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27 July 2016

Marlborough District Council
PO Box 443
Blenheim
Attn: Peter Johnson

Dear Peter,

Resource Consent Application: Marine Farm, Kingfish Bay, Port Underwood
Jonathan Tester

I enclose an application for resource consents (coastal permit and discharge permit) for a proposed marine farm at Kingfish Bay, Port Underwood.

The application is fully described and is supported by plans and a benthic survey.

No cheque is provided as it is intended that the deposit be paid by direct credit.

Please contact me if you have any queries.

Yours faithfully

Jeremy Butler
Landmark Lile Limited
Resource Management Consultancy

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Application for Resource Consent

to the Marlborough District Council

Under Section 88 of the Resource Management Act 1991

APPLICANT: **Jonathan Tester**

LOCATION: **Kingfish Bay, Port Underwood**

CONSENTS SOUGHT AND DESCRIPTION OF ACTIVITIES

Coastal Permit

To establish a marine farm in Kingfish Bay including the following activities:

- Undertake marine farming activity;
- Construct and maintain marine farming structures;
- Disturb the bed of the CMA; and
- Undertake harvesting activities.

Discharge Permit

To discharge contaminants to the coastal environment area, including:

- Faeces and pseudofaeces from marine farm organisms;
- Organic and biodegradable waste particularly during harvest.

(A detailed description of this activity is contained within Attachment A – *Assessment of Environmental Effects*).

ASSESSMENT OF EFFECTS

Attached is an assessment of the environmental effects that the proposed activity may have on the environment in accordance with Section 88 and the Fourth Schedule of the Resource Management Act 1991. Consideration has been given to the Marlborough Sounds Resource Management Plan.

Signed for and on behalf of Jonathan Tester on 27 July 2016

Jeremy Butler
Landmark Lile Limited
Resource Management Consultancy

Deposit: The deposit will be paid by direct credit.

ATTACHMENT A.

ASSESSMENT OF ENVIRONMENTAL EFFECTS

Prepared in accordance with Section 88 and the Fourth Schedule of the Resource Management Act 1991

Table of Contents **Page**

ATTACHMENTS:

A. **Assessment of Environmental Effects** (Landmark Lile Ltd)

B. **Location and layout plans** (Draughting Plus Ltd)

C. **Benthic Site Assessment** (National Institute of Water & Atmospheric Research Ltd)

1.0 Introduction

1.1. The purpose of this report

The purpose of this report is to provide a description of the proposed development and an analysis of the adverse effects on the environment from the granting of this consent. This report has been prepared in accordance with Section 88 and the Fourth Schedule of the Resource Management Act 1991 and forms an integral part of this resource consent application for a coastal permit and discharge permit.

2.0 Description of Activity

2.1. Background and Subject Site

2.1.1. The applicant and their family have been involved in aquaculture within Port Underwood area since the early 1980's. Port Underwood is a focal point where the family currently owns four marine farms. The following proposal would enhance their aquaculture operations in Port Underwood.

2.1.2. Kingfish Bay is a small embayment on the eastern side of the western arm of Port Underwood. A location map is provided in **Attachment B** and an excerpt of the location map is shown in Figure 1 below.

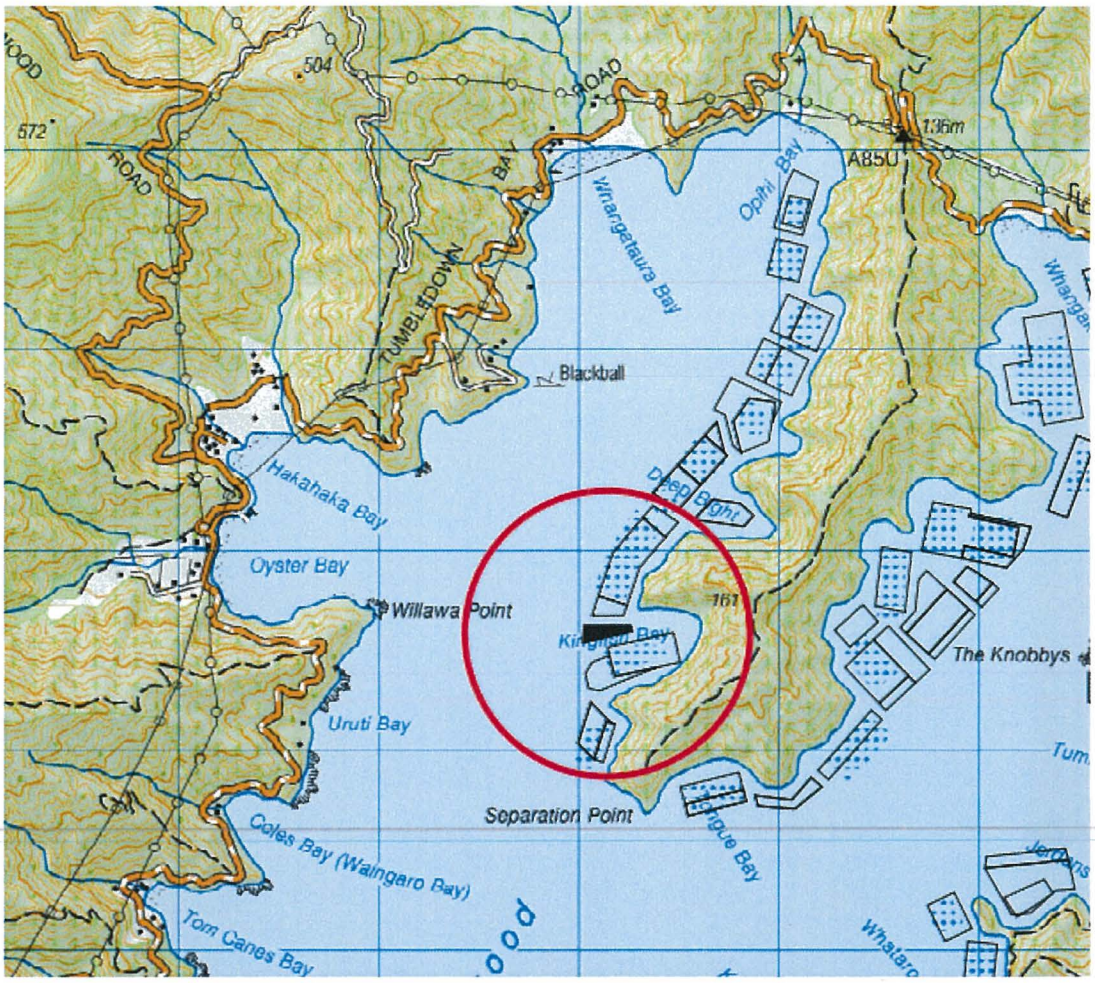
2.1.3. Port Underwood is a long a sound running north south and is accessed by road from Picton via Port Underwood Road.

2.1.4. Topographically, Port Underwood is isolated from the rest of the Marlborough Sounds. There is a long, broad promontory from the northern end of Port Underwood that extends approximately 3.5 kilometres and splits the head of the sound into two. The headland at the southern end of this promontory is named Separation Point.

2.1.5. The landward backdrop of Kingfish Bay is currently in exotic forestry land use. There are no notable features within Kingfish Bay except for the existing marine farming (see below) and a consented mooring (#2434) that is positioned between marine farm 8423 and the head of the bay.

2.1.6. Marine farms are extensively developed along the western side of the promontory. The extent of this marine farming development is evident from the plans and drawings provided in **Attachment B**.

2.1.7. The extensive aquaculture along both sides of the promontory can also be seen in Figure 1 (bottom) which is reproduced from the Council's marine farm mapping system. It is clear that there is a strong pattern of concentration of marine farms within the CMZ2 zone and an absence in the CMZ1 zones.



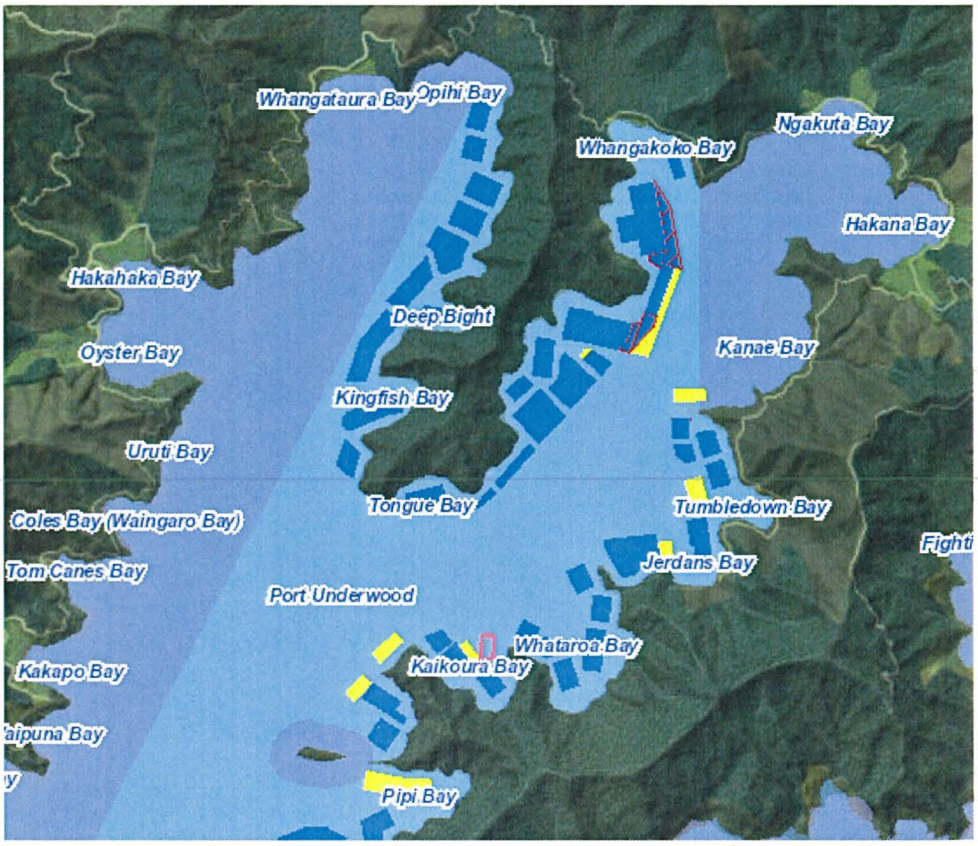


Figure 1: Top: Location of subject site in Kingfish Bay. Bottom: existing marine farming (blue).

