

Application for a Resource Consent – Resource Management Act 1991

This application form must be provided with applications to the council for new and replacement resource consents, and changes to the conditions on an existing resource consent.

If you would like to talk or meet with a consents officer to discuss your application prior to lodging with the council, please phone **0800 002 004** or email request to info@nrc.govt.nz.

PART 1: Administration Matters

1 Full Name of Applicant(s) *(the name(s) that will be on the resource consent document)*

Surname:

First Names:

OR

If the application is being made on behalf of a trust, the Trustee(s) who has/have signing authority for the trust must be named.

Trust Name:

Trustee's Name(s):

OR

Company Name: Aotearoa Fisheries Limited,

Contact Person: Joe Donaldson

Email address: Joe.Donaldson@moana.co.nz

Please Note: *If an email address is provided, then all correspondence for this application will be via email.*

Postal address: PO Box 65, Coromandel 3543, New Zealand

Telephone: *(please tick preferred contact number)*

Residential

Business

Mobile 027 7004403

2 Details of the Address for Service of documents if different from the Applicant (e.g. Consultant). This address will be used for all documents if completed.

Company Name: Hollings Resource Management Ltd

Contact Person: Mr Tom Hollings

Email address: tom@hrm.co.nz

Please Note: *If an email address is provided, then all correspondence for this application will be via email.*

Postal address: PO Box 104 016, Auckland 0654

Telephone: *(please tick preferred contact number)*

Residential Business

Mobile 027 495 3957

3 Invoices

Charges relating to the processing of this resource consent application should be sent to:

Applicant Address for service

Charges relating to the ongoing monitoring of a resource consent should be sent to:

Applicant Address for service

4 Name and Address of all Owners/Occupiers of the Site relating to Application if different from the Applicant

Owner(s): NZ Government (Crown seabed), C/- Land Information NZ

Postal Address: PO Box 5501, Wellington 6145

Telephone: *(please tick preferred contact number)*

Residential Business 0800 665 463

Mobile

Occupier(s):

Postal Address:

Telephone: *(please tick preferred contact number)*

Residential Business

Mobile

Please Note: *If the applicant is not the owner of the land to which the activity relates, then it is good practice to submit the application with written approval from the landowner.*

5 Extending Timeframes

The Resource Management Act 1991 (RMA) specifies timeframes for processing resource consent applications (e.g. 20 working days for a non-notified application); however, these timeframes can be extended, if necessary, with the Applicant's agreement. If the council does not meet these timeframes, then it is required to refund 1% of the total processing cost of the application for each day it exceeds the timeframe up to a maximum of 50%.

Do you agree to the council extending RMA resource consent processing timeframes?

- Yes**, provided that I can continue to exercise my existing resource consent until processing of this application is completed.
(Replacement application only. No refund is required to be paid until after the existing resource consent expires.)
- Yes**, provided that the extension is for the specific purpose of discussing and trying to agree on resource consent conditions.
- Yes**, provided that the application process is completed before this date (dd/mm/yy):
- No**.

6 Deposit Fee

An initial minimum fee is payable with this application. These fees can be found on the council's website www.nrc.govt.nz – [Schedule of Minimum Estimated Initial Fees](#) information. Please contact council consents staff if you need assistance with determining the correct minimum initial fee.

Unless agreed to prior to lodging your application, the council will not commence processing your resource consent application until payment of the minimum initial fee is received (i.e. the statutory processing time for the application will not start).

This minimum initial fee may be paid online, by cheque, or by EFTPOS at one of the council's offices.

Instructions for paying online can be found on the council's website at "[Pay online](#)". Please use either the first six numbers of your resource consent (e.g. CONXXXXXX or AUT.XXXXXX), if known, or the Applicant's name as the Reference/Customer number when paying online.

If you do pay online, then please enclose evidence of payment so that the council is aware that the payment has been made.

If the costs of processing the resource consent application are greater than the minimum estimated initial fee, then the applicant will be required to pay the additional actual and reasonable costs of processing the application.

Note: Annual User Charges for Resource Consent Holders

Holders of resource consents will in most cases be required to pay a "Minimum Annual Charge" for administration of the resource consent once issued. There is also likely to be additional annual charges for the monitoring of the resource consent, which will be dependent on the type of activity the resource consent is for. These charges are detailed on the council's website www.nrc.govt.nz in the Annual Charges section of the council's [Charging Policy](#).

7 Applications for Activities within the Coastal Marine Area (CMA)

Prior to lodging an application with the council to undertake any activity in the coastal marine area (CMA), the applicant is required under the Marine and Coastal Area (Takutai Moana) Act 2011 to notify the application to all groups who have applied for customary marine title in that location, and seek their view on the application. This notification should, as a minimum, include a summary of the application that provides sufficient detail for a group to understand what is being proposed

The council cannot accept an application to undertake an activity in the CMA unless the applicant for the resource consent provides evidence of this notification occurring. A response from customary marine title groups is not required by the council.

To ensure you meet the above requirement, you are advised to contact council consents staff to obtain a list of all of the current customary marine title applicant groups within the area where you are proposing to apply for a resource consent.

Information on customary marine titles is available on the [Ministry of Justice/Marine and Coastal Area Applications](#) website.

8 Consultation

The RMA does not require any person, including the applicant or council, to consult with anyone. It is, however, best practice to do so and will allow the council to make a more informed decision.

It is important to remember that consultation does not require reaching an agreement – it is to allow you and the council to be informed about a person’s views. If you do consult, and there are concerns raised that cannot be resolved and you still want to go ahead with your application, then you should have made a genuine attempt to consult with that person(s) in an open and honest manner. Their views should be recorded so they can be taken into account by the council when considering your resource consent application.

PART 2: Application Details

1 Description of Activity

Please describe in detail the activity for which resource consent is being sought.

See attached AEE - Description of the proposal. NB: This application is for two consents

.....

.....

2 Location Description of Activity

Site Address: See attached existing consent

.....

Legal Description: See attached existing consent

.....

(Legal description can be obtained from your Certificate of Title, valuation notice, or rates demand)

3 Site Plan

On a separate page (*minimum A4 size*), please provide a site plan showing the location of the activity, site layout, and surrounding environment in relation to property boundaries. Please include any buildings or developments on the site.

These plans should be provided electronically and be of good quality, to enable use in resource consent documentation.

If you do not have access to mapping software, we recommend you use the council's "**Property and Boundaries**" map available on our website <https://localmaps.nrc.govt.nz/LocalMapsGallery/>.

This council map contains aerial photography and shows property boundaries and details. You can carry out a property search and print maps of aerial photography.

4 Resource Consent(s) being Applied for

Coastal Permit

Mooring

Marine Farm

Structure

Pipeline/Cable

Other (*specify*)

Land Use Consent

Quarry

Earthworks

Dam Structure

Vegetation Clearance

Construct/Alter a Bore

Structure in/over Watercourse

Other (*specify*)

Water Permit

- Stream/Surface Take Damming Groundwater Take
 Diverting Water Other (specify)

Discharge Permit

- Domestic Effluent to Land General Discharge to Land Farm Dairy Effluent to Land/Water
 Air Water Other (specify)

5 Is this application to replace an existing or expired resource consent(s)? Yes No

If Yes:

(a) Please state the resource consent number(s):

12884.01
.....

(b) Do you agree to surrender the existing resource consent once a new one has been issued:

Yes No

6 Is this application to change a condition of an existing resource consent? Yes No

If Yes, please state the resource consent number(s):

12884.01
.....

7 Please specify the duration sought for your resource consent(s) –

Only for new or replacement applications.

25 years

0 months

8 Do you also require consent(s) from a district council? Yes No

If Yes, please complete the following:

Type of consent required?

Has it been applied for? Yes No

Has it been granted? (If Yes, please attach) Yes No

PART 3: Assessment of Environmental Effects (AEE)

1 An AEE must be provided with your application that has been completed in accordance with the requirements of [Schedule 4 of the RMA](#).

As a minimum, your AEE must include the following:

- Description of the environmental effects of the activity.
- Description of ways in which adverse environmental effects can be avoided, remedied or mitigated.
- Names of people affected by the proposal.
- Record of any consultation you have undertaken, including with affected persons (if any).
- Discussion of any monitoring of environmental effects that might be required.
- An assessment of the activity against any relevant objectives, policies, or rules in the Regional Plans.
- For a coastal permit, an assessment of your activity against any relevant objectives and policies of the New Zealand Coastal Policy Statement.
- An assessment of effects on tangata whenua and their taonga.

This AEE needs to be provided in a separate document attached to this application form.

Any activity needing a resource consent will have some environmental effects. The council will not accept an AEE that says there are no environmental effects from the activity.

You will need to complete the AEE at a level that corresponds with the scale and significance of the effects that the activity may have on the environment. Depending on the scale of the activity, you may need to get help from an expert(s) to prepare your AEE.

The council has a set of standard AEE forms for a selection of common activities. These AEE forms do not cover the relevant objectives, policies, or rules in the Regional Plans nor effects on tangata whenua. If you use one of these forms, then you will need to provide a separate assessment of these matters. These AEE forms can be found on the council's website www.nrc.govt.nz – “Forms and Fees”.

It is important that you provide the council with a complete and well-prepared AEE, otherwise the council may not accept your application.

If your application is for a change to a condition of resource consent under Section 127 of the RMA, then your AEE only needs to cover the effects of the change being requested.

2 Assessment of Effects on tangata whenua and their taonga

The Regional Plan for Northland requires that an AEE must also include an assessment of the effects on tangata whenua and their taonga if one or more of the following is likely:

- Adverse effects on [mahinga kai](#) or access to [mahinga kai](#); or
- Any damage, destruction or loss of access to [wāhi tapu](#), sites of customary value and other ancestral sites and [taonga](#) with which Māori have a special relationship; or

- Adverse effects on indigenous biodiversity in the beds of waterbodies or the coastal marine area where it impacts on the ability of tangata whenua to carry out cultural and traditional activities; or
- Adverse effects on [taiāpure](#), [mātaītai](#) or Māori non-commercial fisheries; or
- Adverse effects on protected customary rights; or
- Adverse effects on sites and areas of significance to tangata whenua mapped in the Regional Plan for Northland (refer [Maps | Ngā mahere matawhenua](#)).

Your AEE must include an assessment of whether any of the above affects are likely to occur.

If they are likely to occur, then you will need to complete a Cultural Impact Assessment (CIA) and provide this with your resource consent application. The Regional Plan for Northland provides details of what must be included in this CIA, and should be referred to.

The best way to find out what the effects of your proposal may be on tangata whenua is to contact local iwi/hapū groups (who represent tangata whenua) and discuss your proposal with them. Council consents staff can provide a list of contact details for local iwi/hapū groups in the area of your proposal. You can then send a copy of your proposal to these groups and seek feedback from them prior to lodging your application. Some iwi/hapū have also developed iwi/hapū Environmental Management Plans that are useful documents that can assist to identify issues of concern to those iwi/hapū for activities occurring in their rohe. The iwi/hapū Environmental Management Plans can be obtained directly from the iwi/hapū or from the council upon request.

3 Assessment of Affected Persons

If the adverse effects of your activity on a person are likely to be minor, or more than minor, then that person is deemed to be an “affected person” for your resource consent application.

An affected person may include neighbouring land owners and occupiers, and/or organisations such as the Department of Conservation, Land Information New Zealand (LINZ), Fish and Game Council, Iwi and Hapū, and community groups.

If you do not think there will be any affected persons for your resource consent application, then you do not need to provide any details on this matter in your AEE. However, the council will still undertake an assessment of whether there are any affected persons as part of processing the resource consent application.

If there are persons you have identified who may be affected, and you have discussed your proposal with these persons, please record any comments made by them and your response, and include this information with your application. If you have written approvals from these parties, then these should be provided as well. The council has a written approval form that can be used for this purpose.

Iwi Settlement Acts

If there is an **Iwi Settlement Act** that covers the area of your application, then there may be “Statutory Acknowledgement” areas which could be adversely affected by your activity. If the location of your activity is within, adjacent to, or may have an adverse effect on, a Statutory Acknowledgement area, then you will need to assess whether the trustees of the Statutory Acknowledgement are affected persons. Information about Statutory Acknowledgements in Northland can be found on the council’s webpage at [“Statutory Acknowledgements in Northland”](#).

Checklist

The following information **must** be included in your application to ensure that is not returned as incomplete under Section 88 of the RMA.

- All applicable application form details have been completed.
 - Assessment of Environmental Effects in accordance with Schedule 4 of the RMA.
 - Assessment of effects on tangata whenua and their taonga.
 - Site plan(s). These are required to be of good quality, and preferably electronically, to enable use in resource consent documentation.
 - Evidence of payment of the required minimum estimated initial fee.
 - If you are applying for a coastal permit, evidence that you have provided notice of your application to all groups who have applied for customary marine title in the location of your application and that you have sought their view on the application. The council cannot legally accept an application without evidence of this.
-

Information Privacy Issues

The information you provide in this application is regarded as official information. It is required under the provisions of the Resource Management Act 1991 to process this application. The information will be held by the council and is subject to the provisions of the Local Government Official Information and Meetings Act 1987, and the Privacy Act 1993. The information you provide in this application will generally be available to the public.

Under Section 88 and/or 127 of the Resource Management Act 1991 (RMA), the undersigned makes this application for resource consent(s).

- 1 I/We confirm that I have authority to sign on behalf of the person(s) named as the applicant(s) for this application for resource consent.**
- 2 I/We have read, and understand, all of the information contained within this application form, including the requirement to pay any additional actual and reasonable costs for the processing of the application.**
- 3 I/We confirm that all of the information provided is true and correct and I understand that any inaccurate information provided could result in my resource consent (if granted) being cancelled.**

Signature(s):

Date:

Signature(s):

Date:

Signature(s):

Date:

Please note that a signature is not required if submitting application electronically.

Resource Consent Applications for an Existing Marine Farm in Whangaroa Harbour

IRISID Registration No. 12884

Supporting information and Assessment of Effects on the Environment

Consent Holder; Aotearoa Fisheries Ltd

Consent Operator; Moana New Zealand Ltd

Prepared for the Applicant by:
Hollings Resource Management Ltd,
PO Box 104 016, Auckland 0654.
Email tom@hrm.co.nz

September 2023

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1. Introduction

- 1.1 This document supports the application for two consents and has been prepared in accordance with statutory requirements and those of Northland Regional Council. These include the Natural and Built Environment (NBE) Act & Resource Management Act, the New Zealand Coastal Policy Statement, the Resource Management (National Environmental Standards for Marine Aquaculture) Regulations 2020, the Marine and Coastal Areas Act and the Northland Regional Plan.
- 1.2 The application relates to marine farming activities for existing marine farm structures used for farming oysters in the Coastal Marine Area (CMA), as described below.
- 1.3 No other resource consents are required for the replacement coastal permit for these marine farming activities.
- 1.4 This application includes the following information:
 - Description of the proposal and Assessment of Effects on the Environment
 - Confirmation of Marine and Coastal Areas Act (MACA) notifications
 - Report on Iwi Consultation
 - Wildlands Consulting Benthic Ecology Report (Brown 2023)
 - Wayfinder Ltd Landscape Report (Bray 2023)

2. Description of the Proposal

2.1 This application is for two consents:

- 2.1.1. A replacement coastal permit to use and occupy space in the CMA for existing structures (including anchors, posts, racks, baskets, monitoring and navigation aids) for the purpose of marine farming as described in Table 1 (including those species specified, associated minor discharges to water and minor disturbances to and deposition on the seabed).
- 2.1.2 A variation to this coastal permit for changes in farming methods to allow the use of the floating basket method of oyster cultivation, known as “flip farming”. This method uses surface long-lines with floating bags secured by anchor post (end-posts). The change from conventional marine farming structures to flip farming requires a single variation to this Marine Farm consent.
- 2.1.3 The following analysis considers the effects on the environment of “this application” (singular) as an interchangeable term for one or both of the 2 consent applications, being for consent renewal and for flip farming.

2.2 Description of operations

2.2.1. Renewal of existing consent

The applicant currently holds the following resource consent as per the table: A copy of this consent is provided as Appendix 1.

Table 1: Existing Marine Farm details: Farm Le 3, IRISID Registration Number 12884

Marine Farm Details	Description
Consent Holder's Name	Aotearoa Fisheries Ltd, operated by Moana NZ Ltd
Marine Farm Location	See attached Map 1 & Map 2, and Appendix 1
Marine Farm coordinates (<i>Geodetic Datum 2000, New Zealand Transverse Mercator Projection</i>)	1669660E 6121380N
Marine farm species	Pacific oysters including spat catching
Area and dimensions	7.1834 hectares
Coastal Permit Number	12884
Previous Authorisation	Le 3
Value	\$897,925
Plans	Survey and Farm Layout & Navigational Plans are provided in Appendix 1.

With the exception of provision for flip farming, no changes to the current conditions of this consent are proposed.

2.2.2 Variation for Flip Farming

This variation seeks to use floating longline and basket systems with end posts. It is not proposed to move the farm outside of its existing leased area. The farm has been in the same place for ~ 50 years.

The flip farming method is described in the attached Wayfinder Report (Bray 2023). Briefly, it is a system of self-floating baskets which are interlinked by string-lines attached to anchor posts wedged into the seabed at the end of each row. This system completely removes the need for frames and racks in the seabed, as the whole farm (other than anchor posts at each end of the row) is floating.

Each basket measures approximately 50cm x 30cm in size, approximately 25cm deep. It is attached to a float of a similar size, such that the baskets hang submerged below the float. When empty, approximately three-quarters of the float remains visible on the surface, and when full the top of the float sits generally flush with the water level.

As each of the baskets has its own buoyancy, the lines need to be attached to anchor posts at each end. These posts, at approximately 250mm in diameter remain the only part of the farm embedded in the seabed and they will extend up to 1.5m above the high tide water level. A floating ring is then placed over the post, to which the lines are attached. This floating ring rises and lowers with the tide, ensuring that the length of the line stays consistently taut, but with enough slack to allow them

to be pulled up out of the water and onto a boat for tending. Navigational marker posts will still be required, which is no different from at present.

The floating basket method allows full access to the oyster farm by boat. Each basket can rotate on the lines, allowing it to be opened while still attached. Alternatively the baskets are periodically left upside-down which stops unwanted overgrowth of other species. The method allows workers to tend to the baskets and farm directly from within the service vessel, rather than walk up and down the seabed along the rows. Thus the method has much less tanalised timber posts, racks and sticks. It has less seabed effects and is more effective for control of pests. It allows the farm to be worked at most stages of the tide (except low tide) with less arduous work, and work can proceed at more suitable times of the day. It produces a better growing and better shaped oyster with less waste.

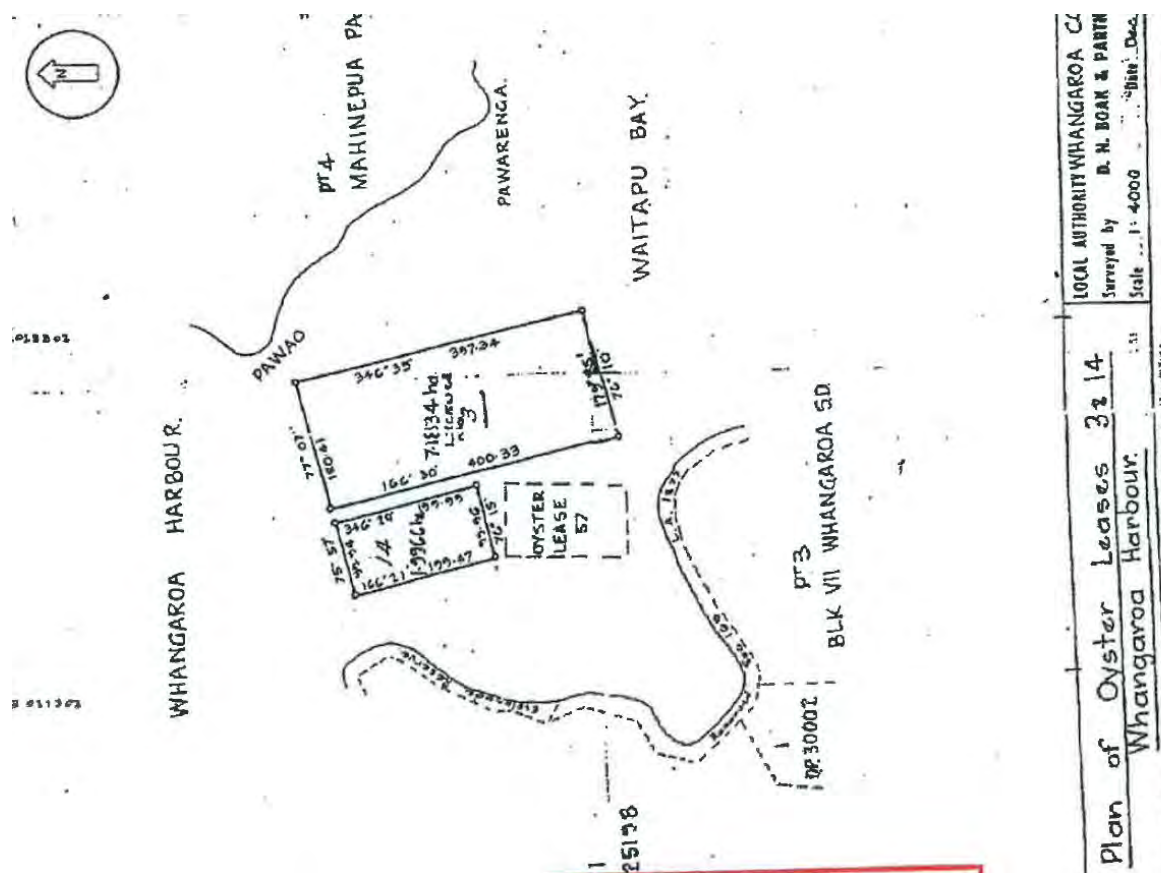
2.2.3 Consent period

A 25-year consent period is sought for both consents. This is to provide business continuity and security of investment. No adverse environmental effects have arisen from the past activity that would warrant a shorter timeframe being applied. The Regional Coastal Plan allows for a maximum term of 25 years. A maximum 25-year consent term would reflect the social and economic benefits of the oyster farming industry to the Northland Region.

