in Croisilles Harbour. In SA038 there are approximately 6,800 ha of marine farms that make up more than 65% of the 10,300 ha of aquaculture in FMA7.²⁰ The cumulative effect of the existing aquaculture is considered further below.

Increased cost of fishing

80 I consider that the aquaculture activities proposed in the area of coastal permit U150770 will not increase the cost of commercial fishing.

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

¹⁹ 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.

²⁰ The 6,800 ha and 10,300 ha of authorised aquaculture space includes recent aquaculture decisions that may still be in the judicial review period.

Likely effect on fishing

82 I consider the aquaculture activities proposed in the area of coastal permit U150770 will only have a small adverse effect on any commercial fishery, if any.

83 The amount of fishing effort estimated to be displaced by the activities proposed in the area of coastal permit U150770 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 zones²¹ 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.

84 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.

85 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.

86 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

87 I consider the addition to the cumulative effect on commercial fishing from the aquaculture activities proposed in the area of coastal permit U150770 is negligible.

88 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 U150770, the cumulative effect has previously been assessed as a maximum of approximately 1.6% effect on any fishery and not undue.

89 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

90 I am satisfied the aquaculture activities proposed within the area of coastal permit U150770 will not have an undue adverse effect on commercial fishing because:

²¹ The “exclusion zone” used for the methods assessed was the new coastal permit area (i.e. 4.78 ha).

- there are alternate fishing grounds in Croisilles Harbour, SA038, 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

91 I am satisfied – based on all relevant information available to me – the activities proposed for coastal permit area U150770 will not have an undue adverse effect on:

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

92 Accordingly, my decision is a determination for coastal permit U150770 with regard to:

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

93 The area of the determination on recreational, customary and commercial fishing is 4.78 ha comprising an area with the following coordinates (NZTM2000):

<u>Point</u>	<u>Easting</u>	<u>Northing</u>
1	1658206.23	5454617.02
2	1658565.48	5454783.02
3	1658641.41	5454695.94
4	1658233.07	5454503.06

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



Judith MacDonald

Acting Manager Customary Fisheries and Spatial Allocations
Ministry for Primary Industries

Dated this 28 January 2016

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