2.1.8. The subject site is bound by marine farms to the north (8422) and the south (8423) as shown in Figure 2.

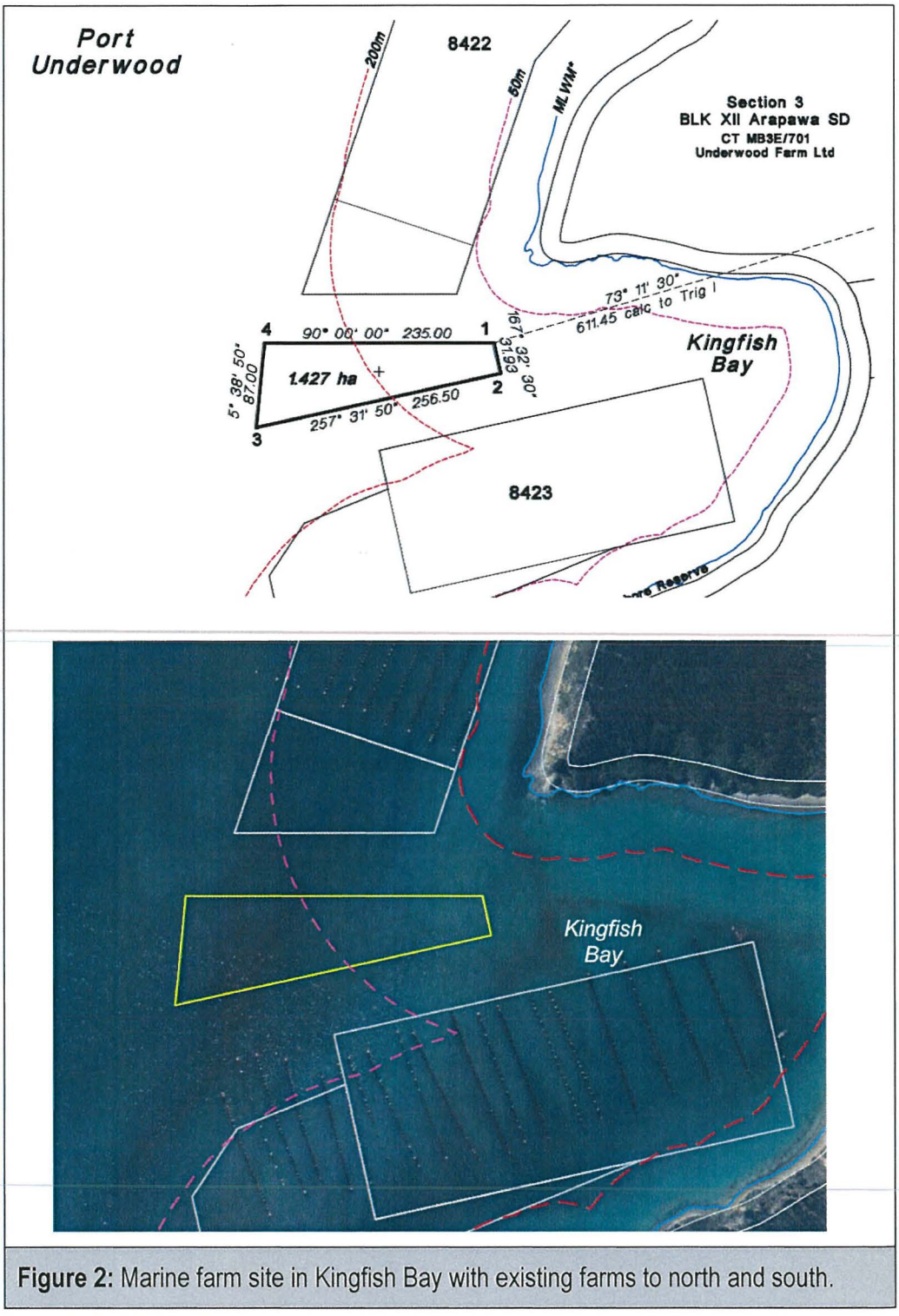


Figure 2: Marine farm site in Kingfish Bay with existing farms to north and south.

2.2. The Marlborough Sounds Resource Management Plan

2.2.1. The application site falls within the jurisdiction of the Marlborough Sounds Resource Management Plan ("the Sounds Plan"). Volume 3 of the Sounds Plan identifies two coastal marine zones:

- Coastal Marine Zone 1 (CMZ1) is shown in a purple colour on the planning maps and identifies a zone where most existing marine farms are provided for but new marine farm developments are prohibited; and
- Coastal Marine Zone 2 (CMZ2) where new marine farms are provided for subject to compliance with the relevant rules and performance criteria.

2.2.2. Figure 2 shows an excerpt from Map 65 of the Sounds Plan. The subject location in Kingfish Bay is shown as being within CMZ2 along with the full length of both sides of the promontory that splits the head of Port Underwood.

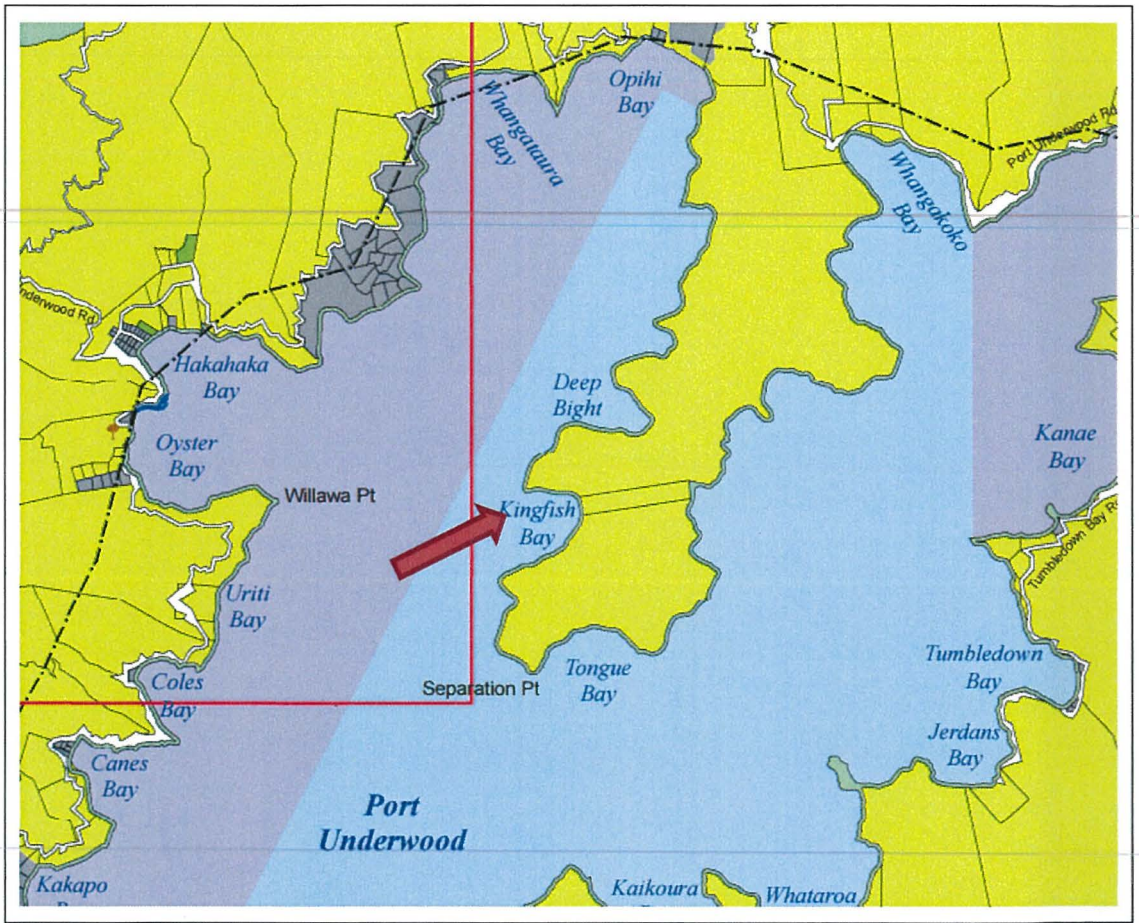


Figure 2: Excerpt of zoning map from Sounds Plan. Purple and blue colours indicate CMZ1 and CMZ2, respectively. Red arrow shows application site.

2.2.3. Volume 3 of the Sounds Plan also contains maps that identity areas of ecological (Map 72 is relevant) and landscape (Map 78) value. The relevant excerpts from these maps are reproduced in Figure 3. It is clear from these excerpts that the subject site is not subject to either Ecological Areas or Areas of Outstanding Landscape Value (AOLV).

2.2.4. In terms of areas of ecological value there are two small locations that are referenced in Figure 3 as "1/28". This corresponds to tube worm colonies. The second is "1/34" for which the ecological value is identified as being for Hectors Dolphin habitat.