Map 1: General Location of Marine Farm



Map 2: Plan Location of Marine Farm



3. Planning assessment

Relevant Planning Provisions and legal requirements in accordance with RMA Section 104 (1) (b) include:

3.1 New Zealand Coastal Policy Statement (2010)

The New Zealand Coastal Policy Statement (NZCPS) recognises the significant existing and potential contribution of aquaculture to the social, economic and cultural well-being of people and communities by:

- a. including in regional policy statements and regional coastal plans provision for aquaculture activities in appropriate places in the coastal environment, recognising that relevant considerations may include:
 - i. the need for high water quality for aquaculture activities; and
 - ii. the need for land-based facilities associated with marine farming;

- b. taking account of the social and economic benefits of aquaculture, including any available assessments of national and regional economic benefits; and
- c. ensuring that development in the coastal environment does not make water quality unfit for aquaculture activities in areas approved for that purpose.

These NZCPS considerations (a – c), and others, are covered in detail in the Assessment of Effects on the Environment (Section 5).

3.2 Regional Policy Statement (RPS) (2016)

The coastal objective is set out in Section 3.7 and emphasises the need for integrated management, including preserving natural character and protecting natural features and landscape values of the coastal environment; recognising the inter-connections between marine and land-based activities; and recognising the dynamic, complex and interdependent nature of natural biological and physical processes. This is supported by Policy 7.1 which emphasises efficient use of space in the coastal marine area and that space is allocated in a way that recognises ecosystem values as well as people’s aspirations. Opportunities for aquaculture are specifically recognised. Objective 3.13 (supported by Policy 7.2) addresses the mauri and health of marine waters, including enabling people and communities to provide for their social, economic and cultural well-being.

This application is aligned with these objectives and policies as evidenced by the information contained in the attached Wayfinder and Wildlands Consulting reports. Further, the applicant utilises space in an efficient manner, and the space allocated to existing marine farms recognises the balance between ecosystem values and people’s social and economic aspirations. The attached reports have not identified any adverse effects which are more than minor.

Further RPS objectives and related policies identify the importance of managing the environment while meeting economic and social well-being. It is considered that this application is consistent with these objectives and policy directives, for the following reasons:

- Existing public amenity and recreational values are unaffected.
- Water quality is unaffected.
- Adverse ecological effects are no more than minor.
- Abandonment risk is minor, given the 25+ years this farm has been in operation, and this application is for a further 25 years.
- Public access will not change.
- Adverse visual and landscape effects are no more than minor.
- The positive socio-economic benefits of this sustainable economic activity remain.
- Efficiency is improved.

It is considered that this application is consistent with and meets the objectives and policies of the Northland Regional Plan, while adverse effects have been avoided and/or mitigated to the point where they are no more than minor. This application will continue the positive socio-economic benefits to the Northland Region. Further information is provided in the assessment of effects on the environment (Section 5).

3.3 National Environmental Standard for Marine Aquaculture (NESMA) 2020

The National Environmental Standard for Marine Aquaculture (NESMA) was made Operative on 1 December 2020. It provides rules for marine farms which simplify and streamline the re-consenting process. It does not apply to this variation application (for flip farming). Generally, NESMA allows for re-consenting marine farms on a Restricted Discretionary basis, unless the operative Regional Coastal Plan allows for more permissive status, or where the marine farm has been realigned or changed operations in such a way that other Rules apply. Consequently, NESMA does not completely override the Northland Regional Plan, so some consent renewals may be either Controlled, Restricted Discretionary or Discretionary, depending on the current operation of the marine farm.

3.4 Operative Northland Regional Plan July 2022 and Environment Court decisions

The Northland Regional Plan was made operative in 2015. Since then, plan changes (including Plan Change 4) have occurred, and more recently a new Regional Plan was made operative in 2022. The new Plan provisions specifically address aquaculture and related activities. The Objectives of the Plan support the sustainable development of marine farming. Marine farming is recognised as an important industry within the region. There is an emphasis on sustainable management and efficient use of space while avoiding adverse effects on the environment.

The Objectives and Policies are also supportive of aquaculture, especially for renewals of existing farms. Policy D.5.1 recognises the benefits that existing and new aquaculture can provide to local communities. Policy D.5.2 provides for: 1) the continued operation of existing aquaculture activities (including their realignment), and 2) the extension of existing aquaculture activities. Policy D.5.4 requires aquaculture activities to avoid adverse effects (after taking into account any remediation or mitigation). With regard to the Plan's objectives, Objective F.1.5 seeks to enable the Northland Region's economic well-being through the efficient and effective use and development of Northland's natural and physical resources in a way that will improve the economic, social and cultural well-being of Northland and its communities. Objective F.1.8 seeks appropriate use and development in the coastal marine area.

There are a number of proposed Plan changes relating to Topic 1A – Aquaculture which have recently been decided by the Environment Court. The outcomes of these decisions are described in Decision [2022] NZEnvC 131 dated 20 July 2022. Updated Appeals Versions of the Plan have been released on 8 December 2022 and 7 June 2023. These updates contain some minor corrections to the earlier (20 July 2022) version of the Plan.

3.4.1 Renewal of existing consent

The Environment Court decision has confirmed the rules outlined in NESMA and clarified the relationship between NESMA Rules and Regional Coastal Plan Rules. The operative Rules (at the time of this application) of the new Regional Coastal Plan now generally follow those outlined in NESMA, which allow for marine farms to continue their operations within existing approved marine farm areas.

The renewal application is a CONTROLLED ACTIVITY consistent with the operative Plan Rule

C.1.3.1. The application site is not within areas identified by the Northland Regional Council as "Significant Ecological Areas", hence this activity is classified as a CONTROLLED ACTIVITY. However, the site is within an area (including the entire Northland coastal-marine zone) identified as a

'Significant Marine Mammal and Seabird Area' in the Proposed Regional Plan maps. An area identified as having High Natural Character (subject to appeal) in the Proposed Regional Plan maps is located c.350 metres to the south of the farm structures. Controlled activities require an assessment of management practices to minimise adverse interactions between marine mammals or seabirds and the marine farm, including entanglements, injury, and mortality. This assessment is provided below in section 5.1(2).

Controlled activities are described by the current Northland Regional Plan as follows:

Re-consenting aquaculture (not finfish) - controlled activity.

An application for a new coastal permit to replace a coastal permit for the occupation of the common marine and coastal area for the purposes of an aquaculture activity, and any associated erection or placement of structures, is a controlled activity, provided:

- 1) *it is not finfish aquaculture, and*
- 2) *no part of the area of occupation is in a mapped (refer Maps Nga mahere matawhenua):*
 - (a) Significant Ecological Area, or*
 - (b) Outstanding Natural Feature, or*
 - (c) Area of Outstanding Natural Character, or*
 - (d) Site or Area of Significance to tangata whenua, or*
 - (e) Outstanding Natural Landscape*
- 3) *there is an existing coastal permit for the aquaculture activity, or a coastal permit for the aquaculture activity existed less than one year before the date the application is made, and*
- 4) *there is no change to the activities as authorised by the existing, expired or lapsed coastal permit (other than a decrease in the area of occupation).*

Matters of control:

- 1) *Measures to manage effects on reefs and biogenic habitats within the footprint of the structure and:*
 - a) 20 metres around the footprint of the surface structures of an inter-tidal marine farm; or*
 - b) 20 metres from the boundary of the consented area of a sub-tidal marine farm.*
- 2) *Management practices to minimise adverse interactions between marine mammals or seabirds and the marine farm, including entanglements, injury, and mortality.*
- 3) *The management of biosecurity risks.*
- 4) *The management of the effects on the environment of noise, rubbish, and debris.*
- 5) *Integrity and security of the structure.*
- 6) *The layout, colour, positioning, density, lighting, and marking of marine farm structures within a marine farm, for the purpose of ensuring—*

a) continued reasonable public access (including recreational access) in the vicinity of the marine farm; and

b) navigational safety, including the provision of navigation warning devices and signs; and

c) with respect to colour, the visibility and coherent appearance of marine farm structures

7) The need to upgrade, replace or remove any derelict or disused structures.

8) The mechanism to recover the full cost of the repair or removal of abandoned or derelict farms and reinstatement of the environment.

9) Effects associated with the operation of the marine farm on public facilities and infrastructure.

10) When occupation is authorised in relation to seasonal activities such as spat catching:

Notification:

Resource consent applications under this rule are precluded from public and limited notification.

For the avoidance of doubt this rule covers the following RMA activities:

- Any erection or placement of structures for aquaculture activities in, on, under or over any foreshore or seabed, any incidental disturbance of the foreshore or seabed, and any deposition of shell and other biota onto the foreshore or seabed incidental to the activity (s12(1)).
- Occupation of the common marine and coastal area by the aquaculture activity (s12(2)).
- Discharges of sediment or water into water incidental to the activity (s15(1)).

3.4.2 Variation of consent to allow flip-farming

The proposed variation is a DISCRETIONARY ACTIVITY consistent with the operative Plan Rule

C.1.3.6. This Plan Rule applies to marine farm applications in an area where aquaculture activities are authorised to occupy, so that a change in method may be sought. NESMA is not applicable to this activity.

The Plan describes, for the avoidance of doubt, that this rule covers:

- **A change of species or farming method**, in an area where aquaculture activities are authorised to occupy in the common marine and coastal area (12(3)).

This Assessment of Effects includes matters to be considered for discretionary activities. These are outlined in Part 2 and the 4th Schedule of the Resource Management Act. These are additional to those matters required to be considered for renewal of consent (as described in Section 3.4.1). It is assessed that ancillary activities associated with the installation and operation of flip farming fit within the Permitted Activity parameters of the Northland Regional and District Plans.

4. Marine and Coastal Areas Act

Section 62 of the Marine and Coastal Areas Act (MACA) requires all resource consent applicants to notify and seek the views of MACA applicants. For the locality of this oyster farm, advice from

Northland Regional Council is that the following MACA applicants require notification for consents in this area (Whangaroa Harbour):

Name of Applicant	Email	Contact Address for Applicant
Uri o Ururoa	sophiadevine@slingshot.co.nz	C/- J Rika
The Descendants of Puhi Poata & Waikainga Hōne Tua Pōmana	porkzfranklin@gmail.com	C/- C Franklin
Te Whanau Whero	paulawilson@hendersonreeves.co.nz	C/- Paula Wilson, Henderson Reeves
Te Ururoa Trust	kiri@kahuilegal.co.nz	C/- Kiri Tahana, Kahui Legal
Te Rūnanga o Whaingaroa Incorporated	mihiarangi@whaialegal.co.nz	C/- M Piripi, Whaia Legal
Te Kaunihera Māori o Te Tai Tokerau	rihari.takuiria@gmail.com	C/- R Dargaville
Te Aeto Hapū, Ngāti Pou Hapū	terry.tauroa@gmail.com	C/- Terry Tauroa
Tahaawai	lisetterawson@gmail.com	C/- L Rawson
Smith Whānau	hemasmith44@gmail.com	C/- H Smith
Samuels on behalf of Ngāti Kahu	charl@ranfurlychambers.co.nz	C/- C Hirschfeld, Ranfurly Chambers
Ngāti Rua	tauihoitepotrust@gmail.com	C/- Waitangi Wood
Ngāti Kawau te Kōtuku, Te Uri o Te Aho, Ngāti Kuri, Te Waiariki Kororā ngā Hapū o Ngāpuhi-Nui-Tonu	mason@phoenixlaw.expert	C/- Phoenix Law
Ngāti Kawau	hemasmith44@gmail.com	C/- H Smith
Ngāti Kahu, Te Rarawa, Te Uriohina	hekenukumai-maca@ranfurlychambers.co.nz	C/- Hekenukumai (Hector) Busby
Ngāti Kahu ki Whangaroa & Ngāpuhi ki Whangaroa	Mihiarangi.Piripi@kensingtonswan.com	C/- Te Rūnanga o Whangaroa Inc
Ngāpuhi Nui Tonu-Kota-toka-tutaha-moana o Whāingaroa	fredw@ycd.co.nz	Ngatiruamahue Marae c/o Wainui Marae Wainui Valley Road RD 1 Kaeo 0478.
Ngāpuhi Nui Tonu (Te Kotahitanga Marae)	jrrk999@yahoo.com	C/- J R Kingi
Ngāpuhi Nui Tonu (Kēnana Marae)	jrrk999@yahoo.com	C/- J R Kingi
Mita Pōmana & Takutai Moana Heke Pōmana Whānau	mjpomana@gmail.com	C/- M Pomana

Kingi on behalf of Ngā Puhi nui tonu, Ngāti Rāhiri, Ngāti Awa, Ngā Tahuu and Ngaitawake	gesharrock@rightlaw.nz	C/- G Sharrock, RightLaw Limited
Kahukuraariki Trust	geraldine.baker@kahukuraariki.iwi.nz;rosie.conrad@kahukuraariki.iwi.nz	C/- R Conrad / G Baker, Kahukuraariki Trust
Hotere & Wikaira on behalf of Te Hikutū Hapū	gesharrock@rightlaw.nz	C/- G Sharrock, RightLaw Limited
Hikuwai - Īhāia Whānau (Waiatua Hikuwai)	waihikuwai@gmail.com	C/- W Fredricsen
Hape Whānau	darrylhape@gmail.com	C/- D Hape
Descendants of Wiremu Tuaru Williams & Emma Hikiora Williams	marie.williams@healthalliance.co.nz	C/- M Williams
Dargaville on behalf of Ngāti Kauwau, Ngāti awa at Whangaroa	gesharrock@rightlaw.nz	C/- G Sharrock, RightLaw Limited
Dargaville on behalf of Ngaitawake	gesharrock@rightlaw.nz	C/- G Sharrock, RightLaw Limited
Craven Whānau	kaeo.tane@gmail.com	G Walmsley
Collier on behalf of Ngāti Kawau & Te Waiariki Kororā	mason@phoenixlaw.expert	C/- Janet Mason, Phoenix Law Limited
Awhirangi Panehina Lawrence Whānau, Mita Pōmana Whānau, Takutai Moana Whānau Trust	awhilawrence@gmail.com	Awhirangi Panehina Lawrence

These MACA applicants were notified by email on August 29th 2023. Ngāpuhi Nui Tonu-Kota-toka-tutaha-moana o Whāingaroa was also notified by mail (as requested by Council).

In Addition to MACA applicant notifications, a copy of this application was forwarded to the following iwi by email for comment:

- **Ngāti Kahu Ki Whangaroa - admin@kahukuraariki.iwi.nz**
- **Te Runanga o Whaingaroa - Raniera.Kaio@whaingaroa.iwi.nz**

The report on MACA applicant and iwi consultation, including responses received and changes to the application resulting from those responses, is provided in Appendix 2 to this document.

5. Assessment of Effects on the Environment (AEE)

5.1 Assessment of Effects (AEE) for renewal of consent – Controlled activity

This assessment includes actual and potential positive and adverse effects. It is presented in accordance with NESMA and NRC/Environment Court guidelines for **Controlled** activities.

The Environment Court decision on the Proposed Northland Regional Plan provides a list of AEE guidelines for Controlled activities in the CMA. These are listed below, along with an assessment of the effects relevant to this application for consent renewal.

1) Measures to manage effects on reefs and biogenic habitats within the footprint of the structure and:

a) 20 metres around the footprint of the surface structures of an inter-tidal marine farm; or

b) 20 metres from the boundary of the consented area of a sub-tidal marine farm.

These effects have been assessed by the Wildlands Report (Appendix 3). No adverse effects which are more than minor have been identified by this report. Consequently, no additional measures are proposed to manage such effects.

2) Management practices to minimise adverse interactions between marine mammals or seabirds and the marine farm, including entanglements, injury, and mortality.

The site is not within areas identified by the Northland Regional Council as 'Significant Ecological Areas' (SEA). The site is within an area (including the entire Northland coastal marine zone) identified as a 'Significant Marine Mammal and Seabird Area' in the Proposed Northland Regional Plan maps (NRC 2021). A review by Sagar (2013) on the potential effects of shellfish aquaculture in New Zealand on seabirds indicated that adverse interactions from these farms can include:

1. *Disturbance and habitat exclusion.* Marine farms may physically exclude birds from an area or may disrupt the birds natural use of the area (behavioural exclusion). The potential for habitat exclusion was considered insignificant by Sagar (2013) given the small area occupied by non-fed aquaculture in New Zealand and the large area of suitable habitat available for foraging seabirds.
2. *Entanglement.* There have been no reports of seabird deaths in New Zealand due to entanglement in shellfish farms.
3. *Reduction of prey due to smothering of benthos under the farm.* Available feeding habitat of benthic feeding birds such as oystercatchers may be reduced due to smothering of benthos under the farm. The potential effects of prey reduction due to smothering was considered insignificant by Sagar (2013) given the small area occupied by non-fed aquaculture in New Zealand and the large area of suitable habitat available for foraging seabirds.
4. *Ingestion or entanglement with foreign objects such as farm litter.* This can cause death by dehydration, blockage of the digestive tract, entanglement or from released toxins.
5. *Attraction to artificial lighting and collision with farm infrastructure.* Flying birds that are attracted to lights have been recorded colliding with fishing vessels and lighthouses.

Positive effects identified included provision of roost habitats closer to foraging locations, and aggregation of fish prey under the farm providing enhanced feeding opportunities. Overall, Sagar (2013) concluded that effects on seabirds due to existing aquaculture should not be regarded as significant.

Recommended management practices that can be used to mitigate potential adverse effects of existing shellfish farms on birds include:

- Disturbance and habitat exclusion. Reduce anthropogenic farm noise, particularly during breeding season.
- Entanglement. Ensure there are no loose lines on the farm that birds can get entangled with. Report any bird entanglements with farm structures to Council.
- Reduction of prey due to smothering. Avoid overstocking the farm and regularly manage biofouling on farm structures to limit accumulation.
- Ingestion of foreign objects. Ensure that all farm litter is disposed of correctly so that it does not end up in the sea. Have a hand net on board to collect any litter that is accidentally dropped.
- Disorientation due to lights. Restrict the use of lighting on the farm to navigational lights and those required for safe vessel operation.

The consent conditions on the current resource consent provide for these management practices. Therefore, no changes to the current consent conditions are proposed.

A review by Clement (2013) on the potential effects of shellfish aquaculture in New Zealand on marine mammals indicated that the main potential adverse effects from these farms include:

1. *Entanglements* Marine mammals can become entangled with ropes and spat lines. However, this has only happened with mussel farms and it is unclear whether the marine mammals were alive at the time of entanglement.
2. *Habitat exclusion*. The potential effects of this are species specific. Some whales and some dolphins are likely to avoid marine farms whereas pinnipeds (seals and sealions), common dolphins and bottlenose dolphins may be attracted to marine farms.
3. *Underwater noise disturbance*. This may either attract or exclude marine mammals. Whales and particular dolphin species tend to be more sensitive to underwater noise, while pinnipeds, common and bottlenose dolphins may be attracted to the noise.