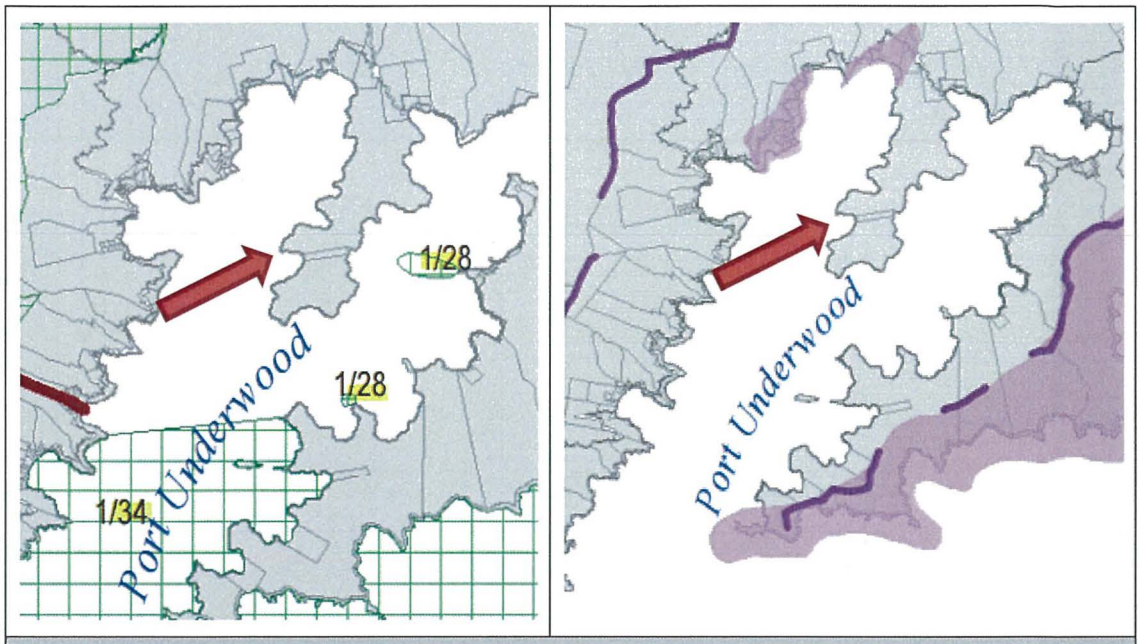


Figure 3: Excerpts from ecology map (left) and landscape map (right). Red arrows show location of application site.

2.2.5. Regarding landscape values, the promontory in the head of Port Underwood is not identified as being a Prominent Ridge, nor an AOLV.

2.2.6. Appendix 2 of the Sounds Plan provides information about the Natural Character Areas of the sounds. The appendix identifies the known core biophysical and ecological components that make up the natural character of the Marlborough Sounds.

2.2.7. Map 106 of the Sounds Plan identifies the marine ecosystem as being "mainly sheltered" and as "C Marine – Port Underwood". The relevant information in Appendix 2 provides the following collective characteristics:

> *"Sheltered, turbid, shallow waters; extensive mud bottom with narrow cobble fringe; conspicuous marine life generally sparse; off-shore red algae beds; massive tube worm colonies"* (Sounds Plan, page *App Two – 65*)

2.2.8. In contrast to several of the other marine ecosystem areas identified in Appendix 2, the Sounds Plan does not provide any "Potential for Restoration" section for Port Underwood.

2.2.9. The tubeworm features are clearly stated being of significance. The locations of these are well known and are not affected by the application site.

2.3. The Proposal

2.3.1. It is sought to establish a new marine farm site of 1.427 hectares in Kingfish Bay, Port Underwood, as shown in Figure 4 and on the site plan in **Attachment B** and as described previously in this application.

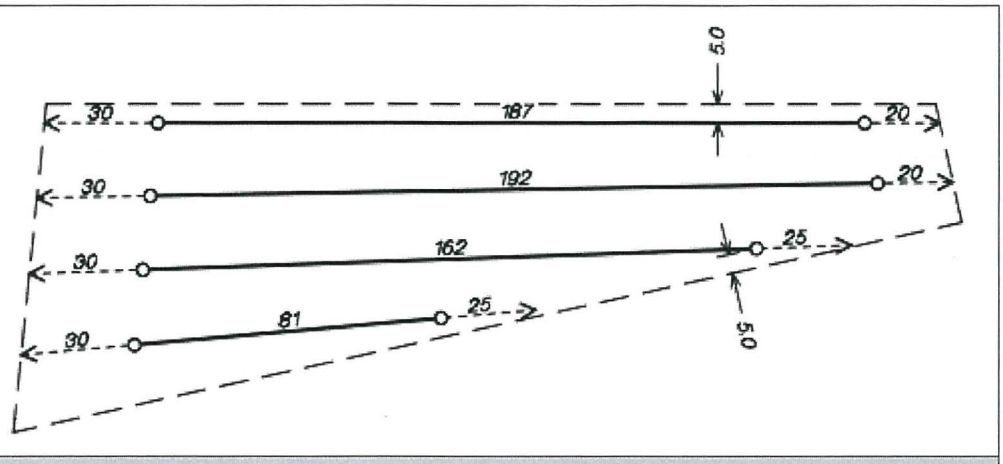


Figure 4: Layout of marine farm.

2.3.2. The proposed site layout will involve establishment of one block of 4 longlines of variable length providing a total backbone length of 622 metres.

2.3.3. It is proposed to farm and harvest the following species using conventional longline methods with variable length backbone to warps and anchors:

- Green Shell Mussels (*Perna canaliculus*)
- Scallops (*Pecten novaezelandiae*)
- Blue Shell Mussels (*Mytilus edulis*)
- Flat Oysters (*Toistrea lutaria*)
- Pacific Oysters (*Crassostrea gigas*)

2.3.4. The following algae are also likely to be propagated at the site:

- *Macracystis pyrifera*
- *Ecklonia radiata*
- *Gracilaria*
- *Pterocladia lucida*

2.3.5. These species are all edible species for Paua (*Haliotis* spp.) and all grow in the Marlborough Sounds. The seaweeds are highly productive and provide for a wide range of organisms which feed on it, and can be farmed using current culture systems.

2.3.6. Consent is also sought to disturb the seabed with anchoring devices and to harvest marine farm produce from the site, including the taking and discharge of seawater and the discharge of biodegradable and organic waste matter during harvesting of produce in Kingfish Bay, Port Underwood.

2.3.7. This will be a new marine farm licence for the site.

3.0 Status of Application

The following table identifies the relevant rules of the Sounds Plan for the purpose of determining the status of these two applications under the Resource Management Act 1991:

3.1. The Marlborough Sounds Resource Management Plan

Rule	Rule Name	Activity Status	Reason
Marine Farm Structures and Activities			
35.4	Discretionary Activities	Does not comply	As the marine farm is not currently existing it falls to be considered under rule 35.4, subject to compliance with the standards specified in Rule 35.4.2.9. The proposed marine farm will not comply with the standard identified in 35.4.2.9 (b) as the boundary of the farm extends beyond 200 metres from the mean low water mark.
35.5	Non-Complying Activities	***Non-Complying***	Marine farms that do not meet the discretionary activity rule standards described above, and which are not identified as prohibited activities, are specified as non-complying activities.
Disturbance of the bed of the CMA and placement of structures			
35.4	Discretionary Activities	***Discretionary***	The disturbance of the bed and the placement of structures as a component of the establishment of a marine farm is provided for by this rule as a discretionary activity.
Harvesting marine farming produce			
35.4	Discretionary Activities	***Discretionary***	The activity of harvesting marine farming produce is provided for by this rule as a discretionary activity.
Discharges			
35.4	Discretionary Activities	***Discretionary***	The discharge of faeces and pseudofaeces from the marine farm to the coastal marine area is provided for by this rule as a discretionary activity.
35.4	Discretionary Activities	***Discretionary***	The discharge of organic and biodegradable waste during harvest to the coastal marine area is provided for by this rule as a discretionary activity.

3.2. Summary

These applications must be considered as a **non-complying activity** within the Marlborough Sounds Resource Management Plan. The relevant assessment criteria are evaluated within Section 4.

4.0 Statutory Framework and Considerations

4.1.1. Section 104 of the RMA provides the basis for the decision making framework under which this application must be considered. The relevant considerations for the Council in making a decision on this application are:

(a) any actual and potential effects on the environment of allowing the activity;

(b) the New Zealand Coastal Policy Statement (NZCPS);

(c) the Marlborough Regional Policy Statement (RPS);

(d) the Sounds Plan; and

(e) Any other matters that the consent authority considers relevant and reasonably necessary to determine the application.

4.1.2. These Section 104 matters will be assessed later in this application when the proposal is evaluated.

4.1.3. As a non-complying activity Section 104D must also be considered.

4.1.4. Section 105 must be considered in relation to the applications for discharge permits. As a result the consent authority must have regard to:

(a) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and

(b) the applicant's reasons for the proposed choice; and

(c) any possible alternative methods of discharge, including discharge into any other receiving environment.

4.1.5. Section 107 restricts the consent authority from granting discharge permits that may result in certain outcomes. The ability of the Council to grant the discharge permit applications under this section will be assessed later in this application.

5.0 Actual or Potential Effects on the Environment

The following assessment has been prepared after having regard to the scale and significance of the actual or potential effects (s88(2)(b)) and has been prepared in accordance with the Fourth Schedule to the Act. The '*actual or potential effects*' have been identified from the relevant '*assessment criteria*' of the Plan.

5.1. Benthic Ecology

5.1.1. The applicant has engaged NIWA to conduct a benthic survey to inform this AEE. The NIWA report is provided in **Attachment C**. By way of background the report states that the main environmental effects expected beneath a shellfish farm in a sheltered embayment such as Kingfish Bay, are moderate levels of organic enrichment caused by deposition of mussel faeces and pseudofaeces, some accumulation on the seabed of shellfish such as mussels and other species growing on the farm structures, and some changes to the species assemblages living on and within the sediments.

5.1.2. As explained in the report a range of sampling methods were carried out to investigate the biophysical benthic conditions.

5.1.3. While all ecosystems have a level of intrinsic value (a point identified in Section 7 RMA), the NIWA report points out that it is the commonness of the muddy substrate benthic environment which reduces the potential adverse effect for this site. There are no unusual or notable 3-dimensional features such as reef outcrops detected on the seabed.

5.1.4. The bed is reported as being well oxygenated and not excessively enriched with organic matter.

5.1.5. The report concludes:

"The survey did not identify any ecological features of special significance on the seabed in the vicinity of the proposed marine farm site in the context of the Port Underwood, Marlborough Sounds biogeographical region (e.g. McKnight and Grange 1991, Stenton-Dozey et al 2006). The main effects resulting from the establishment of a mussel farm at this site, including moderate levels of organic enrichment, some accumulation of mussels and other species dropping from the farm structures, and some changes to the species assemblages living on and within the sediments, are unlikely to result in significant environmental impacts. In terms of benthic ecology, the site is considered suitable for mussel farming." (p9)

5.1.6. The report states that it is unlikely that significant environmental impacts will arise. From that conclusion it is therefore assessed that the effects on benthic ecology are likely to be no more than minor.