The most important factor in limiting adverse effects of aquaculture on marine mammals is siting of new farms to avoid overlapping with critical habitats and/or migration routes (Clement, 2013). This is an application for re-consenting a marine farm in an area where no interactions with marine mammals have been recorded, so it is unlikely that the potential for adverse effects is more than minor. However, management practices that can be used to mitigate potential adverse effects of existing shellfish farms on marine mammals are:

- Ensure there are no loose lines on the farm that mammals can get entangled with.
- Ensure that all farm litter is disposed of correctly so that it does not end up in the sea.
- Report any entanglements with farm structures to Council and the Department of Conservation. Monitor mammal presence/absence around the farm.
- Underwater noise disturbance - Reduce anthropogenic farm noise.

The consent conditions on the current resource consent provide for these management practices. Consequently, no changes to the current consent conditions are proposed.

3) The management of biosecurity risks.

The consent holder currently follows all biosecurity Industry Codes, including the Industry Biosecurity Standards of Aquaculture New Zealand, and other statutory requirements such as NRC

Regional directives and MPI directives. Briefly, these statutory requirements cover measures to minimise the likelihood of spreading pests and diseases including:

- Regular surveillance and recording of the abundance of pest species, new species to the area, or any unusual mortality on the farms;
- Reporting the occurrence of unwanted organisms or suspected disease to the Ministry for Primary Industries (MPI). Note that Mediterranean fan worm is a notifiable species under the Biosecurity Act (1993). This classification requires its presence to be reported to MPI for areas where it is not known to occur;
- Providing appropriate training for farm staff in pest surveillance and biosecurity management;
- Using hatchery spat or spat that has been caught locally;
- Minimising stock transfers among farms and restricting them to farms that are near one another. If transfers are necessary, oysters should be de-clumped, thoroughly washed, visually inspected for fouling organisms, and transferred as single seed;
- Cleaning and decontaminating all removable farm equipment prior to redeployment at a different site;
- Cleaning fouling organisms off floats and ropes during harvest, and rotating floats to expose fouled surfaces to the sun;
- Antifouling all farm vessels according to the manufacturer's recommendations;
- Cleaning and decontaminating farm vessels before travel between management areas or operational zones;
- Washing down decks and emptying bilges and any other contained spaces of vessels before leaving the farm;
- Keeping accurate records of all stock transfers (i.e., date, origin and destination locations, quantity transferred, and health and performance of stock).

Industry Codes, statutory requirements and consent conditions currently provide for these management practices.

4) The management of the effects on the environment of noise, rubbish, and debris.

With reference to the effects of noise, rubbish and debris on ecological values, these are described in Section 2) above. With regard to the effects of these on the neighbourhood and related social values, normal farm practices will continue in accordance with Council Rules, RMA and local Plan provisions and consent conditions. These provide for dealing with these effects to the point where they are no more than minor. To date, no complaints have been received from the public about adverse effects of this nature. Consequently, no changes to the current consent conditions are proposed.

5) Integrity and security of the structure.

No issues or effects of this nature have previously been identified. Normal farm practices will continue in accordance with all safety and statutory requirements.

6) The layout, colour, positioning, density, lighting, and marking of marine farm structures within a marine farm, for the purpose of ensuring—

- a) continued reasonable public access (including recreational access) in the vicinity of the marine farm; and***

- b) navigational safety, including the provision of navigation warning devices and signs; and***
c) with respect to colour, the visibility and coherent appearance of marine farm structures

With respect to public access and navigational safety, normal farm practices will continue in accordance with all safety and statutory requirements. There will be regular inspections and maintenance of farm equipment to avoid/minimise risk of creating navigation hazards through equipment going adrift. The marine farm does not extend into any navigation channel. Navigation is practically restricted to between the row structures of the farm. However public access through the farm remains legal and there are wide areas around the farm to navigate and recreate in. The applicant has not sought exclusive use of the marine farming areas and the public therefore retains the right of access to and along the area within the marine farm. Accordingly, any current adverse effects on navigation and public access are no more than minor. No new adverse effects are likely to result from this consenting application.

With respect to colour, the visibility and coherent appearance of marine farm structures, no issues or effects of this nature have previously been reported.

The consent conditions on the current resource consent provide for these management practices. Consequently, no changes to the current consent conditions are proposed.

7) The need to upgrade, replace or remove any derelict or disused structures.

[Not applicable]

8) The mechanism to recover the full cost of the repair or removal of abandoned or derelict farms and reinstatement of the environment.

Conditions 15-19 of the current consent provide for bonds (and alternatives) which cover these eventualities. No changes to these current consent conditions are proposed.

9) Effects associated with the operation of the marine farm on public facilities and infrastructure.

No effects have previously been reported.

10) When occupation is authorised in relation to seasonal activities such as spat catching:

[Not applicable]

11) Other RMA Part 2 and 4th Schedule considerations relating to renewal of consent:

1. Section 6 (e): The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga: and 6 (g) the protection of protected customary rights

The outcomes of iwi consultation are recorded in Appendix 2.

2. Section 7 (a) kaitiakitanga: and (aa) the ethic of stewardship:

Marine oyster farms have been present in this area for over 40 years. During that period, there have been few to zero public complaints about this activity in the Coastal Marine Area. This is because the marine farming activity retains its own ethic of stewardship insofar as the farms need clean water and a healthy environment to operate. Consequently, the ethic of stewardship is in-built into

the entire marine farming operation, which is consistent with this RMA matter. The consent holder and the marine farm operator fully reflect and give effect to these considerations.

3. Section 7 (b) The efficient use and development of natural and physical resources:

This consent renewal confirms the fact that these farms have operated in an efficient and effective way. The desire to proceed with the maximum term allowed (25 years) confirms that these farms will continue to operate efficiently and effectively into the foreseeable future.

5.2 Assessment of Effects (AEE) for variation of consent to allow flip farming – Discretionary activity

5.2.1. Assessment related to RMA Part 2 matters

An assessment of those effects which are relevant to the application for consent variation, as outlined in RMA Part 2 and Schedule 4, are listed below:

RMA Section 5 promotes the sustainable management of natural and physical resources. “Sustainable management” means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—

(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and

(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and

(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.

With respect to 5(2)(a), the proposed variation would not have any additional effect on the Coastal Marine Area’s natural and physical resources or use of space, in any way that would impede the reasonably foreseeable needs of future generations, nor preclude access to or through the farm areas by others. Ecological effects are reversible and visual effects immediately reversible upon removal of the farms, so future generations are not precluded from making their own decision on use of this area.

With respect to 5(2)(b): Ecological effects of the proposed variation have been assessed as no more than minor (Brown 2023), and the life-supporting capacity of existing marine ecosystems will be safeguarded.

With respect to section 5(2)(c), this application has considered the adverse effects and identified that the proposed variation will avoid or mitigate these effects to the point where they are no more than minor.

In conclusion. With regard to RMA Section 5, this application meets this definition of sustainable management through demonstrating the positive effects of economic, cultural and social benefits; with any actual or potential adverse effects of this activity assessed as being no more than minor.

RMA Section 6 outlines matters of national importance to be considered.

With respect to Sections 6(a) and (b), this relates to:

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:

(b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:

These issues and further analyses are provided in the attached Wayfinder Report (Bray 2023).

Section 6(c) addresses significant habitats of indigenous fauna. The Wildlands Consulting Report (Brown 2023) describes the ecological features of the marine farm site and provides an analysis of the effects of the marine farm on these. It concludes that the proposed site has no significant or sensitive habitats.

Section 6(d) addresses the maintenance and enhancement of public access to and along the Coastal Marine Area. Historically, these marine farms have had a no more than minor effect on public access. The area is only accessible by vessel and is not located in any direct navigation route or anchorage area. The farm layout provides for access ways between the blocks and between the farm and the shore. The farm is marked with appropriate boundary navigation aids on corner (as is required for the existing farm) to assist with navigation safety.

Sections 6(e), 7(a) and 8 deal collectively with Maori cultural and spiritual values. Section 6(e) requires that the relationship of Maori with their culture and traditions, including ancestral lands and water, be recognised and provided for. Section 7(a) requires that particular regard is given to kaitiakitanga. With respect to Section 8, there is a requirement to take into account the principles of the Treaty of Waitangi. With respect to these matters the Marine and Coastal Areas Act process also applies.

Section 7(aa) requires particular regard to be given to the ethic of stewardship. From the information and reports provided within this application, actual and potential adverse effects have been assessed as being no more than minor. Consent conditions are used to promote best practice operations, which supports the ethic of stewardship. One additional consent condition, relating to construction noise, is proposed as a result of this variation.

Section 7(b) seeks the efficient use and development of natural and physical resources. The marine farm variation significantly enhances the efficiency of the overall operation of the farm and allows for more efficient use of the coastal space, as the area is compact and fully utilised while providing for unimpeded access and currents.

Section 7(c) seeks the maintenance and enhancement of amenity values. This relates in particular to visual effects and the effects on fishing and other recreational activities. Visibility of the farm is affected by elevation and distance. Visual amenity effects are considered to be low (Bray 2023), as there is an existing farm in place. Recreational fishing activities are often positively associated with marine farms. It is considered that the overall effects on amenity values are no more than minor, and current recreational opportunities will be maintained.

Section 7(d) and (f) considers the effects on intrinsic values of ecosystems and maintenance and enhancement of the quality of the environment. The adverse effects of the new method on benthic ecology are considered to be less than previously. This is because of less oyster “dropoff”, less

fouling and the cessation of walking on the seabed (which can cause marine sediment compaction). Based on this, it is considered that the intrinsic values of the marine ecosystems will be improved by the variation and consequently remain no more than minor.

Other clauses in Section 7 do not apply to this variation. In conclusion, this application is consistent with the relevant provisions of Part 2 of the RMA and fully meets the purpose of the Act.

5.2.2 Assessment related to RMA 4th Schedule matters

The 4th Schedule outlines the information required in an application for resource consent.

(1) Description of the proposal for consent variation

This Variation application seeks consent to use floating longline and basket systems with end posts. A description of the farm, including diagrams and the location of the farm, is provided in Section 2.2.1 of this AEE and the original consent (Appendix 1).

Floating oyster longlines (flip farm systems) are planned by Aotearoa Fisheries(AFL)/Moana to replace all rack systems. These will be phased in over a short time period around standard farming operations. AFL/Moana shore operations will continue with negligible change to those operations. There are high reductions in both waste oysters and biofouling, due to oysters being contained within longline flip (rotating) baskets, as opposed to the present seabed fixed timber rack system. There is also the elimination of most of the tanalised timber which form the racks. Structural details of these farms are shown in Appendix 4.

Operationally, consent approval is sought for;

- Oyster marine farming in floating baskets along a surface longline, secured by end-posts.
- No lighting is proposed (with navigation marking as now).
- Approval is sought for Variation as an addition to seabed racks since it may take many months to make the transition between the two methods. It is intended in time, however, to go to all surface longlines and no seabed racks/bags. The surface longline bags are a good “fit” with Moana’s single-seed (single unattached) oyster farming method. Longlines will be spaced at a minimum of 10m apart.

Recycling and/or disposal of the existing rack structures (which have a mean life of 10 to 15 years) is something the applicant does routinely now, and this will continue to be done in accordance with good practice. The method for installing and maintaining posts are described in the Wayfinder report (Bray 2023). These would be vibrated-in from a floating barge, or possibly driven-in (rammed or pushed). Post installation is permitted by the existing farming consent (seabed posts such as for racks are consented). The number of these posts will be 2 per 100metre row of oyster farm; as opposed to ~60 posts per 100m for rack farming. The longline row density will be half (or less) than the current rack-row density per hectare, as the spacing of longline rows is to be no less than 10m apart. This will reduce intensity of effects notably near low water, compared to the higher density of racks now allowed. Ecologically, the surface longline method has significantly less oysters and detritus waste dropping to the seabed. Flip farm structures are made of recyclable plastics, with synthetic flotation & durable ropes. Walking the seabed is no longer part of farm maintenance and harvesting operations.

Flip farming featured in an episode on Maori TV. The program is useful viewing in considering the positive impacts of Flip farming including with use of end-posts. That link is;

<https://www.maoritelevision.com/shows/home-land-and-sea/S01E010/home-land-and-sea-episode-10>

The proposed term for this Variation is 25 years, contiguous with the proposed term for consent renewal.

(2) Consideration of Alternatives

If it is likely that the activity will result in any significant adverse effect on the environment, a description of any possible alternative locations or methods for undertaking the activity should be provided. This assessment of effects has not been able to identify any significant adverse effects on the environment, so consideration of alternative locations may not apply. The only alternative method for oyster farming operations is the present wooden-rack method. The flip farming method has superior operational characteristics and fewer actual and potential adverse effects, so it is the better alternative of the two methods. There are no apparent alternative sites in any event that have the needed package of good farming water with proximity to the Shore Base. Moana NZ operates a sizeable farming Shore Base in Jury Road near the town of Kaeo.

(3) Effects on those in the neighbourhood and, where relevant, the wider community including any socio-economic and cultural effects.

Regarding positive socioeconomic effects, the applicant is an iwi/Maori company (the Moana Oysters component of Moana New Zealand Limited) in cooperation with Aotearoa Fisheries Limited (AFL). Both these companies operate for the benefit of their iwi owners, plus create benefits for its many local employees. The flip farm system is much less onerous for workers and can be operated during the “9am to 5pm” period of the day. The work is considerably less labour-intensive resulting in efficiency/savings while no labour redundancies are planned, just redeployment. The system grows better, more valuable oysters; with less waste and growth rates can also be quicker. Flip-farms also fit well for AFL/Moana which has already moved to all-hatchery and single seed and thus bag/container cultivation methods. That approach of hatcheries allows better genetic types and bags allow good growth with less waste and for ready quick harvesting, in volume, of clean shelled and singled oysters, including in advance of rainfall/runoff based harvest closures. These are all sizeable and valuable farming enhancements albeit with extra capital cost. The capital investment in flip-farm oyster stock and gear is 5 to 10 times that of stick and rack cultivation.

The applicant/Moana has received no complaints from the public about their surface cultivation trials and approvals at Coromandel. The few comments received are all along the lines of “what a good idea”.

Potential adverse visual effects of the method have been assessed in the (attached) Landscape Report by Wayfinder (Bray 2023). With regard to these effects, the report concludes:

The proposal will have some adverse effects, these largely relating to visual effects. Such effects include visibility of the farms during all tides, visibility of anchor posts, curved rows that move with the water current, changes in wave patterns and potential changes in seabird movements around the farms. The visual effects will be heightened in the areas where the Moana farms are in the same seascape as other operators (who are not undertaking a change to the farming method). However, there are also positive visual effects resulting from the removal of the racking system which is visible at low tide.

In addition there are a number of other positive outcomes (such as ecological and workforce management) of the proposal. The removal of the racking and undertaking of the farming operation by boat will reduce direct effects on the seabed. There is also likely to be a reduction in seabed effects under the farm, and as such a reduction in the shell deposits on the seabed and shoreline.

Overall it is considered that the natural character and landscape effects will be very-low, and can be considered to be less than minor. Visual effects will range from low to very-low, and also can be considered overall to be less than minor. Some properties and viewers will be aware of the changes, but the change in method will not change the overall composition or character of the view.

For AFL/Moana Oyster flip-farming has significant positive socio-economic effects, both for Iwi/Maori and for the applicant and associated companies.

(4) Any physical effect on the locality, including any landscape and visual effects

No physical adverse effects that are more than minor are perceived. The method will provide a positive effect through reductions in depositions of detritus and disturbances. Perceptual effects relating to landscape and visual are considered to be no more than minor by the attached Wayfinder Report (Bray 2023).

(5) Any effect on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity

This is discussed in the Wildlands Report for this marine farm (Brown 2023). This report assessed that there will be no more than minor adverse ecosystem effects of the farming system overall.

There will be some positive ecosystem effects in changing from the existing rack system to flip farming. Flip farms will be operated from the sea surface at the high-tide section of the tidal cycle rather than by farmers walking over the seabed at low tide. The surface longline flip farming method has less fouling on the structures as the bags are periodically flipped (hence the alternative term of “flip farming”). This means that the only potential fouling might be a light slime layer that builds up. There are few small or misshapen oysters as oysters are farmed as singles. The method requires less time-on farm and more can be done from onshore. The method uses recyclable black plastic (anti-UV) bag structures plus a single longline connecting rope with a large anchor post at each end. Overall, the attributes of flip farming compared to rack and stick farming can be summarised as;

- Labour: Farms are operable at high tide which is far more convenient & efficient than low tide. The method requires less time-on farm and more can be done from onshore. Also, the physical labour is less per oyster and also less onerous for workers.
- Oysters: Producing better oysters more quickly and efficiently with very few small or misshapen oysters
- Seabed: Nil walking over the seabed and significantly less oyster detritus on the seabed
- Fouling: Significantly less fouling on the structures.
- Gear & Waste: Significantly less tanalised timber and more recyclable plastic used.

There are two potential adverse effects that may be considered with regards to flip farming:

- The structures are visible at all times (not just at low tide) and thus the visual appearance of flip farm structures is for longer. However, the Wayfinder report (Bray 2023) assessed this effect as no more than minor.

- The capital cost of the method is higher, in setting up costs for gear. However, this is compensated by producing better quality oysters more quickly and efficiently, plus reduced operating costs and less ecological effects.

(6) Any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, cultural, or other special value for present or future generations

Drawing on the information in the Proposed Northland Regional Plan, the proposed marine farm variation is not located in an area specially identified for aesthetic, scientific, historical, spiritual, cultural, or other special values. There is a High Natural Character Area nearby but that is some distance away from the oyster farm.

(7) Any discharge of contaminants into the environment, including any unreasonable emission of noise and options for the treatment and disposal of contaminants

The current consent allows for discharges from farm operations. Flip farming significantly reduces discharges during all phases of farm operations. Notably, there will be a reduction in discharge through contaminant leaching from the existing rack system which uses treated timber. This will be a positive effect. Regarding noise, the time spent on the farms by barges will be no greater or less than at present, so there will be no increase or reductions in noise emanating from operations such as harvesting, splitting, tumbling, washing or hammering. Establishment of the 2 end poles per flip line involves some limited and temporary noise. To mitigate this, it is suggested that the same construction noise condition of Moana NZ's Coromandel flip farm consents is included. This proposed condition is provided below:

CONSTRUCTION NOISE - Noise levels associated with the installation of the posts shall not exceed those set out as follows:

The noise from all construction activities seaward of the line of Mean High Water Spring (MHWS) shall comply with the construction noise limits prescribed in NZS6803:1999 "Acoustics – Construction Noise

Based on Table 2, NZS 6803: 1999 "Acoustics – Construction Noise", Standards New Zealand

Time of Week	Typical Duration	Typical Duration (dBA)		Short-term Duration		Long-term Duration	
		Leg	L _{max}	Leg	L _{max}	Leg	L _{max}
Weekdays	0630 – 0730	60	75	65	75	55	75
	0730 – 1800	75	90	80	95	70	85
	1800 – 2000	70	85	75	90	65	80
	2000 – 0630	45	75	45	75	45	75
Saturdays	0630 – 0730	45	75	45	75	45	75
	0730 – 1800	75	90	80	95	70	85
	1800 – 2000	45	75	45	75	45	75
	2000 – 0630	45	75	45	75	45	75

Noise measurements shall be measured in accordance with NZS 6801: 2008 Acoustics – Measurement of environmental sound and assessed in accordance with NZS 6802: 2008 Acoustics – Environmental noise. Measurement shall be at the notional boundary of any dwelling landward of

mean high water springs not under the control of the Consent Holder. Construction noise shall comply with, and be measured and assessed in accordance with, the requirements of the Standard.

(8) Any risk to the neighbourhood, the wider community, or the environment through natural hazards or the use of hazardous substances or hazardous installations

Farm operations include regular inspections and maintenance to avoid any risk of creating navigation hazards through gear going adrift. The flip-farm method has been trialled or fully operated in multiple NZ locations without navigation or hazard issues, and negligible losses. Thus, the conversion from rack farming to flip farming poses a risk which is no more than minor.

The activity associated with this variation does not include any additional discharge of contaminants.

(9) Description of mitigation measures

Mitigation measures include conditions on the existing consent, which are not proposed to be changed. A condition is proposed to mitigate noise during construction – as outlined in (7) above. Further mitigation is achieved through regular inspections and maintenance of the gear to avoid/minimise any risk of creating navigation hazards thru gear going adrift. This is part of normal farming operations. The flip farming method has been trialled in multiple NZ locations without issues and negligible losses are expected.