5.2. Natural Character

5.2.1. As can be seen from the supporting maps the coastal marine zones within Port Underwood are split into three distinct areas. The western side of Port Underwood is entirely zoned CMZ1 within which any new aquaculture is prohibited. Similarly with three bays at the head of Port Underwood on the eastern side: Ngakuta Bay, Hakana Bay and Kanae Bay.

5.2.2. Down the centre of the bay Port Underwood is zoned CMZ2. This zoning takes in all of the central waters and includes the long central headland or promontory that extends southwards from the head of Port Underwood.

5.2.3. Marine farming currently almost completely surrounds this promontory. The proposed marine farm is proposed to sit within the existing ring of farms around this promontory and will not protrude or exhibit visibility beyond the effects of the existing marine farms.

5.2.4. Chapter 2 of the Sounds Plan sets the context for the consideration of natural character:

Natural character can generally be described as being those characteristics (qualities and features) of a particular environment. The particular environment in the case of the Plan, is the coastal environment, freshwater environments or wetlands, lakes, rivers and their margins.

The natural character of the coastal environment and freshwater bodies is comprised of a number of key elements which include:

- *Coastal or freshwater landforms;*
- *Indigenous flora and fauna, and their habitats;*
- *Water and water quality, including marine and freshwater ecosystems;*
- *Scenic or landscape values;*
- *Cultural heritage values; and*
- *Habitat of trout.*

All parts of the Marlborough Sounds coastal and freshwater environments have some or all of these qualities and to that extent, all have some degree of natural character. (MSRMP, p2-1)

5.2.5. It should be noted that the above considerations were formulated under the older 1994 NZCPS and is therefore not necessarily consistent with the current NZCPS which in Policy 13 states: that natural character "*may include matters such as:*

(a) natural elements, processes and patterns;

(b) biophysical, ecological, geological and geomorphological aspects;

(c) natural landforms such as headlands, peninsulas, cliffs, dunes, wetlands, reefs, freshwater springs and surf breaks;

(d) the natural movement of water and sediment;

(e) the natural darkness of the night sky;

(f) places or areas that are wild or scenic;

(g) a range of natural character from pristine to modified; and

(h) experiential attributes, including the sounds and smell of the sea; and their context or setting."

5.2.6. Following the matters set out in these definitions, it is apparent that the preservation of natural character is intended to apply in the CMZ1 zones on the western and eastern areas of Port Underwood.

5.2.7. Figure 1 provides a photo of the site of the marine farm site. It is evident that the natural character values of the site are reduced by both the modification of the modification of the sea surface by marine farming on both sides of the proposed site. The natural character values are also reduced by the exotic forestry that is the predominant land use of the land that forms the backdrop to the site. There is a ribbon of regenerating vegetation around the lower slopes of the promontory that can be seen on the photo. This ribbon contains a mixture of exotic weedy species and native shrubs.

5.2.8. There are no dwellings or residents within Kingfish Bay and it contains no notable attractions for recreation. The northern point of Kingfish Bay is defined by rocky headland.

5.2.9. Overall, while the coastal marine area and coastal margin will always retain some inherent natural character, at this site it is considered that the reduction in natural character will be no more than minor. From the zoning and development pattern within Port Underwood it is clear that the more accessible and visible western and eastern margins are of principle importance for retaining the over-arching natural character of the sound.

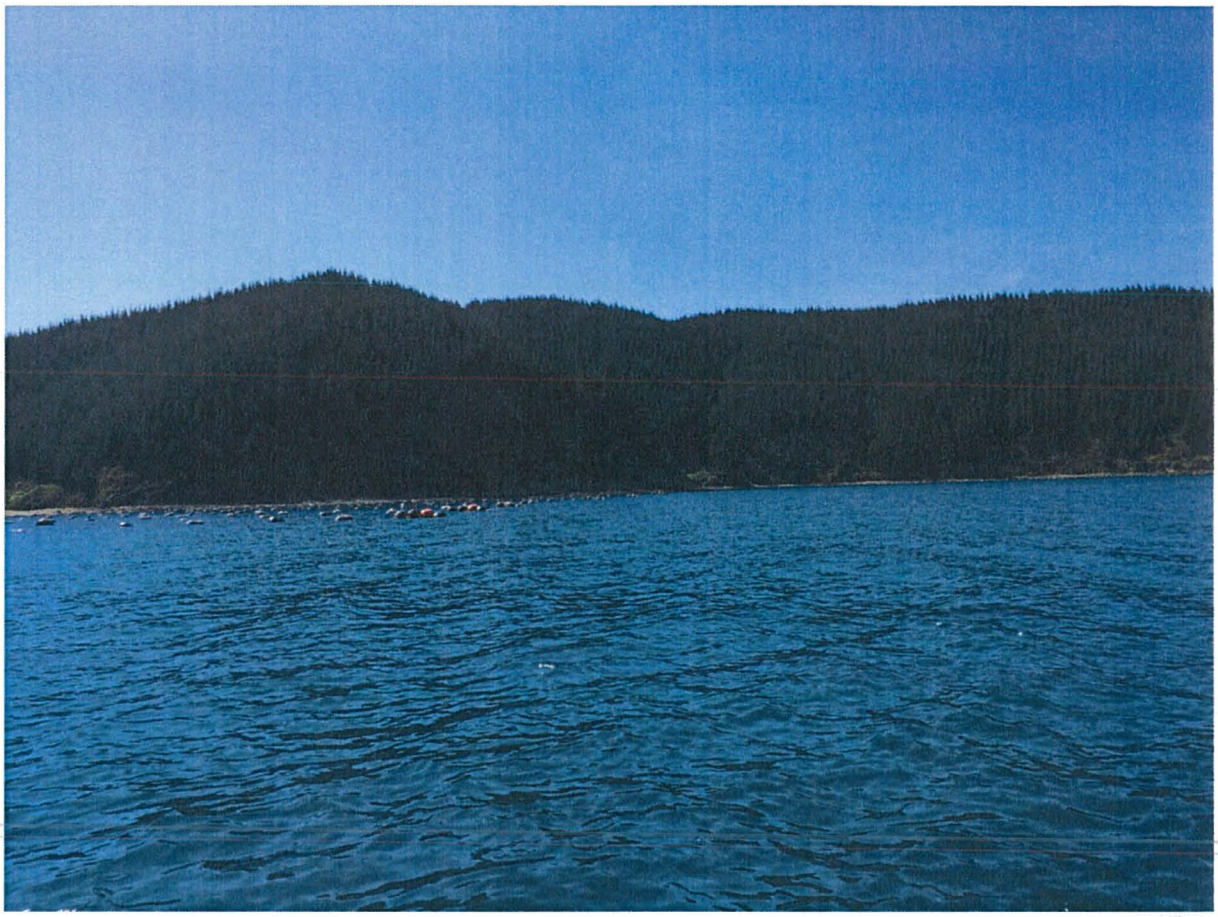


Figure 5: View of marine farm site looking east

5.3. Landscapes, Seascapes and Natural Features

5.3.1. The central promontory is not identified as an Area of Outstanding Landscape Value. The small headland that defines the northern extent of Kingfish Bay would also not be considered an outstanding natural feature.

5.3.2. As stated previously both the landscape backdrop and the seascape around the site is modified by exotic forestry and marine farming, respectively.

5.3.3. The proposed marine farm will fill a small gap in the existing marine farming but it is not considered that this gap is in a particularly prominent or strategic location. As a result the adverse effects on landscape and seascape values will be no more than minor.

5.4. Public Access and Navigation

5.4.1. Kingfish bay is not recognised as a particular recreation destination. With a large area of space within Port Underwood that is zoned CMZ1 and therefore will remain free of marine farming it is considered that there are ample fishing and landing locations elsewhere that will be significantly more attractive for recreation.

5.4.2. In any event the gaps between the proposed farm and the existing farms to the north and south will be sufficient to allow retain readily navigable access in and out of Kingfish Bay.

5.4.3. Only one mooring (#2434) exists within the bay. This mooring is owned by Talleys Group and it is anticipated that it will be used for marine farming. The proposed farm location will not compromise the ability of vessels to be able to directly enter Kingfish Bay and access the mooring.

5.4.4. The outer boundaries of the farm will not protrude eastwards beyond the line formed by the farms to the north and south, and will therefore not be a risk to north south navigation.

5.5. Amenity Values

5.5.1. There are no dwellings on the land that forms the backdrop to the site. There are also no other sensitive land uses. As a result there are no adverse effects on the amenity of any dwelling or sensitive activity as a result of this activity.

5.5.2. Visual amenity effects may arise from people on the water. However, the proposed farm is small (in comparison to surrounding farms). The proposed farm will contribute to the existing virtually unbroken line of marine farms around the promontory in the centre of Port Underwood.

5.6. Cumulative Effects

5.6.1. The proposed farm will cause a small increase in the density of marine farms in the CMZ2 zone on the western side of the promontory.

5.6.2. Cumulative effects will occur in relation to several of the spheres of effect discussed above including, benthic ecology, natural character, public access and amenity values. However, in all cases the magnitude of incremental adverse effect very small and assessed as less than minor.

5.6.3. As stated below, the Sounds Plan intends that the development of further marine farming should (all else being equal) be "*encouraged in areas where the natural character of the coastal environment has already been compromised ...*" (Policy 2.1.2.2)

5.6.4. Whilst, logically, it could be argued that this assessment of cumulative effects may result in unfettered growth of marine farming, this cannot occur in Port Underwood due to the extensive areas of CMZ1 zone which are free of marine farming. Therefore it is appropriate that farming be concentrated in existing developed areas.

5.7. Cultural Heritage Values

5.7.1. Statutory Acknowledgements are in place for all Te Tau Ihu Iwi for the Coastal Marine Area.

5.7.2. Te Tau Ihu Iwi have not been consulted for this application. However, based on experience it is not anticipated that this proposal will have adverse effects either on the interest of the Iwi, or on their cultural values.

6.0 Provisions of the Sounds Plan

6.1. Support for Marine Farming where Appropriate

6.1.1. The Sounds Plan and the NZCPS provide a level of support for marine farming in locations and ways that it is "appropriate". Determining the appropriateness or otherwise of a given application is too be based on the outcome that the objective or policy is seeking to achieve.

6.1.2. Policy 8 of the NZCPS is to "*recognise the significant existing and potential contribution of aquaculture to the social, economic and cultural well-being of people and communities ...*" The policy notes the social and economic benefits of aquaculture.

6.1.3. In relation to natural character, Objective 2.2.1 of the MSRMP is as follows

Objective 2.2.1: The preservation of the natural character of the coastal environment, wetlands, lakes and rivers and their margins and the protection of them from inappropriate subdivision, use and development.

6.1.4. This objective is consistent with the higher statutory documents: the NZCPS and Part 2 of the Act. Also consistent is its use of the term "inappropriate". What is inappropriate in the context of the objective should be informed by analysis of the relevant supporting policies and what is to be achieved by the objective.

6.1.5. Policies 2.2.1.1 and 2.2.1.2 are as follows:

Policy 2.2.1.1: Avoid the adverse effects of subdivision, use or development within those areas of the coastal environment and freshwater bodies which are predominantly in their natural state and have natural character which has not been compromised.

Policy 2.2.1.2: Appropriate use and development will be encouraged in areas where the natural character of the coastal environment has already been compromised, and where the adverse effects of such activities can be avoided, remedied or mitigated.

6.1.6. Broadly, when read in concert these policies seek to avoid development where the coastal environment is predominantly in its natural state, and to encourage development in areas where the natural character of the coastal environment has already been compromised. This approach is supported by the zoning framework (CMZ1 and CMZ2) employed in the Sounds Plan.

6.1.7. In Port Underwood there are, as already described, three distinct areas with new marine

farming prohibited on the western and eastern sides of the sound, and provided for through the centre part of the sound. This centre area is reasonably intensively developed. Policy 2.2.1.2 supports this intensity and seeks that where additional farming is appropriate, that it be located within this central area. Logically, additional farming would be placed within the existing ribbon.

6.1.8. Chapter 9.0 of the Sounds Plan provides an extensive suite of provisions to guide development in the CMA. Objective 9.2.1.1 makes it clear that appropriate activities may be accommodated in the coastal marine area.

6.1.9. Policy 9.2.1.1.14 is:

"To enable a range of activities in appropriate places in the waters of the Sounds including marine farming, tourism and recreation and cultural uses"

6.1.10. As such, marine farming is specifically identified as an activity that may be appropriate in the Sounds.

6.1.11. Overall, it is considered that there is support within the statutory documents for marine farming in appropriate locations.

6.2. Natural Character and Landscape

6.2.1. Natural character values were considered previously in this application document. The site is relatively unremarkable being positioned along a rocky coastline that is already fringed with extensive marine farming.

6.2.2. In accordance with Policy 2.2.1.2, providing for additional development in amongst the existing farmed area is appropriate and will result in a less than minor reduction in natural character. Importantly, concentrating marine farming in the CMZ2 will help retain the natural character of other areas of Port Underwood such as the relatively undeveloped CMZ1 zone and areas such as the Knobbies and other headlands and promontories.

6.2.3. The site is not identified as an Area of Outstanding Landscape Value. Therefore the provisions of Chapter 5 do not apply.

6.3. Effects on Ecological Values

6.3.1. The Sounds Plan identifies areas of significant ecological value. The application site is not subject to, nor is it near enough to potentially affect, any of these areas.

6.3.2. Policy 11 of the NZCPS also seeks to protect indigenous biological diversity in the coastal environment. Policy 11(a) does not apply as there are no species identified that meet the criteria set out therein. The NIWA report (**Attachment C**) does not identify any features,

habitats or species that would qualify under Policy 11(b) and therefore it is considered that this provision, also, does not apply

6.3.3. The NIWA report concludes that there are unlikely to be any significant effects on the benthic environment.

6.4. Public Access and Recreation

6.4.1. Objectives and Policies in Chapters 8 and 9 of the Sounds Plan emphasises that the recreational activities and public access is a priority in the Sounds, particularly in certain locations.

6.4.2. The objective and policies under Section 8.3 seeks to avoid, remedy or mitigate adverse effects on public access caused by structures, works or activities.

6.4.3. Policy 8.3.1.3 states:

To prevent the erection of structures and marine farms that restrict public access in the coastal marine area where it is subjected to high public usage.

6.4.4. Kingfish Bay is not subject to high public usage. Areas with CMZ1 within Port Underwood are considerably more attractive and accessible to fishing and other forms of informal recreation.

6.4.5. The outer boundaries of the farm will not protrude eastwards beyond the line formed by the farms to the north and south, and will therefore not be a risk to north south navigation.

6.5. Precautionary approach

6.5.1. Both the NZCPS and the Sounds Plan promote a precautionary appropriate be taken to decisions on resource consents where the effects on the coastal environment are uncertain, unknown, or little understood, but potentially significantly adverse.

6.5.2. In the case of this application the applicant has obtained a benthic survey.

6.5.3. As there are no areas of significant ecological value identified in the Sounds Plan, and with knowledge of the benthic environment and potential changes and effects that may occur, it is not considered likely that there are any unknown effects that would reach the threshold set out in Policy 3 of the NZCPS.

7.0 Section 104D Assessment

7.1. Because the proposed activity falls to be considered as a non-complying activity Section 104D of the Act must be considered. The section requires that the consent may not be granted unless either the effects of the activity are no more than minor, or the activity is not contrary to the

objectives and policies of the Sounds Plan.

7.2. With regard to the former, it is considered that overall the effects of the activity are no more than minor for the reasons given previously. Significantly, the site already heavily developed on either side. The proposed farm will be small and fit between two existing farms without protruding into the open bay. The land backdrop is heavily modified for use for exotic forestry and there are no dwellings on the land that would be adversely affected by the marine farm. Further, there are no identified ecological effects that are likely to be more than minor.

7.3. Turning to the objectives and policies of the Sounds Plan. The Plan is supportive of marine farm development in appropriate locations, and supports development in areas that have already been compromised. Sensitive locations such as AOLV, areas of ecological value have been avoided, and natural character is reduced by the presence of existing farms. Overall the development of a small marine farm in this location is not inconsistent with the objectives and policies of the Plan.

7.4. For the purposes of assessment against Section 104D it is considered that the proposal passes both gateways and can therefore be considered under Section 104.

8.0 The Proposed Marlborough Environment Plan (PMEP)

8.1.1. The PMEP was publicly notified on 9 June 2016 and is, at the time of writing, open for submissions.

8.1.2. The PMEP does not include provisions managing marine farming, and is therefore of very limited relevance to this application. However, while specific marine farming provisions are beyond the scope of the PMEP, a range of relevant objectives and policies are included for which it is appropriate that a brief assessment is made. The PMEP is at an early stage of the Schedule 1 (RMA) process and therefore does not yet hold a high level of weight under the assessment of resource consents.

8.1.3. Volume 4 of the PMEP contains the maps. The following maps are relevant:

- Coastal Natural Character (Map 4)
- Landscapes (Map 5)
- Ecologically Significant Marine Sites (Map 14)

8.1.4. None of these maps identify the application site as being within the area of the values respectively identified on these maps. i.e. the site is not identified as having any status within the Coastal Natural Character Rating scale. Nor is the site within or adjacent to an Outstanding Natural Feature or Landscape. Nor have any ecologically significant marine sites been identified.

8.1.5. Chapter 6 of the PMEP contains policy guidance in relation to natural character. The Chapter 6 policy framework emphases the retention of natural character in areas with high or better natural character. Proposed Policy 6.2.5 is to "*recognise that development in parts of the coastal environment ... that have already been modified by past and present resource use*

activities is less likely to result in adverse effects on natural character."

8.1.6. Overall, a broad general read of the PMEP does not indicate that the proposal is likely to be inconsistent with the direction of the PMEP. It is restated that no rules have yet been proposed in the PMEP for marine farming.

9.0 Part 2 RMA Analysis

9.1. This application is to be primarily assessed under the provisions of the Sounds Plan and the NZCPS. These relevant statutory documents were both promulgated under the current Part 2 provisions and therefore give effect to those provisions. Nevertheless, Schedule 4 of the Act (under which this application is made) requires an assessment of the activity against the matters set out in Part 2.

9.2. Section 6 of the Act sets out the matters of national importance. The act requires that all persons shall recognise and provide for these matters. The matters that are relevant to this application are:

(a) *the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:*

(d) *the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:*

(e) *the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:*

9.3. With the protection of much of Port Underwood through the extensive CMZ1 zone within the sound, the concentration of marine farming in the subject location will not adversely affect the overall natural character of Port Underwood.

9.4. Public access remains appropriately provided for in the areas of high public usage. Access to Kingfish Bay remains practicable.

9.5. The marine farm will not compromise the values of Maori.

9.6. Section 7 of the Act sets out other matters to which particular regard must be had. The matters that are relevant to this application are:

(a) *kaitiakitanga:*

(b) *the efficient use and development of natural and physical resources:*

(c) *the maintenance and enhancement of amenity values:*

(d) *intrinsic values of ecosystems:*

(f) *maintenance and enhancement of the quality of the environment:*

9.7. It is an efficient use of the available sea-space to allow additional marine farming in areas that are

already compromised, and where adverse effects on the environment are no more than minor.

9.8. Ecosystems and the overall quality of the environment will be maintained.

9.9. Section 8 of the Act states that:

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

9.10. While the Coastal Marine Area is significant to all Te Tau Ihu tribes, it is not anticipated that a small marine farm in this location will be of concern.

9.11. Section 5 sets out the purpose and principles of the Act.

9.12. This proposal will provide for the wellbeing of the applicant. There are no resources that will be consumed by this activity such that future generations cannot provide for their own wellbeing.

9.13. The life-supporting capacity of the environment will not be affected to anything more than a minor extent. The benthic habitat is not rare or unusal and is well represented in the Sounds, including in the CMZ1 zone for which marine farming is prohibited. The site is not one of significant ecological value.

9.14. Overall the proposal is consistent with the purpose of the Act.

10.0 Term

10.1. A term of 20 years is sought.

11.0 Overall Assessment

11.1. The location of this application is within the area of existing marine farming in Port Underwood. A small marine farm is sought to be established between two larger farms in Kingfish Bay.