(10) Consultation

Marine & Coastal Area Act (MACAA) notification has been carried out on this application, as per the requirements of Section 62 (See Section 4). MACAA and iwi consultation is outlined in detail in Appendix 2.

Further public consultation has not been carried out, largely because similar applications for variation to allow flip farming have not attracted any significant public interest. This is unsurprising, given the effects of this activity have been independently assessed by Bray (2023) and Brown (2023) as no more than minor.

(11) Monitoring

It is assessed that the scale and significance of the proposed variation's effects are such that additional monitoring is not required.

5.2.3 4th Schedule assessment of effects summary

The Wayfinder Report (Bray 2023) and the Wildlands Report (Brown 2023) investigated actual and potential effects of this proposal in detail.

The consent renewal and variation provide for the ongoing sustainable utilisation of coastal space for marine oyster farming, while avoiding and mitigating actual and potential adverse effects to the point where they are no more than minor.

Furthermore, there are actual and potential positive effects of the variation to change to flip farming.

6. Summary and decision sought

This application has been made pursuant to RMA Section 88 and NESMA and contains all the relevant information relating to the activity in the prescribed form and including an assessment of the effects of the activity on the environment as required, including Northland Regional Council guidelines, Environment Court decisions and Schedule 4 of the RMA. Overall, it is assessed that the current and proposed farm activity will have no more than minor effects on the environment and any adverse effects are already mitigated through existing and proposed conditions such that actual and potential adverse effects are no more than minor. With the addition of one condition relating to noise construction for flip farming, no further changes to existing conditions are proposed for this renewal of consent. No other additional conditions are proposed.

In accordance with S42A(1B)(a) of the RMA, the Council in the preparation of its S42A Report, may adopt all the information provided in this application so as to avoid repetition of information already included in the application as outlined in Section 42A(1A) of the Act. Or alternatively, in accordance with Section 42A(1B)(b), adopts any part of the information by referring to the part adopted. This is sought as a means to streamline the resource consenting process and minimise costs.

Appendix 1: Copy of current resource consent, including Farm Plan (attached separately)

Appendix 2: Report on MACA applicant and Iwi Consultation (attached separately)

Appendix 3: References

Bray, S. 2023. Natural Character, Landscape & Visual Effects Assessment. Change in Farming Method.
Report prepared by Wayfinder Ltd for Moana NZ Ltd, Northland. *Copy supplied with this application.*

Brown, S. 2023. Ecological Survey at Oyster Farm Le 3 (Con20051288401), Waitapu Bay, Whangaroa Harbour.
Wildlands Consulting Ltd Contract Report No. 6512j. *Copy supplied with this application.*

Clement, D. 2013. Effects on marine mammals. *In*: Literature review of ecological effects of aquaculture. Ministry for Primary Industries, Nelson, New Zealand. pp. 4-1 - 4-19.

Sagar, P.M. 2013. Seabird interactions. *In*: Literature review of ecological effects of aquaculture. Ministry for Primary Industries, Nelson, New Zealand. pp. 6-1 - 6-18.

Appendix 4: Flip Farming description - Structures photos and diagrams :

Moana Float & Flip surface longline baskets



Basket Up; Basket in dry-out mode, float underneath, Oysters & long-line on top. This orientation is to remove overgrowth & harden-off Oysters, for prolonged out of water shelf-life.



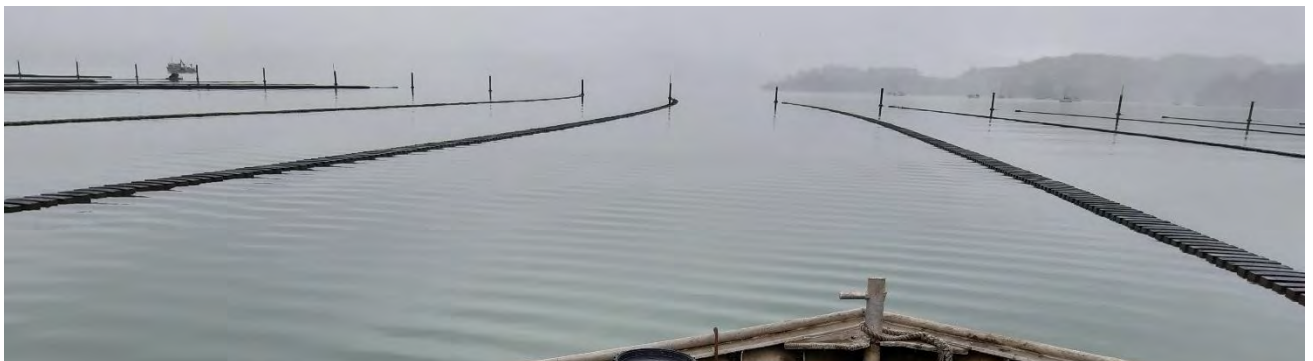
Basket down; Basket in growing mode, float on-top, Oysters & long-line underneath. Longline to run thru tube underneath. This float-up orientation is for maximum Oyster growth, while they are fully submerged.

Orientation ratio varies but is ~ 5:1 to 10:1 (duration re - basket down : basket up).

Density; ~ 3 baskets per metre, rows at minimum of 10m spacings apart.



Flip Farm installed & in operation at McGregor Bay Coromandel, at April 2022. Notes; showing predominant orientation of float-upwards for Oyster feeding & growth, rows at 15m spacings, each post labelled and with a stopper on top for big tides/winds, with boundary farm marker posts as well. There is a second line under a longline of floats, by use of which the service vessel hauls itself along the float line.



Flip Farm installed & in operation at McGregor Bay Coromandel, at April 2022, view from barge.



Flip Farm installed & in operation at McGregor Bay Coromandel, at April 2022. Notes; showing predominant orientation of float-upwards in foreground and opposite orientation of float-downwards at top right.

**ECOLOGICAL SURVEY AT OYSTER
FARM LE 3 (CON20051288401),
WAITAPU BAY, WHANGAROA HARBOUR**



 providing
outstanding
ecological
services to
sustain
and improve our
environments



ECOLOGICAL SURVEY AT OYSTER FARM LE 3 (CON20051288401), WAITAPU BAY, WHANGAROA HARBOUR



Oyster Farm Le 3, Whangaroa Harbour.

Contract Report No. 6512j

May 2023

Project Team:

Stephen Brown – Field assessment and report author

Federico Mazzieri – GIS mapping

William Shaw – Peer review

Prepared for:

Hollings Resource Management Ltd

PO Box 104 016

Auckland 0654

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Reviewed and approved for release by:



W.B. Shaw
Director/Lead Principal Ecologist
Wildland Consultants Ltd

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1. INTRODUCTION

1.1 Background

Hollings Resource Management Ltd. (HRM), on behalf of Aotearoa Fisheries Ltd, is applying for renewal of the consent for the intertidal Pacific oyster (*Crassostrea gigas*) farm Le 3 (CON20051288401) in Whangaroa Harbour (Figure 1). HRM commissioned Wildland Consultants to provide ecological information to support the consent renewal.

1.2 Statutory context

Under Regulation 18(g) of the National Environmental Standards for Marine Aquaculture 2020 (NES-MA), consent renewal applications must consider the effects of the marine farming activity on ‘reefs’, ‘biogenic habitat’, and ‘regionally significant benthic species’ within the ‘area of interest’. Definitions and criteria relevant to those areas and biological features are set down in Regulations 3, 8, 7, and 9, and Schedule 4 of the NES-MA. Assessments are to be based on a representative ecological survey by suitably qualified and experienced person or persons, to determine whether reefs, biogenic habitat and/or regionally significant benthic species are present within 20 metres of the farm structures (the area of interest).

1.3 Purpose

The objective of the ecological work was to undertake an initial desktop investigation and to carry out a benthic survey to determine whether ‘reefs’, ‘biogenic habitat’, and ‘regionally significant benthic species’ are present within 20 metres of the farm structures, and to provide comment on the effects of the existing marine farm on those features.

2. METHODS

2.1 Desktop investigation






A desktop search of published and unpublished grey literature was undertaken to gain an overview of the ecological features at the site. The Northland Regional Council’s Proposed Regional Plan for Northland – Appeals Version (PRPN) (NRC 2022) and associated maps were checked to determine if the farm site is located within areas identified as having special ecological significance. Satellite imagery (Google Earth[®]) was viewed to assist in identifying the presence of reefs or biogenic habitat in the vicinity of the site.

2.2 Site survey

2.2.1 General

On 22 February 2023 a survey was undertaken at the oyster farm lease site Le 3 (Figure 1) by a Wildlands Senior Marine Ecologist. The survey was carried out within the period two hours on each side of low tide (4:18 pm).

Legend

-  Farm structures boundary
-  Area of interest boundary
-  Photograph (P1-5)
-  Core sample (C1-8)
-  Track covered during survey



Data Acknowledgment
 Map contains data sourced from LINZ
 Crown Copyright Reserved

Report: 6512
 Client:
 Ref: 10411
 Path: E:\gis\NorthlandOysterFarm\mxd\Figures\
 File: Figure_Le3.mxd

Figure 1. Sample positions at Le3



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 www.wildlands.co.nz, 0508 WILDNZ

Scale: 1:1,250
 Date: 17/05/2023
 Cartographer: FM
 Format: A4

There is no official list or guide that identifies ‘regionally significant benthic species’ for the Northland Region. Therefore, consideration was given to species threat status on a national and international level, and this was combined with the professional judgement of the Wildlands Senior Marine Ecologist to identify benthic species considered to be ecologically significant. Relevant clauses from NES-MA defining ‘reefs’, ‘biogenic habitat’, ‘regionally significant benthic species’ and ‘area of interest’ are provided in Appendix 1.

2.2.2 Substratum characteristics and benthic habitats

Physical characteristics of the substratum (composition, texture) were sampled using a spade and a PVC corer, and were assessed qualitatively. Sediment sampling positions were determined during the field survey, and were positioned to ensure that samples were representative and provided good coverage of the area of interest.

The benthic substratum and habitat was photographed at representative positions throughout the area of interest using an iPhone 7 camera or a GoPro 9. The location of all samples and photographs were recorded using a hand-held Garmin GPS unit, or the GPS function of the iPhone and GoPro cameras. Photographs taken at sample positions shown in Figure 1 are provided in Appendix 2.

2.2.3 Biota

Conspicuous epibiota was noted, and sediment samples were passed through a sieve (4 millimetre apertures) to detect the presence of any benthic species of special ecological significance, including edible shellfish resources. Contents of representative sieved samples were preserved in 70 % ethanol and retained for later identification of macrofaunal taxa. Incidental observations of fish and seabirds during the survey were also recorded.

3. SITE CONTEXT

The farm structures at Le 3 occupy *c.* 1.53 hectares of the 7.1834 hectares that comprises the total consented area of the lease at the head of Waitapu Bay, in Whangaroa Harbour. Habitat at the site is classified as ‘mud’ in the habitat maps published by the Department of Conservation (Kerr 2009).

The site is not within areas identified by the Northland Regional Council as ‘Significant Ecological Areas’ (SEA), but it is within the Significant Marine Mammal and Seabird Area that covers the entire Northland Coastal Zone. An area identified as having High Natural Character (subject to appeal) in the PRPN maps is located *c.* 350 metres to the south of the farm structures.

4. SITE SURVEY FINDINGS

4.1 Substratum and habitat characteristics

Photographs of the substratum and habitats taken at sample positions shown in Figure 1 are provided in Appendix 2.

The surface of the substratum in the vicinity of Le 3 was of a layer of soft sandy mud (Plate 1). The sandy mud layer varied in thickness between c.10 and 15 centimetres. Beneath the soft sandy mud layer there was a firmer layer of mixed shell hash (mainly dead tuangi (*Austrovenus stutchburyi*), mud, and sand.



Plate 1: Core sample at C5 showing sandy mud at Le 3. 22 February 2023.

4.2 Biota

4.2.1 Benthic macrofauna

Conspicuous macrofauna in the core samples obtained during the survey were kowhitiwhiti moana (snapping shrimp, *Alpheus novae zelandiae*),) pāpaka (tunneling mud crab (*Austrohelice crassa*), hanikura (wedge shell, *Macomona liliana*), an unidentified nudibranch, and representatives of the polychaete worm families Maldanidae and Capitellidae.

No species considered to be of special ecological value were found during the survey.

4.2.2 Avifauna

Several tara (white-fronted tern *Sterna striata*, At Risk-Declining¹) were feeding near the seaward boundary of Le 3 during the survey.

4.2.3 Fish

During the survey, unidentified flatfish, possibly flounder (*Rhombosolea* sp.), were seen in the shallows near the southern end of the site.

5. CONCLUSION

No reefs, biogenic habitat, or regionally significant benthic species were found within the area of interest at the Le 3 site. Therefore, no effects on those habitats or species are expected as a result of oyster farming activity at Le 3.

ACKNOWLEDGMENTS

Tom Hollings, Bill Chisholm, Paul Maxwell (NRC), and Richard Griffiths (NRC) all contributed to providing location information for Le 3.

REFERENCES

- Kerr V.C. 2010: Marine Habitat Map of Northland: Mangawhai to Ahipara Vers. 1. Technical Report, Department of Conservation, Northland Conservancy, Whangarei, New Zealand.
- Northland Regional Council 2022: Proposed Regional Plan for Northland (Appeals Version) 2022. <https://www.nrc.govt.nz/media/4mln5fnk/proposed-regional-plan-appeals-version-8-december-2022.pdf>.
- Robertson H.A., Baird K.A., Elliott G.P., Hitchmough R.A., McArthur N.J., Makan T.D., Miskelly C.M., O'Donnell C.F.J., Sagar P.M., Scofield R.P., Taylor G.A., and Michel P. 2021: Conservation status of birds in Aotearoa New Zealand, 2021. *New Zealand Threat Classification Series 36*. Department of Conservation, Wellington. 47 pp.

¹ Conservation status of bird species is from Robertson *et al.* 2021.

RELEVANT DEFINITIONS AND CRITERIA FROM THE NATIONAL ENVIRONMENTAL STANDARDS FOR MARINE AQUACULTURE 2020 (NES-MA)

7 Meaning of biogenic habitat

Definition

- (1) In these regulations, **biogenic habitat**—
- (a) means the natural habitat created by the physical structure of living or dead organisms or by the interaction of those organisms with the substrate, including either a hard (reef) or soft (sediment) substrate; but
 - (b) does not include—
 - (i) non-indigenous living organisms; or
 - (ii) organisms attached to a marine farm or other man-made structure; or
 - (iii) holes, mounds, and similar seabed irregularities created by burrowing organisms in soft sediments.

Application of definition

- (2) The meaning given in subclause (1) applies only if 1 or more of the criteria and triggers set out in [Part 1](#) of Schedule 4 are met as a result of a representative survey within the area of interest using best-practice methodology.

8 Meaning of reef

Definition

- (1) In these regulations, **reef**—
- (a) means the exposed hard substrate in the coastal marine area formed by geological processes; and
 - (b) includes cobbles equal to, or greater than, 64 mm across, boulders, and bedrock; and
 - (c) includes marine species associated with the reef; but
 - (d) does not include sand or gravel.

Application of definition

- (2) The meaning given in subclause (1) applies only if 1 or more of the criteria set out in [Part 2](#) of Schedule 4 are met as a result of a representative survey within the area of interest, using best-practice methodology.

9 Meaning of regionally significant benthic species

In these regulations, **regionally significant benthic species** means benthic species that are—

- (a) protected under the [Wildlife Act 1953](#); or
- (b) listed as threatened or at risk in the New Zealand Threat Classification System; or
- (c) listed as threatened by the International Union for Conservation of Nature and Natural Resources; or
- (d) identified by a regional council as regionally significant in—
 - (i) a policy statement or plan or proposed policy statement or plan to give effect to a New Zealand coastal policy statement (or a species identified by a similar term in any of those documents); or
 - (ii) a published scientific report—
 - (A) prepared by subject matter experts using significance criteria outlined in a policy statement or plan or proposed policy statement or plan; and
 - (B) endorsed by the regional council.

Schedule 4 Criteria for applying certain definitions

rr 7, 8

Part 1 Application of definition of biogenic habitat

Criteria and triggers

- 1 One rhodolith specimen detected within the area of interest.
- 2 Areas of dead shell identified by a regional council as regionally important within the area of interest.
- 3 Any biogenic species or colony within the area of interest that is—
 - (a) prominently raised above the surrounding seabed; and
 - (b) equal to or greater than 0.5 metres across.
- 4 Any biogenic habitat when 1 or more of the following trigger levels are estimated to be met at any sampling location:
 - (a) percentage cover is equal to or greater than 10% for the following biogenic habitats (singly or in combination):
 - (i) colony-forming animals (for example, sponges, bryozoans, and tube worm mounds);
 - (ii) macroalgae and seagrass;
 - (iii) tube worm fields, brachiopod beds, and natural shellfish beds;
 - (b) percentage cover of dead shell is equal to or greater than 40%;
 - (c) mean density of large biogenic habitat-forming species (for example, horse mussels, hydroid trees; but excluding individual tube worms) is equal to or greater than 1 individual/m².

Part 2 Application of definition of reef

Criteria

Any reef detected within the area of interest.

SITE PHOTOGRAPHS



Plate 2: View southeast from P1. 22 February 2023.



Plate 3: View east from P2. 22 February 2023.



Plate 4: Sediment sample at C1. 22 February 2023.



Plate 5: Sediment sample at C2. 22 February 2023.



Plate 6: View north from P3. 22 February 2023.



Plate 7: Sediment core contents at C3. 22 February 2023.



Plate 8: Core at C4. 22 February 2023.



Plate 9: View north from P4. 22 February 2023.



Plate 10: Core sample at C5. 22 February 2023.



Plate 11: Core sample at C6. 22 February 2023.



Plate 12: View south from P5. 22 February 2023.

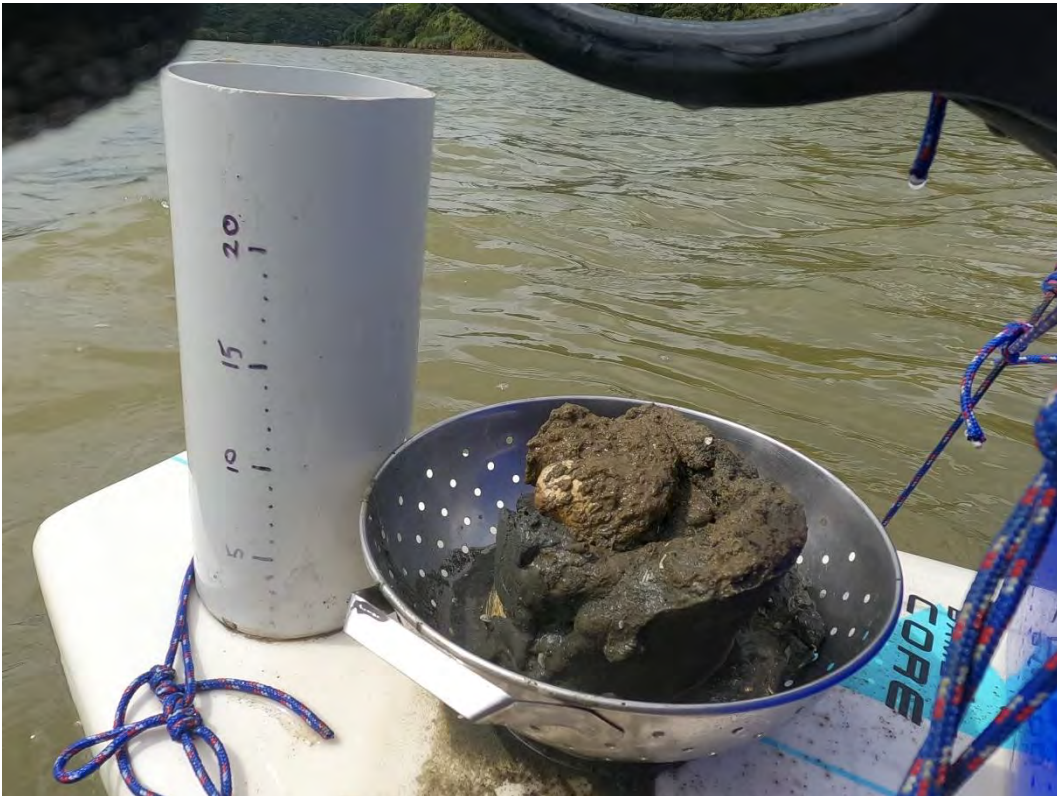


Plate 13: Core sample at C7. 22 February 2023.



Plate 14: Core sample at C8. 22 February 2023.



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Report on Marine Farm 12884.01

Marine and Coastal Areas Act

Section 62 of the Marine and Coastal Areas Act (MACA) requires all resource consent applicants to notify and seek the views of MACA applicants. For the locality of this oyster farm, advice from Northland Regional Council is that the following MACA applicants require notification for consents in this area (Whangaroa Harbour):

Name of Applicant	Email	Contact Address for Applicant
Uri o Ururoa	sophiadevine@slingshot.co.nz	C/- J Rika
The Descendants of Puhī Poata & Waikainga Hōne Tua Pōmana	porkzfranklin@gmail.com	C/- C Franklin
Te Whanau Whero	paulawilson@hendersonreeves.co.nz	C/- Paula Wilson, Henderson Reeves
Te Ururoa Trust	kiri@kahuilegal.co.nz	C/- Kiri Tahana, Kahui Legal
Te Rūnanga o Whaingaroa Incorporated	mihiarangi@whaialegal.co.nz	C/- M Piripi, Whaia Legal
Te Kaunihera Māori o Te Tai Tokerau	rihari.takuirā@gmail.com	C/- R Dargaville
Te Aeto Hapū, Ngāti Pou Hapū	terry.tauroa@gmail.com	C/- Terry Tauroa
Tahaawai	lisetterawson@gmail.com	C/- L Rawson
Smith Whānau	hemasmith44@gmail.com	C/- H Smith
Samuels on behalf of Ngāti Kahu	charl@ranfurlychambers.co.nz	C/- C Hirschfeld, Ranfurly Chambers
Ngāti Rua	tauhoitepotrust@gmail.com	C/- Waitangi Wood
Ngāti Kawau te Kōtuku, Te Uri o Te Aho, Ngāti Kuri, Te Waiariki Kororā ngā Hapū o Ngāpuhi-Nui-Tonu	mason@phoenixlaw.expert	C/- Phoenix Law
Ngāti Kawau	hemasmith44@gmail.com	C/- H Smith
Ngāti Kahu, Te Rarawa, Te Uriohina	hekenukumai-maca@ranfurlychambers.co.nz	C/- Hekenukumai (Hector) Busby
Ngāti Kahu ki Whangaroa & Ngāpuhi ki Whangaroa	Mihiarangi.Piripi@kensingtonswan.com	C/- Te Rūnanga o Whangaroa Inc
Ngāpuhi Nui Tonu-Kota-toka-tutaha-moana o Whāingaroa	fredw@ycd.co.nz	Ngatirumamahue Marae c/o Wainui Marae Wainui Valley Road

		RD 1 Kaeo 0478.
Ngāpuhi Nui Tonu (Te Kotahitanga Marae)	jrrk999@yahoo.com	C/- J R Kingi
Ngāpuhi Nui Tonu (Kēnana Marae)	jrrk999@yahoo.com	C/- J R Kingi
Mita Pōmana & Takutai Moana Heke Pōmana Whānau	mjpomana@gmail.com	C/- M Pomana
Kingi on behalf of Ngā Puhi nui tonu, Ngāti Rāhiri, Ngāti Awa, Ngā Tahuu and Ngaitawake	gesharrock@rightlaw.nz	C/- G Sharrock, RightLaw Limited
Kahukuraariki Trust	geraldine.baker@kahukuraariki .iwi.nz;rosie.conrad@kahukura ariki.iwi.nz	C/- R Conrad / G Baker, Kahukuraariki Trust
Hotere & Wikaira on behalf of Te Hikutū Hapū	gesharrock@rightlaw.nz	C/- G Sharrock, RightLaw Limited
Hikuwai - Ihāia Whānau (Waiatua Hikuwai)	waihikuwai@gmail.com	C/- W Fredricsen
Hape Whānau	darrylhape@gmail.com	C/- D Hape
Descendants of Wiremu Tuaru Williams & Emma Hikiora Williams	marie.williams@healthalliance. co.nz	C/- M Williams
Dargaville on behalf of Ngāti Kauwau, Ngāti awa at Whangaroa	gesharrock@rightlaw.nz	C/- G Sharrock, RightLaw Limited
Dargaville on behalf of Ngaitawake	gesharrock@rightlaw.nz	C/- G Sharrock, RightLaw Limited
Craven Whānau	kaeo.tane@gmail.com	G Walmsley
Collier on behalf of Ngāti Kawau & Te Waiariki Kororā	mason@phoenixlaw.expert	C/- Janet Mason, Phoenix Law Limited
Awhirangi Panehina Lawrence Whānau, Mita Pōmana Whānau, Takutai Moana Whānau Trust	awhilawrence@gmail.com	Awhirangi Panehina Lawrence

These MACA applicants were notified by email on August 29th 2023. Ngāpuhi Nui Tonu-Kota-toka-tutaha-moana o Whāingaroa was also notified by post (as requested by Council).

Responses from MACA applicants

Emails which failed were:

- sophiadevine@slingshot.co.nz
- hekenukumai-maca@ranfurlychambers.co.nz
- ohineriria2015@gmail.com

In addition, Paula Wilson (PaulaWilson@hendersonreeves.co.nz) made contact to advise that Te Whanau Whero did not have a MACA application which included Whangaroa Harbour.

After 20 working days, no other communication(s) were received from MACA applicants.

Iwi Consultation

In Addition to MACA applicant notifications, a copy of this application was forwarded to the following iwi by email for comment:

- **Ngāti Kahu Ki Whangaroa - admin@kahukuraariki.iwi.nz**
- **Te Runanga o Whaingaroa - Raniera.Kaio@whaingaroa.iwi.nz**

After 20 working days, one response was received. This was from Thomas Hawtin (hawtinthomas@gmail.com). Unfortunately, Mr Hawtin did not identify which iwi/hapu/whanau he represented. A reply email was sent to Mr Hawtin asking him to identify this, but to date no response has been received.

Mr Hawtin indicated a problem with the plastic baskets coming loose and floating around /washing up on Whangaroa Harbour and also up the coast. It was not identified which farms these baskets came from. Presumably, such rubbish creates adverse aesthetic effects as well as a potential adverse effect on navigation.

The issue of the detachment of the floating basket from the structures is managed through conditions on the existing consent. This includes Conditions 2, 11, 12 and 21, all which require the structural integrity of the marine farm to be sound. In addition, there are compliance protocols outlined in Schedule 1 of the existing consent. Schedule 1 provides details of various levels of non-compliance. It is assessed that the current consent conditions provide for the management of this potential adverse effect, and that it is best managed through robust consent compliance, rather than through additional consent conditions.

Summary Report on Iwi Consultation

Cl	Requirement	Information/ Response
a	The persons/ groups informed	Ngāti Kahu Ki Whangaroa - admin@kahukuraariki.iwi.nz Te Runanga o Whaingaroa - Raniera.Kaio@whaingaroa.iwi.nz
b	How informed/ date informed	Email on 29 th August 2023
c	Name and contact details of all who responded	Response received from Thomas Hawtin hawtinthomas@gmail.com (iwi affiliation unknown).
d	Any sites/ areas identified as being of significance, that may be affected by the marine farm	Whangaroa Harbour and coastline
e	Any sites/ areas identified as being of significance to tangata whenua in RPS/ RCP (operative/ proposed), that may be affected by the marine farm	Whangaroa Harbour and coastline

f	Description of any adverse effects on the values that make the site/ area significant	Regarding the floating basket oyster farming system. Since it was first introduced in Whangaroa there has been an astonishing amount of plastic baskets drifting around the harbour and even found far up and down the coast. These are just the ones with the floats still attached with the plastic bolts still holding them together.
g	Translocation of taonga spp	N/A
h	Proposals to avoid, mitigate or remedy, adverse effects (if any) identified in f) and g)	Structural security of marine farm installations is already dealt with under existing consent conditions 2, 11, 12 and 21. In addition, Schedule 1 provides a detailed description of what constitutes non-compliance with regard to structural integrity of the marine farm.
i	Any other information provided on the values of tangata whenua, in relation to the location of the farm	See Section 5 of the Assessment of Effects on the Environment.
j	Details of any change to the application proposed as a result of discussion (if any) entered into with persons/groups informed	No changes to consent conditions proposed. Existing conditions deal with the structural integrity of marine farm installations. There may be compliance issues here, but that is not a matter which relates directly to this application for variation or consent conditions.



Natural Character, Landscape & Visual Effects Assessment.

Moana Oysters Northland
Change in Farming Method

May 2023

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Document Control

Report Title:	Landscape and Visual Effects Assessment				
Client:	Moana NZ				
Client Contact:	Roly Rush				
Report Author:	Shannon Bray				
Report Reviewer:	Megan McBain				
Revision:	1	2	3		
Date:	07.02.23	14.03.23	10.05.23		
Status:	DRAFT	DRAFT	ISSUE		



Introduction

Moana New Zealand Ltd (“Moana”) operates oyster farms across Northland, between Paihia and Te Hapua. Many of these farms have been operating since the 1960’s, with a farming method that is based on timber frames that are embedded into the foreshore within the inter-tidal zone. The farms are managed through a variety of resource consents that have been granted by Northland Regional Council.

In more recent times, Moana have been investigating innovative farming methods to improve the efficiency of the operation and reduce potential environmental effects. Following a successful trial on some of their Northland farms, Moana are now wanting to adopt the “floating basket” method that will essentially eliminate the need for the timber frames. The method involves stringing a series of baskets together on surface lines that are attached to anchor posts at each end. The method has ecological, economic and workforce management advantages.

Moana are therefore seeking to amend their existing resource consents, across all their Northland operations, to reflect the new method (noting that some farms have already been converted on a trial basis).

This report has been prepared to provide an assessment of the effects of this change in method on visual amenity, natural character and landscape. The report concludes that the change in method will result in change in the nature of the effects generated by the farming operation, but taking a holistic view the adverse effects are considered to be **low to very-low**, and within the terms of the resource consent, **less than minor**. The changes are also considered to be consistent with the New Zealand Coastal Policy Statement (2010) in that any adverse effects on natural character, natural features and natural landscapes are avoided, mitigated or remedied.



Methodology

This report has been prepared to assess the landscape, natural character and visual effects of some 15 oyster farms that are operated by Moana in Northland. As the nature of the effects are essentially the same for all the farms, a single report has been prepared, however where necessary the report describes the specific context and effects for each of the farms.

The author of this report undertook site visits to all of the Moana farms over several days during the week commencing 21st November, 2022. This involved visiting each of the farms by boat, during various stages of the tide. A locality visit was also undertaken by traversing to a wide range of publicly accessible locations where the farms are potentially visible. The broad list of locations visited include:

- ▶ Parengarenga Harbour, by boat (including Puponga, Pahuapa, Te Toi, Te Kao channel, Kauanga channel);
- ▶ Paua Road, Parengarenga;
- ▶ Far North Road, Parengarenga;
- ▶ Houhora Harbour, by boat;
- ▶ Subritzky Road, Houhora;
- ▶ Saleyard Avenue, Houhora;
- ▶ Harbour View Road, Houhora;
- ▶ Whangaroa Harbour, by boat (including Waitapu, Touwai, Pumanawa, Whangaroa);
- ▶ Whangaroa and Ruato Roads;
- ▶ Old Hospital Road, Whangaroa;
- ▶ McKenzie Road, Whangaroa;
- ▶ Old Church Road, Whangaroa;
- ▶ Ota Point Road, Whangaroa;
- ▶ Porters Access Road (only partially), Whangaroa;
- ▶ Totara North Road, Totara North;
- ▶ Okura Bay Road, Totara North;
- ▶ Orongo Bay, Russell, by boat;
- ▶ Aucks Road, Russell;
- ▶ Russell-Whakapara Road;
- ▶ Te Wahapu Road, Russell; and
- ▶ Waiaruhe Way, Russell;



No private residences or commercial properties were visited in the preparation of this assessment, however it was possible to access the start of some private roads for a viewing assessment only (no photographs were taken from such locations). This is normal practice for an assessment of this nature, and it is considered that enough information was gained from the site visits to enable an accurate assessment of effects.

Over 1,000 photographs of the farming operation were taken during the site visits. The locations of each group of photographs was captured by GPS, and a map showing the key viewpoints (and representative photographs from these viewpoints) that are discussed in this report are attached as an Appendix to this report. As most reports and visuals are now viewed digitally, the decision was made to provide series of images that can be enlarged onscreen, rather than full-size images that would result in a lengthy graphical document. Should any single photo be required at a larger print size, these can be provided on request.

The camera used for the assessment was a Panasonic G85 four-thirds digital camera, which means the lens size is half a standard 35mm lens camera (eg a 25mm four-thirds lens is the same as a 50mm lens on a 35mm camera). This attachment also contains various Marine maps, Council overlay maps, and more generic photographs that help explain the proposed farming methodology. Rather than montage several photographs together using photoshop (which can morph images), the images are overlaid in the graphic attachment as they have been taken.

It is noted that severe weather occurred in Northland during the week of the site and locality visit, but as much as possible this was avoided by altering travel arrangements during the week. Some of the photographs appear very dark or have low long-range visibility due to the weather conditions, but the overall duration of the site work (included repeated vehicle trips) was such that the author was able to fully appreciate the surrounding landscape context around each of the farms. The author is also reasonably familiar with the Northland landscape having historically undertaken other professional work in the region.

No visualisations of the proposal have been prepared. This is because there is enough information contained in the breadth of photographic material that a clear overview of the proposal can be visualised. The author of this report has also prepared a similar report for Moana's Coromandel operation, during which the differing effects of a single oyster farm (McGregor Bay) were observed at hourly intervals between high and low tides. Excerpts from the Coromandel assessment have been reproduced in this report where required.



Scale of Effects

The New Zealand Institute of Landscape Architects has recently published technical guidelines for landscape assessment¹ which has informed the preparation of this document. This includes the use of a 7-point assessment rating scale which has been adopted for this report, as follows:

This Assessment	Very-Low	Low	Low-Mod	Moderate	Mod-High	High	Very-High
RMA	Less than Minor		Minor		More than Minor		
						Significant	

The scale deliberately avoids the use of more traditional RMA terminology, such as minor or less than minor, and (as the NZILA guidelines set out) caution is needed in directly translating the 7-point scale of each identified effects into an RMA terminology. Rather, the degree of individual effects are to be assessed first, and then – following that – an overall professional judgement can be made on the overall significance of effects in the context of relevant RMA or policy tests. Nevertheless, a broad scale translation of effects is provided for reference.

In terms of natural character and landscape effects, a **very-high** rating represents a situation where a proposal would fundamentally change the character or experience of a landscape or place, such that the activity becomes the most dominating aspect. A **very-low** rating represents a situation where a proposal would potentially be noticeable, but the surrounding landscape would remain unchanged and the experience of a person within that landscape would be largely unaltered. In a general sense, landscape effects are likely to be at the higher end of the scale for new farms, and at the lower end of the scale where there are only minor changes to the alignment or types of structures used within an existing farm.

In terms of visual effects, a **very-high** rating represents a situation where a proposal would become the key, dominating element in the primary view from a particular viewpoint, likely in the foreground, making the appreciation of other aspects of the view difficult to achieve. A **very-low** rating represents a situation where a proposal might be partially visible from a particular viewpoint, but it would be subservient to other aspects of the view and likely partially (or largely) obscured by foreground elements.

¹ Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines, published by Tuia Pito Ora New Zealand Institute of Landscape Architects, July 2022.



It's important to recognise that visual effects need to be considered in terms of the whole view – during an assessment process it is easy to focus solely on the proposed site only, and not consider views in other directions which may be more interesting or captivating.

Proposal

The proposal and this assessment relates to changing the method of farming across all of Moana's Northland operation, as follows (refer to attached Sheets 1-5):

- ▶ Parengarenga Northern Harbour: 6 farms of approximately 25ha total;
- ▶ Parengarenga Mid-Harbour: 2 farms of approximately 15ha total;
- ▶ Houhora Harbour: 1 farm of approximately 50ha;
- ▶ Whangaroa Inner Harbour: 1 farm of approximately 95ha;
- ▶ Whangaroa Mid Harbour: 3 farms of approximately 10ha total; and
- ▶ Orongo Bay, Russell: 3 farms of approximately 10ha total.

All of the farms are existing and are actively operated by Moana. Some of the farms in Parengarenga and Whangaroa have already been converted to the proposed floating basket method, as a trial. It is proposed to make these changes permanent, and then roll-out the changed method to all of the other farms over the next 2-3 years.

A full breakdown of the existing resource consents and lease titles for each of the farms is provided in the AEE.

Existing Operation

The method by which oysters are farmed has changed very little over the past 50 years. However, Moana have been investigating ways in which to improve the efficiency of their operation and reduce the potential environmental effects associated with farming. This has resulted in a variety of floating basket trials across some of their Northland (and Coromandel) sites.

The existing farm operation (on the farms that have not already been converted as part of the trials) consists of a series of timber frames located in the intertidal area of the seabed foreshore. Each frame, consisting of two poles, is sunk into the seabed, and then connected to adjacent frames by linear rails or "racks". Oyster baskets are then placed on these racks, forming a long line (some lines can be over 200m in length). This infrastructure is repeated, creating a farm segment of lines (rows) positioned approximately 5-10m apart. As many as 50 lines may be present in each segment, depending on the size and location of the farm. This is best visualised in images W4A and W4B on Sheet 18 – these of the Whangaroa Harbour farms.

Navigational posts are driven into the seabed on the corners and along the boundaries of each farm. Typically, these are painted white or yellow and contain signage to warn recreational boats of the oyster farm (such as Images O1A to O1J, Sheet 21).



The farms are mostly located in the intertidal area – that is at low tide most of the infrastructure is exposed (Images O1G to O1J, Sheet 22 and O3A to O3J, Sheet 23), and at high tide the farm is completely covered other than navigational posts (such as Image W1G, Sheet 15). The intertidal waterflows, which include the movement of nutrients on which the oysters feed, are the preferred environment for oyster growth. However, the nature of the farming operation is such that all the infrastructure and the oyster baskets are best worked from a standing position (in the water), rather than by boat (although the latter is possible at certain tides). As such, operation and maintenance of the oyster farm generally needs to occur in relatively shallow water (less than waist-deep), that is low-water, as it is preferable for farm workers to physically walk up and down the rows in waders.

The typical Moana farming cycle is annual. After being spawned off-site (Nelson), oysters are introduced to the baskets which are then in turn attached to the racks. Over the period of 10-11 months, the oysters are monitored for growth, are tendered and thinned and the baskets cleaned, until maturity. They are then harvested, the baskets thoroughly cleaned (and replaced when required), and the process repeats.

The constant tidal motion around the racks, and repeated exposure to water and air, means that the frames weather relatively quickly. In addition, wild oysters and barnacles attach to the racks and baskets, so need to be knocked off on a regular basis to enhance the quality of the farmed oysters. This results in segments of shells and getting embedded in the seabed or being washed up on the beach. This is unavoidable and an effect already anticipated by the existing consents.

The oyster farms are usually monitored or tendered daily (or at least every couple of days). This occurs between low tide and half-tide, when farm workers are able to walk up and down the rows and have direct access to the racks. Harvesting happens at low tide only.

Proposed Method

Moana have developed a system of self-floating baskets which are interlinked by string-lines attached to anchor posts at the end of each row. This system completely removes the need for frames and racks in the seabed, as the whole farm (other than anchor posts at each end of the row) is floating (as shown in the trial sites in Whangaroa Harbour, Images W2A to W2Q, Sheet 16).

Each basket measures approximately 50cm x 30cm in size, approximately 25cm deep. It is attached to a float of a similar size, such that the baskets hang submerged below the float. When empty, approximately three-quarters of the float remains visible on the surface, and when full the top of the float sits generally flush with the water level. Both the float and the basket are matt black in colour.

As each of the baskets has its own buoyancy, the lines need to be attached to anchor posts at each end. These posts, at approximately 250mm in diameter remain the only part of the farm embedded in the seabed and they will extend up to 1.5m above the high tide water level. A floating ring is then placed over the post, to which the lines are attached. This floating ring rises and lowers with the tide, ensuring that the length of the line stays consistently taught, but with enough slack to allow them to be pulled up out of the water and onto a boat for tendering (Images P9A to P9E, Sheet 9). As a result, the surface lines form a



gentle visually curved shape between the anchor posts, depending on the direction of the water current (Image P9A, Sheet 9).