11.2. The benthic environment has been described as relatively uniform and with a substrate and community assemblage that is typical of a large area of the Sounds. The terrestrial backdrop to the site is modified and the predominant land use is exotic forestry.

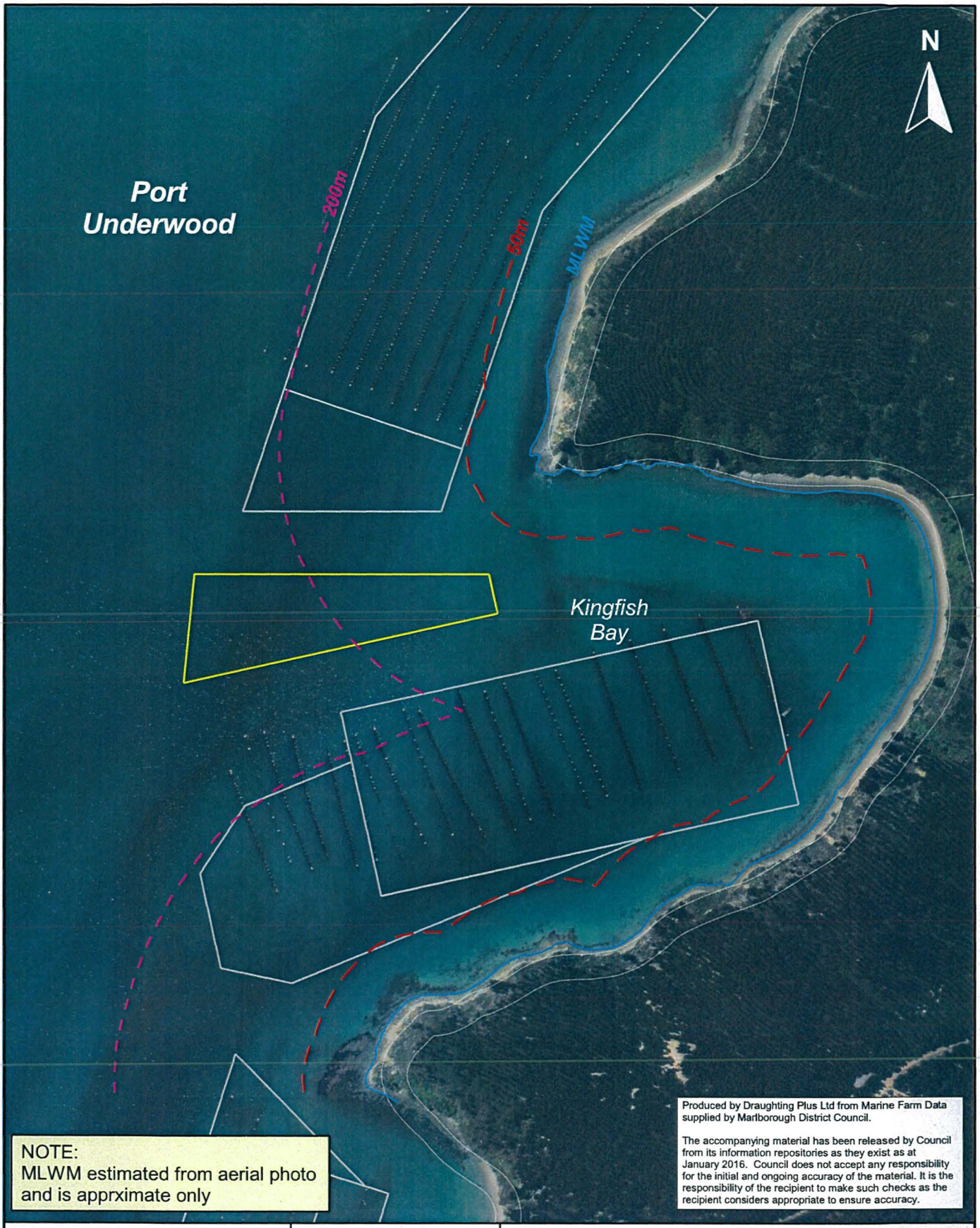
11.3. The marine farm will extend seaward of the line that is 200 metres from MLWS. As a result the application is for a non-complying activity.

11.4. The application will have only minor or less than minor effects on natural character, landscape values, ecological values, public access and navigation.

11.5. The application is not inconsistent with the provisions of the Sounds Plan, the NZCPS and Part 2 of the Act. As such, it is appropriate that the application be granted under Sections 104 and 104B of the Act.

Attachment B:

Location and Layout Plans (Draughting Plus Ltd)



Produced by Draughting Plus Ltd from Marine Farm Data supplied by Marlborough District Council.

The accompanying material has been released by Council from its information repositories as they exist as at January 2016. Council does not accept any responsibility for the initial and ongoing accuracy of the material. It is the responsibility of the recipient to make such checks as the recipient considers appropriate to ensure accuracy.

NOTE:
MLWM estimated from aerial photo and is apprximate only

REFERENCE

- Existing Marine Farm
- Proposed Marine Farm

Aerial Photo image from MDC GIS dated 2012

Draughting Plus Limited

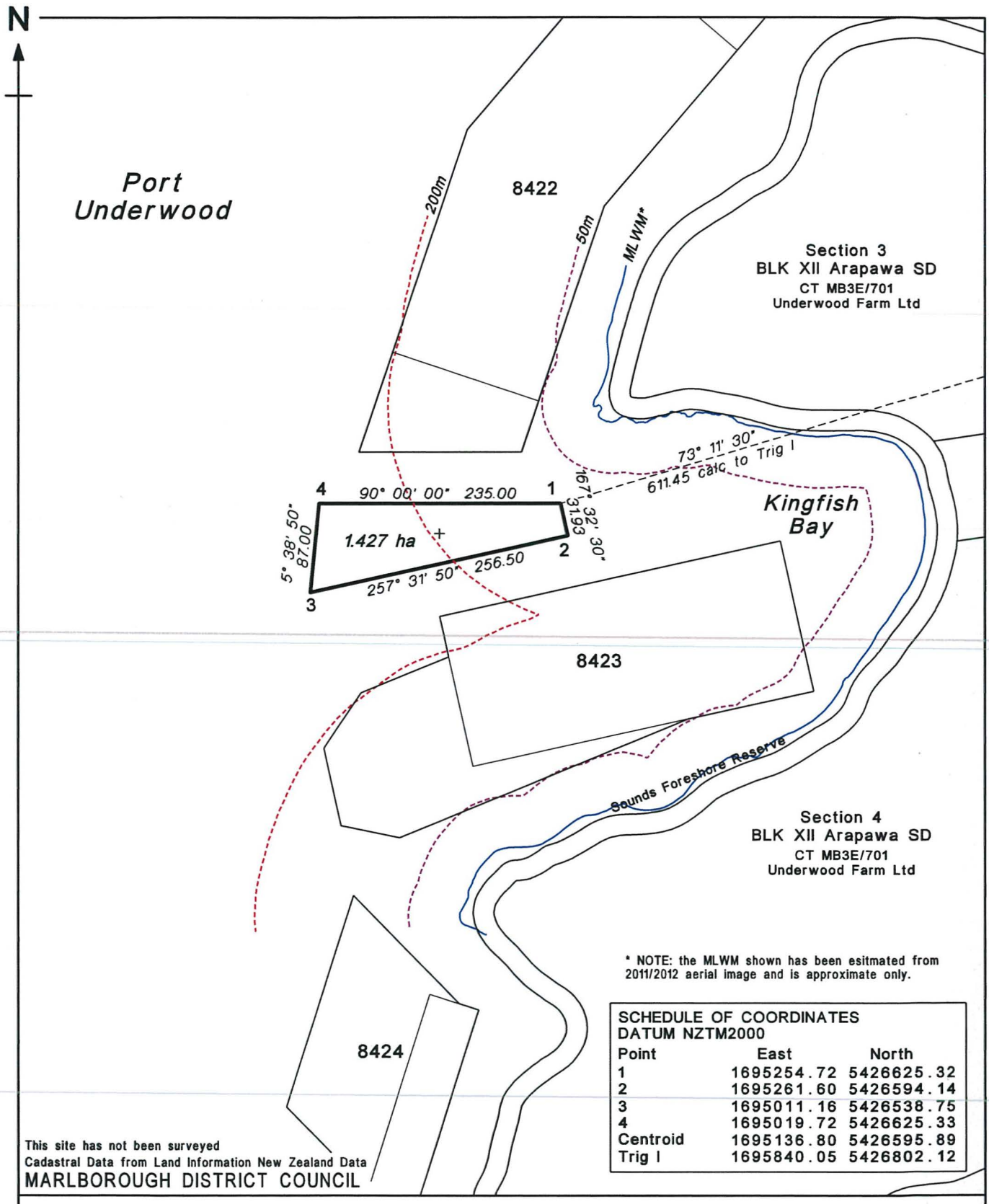
27 July 2016

Proposed Marine Farm Kingfish Bay - Port Underwood

Aerial Overlay

Scale 1:4,000

50 0 50 100 150 200 250 Meters



Proposed Coastal Permit

Kingfish Bay - Port Underwood

SCALE 1:5,000

50 0 100 200 300 400 500 metres

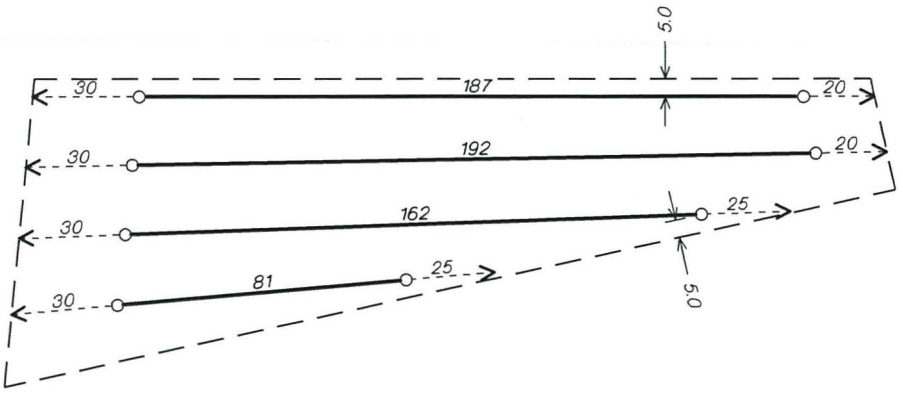
Prepared by
Draughting Plus Ltd
27 June 2016