The proposed floating basket method allows full access to the oyster farm by boat. Each basket can rotate on the lines, allowing it to be opened while still attached. The method allows workers to tend to the baskets and farm directly from the boat (at waist height), meaning that there will be significantly less requirements for them to walk up and down the rows (reducing the work effort). Additionally, the farm can be tendered during a typical working day, rather than being restricted by tides.

The new method also means there is limited infrastructure for wild oysters and barnacles to attach to, and the baskets can be more readily cleaned. This has the benefit that the infrastructure needs replacing much less often, and there will be less debris falling to the seabed. However, it has been noted during the trials that sea birds can sometimes perch on the floating baskets (although changes to the designs of the basket means that birds are unable to access inside them).

Navigational marker posts will still be required, this is detailed further below.

The oyster farm will need to be tendered as regularly as the current operation, and therefore there will be no increase to the movement of boats and barges around the farm. However, because the racks do not need to be cleaned following harvest, it is possible to harvest and refill the baskets at the same time, reducing double-handling. Ultimately this will allow oysters to be harvested when they are ready, rather than on an annual cycle. The trials that Moana have undertaken indicate that this will reduce the length of the farming cycle, increasing the productivity and efficiency of the farm.

Marine Farm Guidelines: Navigational Safety

Guidelines prepared by Maritime New Zealand (December 2018) provide an overview of the required navigational aids around marine farms. It has been developed in response to the Maritime Transport Act 1994.

The 2018 guidelines set out recommendations for (yellow) markers to be placed around oyster farms. Although these are to be designed in consultation with the harbourmaster (for each harbour), the general principle is to have vertical marker posts along the boundaries of the marine farm, potentially including a cross marker at the top. Although the guidelines recommend the use of yellow markers, commonly the oyster farms in Northland have been marked with white boundary posts.

It is understood that where oysters are farmed in the intertidal zone where vessel (boat) access is limited, marking the boundary with yellow or white poles is sufficient. The guidelines note that intertidal oyster farms are considered low risk in terms of navigational safety. It is noted that the farms will be located in the same area as the current operation, which are marked on current marine and topographical maps.

Therefore, it is not proposed to paint the anchor posts, with the exception of those in corner positions and single posts at 50m intervals along the side of the farm which will be painted to meet the navigational safety requirements.



The guidelines state that night lighting is at the discretion of the harbourmaster, and it is noted that none of the oyster farms currently require night lighting. It is not proposed to add any lighting, and no lighting has been assessed as part of this report.

Physical Context

As identified, the farms are spread across four locations in Northland, these being Parengarenga, Houhora and Whangaroa Harbours and Orongo Bay south of Russell (Sheet 1). All farms are in the Northland Region, considered to be the far north of New Zealand. It can be described as a generally remote part of the country that has a high degree of scenic value, particularly derived from its extensive coastal landscape. This value, together with its generally warm, somewhat sub-tropical climate, means Northland is a popular tourist and holiday destination, especially around its many sandy beaches.

Whilst oyster farming happens in the water, it's too simplistic to consider the landscape context to simply be the seascape in which they are located. Each of the farms are located in bays and harbours that have a character defined as much by the surrounding land-use as the natural landform. Whilst each location is, in itself, a seascape that is influenced by tidal activity, shorelines and natural fauna (both native and exotic birds), the character is heavily influenced by the surrounding activities, and particularly the degree of modification to landcover. None of the farms are located in pristine natural environments – rather they are located in coastal locations that are surrounded by urban and rural landuses, or at least (in the case of Parengarenga and Houhora Harbours), regenerating vegetation cover that has been historically modified. These landscapes include buildings, exotic vegetation, roading, and overhead utility lines, and in many cases include intensive land-based activities that extend right to the coastal edge.

Each location is also characterised by the existing oyster farms, most of which have operated in the area for over 50 years. The farms are as much part of the existing landscape as the surrounding farming infrastructure, and in nearly all cases they are recorded on both topographic and marine maps. Due to the historical intertidal nature of the operation, the farms tend to be located in muddier or siltier, upper parts of the harbour, rather than being near the more popular and more exposed sandy beaches.

The following subsections provide a more detailed description of each of the oyster farm landscape settings, and then a description of the general character of the existing farms themselves.

Parengarenga Harbour

The Parengarenga Harbour is the most northern water inlet in New Zealand, the northern extent of the harbour located less than 10km south of Otou North Cape (Sheet 2). The entrance to the harbour is at the northern end of Great Exhibition Bay, defined by Ohao Point to the north, and the Kokotu sandspit which extends some 10km to a landbase in the south. After passing through a narrow channel, the harbour opens up to many bays that weave to the north, west and south.

Kokotu spit is formed of pure silica sand, which regularly gleams bright white against the surrounding harbour and sea water, and is one of the key natural attractions of the harbour. The sandspit and



surrounding area has historically been harvested for glassmaking, with dredging stopping in the late 1990's. Since this time natural regeneration of coastal grasses has resulted in improved habitat for a variety of sea and shore birds and is an important first landfall for many migrating birds, such as godwits.

Most of the landmass between the northern coasts of the harbour, North Cape and Cape Reinga is covered in native forest. A large part of this area is managed by the Department of Conservation as the Mokaikai Scenic Reserve. The area consists of areas of relatively dense, sub-tropical native forest with some formed (but remote) tramping tracks. The forest is relatively unmodified in parts, but extensive areas were historically cleared for farming and are now regenerating. The harbour was also historically important for kauri gum trading, and many of the larger kauri around the harbour were removed during the 19th and early 20th centuries.

Within the many bays and shallower parts of the harbour, the native New Zealand mangrove, *Avicennia marina*, has established.

Settlement around Parengarenga Harbour is very limited. The main settled area is Te Hapua, which sits on a small peninsula that extends southward into the northern part of the harbour. The village has a population of around 75, with most people within the Ngāti Kurī iwi. A few farming properties are located around the western side of the harbour, including along the Paua Peninsula which almost connects to Kokotu save for the Te Kao Channel – this being the northern outlet point for the Lake Wahakari and the Te Kao Stream further south.

The only roads in the vicinity of the harbour are State Highway 1 (“SH1”) to the west, the access road to Te Hapua (and some roads within the village), and a road extending along the aforementioned Paua Peninsula.

The combination of the above physical attributes gives the harbour a very remote character, punctuated and surrounded by relatively high natural values. However, it is not pristine – signs of human occupation and activity are present within the water areas and on the foreshore. Aside from the farmland to the east, the Te Hapua settlement, there are also various coastal structures including current and historical jetties, a variety of boat moorings, and the existing marine farming activities (including the Moana oyster farms and numerous others).

The key areas for marine farming are several northeastern bays around Te Toi and Puponga, Parematetaha (north of Te Hapua), and southern areas around Te Kauanga and Te Kao Channels. Access to the southern Moana Farms is from a small shingle beach tucked behind mangroves on the southern side of the Paua Peninsula.

Houhora

The Houhora harbour is the smallest of all of the inland waterways assessed. It is located at the southern point of the broader Aupouri Peninsula – this being the tombolo that forms the most northerly arm of New Zealand up to Cape Reinga and North Cape (Sheet 3). This wider landform is defined on the western side by the widely recognised Ninety Mile Beach.



The harbour is largely defined by a single deep channel that winds its way from the north to the Houhora Heads in the south. This channel empties freshwater from the Waihopo catchment, this being a selection of small lakes, freshwater marshes and streams.

In contrast to Parengarenga, Houhora is almost fully surrounded by farmland or highly modified vegetation. Due to the much more prominent and scattered settlement of Houhora, on the western side of the harbour, it has a much less remote character which is further eroded by the increased presence of boats, particularly south of the boat ramp and marina area at Pukenui. Many buildings between the harbour and SH1 are orientated to obtain views across the harbour and are therefore somewhat prominent when seen from the water.

Vehicle access to the landform between the eastern shores of the harbour and Rangaunu Bay is more limited, with only a 4WD track extending to Tohoraha, the conical elevated landform that forms the northern entrance to Houhora Harbour. As a result, although the forest has historically been cleared, native regeneration of this landform is slowly occurring. In addition, the shallow shorelines are populated with mangrove, especially in the bay east of the oyster farm.

This farm, the only one in Houhora harbour, is located at the northern reach of the harbour, just south of Jackson Point (another farm, not operated by Moana, is located in Rangaunu Bay, outside the harbour).

Whangaroa Harbour

The Whangaroa Harbour is located a few kilometres north of the township of Kaeo, and is largely fed by the Kaeo and Pupuke Rivers (Sheet 4). The estuaries where these two rivers meet the harbour are densely covered by mangrove forest which give way to long, shallow mudflats that are exposed at low tide. This area forms the base of the harbour and forms a wide bay that is flanked by Whangaroa Road to the east, SH10 to the south, and the holiday settlement of Totara Bay to the west.

Most of the land-use around this part of the harbour is pastoral farmland, although some native vegetation exists around the steeper slopes of Mangapiko (behind the Whangaroa settlement) and Papakura (east of Totara North). This latter vegetation forms part of the more extensive Mangonui Forest which extends around Pekapeka Bay, the northern most bay off the harbour. On the opposite side of the harbour, similar vegetation cover extends from Matangirau (on the Matauri Bay Scenic Road loop) to the harbour's South Head. However, unlike Parengarenga, there is greater evidence of modification to the vegetation around this harbour, particularly on the eastern side, and a greater presence of structures, including residential dwellings that have been built to capture views over the harbour.

Whangaroa is a relatively busy boating settlement that contains a marina, boat ramps and various boat moorings. The harbour supports a variety of recreational and commercial boating activities, providing relatively direct access to the open ocean, sheltered only by Mahinepua Island to the north.

The middle part of the harbour contains several small bays, coves and inlets, as well as a couple of islands, that provide a degree of interest and remoteness despite the boat traffic.



Several oyster farms are operated within Whangaroa Harbour, including many that are not owned by Moana. The largest collection is in the base of the harbour, clearly visible from Whangaroa Road, but there are other smaller farms located in the middle harbour in Waitapu, Touwai and Pumanawa Bays.

Orongo Bay

Orongo Bay is located at the base of the Bay of Islands, being semi-separated part of the wider Pomare Bay, east of the Veronica Channel (Sheet 5). The township of Russell is located just to the north of this Bay, with Paihia to the west on the other side of the channel. Orongo Bay is a sheltered, relatively shallow bay that is almost completely circled by landform.

Of all the Northland locations near the Moana farms, Orongo Bay is the most populated and modified. However, it has been used for oyster farming since the 1950's and is extensively covered in farms today. Moana only operate a small component of the total farmed area in this Bay. Its shallow nature, and the extent of oyster farms, means that it is generally not suited to recreational boating, although some smaller private boats fish around the farms.

The main activity on the surrounding landforms is residential, comprising of both lived-in houses and holiday homes, most of which have been designed to take in views of the water (including the oyster farms). Aucks Road and Russell-Whakapara Road intermittently flank the coastal edge, although outward views are regularly restricted by vegetation, both native and exotic, including mangroves around the coastal margins. Te Wahapu Road is more elevated, running along a steep peninsula that separates Orongo Bay from Te Wahapu Inlet in the channel, with private access roads/driveways dropping down both sides to service residential properties. Aucks Road is relatively busy, as it connects Russell to Opuia via the vehicle ferry.

Boat access to the farms is from a small hub on the northern part of the bay, this consisting of a variety of sheds and storage yards directly adjacent to the water edge. However, the oyster farms are only easily accessed by boat from this location at high tide.

Character of Oyster Farms

All of the oyster farms that are being converted to the proposed method are existing and are not proposed to be moved outside of their existing leased areas. Although the farms are operated within the marine areas under an RMA consent and a lease arrangement, many have been in place for over 50 years.

Oyster farms are similar in character to mussel farms, consisting of long lines that run parallel to each other across the farm. Traditionally, the oyster lines are made of timber, attached to timber frames that are wedged into the seabed. Typically, they are laid out such that the lines run perpendicular to the current, although this is not always the case.

Unlike mussel farms, there are no floating buoys associated with an intertidal oyster farm, but there are various navigational posts and sometimes night lighting. The nature of oyster farming, however, is that they are located further in-shore than mussel farms, often in places notably intertidally that are difficult to navigate by larger boats.



Oysters are attached to sticks or contained within baskets that are attached to the timber lines.

The anchored frame method means that the whole farm becomes visible as the tide lowers. The extent of farm visible depends on the depth of the tide, as the frames are built to a height near to the mean low water tide line where they can be tendered to by workers walking up and down the lines, on the seabed. This work, including harvesting, is usually undertaken near low water when the frames are exposed and visible.

Due to the nature of the location of oyster farms, the timber frames become attractive anchors for wild oysters, and they often have a gnarly, barnacled appearance. The timber also needs to be treated to marine standards (H6 on the timber treatment rating), and typically takes on a dark green colour, changing to black over time.

Many of the wild oysters attached to the frames also fall onto the seabed, and as such at low tide the seabed can appear littered with shells. These can be washed up onto the beach area.

In general, oyster farms are – like pastoral farming on the land – a modification of the character of the seascape. They are working farms within the water. However, they don't necessarily detract from the overall natural character of the coastline, which is defined by many other elements such as rocky faces, land-use and landcover across the landscape. Although the farms are often tendered to daily, the activity around them usually involves only a handful of people and one or two boats, such that even bays that contain oyster farms can retain a sense of remoteness and calmness.

All of the oyster farms considered in this assessment are part of the existing character of the combined seascape and landscape. In some cases, as outlined, these are more developed or managed, and in other places more scenic and remote.

Policy Context

The AEE provides a detailed assessment of the relevant statutory policy. The following section provides a summary of the policy relevant to this assessment.

Regional Policy Statement for Northland (RPS)

Section 2.1 of the RPS outlines the key pressures on the fresh and coastal water resources of Northland. It notes that the consequences of these pressures includes the reduction of natural character values. This section also mentions that the pressures also create constraints on water-dependent industries, which would include oyster farming.

Section 3.14 considers Natural Character, Outstanding Natural Features (ONFs), and Outstanding Natural Landscapes (ONLs), requiring the identification and protection of these from inappropriate subdivision, use and development (building on issues identified in s2.8). Section 3.15 seeks active management to maintain and/or improve the natural character of the coastal environment, ONFs and ONLs, with s4.6.1 providing policy on avoiding effects on outstanding natural character or landscapes. Within the coastal environment that is not outstanding, it notes the requirement to avoid significant adverse effects. In both cases, the



emphasis is the consideration of adverse effects on the characteristics and qualities of the natural character, natural features and landscape values.

The outer harbour, including the intertidal flats and channels of the Parengarenga Harbour are identified as having Outstanding Natural Character (99/03), however the area mapped does not cover the oyster farms in this harbour. High Natural Character Areas 96/26 and 98/11 both note that they exclude the areas covered by oyster farms, and note that although there are few obvious human structures this also excludes the oyster farms. The ONLs of Parengarenga include north and south of the mouth of the harbour, including Kokota. Two ONFs, part of the Parengarenga-Paratoetoe Miocene Sequence are also identified in the vicinity of the northern most oyster farms in Parengarenga.

Houhora Harbour is identified as having High Natural Character (104/06), again this area excluding the marine farms. The Henderson Bay coastline is identified as an ONL, on the eastern seaward side of the Peninsula.

An area of Outstanding Natural Character is located south of the oyster farms in Whangaroa Harbour (119/20), but this is outside of the farmed area. Other areas of Whangaroa Harbour are identified as having High Natural Character, with some of these areas close to but not within the farmed areas.

An area of High Natural Character is mapped in Orongo Bay (08/23), this being the area of mangroves to the eastern side of the bay, outside of the oyster farms. In addition, the hillslopes to the north and west of Orongo Bay (on land) are identified as having High Natural Character (08/21 and 08/30) due to the kanuka dominant landcover.

Proposal Regional Plan for Northland (RP)

Section C.1.3 of the Regional Plan provides for aquaculture, including oyster farms, provided various policies are met. It notes a control measure to consider the effects of colour, visibility, and the coherent appearance of marine farm structures.

The regional plan also exercises control over effects on biogenic habitats, rubbish, debris and the interaction of marine mammals or seabirds with the farms. Although these are outside the specific scope of this report, it is noted that the change in activity is likely to have some positive outcomes in regard to these effects.

Far North District Council District Plan (DP) and Proposed District Plan (PDP)

It is noted that as the oyster farms are located within the marine environment, they are not within the Far North District Council territorial boundary. However, this territory includes land that is part of the wider seascape and landscape environment.

Section 10 of the DP discusses the coastal environment, noting that Northland has a long and varied coastline that is valued for its landscape, ecology, history, settlement and land-use patterns. Section 10.1.2 notes that the coastal environment includes areas of both land and sea, and that activities on the land within the coastal environment can have effects on the sea and vice versa.



The PDP then echoes many of the outcomes sought by the RPS in terms of managing effects on natural character and natural landscapes. The mapped areas of Outstanding and High Natural Character and ONLs largely follows those mapped in the RPS. Section 12.1.1 outlines issues associated with these areas, including visual impacts and effects on the character that makes them special landscapes.

New Zealand Coastal Policy Statement (2010) (NZCPS)

The NZCPS sets out requirements for the preservation and enhancement of the New Zealand coast. The following policies are considered to have particular relevance to this assessment:

- ▶ **Policy 6: Activities in the coastal environment.** Notes that there are a range of activities to be considered, including activities that contribute to the social, economic and cultural wellbeing of people and communities.
- ▶ **Policy 8: Aquaculture.** Recognises the significant existing and potential contribution of aquaculture to the social, economic and cultural wellbeing of people and communities.
- ▶ **Policy 13: Preservation of natural character.** Notes a requirement to preserve the natural character of the coastal environment and protect it from inappropriate subdivision, use, and development, including avoiding significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on natural character in all other (that is not outstanding) areas of the coastal environment. Also notes that natural character is not the same as natural features or landscapes or amenity values.
- ▶ **Policy 14: Restoration of natural character.** Promotes the restoration or rehabilitation of natural character in the coastal environment (including removing redundant structures and materials, and redesign of structures that interfere with ecosystem processes).
- ▶ **Policy 15: Natural Features and Natural Landscapes.** Promotes the protection of natural features and natural landscapes in the coastal environment, including seascapes.

Potential Natural Character Effects

As identified above, none of the oyster farms are located within an area identified as having outstanding natural character. As such, the requirements under the NZCPS extend to avoiding *significant* effects, and avoiding, remedying or mitigating other effects.

Before undertaking an assessment of the proposed farming method, it is important to recognise that the existing oyster farms already have effects on natural character – this is evident by the RPS maps which specifically exclude the marine farms from areas of high or outstanding natural character. Principally, the effects are related to the reduction in experiential values, in particular the sense of remoteness and naturalness of an area. This is most pronounced at low tide, where the permanent racking dominates (to different extents across each oyster farm) the intertidal area. Even at high tide, when the oyster racks are largely submerged, the navigational marker posts indicate the presence of commercial activity, and from views above the water the racks are regularly partially visible.



Effects on biotic values are also evident, including the establishment of wild oysters and other encrusting organisms on the racks, and the ultimate need to regularly clean these to ensure good biosecurity and the efficient operation of the farm.

Having said this, the oyster farms have been in operation in this area for a very long time, and are managed under specific consents. As such, the effects outlined above have already been considered as appropriate, with conditions in place to mitigate and remedy where required.

Therefore, the task for this assessment is to consider how changes in the method will alter the existing effects, in either a positive or adverse way.

Considering the positive effects, the most notable change is the elimination of permanent infrastructure anchored in the seabed. The removal of this infrastructure is entirely consistent with Policy 14 of the NZCPS, and will have immediately notable effects on biotic value by reducing the opportunity for wild oysters and other marine life to build up (and ultimately be cleaned off) around the farm. In addition, the move to floating baskets significantly reduces the need for workers to walk on the seabed, which will in turn reduce ecosystem disturbance underneath the oyster farm.

In terms of adverse effects, most notable will be the change in the visibility of the farm (as will be further detailed below). Visibility of the farm is only one aspect of experiential value in regard to natural character (noting the NZCPS separates amenity from natural character) – more than visibility is the recognised “presence” of the farm. In other words, the sense of naturalness and remoteness is affected not just because something is visible, but because it is known to exist or be present. The proposed method will have the same presence as the existing operation. Each farm will occupy the same area and be identified by navigational markers in the same way as they are now. Boats and barges will attend the farm with the same regularity. Recreational boats generally avoid the farm area.

The floating baskets will have an effect on wave patterns which is likely to draw attention to them more than submerged racks. Observation of trial sites that have been developed by Moana indicate calmer waters between the rows, although it is noted that all of the farms are already located in relatively calm harbours and bays. In addition, it’s possible that the lines will provide a perching spot for sea birds. Both these effects relate to natural processes and the perceived naturalness of the area.

Overall, it is considered that the proposed new farming method will have a mixture of positive and adverse effects on natural character. It will result in better outcomes in terms of biotic values, but this will be offset by adverse outcomes in terms of experiential values. In balance, it is considered that the overall adverse effects on natural character will be **very low** – primarily this will be a slight reduction in experiential values. Such effects are mitigated by the positive outcomes achieved by removing permanent infrastructure from the seabed.



Potential Landscape Effects

None of the oyster farms are located within any ONFs or ONLs. However, as identified above, the northern farms in Parengarenga are located near to ONLs that cover the land area. The ONL at Houhora is on the other side of the headland peninsula north of the mouth. None of the other farms are located near ONFs or ONLs, however all the farms are located within a seascape and landscape environment that has amenity and landscape value. In particular, there is a sense of remoteness within the Parengarenga and Whangaroa harbours, and scenic values in all locations. There is also a sense of openness, and relatively high transient values resulting from frequently changing conditions in each of the harbours. As identified earlier, there is also a strong connection between the landscape and seascape that is recognised as significantly important to Northland as a region.

However, the existing oyster farms are part of these seascapes and landscapes, and have been for a long period of time. The farms contribute to the overall character of the area, in some locations potentially positively, and in other locations potentially adversely – but in all cases they are existing, physical entities that are a component of the overall scene.

Principally, the existing farms have associative attributes – they are recognisable as part of the unique identity of Northland, which is known to include this type of commercial aquacultural activity.

The existing farms also have existing effects on the landscape, notably its biophysical aspects. In the previous section it was noted that the existing racking attracts wild oysters and other marine life, which often fall to the seabed and can be washed ashore. Seabirds also interact with the farms, particularly during low tide when the baskets are exposed.

The proposed change in farming method doesn't remove the farms, or fundamentally change their character. Each farm remains the same size, in the same location, consisting of rows of baskets that are clearly human-made structures. On the surface, the key difference is an increase in the number of posts visible above the water in all tides, and a slight increase in visibility of the baskets during the higher periods of the tide (and reduced visibility during the lower periods of the tide), with the lines now arcing with the current, compared to the previously fixed lines. There will also be some changes to the wave patterns at high tide, with less obstructions within the main water flow but a calmer surface area between the lines. Seabirds will continue to interact with the farms, potentially on a lesser-scale since the baskets, when full, are more submerged. But ultimately, the oyster farms remain as oyster farms – a productive use of the seascape, with navigational markers and with the movement of boats and workers around the farm.

There will be positive landscape outcomes. The removal of the timber frames from the seabed will reduce the dominance and perceived permanence of the farm, particularly at low tides. The removal of this infrastructure, and the regular flipping activity, also reduces the encrustation of wild oysters and other marine life, resulting in less drop-offs into the seabed and shoreline. This is further enhanced by the maintenance activity being undertaken on the boat, such that everything dropped is caught by the deck of the boat.



In this regard, the potential landscape effects of the proposed new method across all farms (irrespective of their location and context) are considered to be **low**. Fundamentally, the character of the farms as a productive, working area of the seascape will not change, nor will any of the landscape or seascape around it. Overall, the combination of the various landscape and seascape attributes will be the same as it is now, with some subtle differences in the details only within the farms. The ONLs of Parengarenga and Houhora will remain as they are now, perceived in the context of a productive area of seascape, and not affected by the proposed change in farming method.

Potential Visual Effects

Attached to this assessment is a series of photographs that show each of the existing oyster farms from a wide range of viewpoints. Visualisations of the proposed method have not been prepared, however a selection of photographs from both Northland and Coromandel of the trial sites (using the same method as proposed) have been included. As outlined in the methodology, the author of this report has viewed a large number of oyster farms, using both the existing and proposed farming methods, across Coromandel and Northland. A wide variety of viewpoints have been considered, including close-up locations by boat and more distant views from roads and public locations.

Perhaps the most notable visual effects that will be brought about by the change in farming method will result from the change in what aspects of the farm are seen at different tides. Currently the oyster farms are only fully visible at half to low tide, when the frames and baskets can be seen clearly embedded in the seabed. The weathered nature of the timber, and the presence of wild oysters and barnacles enhances the visibility of the infrastructure, and the farms are a dominating feature of the view from nearby locations.

As the tide comes in, the bulky infrastructure reduces in visibility. Between half and high tide the farm itself becomes fully submerged, and largely becomes invisible from the water surface – however from aerial positions (such as surrounding elevated land forms), the baskets can still be visible through the water.

Essentially, the existing farms have high visibility at low tide, and low-moderate visibility at high tide (depending on the location/elevation of the viewer).

The proposed new method will reduce the visibility of the farm at low tide. Whilst rows of baskets will remain, the larger racking infrastructure will no longer be present, replaced with anchor posts at the end of each row. As a result, the natural qualities of the seabed will become more dominant elements of the view, diminishing the presence of the oyster farm (noting that the rows of oyster baskets will lie across the seabed when the tide is fully out).

This reduction in effects is countered by an increase in visibility of the baskets across all tides. Although the baskets will sit on or just below water level, they will remain visible even when high tides would have previously covered the farm. From elevated positions, the rows of baskets will be more clearly visible at all times, irrespective of tide level and water opacity. Navigational markers, boats, barges and workers will be equally as visible as the existing operation. The rows of baskets will also be curved with the current or tide,



unlike the fixed system where the rows are always linear. In addition, the floating nature of the farm will impact wave structures, and it is likely that there will be calm areas around the rows.

In all tides, the anchor and navigational marker posts around the perimeter of the farm are permanently visible elements, as are the presence of boats, barges and workers tending the farm.

However, visibility does not necessarily equate to effects on visual amenity. Viewers in and around the oyster farms, including those within residential properties elevated above the farms (only in some locations), are already accustomed to seeing the infrastructure. Even when submerged, people familiar with the view will be able to readily make out the location of baskets and racks. And, for most people, this view will not have changed much over living memory – the oyster farms having been an aspect of the overall outlook for a long time.

From the water surface, the effect will be lessened. Whilst the baskets will be more visible from close proximity, assessment of the trial sites developed by Moana indicates that beyond approximately 200 to 250m the baskets are almost impossible to see – hidden below the crests of waves. Therefore the only visible signs will be the posts.

Generally, it is considered that visual effects will range from *low* to *very-low*. The use of the floating basket method will therefore represent a change that is likely to be noticed, particularly in the short term. It is likely that viewers, particularly in elevated positions, will initially consider the modified farms to be “more visible”, this being a response to a more regular consistency of visibility rather than them necessarily being more prominent. The reality is that the oyster farms will become more visible at high tides, but less visible at low tides. As has been identified in the previous section, the character of the farm and its relationship to the wider landscape and seascape character will remain unchanged – it is only the detail of the farm itself.

Parengarenga Harbour

The oyster farms in Parengarenga are located in relatively remote locations, and therefore most visibility of the farms is by boat. None of the farms are within the main channels that are frequented by fishing or tourist boats – they are tucked into bays and shallow water, typically more than 200-250m away. Whilst it will be possible to see the farms from boats, especially boats venturing closer to the farms, the surrounding landform and scenery – particularly Kokotu – remain the prominent features of the landscape that draw the attention of the viewer. The potential visual effects from boat in this harbour are considered to be consistent with the *very-low* general rating outlined above.

A fleeting, elevated glimpse of the oyster farm in Kauanga Channel is possible from State Highway 1 as it passes the base of the channel (Images P12 to P15, Sheet 9). There are also a small number of residential dwellings located within the farmland that have similar elevated views across this farm and the ones in Ngutukorari Channel. However all of these properties are able to see the existing farms, and based on the viewing experience from SH1, have an extensive landscape view that takes in expanses of the harbour across to Kotoku. In this context, the oyster farms are a small part of the overall scene, and not the immediate focus of the viewer.



It's unlikely that there are any views of any of the farms from Te Hapua as the settlement is located relatively low on the landform and some distance from the farms.

Overall it is considered that the potential visual effects of the change in farming method within the Parengarenga Harbour farms will be **very-low**.

Houhora Harbour

The oyster farm at Houhora is located a long way up the channel near the northern most part of the harbour. It is likely any recreational boats will not head in this direction, the more likely path being from the wharf and jetty south to the heads.

The farm is visible from a large number of houses along the western side of the harbour, between Subritzky Road and the old Houhora Tavern (Images H3 and H4A to H4C, Sheet 13). Various views of the existing farm are possible, broken up by shelter trees, other buildings, and in some cases subtle folds in the landform. The viewing angle is just above water level. Residents in these properties, and some travellers along SH1 in this location, may notice the change in farming method. It's also noted that the tide movement from low to half in this part of the harbour is quite fast, meaning that the existing racking is exposed for a less amount of time than in other locations.

However, as outlined above, the overall character and composition of the view will remain and the changed method will be within only a small portion of the overall outlook.

The farm may be visible from the walking tracks on the eastern side of the harbour, but would not form part of the primary view and would not be a focus. The change in farming method is unlikely to change the visual prominence of the farm from such locations.

Overall it is considered that the potential visual effects of the change in farming method within the Houhora Harbour farm will be **very-low**.

Whangaroa Harbour

The existing farms at the base of Whangaroa Harbour are visible from a number of elevated residential properties, and from the roads at this location.

These farms are not within the area frequented by recreational boats, these tend to head out to the mid and outer parts of the harbour (or beyond) away from the farm.

The view from the road is extensive, at a relatively close viewing range (Images W3A to W3E, Sheet 18). As such, from the road it is possible to see a lot of the detail in the racking system at low tide, and witness the shell covered seabed. The change in farming method will likely be evident from this location, however given the view is largely of productive marine farming it is not considered this is necessarily an adverse visual effect. The viewing locations, including the small pull-off bays from the road, provide an opportunity to specifically study the farms and their operation. Potentially, the change in method may be seen as an interesting innovation.



The residential properties tend to be more elevated (Images W4A and W4B, Sheet 18), and therefore they will see the full change in method, both the visibility of the new method through all tides, and the cleaned up foreshore in low tide (with racking removed). They will also experience the curving nature of the lines, which will change direction with the tide. However, these elevated properties also have extensive outward views across to Totara North with the marine farms a key aspect of the view. The composition and general character of this view will not change.

The other farms within Whangaroa are located in more remote bays. Whilst some recreational boats may enter these bays, the farms are located in shallower water and can't be easily accessed by most boats.

Some elevated residential properties on Ota Point and Waitapu Creek Road also have visibility, and will experience similar effects as described above for other elevated views. In this instance, however, Moana own or manage all the farms in each bay, so there will be no effects resulting from seeing different methods across different adjacent farms.

Overall it is considered that the potential visual effects of the change in farming method within the outer Whangaroa Harbour farms will be *very-low*.

Orongo Bay

Moana own and manage only three of the many oyster farms within Orongo Bay.

Orongo Bay is surrounded by a number of elevated landforms that are scattered with residential properties. Many of these properties, including the eastern side of Te Wahapu Road and many houses above the Russell Whakapara Road will have views of the existing oyster farms, as well as the wider bay (Refer to the aerial photograph, Sheet 19 and Images O3A to O3J, Sheet 23).

The visual effects for these properties will be heightened by the curved nature of the rows within the Moana farms in contrast to the straight lines of other farms. However, the overall character of the farms – which dominate the bay – will remain. Orongo Bay is a productive marine farm basin.

Overall it is considered that the potential visual effects of the change in farming method within the Orongo Bay farms will be *low*.

Summary of Visual Effects

Although the landscape setting alters across all of the farms, and each viewpoint has a unique composition and quality, the potential visual effects are relatively consistent. The key difference will be the reduced visibility of the farm at low tides, countered by permanent visibility of anchor posts and the baskets just below the surface. The rows will curve with the current, and will slightly change the wave patterns.

However, the farms remain in the same location within the view and do not physically affect other landscape features. They will retain a marine-farm character, which is perceived within the wider view in the same way as the existing farms.



It's likely that some people will notice the visual change in the farm, but it is not considered that the change in farming method will make the farms any more prominent or eye catching.

Therefore, the visual effects of the proposed change in farming method, across all farms, are considered to be **low** to **very-low**.

Assessment Against Policy

NZCPS

Considering the positive effects, the most notable change is the elimination of permanent infrastructure anchored in the seabed. The removal of this infrastructure is entirely consistent with Policy 14 of the NZCPS, and will have immediately notable effects on biotic value by reducing the opportunity for wild oysters and other marine life to build up (and ultimately be cleaned off) around the farm. In addition, the move to floating baskets significantly reduces the need for workers to walk on the seabed, which will in turn reduce ecosystem disturbance underneath the oyster farm.

Policy 13.1(a) does not apply as the proposal is not located in any areas of outstanding natural character, and therefore the requirement under Policy 13.1(b) is to avoid *significant* effects on natural character.

As identified above, the context of each of the existing farms is a marine environment. The proposal does not result in any change to the character or physical makeup of the seascape or landscape, and is contained within the boundaries of the existing farms. It is not considered that the change in method will make the farms any more visually prominent than they are now, and it will not change the overall composition or character of the view.

Therefore, the only natural feature directly affected by the proposal is the seascape. The assessment identifies how the floating baskets will affect visibility, currents, wave motion, and bird behaviour. It also outlines the positive effects resulting from removing fixed infrastructure in the seabed, and notes that even at high tide, when the existing infrastructure is submerged, it is possible to still make out the farm under the water and by the exposed boundary poles.

In an area already highly modified – including those of the existing farms – it is concluded that the effects of the proposal will be **low** to **very-low**. This is a long way from being *significant*, and therefore the proposal is consistent with Policy 13.1(b).

Policies 13.1(c) and 13.1(d) require the identification and assessing (the value of) natural character – with the purpose of informing regional policy under which resource consent applications are made. This assessment has been captured in the RPS and has been considered within this assessment.

Policy 15(a) requires the avoidance of effects on ONFs and ONLs. This assessment has outlined that there will be no physical effects on any ONF or ONL areas, and that the proposal will only change an aspect within the existing boundaries of existing marine farms. The overall composition and character of the landscape will not change. Therefore, it is considered that the proposal is consistent with Policy 15(a).



Policy 15(b) requires avoidance of *significant* effects on other natural features and natural landscapes. This assessment has outlined how the effects on landscape will be **very-low**, and therefore the proposal is consistent with this policy.

Policies 15(c), 15(d) and 15(e) require the identification and assessing (the value of) natural features and landscapes – with the purpose of informing regional policy under which resource consent applications are made. This assessment has been captured in the RPS and has been considered within this assessment.

Overall it is considered that the change in farming method is consistent with the requirements of the NZCPS.

RPS & DP

The policies within the RPS and DP echo the requirements of the NZCPS. These require the avoidance of significant effects, which this assessment identifies has been achieved. All of the mapped areas of Outstanding and High Natural Character have been considered, noting the oyster farms are specifically excluded from these areas.

Overall it is considered that the change in farming method is consistent with the requirements of the RPS and DP.

Conclusions

This assessment has been undertaken to identify the potential natural character, landscape and visual effects of the proposed change in farming method for all of Moana's oyster farms within Northland. The proposal is to remove the historical racking system of structures embedded in the seabed, and replace these with a floating basket system. The areas which are farmed will remain the same.

To inform the assessment, site and locality visits were undertaken to all the farms over several days. A wide range of photographs captured on these visits is attached to this report.

The proposal will have some adverse effects, these largely relating to visual effects. Such effects include visibility of the farms during all tides, visibility of anchor posts, curved rows that move with the water current, changes in wave patterns and potential changes in seabird movements around the farms. The visual effects will be heightened in the areas where the Moana farms are in the same seascape as other operators (who are not undertaking a change to the farming method). However, there are also positive visual effects resulting from the removal of the racking system which is visible at low tide.

In addition there are a number of other positive outcomes (such as ecological and workforce management) of the proposal. The removal of the racking and undertaking of the farming operation by boat will reduce direct effects on the seabed. There is also likely to be a reduction in seabed effects under the farm, and as such a reduction in the shell deposits on the seabed and shoreline.



Overall it is considered that the natural character and landscape effects will be **very-low**, and can be considered to be **less than minor**. Visual effects will range from **low** to **very-low**, and also can be considered overall to be **less than minor**. Some properties and viewers will be aware of the changes, but the change in method will not change the overall composition or character of the view.

Shannon Bray
NZILA Registered Fellow



Resource Consent

Pursuant to the Resource Management Act 1991, the Northland Regional Council (hereinafter called "the Council") does hereby grant a Resource Consent to:

~~SANFORD LIMITED, PO BOX 142, KAEO 0448~~

AOTEAROA FISHERIES LIMITED, C/O PACIFIC MARINE FARMS, PO BOX 65, COROMANDEL 3506

To place, use and occupy 7.1834 hectares of space in the coastal marine area with structures associated with marine (oyster) farming activities, including the disturbance of the foreshore and seabed and the deposition or discharge of material from marine (oyster) farming activities within an Approved Area in Waitapu Bay, Whangaroa Harbour at or around location 1669660E 6121380N.

Note: All location co-ordinates in this document refer to Geodetic Datum 2000, New Zealand Transverse Mercator Projection.

Subject to the following conditions:

- 1 This consent applies only to the area identified on SO Plan No. **54851 attached**. This area shall be known as the Approved Area.
- 2 The Consent Holder shall ensure that marine farming structures, including notice boards, marker posts and all other equipment, facilities and navigational aids within the Approved Area are situated and secured so as to remain within the boundaries of the Approved Area. The Consent Holder shall maintain these in good order and repair.
- 3 The Consent Holder shall ensure that all non-biodegradable waste requiring disposal shall be collected and disposed of to land at an approved disposal facility, and shall take whatever steps are reasonably necessary to retrieve from the Coastal Marine Area any non-biodegradable material that has escaped from the Approved Area.
- 4 The Coastal Marine Area shall not be used for the storage of marine farming waste or materials.
- 5 The Consent Holder shall, at the request of the Council's Monitoring Manager, remove accumulated debris, including shell, and other material from the Approved Area.

Survey Conditions

- 6 The Consent Holder shall, if requested by the Council in writing, provide a Land Information New Zealand (LINZ) certified survey office plan that defines the boundaries of the marine farm. The survey plan, which is to be undertaken by a licensed cadastral surveyor, shall be submitted to LINZ for certification no later than two months from the date of receipt of that request by the Council.

The survey plan shall be made in accordance with the Surveyor General's Rules for Cadastral Survey 2002/2 or any regulations made in substitution thereof. Location co-ordinates are to be in terms of Geodetic Datum 2000, New Zealand Transverse Mercator Projection, and shall be recorded on the plan.

Advice Note: *This condition only applies to those marine farms that have not already provided certified survey office plans of the Approved Area.*

Extent of Occupation

- 7 The right to occupy part of the Coastal Marine Area, as interpreted in Section 2 of the Resource Management Act 1991, shall be limited to the Approved Area. This right is not an exclusive right. Without restricting the Consent Holder from reasonably undertaking the activities authorised by this permit, the Consent Holder shall not undertake the activities in such a way that would effectively exclude the public from the Approved Area for the purposes of public access to and along the Coastal Marine Area.

Marine Farming Mooring

- 8 The Consent Holder is entitled to locate a swing mooring within the Approved Area. Other than this mooring, the Consent Holder shall not erect, place, moor or keep any ancillary structures without first holding a Coastal Permit. This includes swing, pile or other mooring structures, which are partially or completely outside the Approved Area.

Navigational and Safety

- 9 The Consent Holder shall mark the Approved Area with permanent white marker posts, in accordance with Northland Regional Council Plan **3950 attached**. The marker posts shall extend at least 2 metres above mean high water spring tide level, and shall be maintained to a standard to maintain the navigational purposes of the markers.
- 10 A clear and legible sign shall be fixed to each corner of the Approved Area with the number **12884** shown in black lettering, in such a manner as to be clearly visible at all times from a distance of five metres.
- 11 The Consent Holder shall not allow notice boards, marker posts or any other equipment, facilities and navigational aids in the Approved Area to be, become, or cause, in the opinion of a Council Monitoring Officer, a hazard or potential hazard to the environment or to navigation.

- 12 Should any part of the marine farming structures that are of a size that could constitute a navigation and safety hazard, be lost into the marine environment, the Consent Holder shall immediately inform the Regional Harbourmaster for Northland and Maritime New Zealand of this occurrence. The Consent Holder shall also undertake all necessary steps to find and retrieve the lost structure/s, as promptly as is reasonable in the circumstances.