MF_2467a

C:\General CADD 11\GxdMarine Farming\mf_2467a.gxd — 06/27/2016 — 04:30 PM — Scale 1 : 5000.00

N

Port Underwood



Kingfish Bay

REFERENCE

- ○ Orange Float
- < Anchors
- ------- Anchor Warp (32mm Rope)
- ——— Backbone (24-28mm Rope)

NOTE: Longline Spacing = 15.5m minimum
Total Longlines = 4
Backbone Length = as shown
Total Backbone Length = 622m

Layout Details

Proposed Marine Farm
Kingfish Bay - Port Underwood

20 0 20 40 60 80 100 120 140 160 180 200m

SCALE 1:2,000

Prepared by
Draughting Plus Ltd
10 February 2016

MF_2466

Attachment C:

Benthic Site Assessment (NIWA)

NIWA
Taihoro Nukurangi

Benthic Site Assessment in Kingfish Bay, Port Underwood

Prepared for Jonathan Tester

July 2016

Prepared by:
Stephen Brown
Ken Grange
Louis Olsen

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NIWA CLIENT REPORT No: 2016029NE
Report date: July 2016
NIWA Project: SCJ174PRO

Quality Assurance Statement		
	Reviewed by:	
	Formatting checked by:	
	Approved for release by:	

20 July 2016 12.07 p.m.

Contents

Tables

Figures

Executive summary

NIWA was engaged by Jonathan Tester to conduct a seabed survey to provide information for a resource consent application to establish a shellfish farm at a 1.4 Hectare Site in Kingfish Bay, Port Underwood. The survey was designed to describe the benthic characteristics in the vicinity of the proposed extension to aid in assessing its suitability for marine farming.

The survey undertook side-scan sonar swaths to identify potential 3 dimensional features of interest on the seabed, collected grab samples to characterise the sediment composition and the infaunal community, and high definition underwater photographs to describe the seabed habitat and sediment-surface dwelling animals and seaweeds.

The survey did not identify any ecological features of special significance on the seabed in the vicinity of the proposed marine farm site and no significant environmental impacts are expected to result from the proposed farming activity. In terms of benthic ecology, the site is considered suitable for mussel farming.

1 Introduction

Jonathan Tester engaged NIWA to conduct a benthic survey to provide information for a resource consent application to establish a shellfish farm at a 1.4 Hectare Site in Kingfish Bay, Port Underwood. The survey was designed to describe the benthic characteristics in the vicinity of the proposed extension to aid in assessing its suitability for marine farming.

The main environmental effects expected beneath a shellfish farm in a sheltered embayment such as Kingfish Bay, are moderate levels of organic enrichment caused by deposition of mussel faeces and pseudofaeces, some accumulation on the seabed of shellfish such as mussels and other species growing on the farm structures, and some changes to the species assemblages living on and within the sediments.

2 Methods

The survey was conducted on 13 July 2016 by NIWA staff aboard the vessel RV Tio. All sample locations as shown in Figure 2-1 were located and recorded using a Garmin GPS unit.

2.1 Side-scan sonar

To identify potential features of interest in the vicinity of the site, side-scan sonar swaths, each 100 m wide (50 m either side of the vessel) were made throughout the proposed extension and adjacent area using a high-frequency (675 kHz) Tritech towfish. The position of the side-scan sonar was automatically recorded every 2 seconds along each swath from a GPS and saved in real time to a laptop on board the vessel using SeaNet Pro software. Data were post-processed with Triton Perspective software to produce geo-referenced seafloor images that could be plotted in ArcMap v9 GIS or Google Earth, where locations of features of interest could be determined.

2.2 Grab sampling

A benthic grab (bite area ca 0.13 m^2, maximum bite depth 22 cm) was used to obtain samples to describe sediment physicochemical characteristics, and infaunal species assemblages at 4 locations within the proposed farm area.

2.2.1 Sediment Physicochemistry

From each grab sample, a single core (5 cm diameter) sub-sample was taken to 10 cm depth. Each core was photographed, and the sediment colour and smell was noted. The top 3 cm of the core from each of the grabs was returned to the laboratory for analysis of sediment grain size. The proportion of mud, sand and gravel was determined by oven drying each sediment sample at 100°C overnight and washing a weighed subsample through stacked 200 µm and 63 µm sieves. The fraction retained on each sieve was dried and weighed and the weight of material passing through the 63 µm sieve obtained by subtraction from the original weight. Dry weights for each fraction were expressed as percentages of the total dry weight.

2.2.2 Infauna

To sample the infaunal community (animals living within the sediment), the entire contents of the grab sample were transferred to a mesh bag (mesh size 1.0 mm), and sieved by gently washing the bag in seawater. Following sieving, the infaunal samples were preserved in a solution of 70% ethanol in seawater and transported back to the NIWA lab for taxonomic identification and counting.

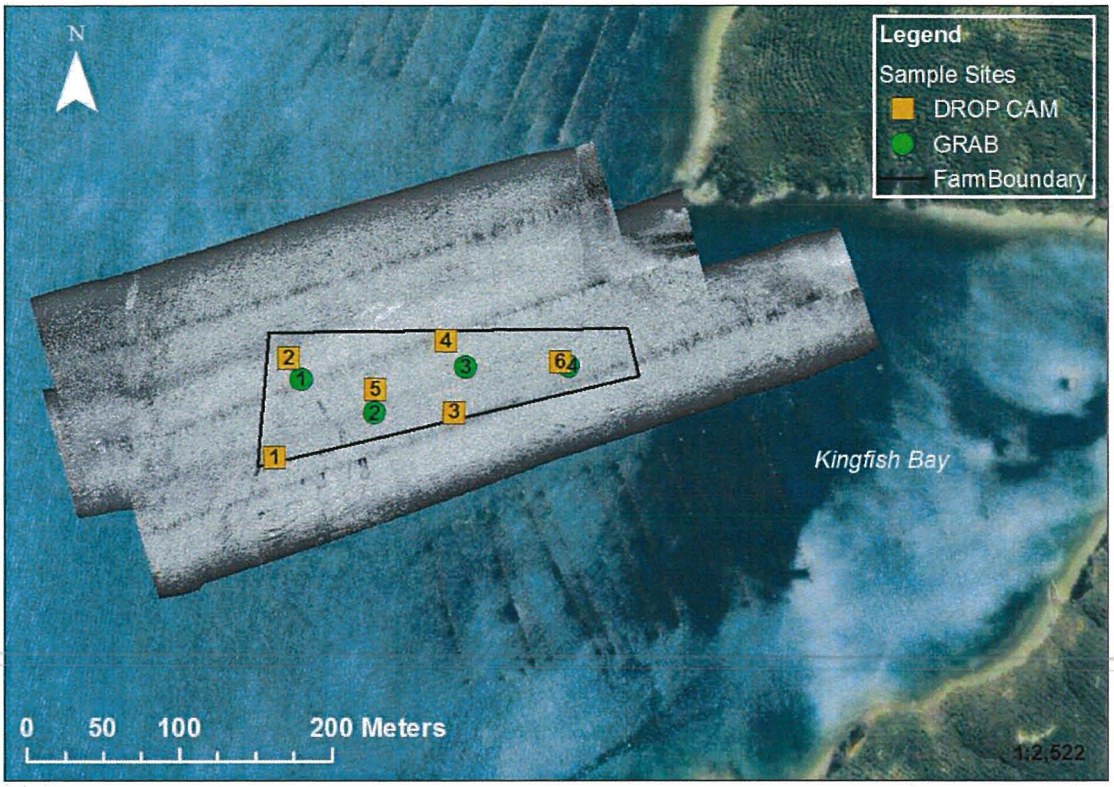

Figure 2-1: Site location and sample positions for the site in Kingfish Bay, Port Underwood. Pale grey bands are georeferenced side-scan images.

2.3 Drop-Camera photoquadrats

A high-definition remotely operated underwater camera was mounted on a frame (drop-camera) to obtain video and still images to characterise surface sediment and biological features. The drop camera was deployed at 6 stations within the site (Figure 2-1).

3 Results

3.1 Side-scan

The side-scan images revealed that the seabed was relatively uniform and flat (Figure 2-1). There were no notable 3-dimensional features such as reef outcrops detected on the seabed in the vicinity of the site.

3.2 Grabs

3.2.1 Sediments

The sediments were composed of fine silt or mud with a small component of sand (Table 3-1).

Table 3-1: Sediment grain size distribution at each grab sample position.

Sample	%Gravel (>200µm)	%Sand (63 µm - 200 µm)	%Silt (<63 µm)
Grab1	0.23%	0.38%	99.40%
Grab2	0.00%	0.31%	99.69%
Grab3	0.00%	0.18%	99.82%
Grab 4	0.00%	0.41%	99.59%

Sediments were grey/brown in colour (Figure 3-1) and there was no noticeable smell of sulphur. Those observations indicate that the sediments were well oxygenated and not excessively enriched with organic matter.

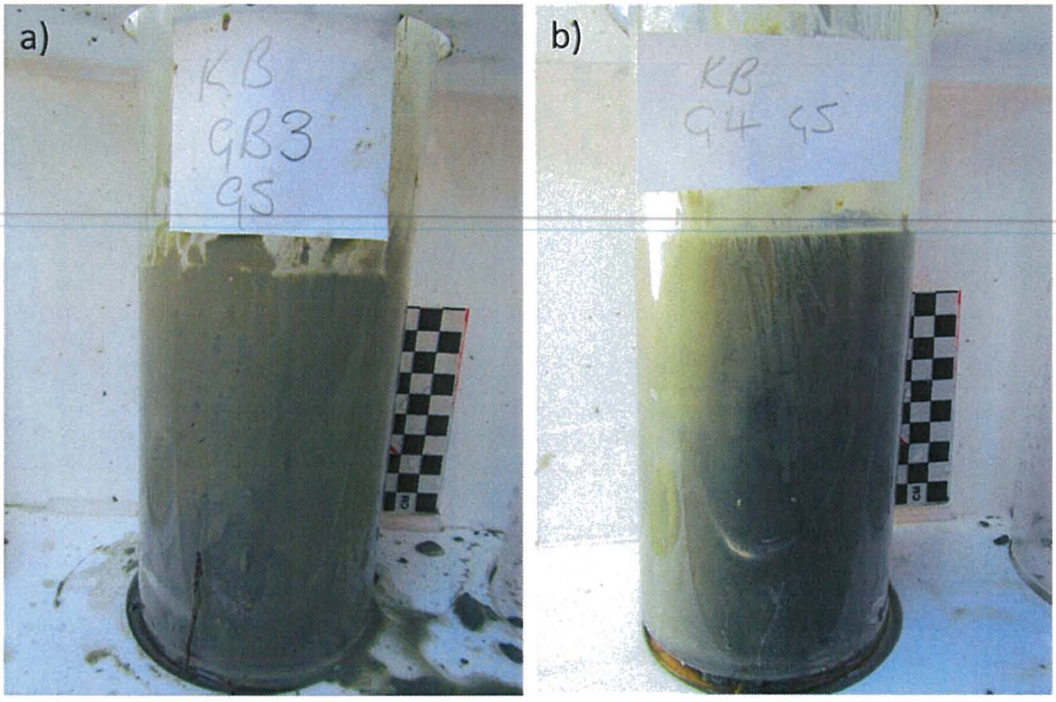

Figure 3-1: Examples of sediment cores taken from grab samples. a) From grab station 3. b) From grab station 4.

3.2.2 Infauna – Animals living within the sediment

The benthic fauna comprised species that are generally common and widespread in mud habitats in Port Underwood and the Marlborough Sounds (Table 3-2) (e.g. McKnight and Grange 1991, Stenton-Dozey et al 2006). In total, 40 taxa were identified from all grab samples. The most abundant taxon found in all the grab samples were polychaete worms living in parchment tubes from the family Chaetopteridae. Polychaetes from the family Trichobranchidae were also present in all the grab samples. Other commonly sampled taxa were the small gastropod molluscs *Eatoniella* sp. *and Maoricolpus roseus,* the bivalve mollusc (*Purpurocardia purpurata*) and small crustaceans such as amphipods and tanaid shrimps.

Table 3-2: Fauna in grab samples.

Group	Taxon	KB1	KB2	KB3	KB4	Total	Frequency
Amphipoda	Amphipoda	2	3	4	2	11	4
Decapoda	*Halicarcinus varius*	2			1	3	2
Decapoda	*Notomithrax* sp.	1	1	2		4	3
Decapoda	*Petrolisthes novaezelandiae*		2			2	1
Decapoda	*Jaxea novaezealandiae*	1			1	2	2
Tanidiacea	Tanidiacea	4	1	6	15	26	4
Brachiopoda	*Terebratella sanguinea*		1			1	1
Ascidiacea	Various ascidians	2	3	1	3	9	4
Anthozoa	Actiniaria		1			1	1
Bivalvia	*Arthritica bifurca*				2	2	1
Bivalvia	*Dosina mactracea*		1			1	1
Bivalvia	Nuculidae	1	1			2	2
Bivalvia	*Parathyasira neozelanica*	1				1	1
Bivalvia	*Purpurocardia purpurata*	1	2	5	2	10	4
Bivalvia	*Talochlamys zelandiae*	1	2	1		4	3
Bivalvia	*Theora lubrica*			1	1	2	2
Gastropoda	*Buccinulum* sp.			2		2	1
Gastropoda	*Eatoniella* sp.	4	5	21	2	32	4
Gastropoda	*Maoricolpus roseus*	11	9	10	1	31	4
Gastropoda	Nudibranchia/sea slug		1			1	1
Gastropoda	*Stiracolpus symmetricus*		4		2	6	2
Gastropoda	*Zemitrella* sp.		2	1		3	2
Porifera	Unidentified sponge		p	p		0	2
Priapulida	*Priapulopsis australis*	1	1	2	1	5	4
Sipuncula	Sipunculus sp.		1			1	1
Polychaeta	Chaetopteridae	>50	>50	>50	>50	200	4
Polychaeta	Cirratulidae			1		1	1
Polychaeta	Dorvillidae				1	1	1
Polychaeta	Flabelligeridae	4				4	1
Polychaeta	Maldanidae	15	5		6	26	3
Polychaeta	Nereidae			3		3	1
Polychaeta	Opheliidae		2		1	3	2
Polychaeta	Orbiniidae	1				1	1
Polychaeta	Phyllodocidae		2			2	1
Polychaeta	Serpulidae			1		1	1
Polychaeta	Sigalionidae		1			1	1
Polychaeta	Spionidae			1		1	1
Polychaeta	Syllidae			2		2	1
Polychaeta	Terebellidae	1			1	2	2
Polychaeta	Trichobranchidae	5	4	1	1	11	4
	No. of individuals	108	105	115	93		
	No. of taxa	19	24	19	18		

3.3 Habitat and Epibiota (animals and seaweeds at the sediment surface)

The drop-camera stills (Figure 3-2) show a muddy seabed with the parchment tubes from the Chaetopterid worms at the sediment surface, and a variety of bladed red macroalgae growing attached to the worm tubes. A small clump of blue mussels and two sea tulips (*Pyura pachydermatina*) are visible in the still taken at drop cam station 1 (Figure 3-2, 1) The mussels and the sea tulips are likely to have dropped to the seabed from nearby mussel farm structures.

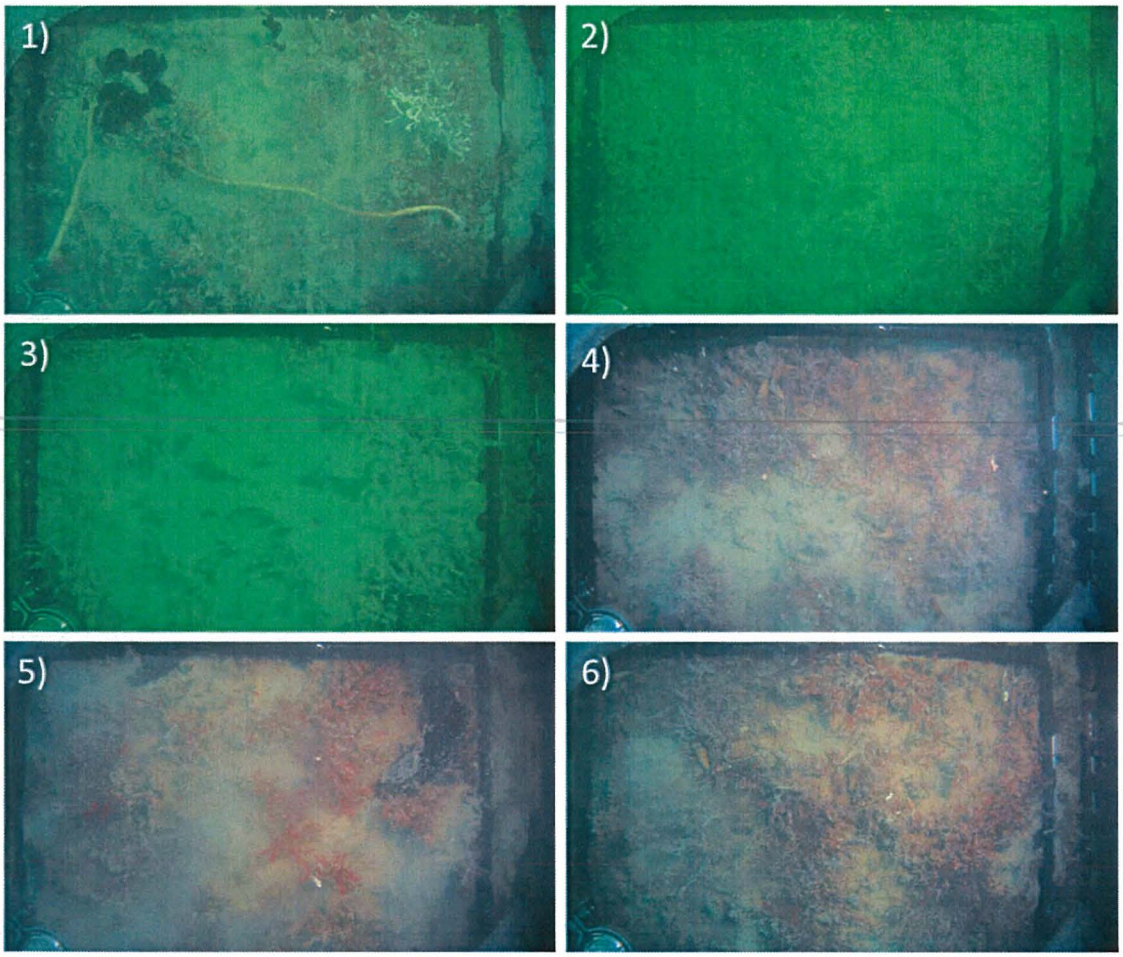

Figure 3-2: Drop Camera still photographs of the seabed within the site. Numbers 1-6 correspond to drop cam stations in Figure 2-1.

4 Conclusion

The survey did not identify any ecological features of special significance on the seabed in the vicinity of the proposed marine farm site in the context of the Port Underwood, Marlborough Sounds biogeographical region (e.g. McKnight and Grange 1991, Stenton-Dozey et al 2006). The main effects resulting from the establishment of a mussel farm at this site, including moderate levels of organic enrichment, some accumulation of mussels and other species dropping from the farm structures, and some changes to the species assemblages living on and within the sediments, are unlikely to result in significant environmental impacts. In terms of benthic ecology, the site is considered suitable for mussel farming.

5 Acknowledgements

The authors thank Anna Bradley for assistance in the field, Megan Carter for macrofaunal identifications, and Mike Page for reviewing this report.

6 References

McKnight, D.G., Grange, K.R. 1991. Macrobenthos-sediment-depth relationships in Marlborough Sounds. DSIR Marine and Freshwater 19p.

Stenton-Dozey, J., Morrisey, D., Stevens, C., Grange, K. 2006. Fisheries resource impact assessment for marine farming applications in Crail, Clova, and Beatrix Bays, Marlborough Sounds. *NIWA Client Reports CHC2005-114.1 to CHC2005-114.15.*