Marine Farm Removal

- 13 The Consent Holder shall inform the Council should it cease to farm the Approved Area. The structures authorised by this permit shall be removed within one month or as otherwise agreed in writing with the Council of the date of cessation of farming in the Approved Area and the site shall be rehabilitated to the satisfaction of a Council Monitoring Officer.
- 14 Prior to the expiry, cancellation, or lapsing of this permit the Consent Holder shall remove all structures and other materials and refuse associated with this permit from the Approved Area and shall restore the Approved Area to the satisfaction of the Council, unless an application for a replacement permit has been accepted by the Council in accordance with Section 88 of the Resource Management Act beforehand.

Advice Note: *The Council may remove structures, debris and/or other material associated with the marine farm where:*

- (a) the structures, debris and/or other material associated with the marine farm are the subject of an abatement notice (or other similar formal action), and the abatement notice has not been complied with within stipulated timeframes;*
- (b) After the coastal permit has expired and an application for a coastal permit for the same space has not been received by Council; or*
- (c) In any other circumstance where the Consent Holder agrees.*

Financial Security for Clean-up

Bond

- 15 Within 6 months of the date of commencement of this reviewed condition, the Consent Holder shall enter into and thereafter maintain a bond with the Council. Subject to Conditions 19 and 22 the bond shall be in the amount of:
- (a) \$6.95 per horizontal lineal metre of racks within the area approved by this permit; or alternatively,
 - (b) \$9,000 per developed hectare within the area approved by this permit

Alternative (a) or (b) shall be the choice of the Consent Holder
The form of the bond shall be a bank or other surety acceptable to the Council.

If a bond is provided by a bank or other surety, then it will be prepared by the Council's solicitor, and shall be signed and sealed by both parties. All costs associated with the preparation and registration of the bond shall be met by the Consent Holder.

- 15A Notwithstanding Condition 15, the Council's Monitoring Manager may, at any time upon request of the consent holder, reduce the amount of the bond specified in Condition 15 if he/she is satisfied that the actual costs of removing structures, debris and/or other material associated with the marine farm will be less than the amounts specified in Condition 15.

Advice Note: *Condition 15 specifies the amount of the bond by reference to an industry based average. Condition 15A enables this amount to be reduced if the consent holder can demonstrate to the Regional Council that the costs to the Regional Council of removing structures, debris and/or other material associated with that marine farm in the event of abandonment will be less than the amount specified in Condition 15. The information to be supplied by the consent holder in order to establish that the costs of cleanup will be less than those contained in Condition 15 would need to comprise, as a minimum:*

- (a) *A detailed description of the particular circumstances relating to that marine farm that justifies a reduction in the amount written; and*
- (b) *Written estimates from reputable independent contractors specifying the likely cost removing structures, debris and/or other material associated with that marine farm.*

Nothing in this condition affects the ability of the consent holder to apply for a change to Condition 15 pursuant to section 127 of the Resource Management Act 1991.

- 16 If the coastal permit is transferred in part or in whole to another party or person, the transferor Consent Holder shall not be entitled to the release, if sought, of any part of its bond until the transferee Consent Holder has a replacement bond of the same value and which is fully compliant with this permit, in place with the Council.
- 17 The bond, inclusive of any accrued amount, will be released to the Consent Holder upon the expiry of this permit, provided that, prior to the expiry date of this permit, the Consent Holder has removed the marine farm in compliance with the conditions of this permit.
- 18 In the event that the marine farm has not been removed by either the expiry date of the resource permit or the expiry of the period specified in an earlier abatement notice requiring the removal of the marine farm structures, then, in the absence of any other resource permit authorising the removal where it is appropriate to release the bond, the bond will be retained by the Council to be utilised for the removal of the structures. In the event of the cost to Council of removal being less than the amount of the bond, the balance shall be released to the Consent Holder.

Alternative to Bond

- 19 The requirement for a bond pursuant to Condition 15 -18 (inclusive) hereof may be waived by the Council if the Consent Holder is able to satisfy the Council, either within 6 months of the date of commencement of this reviewed condition or at any time during the term of a bond or other surety already established under Condition 15 hereof, that the Consent Holder has secured the risk of marine farm removal costs pursuant to an alternative arrangement on terms acceptable to the Council.

Monitoring Conditions

- 20 The Consent Holder shall provide a report, annually during the month of April, on:
- (a) The degree of development within the Approved Area, including the proportion of the marine farm that is utilised;
 - (b) The number of racks present on the farm; and
 - (c) Whether and the extent to which the horizontal lineal metre of racks within the area approved by this permit is increased or decreased; and
 - (d) Whether and the extent to which the developed hectares within the area approved by this permit is increased or decreased; and
 - (e) All maintenance in relation to any non-compliance of structures or seabed during the past year.
- 21 Where from any cause, contaminant or other material associated with the Consent Holder's operation escapes, otherwise than in conformity with this permit, the Consent Holder shall:
- (a) Immediately take such action, or execute such work as may be necessary, to stop such escapes; and,
 - (b) Immediately notify the Council of the escape of contaminant or material; and,
 - (c) Within 24 hours report to the Council in writing of the manner and cause of the escape, and the steps taken or being taken to effectively control and prevent such escape.
 - (d) Remedy any adverse effect on the environment caused by the escape.

Permit Review

- 22 The Council may in December 2014 and December 2019, in accordance with Section 128 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions of this permit annually during the month of April. The review may be initiated for any one or more of the following purposes:
- (a) To deal with any adverse effects on the environment that may arise from the exercise of the permit and which it is appropriate to deal with at a later stage, or to deal with any such effects following assessment of the results of the monitoring of the permit and/or as a result of the Council's monitoring of the state of the environment in the area;
 - (b) To require the adoption of the best practicable option to remove or reduce any adverse effect on the environment;

- (c) To provide for compliance with rules in any regional plan that has been made operative since the commencement of the permit;
- (d) To review the amount of any bond imposed pursuant to Condition 15 or surety pursuant to Condition 19 hereof when the horizontal lineal metres of racks or the developed hectares (whichever is applicable to the bond assessment of this permit) within the area approved by this permit is increased.

The Consent Holder shall meet all reasonable costs of any such review.

EXPIRY DATE: 31 DECEMBER 2024

TRANSFERRED ON: 1 AUGUST 2012

TRANSFERRED TO: AOTEAROA FISHERIES LIMITED, C/O PACIFIC MARINE FARMS, PO BOX 65, COROMANDEL 3506

Advice Notes

1. *The resource permit is transferable to another owner, on the same conditions and for the same use as originally granted (Section 135 of the Resource Management Act). The Consent Holder is advised that should he/she wish to transfer the deemed coastal permit to any other person he/she must do so by advising the Council in writing in accordance with Section 135(1)(a) of the Resource Management Act. An administration fee is payable to give effect to the transfer.*
2. *The taking, use, and discharge of coastal water for the purpose of washing and sorting farmed shellfish is permitted provided that the activity does not result in:*
 - (a) *A reduction in water colour or clarity outside the Approved Area.*
 - (b) *The accumulation of shell and other debris on the foreshore or seabed within or adjoining the Aquaculture Marine Area.*
3. *The Consent Holder, in accordance with Section 44 and 46 of the Biosecurity Act 1993, is under a duty to inform the Ministry of Agriculture and Forestry (MAF), as soon as practicable in the circumstances, of the presence of what appears to be an organism not normally seen or otherwise detected in New Zealand and shall without unreasonable delay report to the Chief Technical Officer of MAF its presence or possible presence in that place at that time.*
4. *The Council will generally undertake monitoring and enforcement of oyster farms in accordance with Schedule 1.*

Please note that this consent was issued by Simon Berry who has signed the decision as Hearings Commissioners on Monday 12 September 2011, being the date of the Hearings Commissioners decision. Please note that the date of commencement of the resource consent is 5 October 2011.

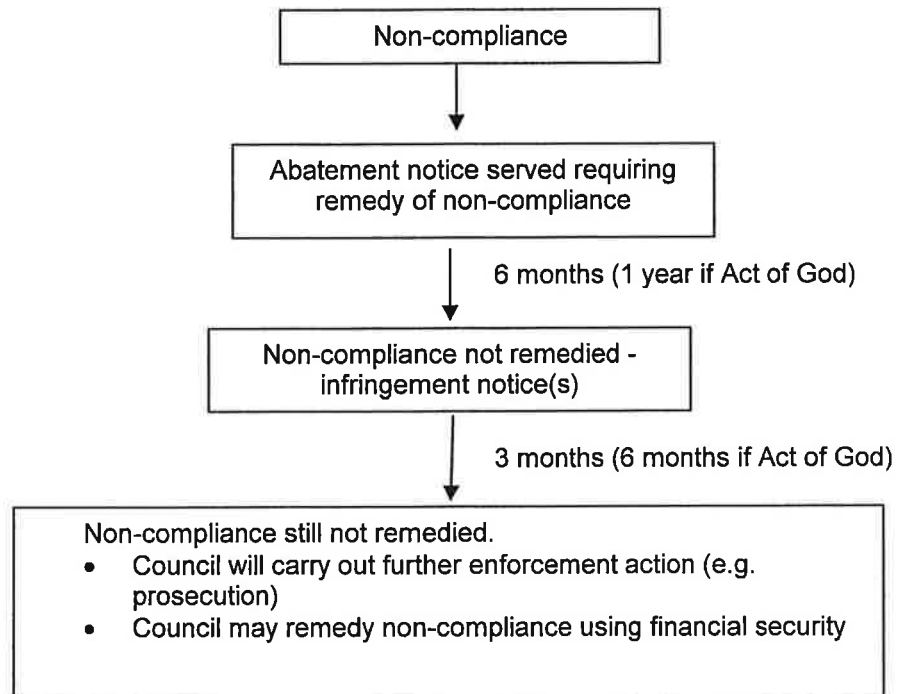
Note: *The plan attached to this consent is a reduced copy and therefore may not be to scale and may be difficult to read. In the event that compliance and/or enforcement action is to be based on compliance with the attached plan, it is important that the original plan, is sighted and used. An original of the plan referred to is available for viewing at the Council's Whangarei office.*

SCHEDULE 1: Oyster Farm Compliance

This document sets out the process the Council will generally use for monitoring and undertaking enforcement of non-compliance for oyster farms. The principle behind the approach is to provide a simple and clear process that seeks to address non-compliance issues early before they escalate.

Note:

- 1 The Council is not bound by this process. For example the Council may deviate from the enforcement process should extenuating circumstances arise.
- 2 The Council may review and amend this process as follows:
 - (a) The Council will monitor the state of marine farms every year, in March or April. The monitoring will generally be by helicopter.
 - (b) The Council will provide all consent holders with a monitoring report, which will include the calculation of developed area.
 - (c) If non-compliance is identified (this could be at anytime, ie. not just as a result of the scheduled yearly monitoring):
 - (i) The Council will issue an abatement notice giving six months to remedy the non-compliance, and
 - (ii) The Council and Consent Holder may prepare a restoration plan detailing how the non-compliance will be resolved.
 - (d) The Consent Holder to provide evidence of compliance (e.g. photos), and/or Regional Council monitoring officer visits the site (at the Consent Holders cost) – the Council to determine. The Council will determine whether non-compliance has been remedied satisfactorily, and will provide the Consent Holder with written notification.
 - (e) If the non-compliance is not remedied within six months, then the Council will issue one or more infringement notices (fines).
 - (f) A further three months will be given for the Consent Holder to remedy the non-compliance.
 - (g) If there is still outstanding non-compliance after the three months, then:
 - (i) the Council will carry out further enforcement action including infringement notices and/or prosecution, and/or
 - (ii) the Council may use the financial security to remedy the non-compliance
 - (h) Where the non-compliance is as a result of an event that *directly* renders more than 50% of the marine farm non-compliant, within one week (an 'Act of God' e.g. severe storm), the timeframes are doubled (e.g. initial six months becomes one year).



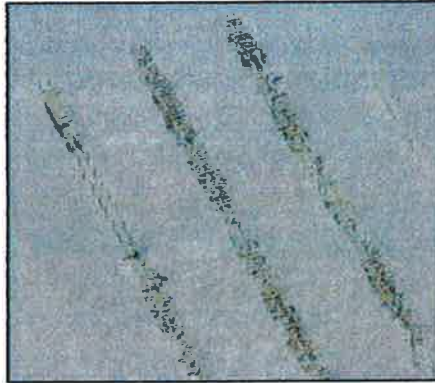
What Constitutes Non-compliance?

The following sets out the guidelines for how the Council will determine non-compliance. The four main issues are outlined – condition of structures, condition of foreshore/seabed, presence of debris, and navigational markers. Examples of both minor and significant non-compliance are shown. However, an abatement notice will generally be issued regardless of whether the non-compliance is minor or significant.

Where the non-compliance is less than minor and/or there is a non-compliance not covered by the following, then the Council will use its discretion as the most appropriate enforcement action (if any).

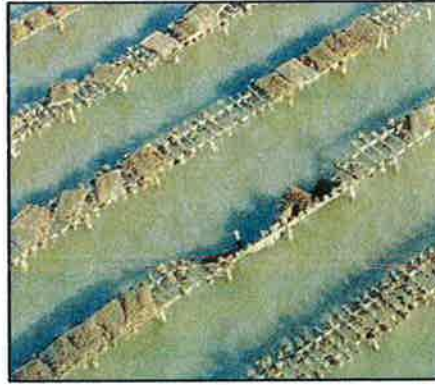
CONDITION OF STRUCTURES

Significant Non-Compliance



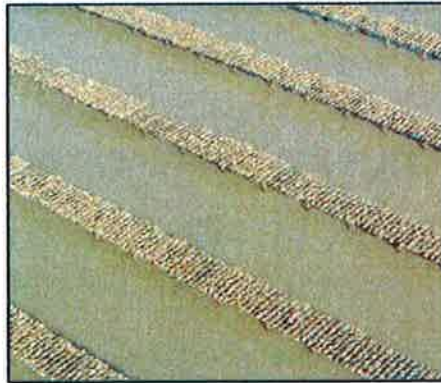
More than minor areas of the farm structures appear in disrepair and are becoming or likely to become detached and result in either debris generation and/or give rise to objects that may become potential navigation hazards.

Minor Non-Compliance



Localised minor small areas of farm structures appear in disrepair and are becoming or likely to become detached and result in either debris generation and/or give rise to objects that may become potential navigation hazards and/or excessive cropping likely to cause failure of farm structures.

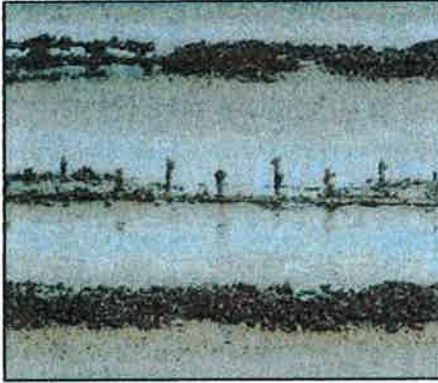
Full Compliance



All structures in good condition.

CONDITION OF SEABED

Significant Non-Compliance



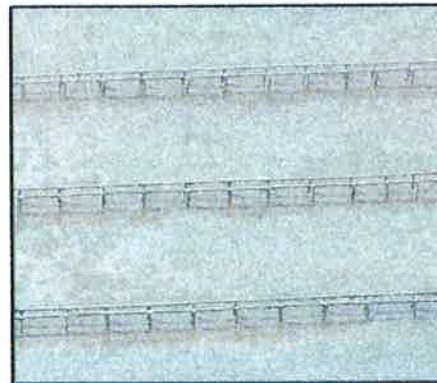
More than minor sediment and shell accumulation visually apparent under farm structures causing 'windrow' formation of sediment mounds.

Minor Non-Compliance



Minor accumulation of shell material beneath farm structures readily apparent, although no 'windrow' formation of sediment mounds apparent.

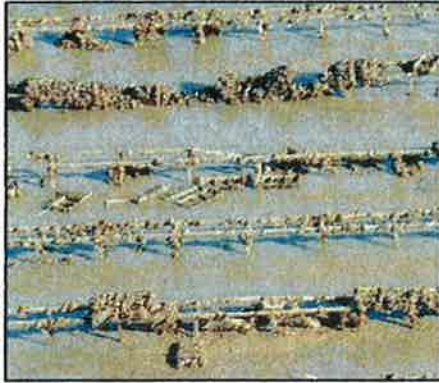
Full Compliance



Less than minor accumulation of shell material beneath farm structures and no 'windrow' formation of sediment mounds apparent.

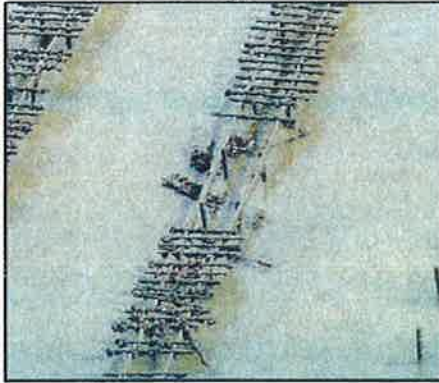
PRESENCE OF DEBRIS

Significant Non-Compliance (CL6)



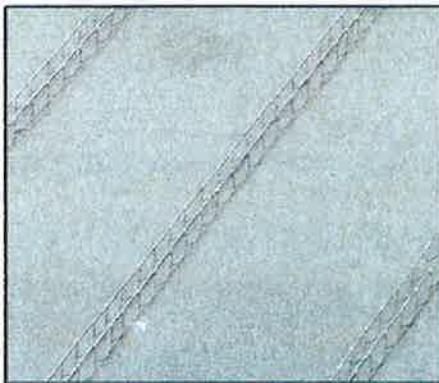
More than minor amount of debris present and/or potential for debris generation from failed or failure of farm structures or materials associated with farming activities.

Minor Non-Compliance (= CL3)



Minor amount of debris present from failed farm structures or materials associated with farming activities.

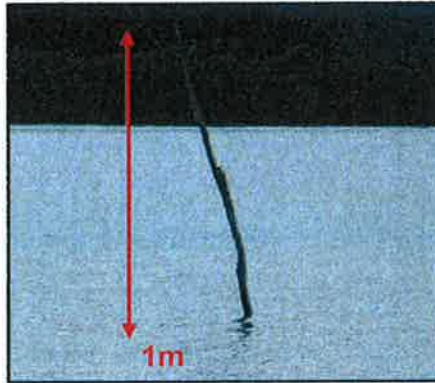
Full Compliance (= CL1)



No debris apparent.

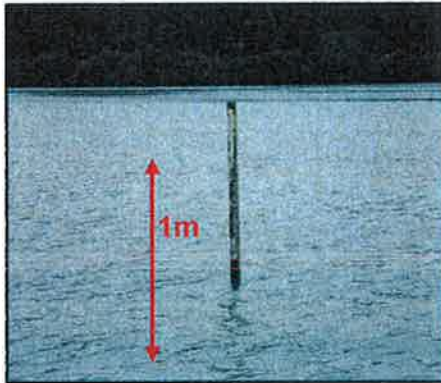
NAVIGATIONAL MARKERS

Significant Non-Compliance



Markers absent from one or more location and/or showing less than 1 metre above MHWS, not showing white, or are not placed at correct spacing, which are likely to cause a navigational hazard to other marine users.

Minor Non Compliance

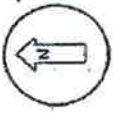


Markers missing from one or more locations, however, are not likely to be a navigational hazard to other marine users, or marker is suitable, however, not adequately maintained (ie. white painting faded).

Full Compliance

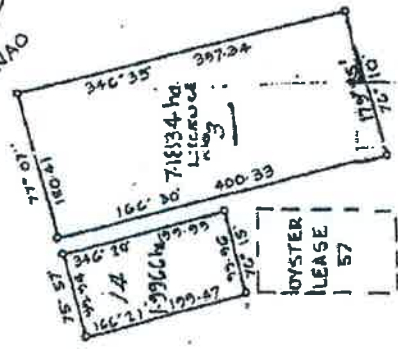


Markers present at required locations, showing at least 1 metre above MHWS and well maintained.



WHANGAROA HARBOUR.

PT 4
MAHINEPUA PAR.
PAWARENGA.



WAITAPU BAY.

PT 3
BLK VII WHANGAROA S.D.

Northland Regional Council
APPROVED
ACR 12 SEP 2011
Plan / Document
Consent # 20051288401

Plans as shown and to scale
S. O. 54851
Ministry of Agriculture & Forestry
18/9/11

Total Area 2,1800 ha.
Comprised in

1. District Māori Block, of Tekeapuna
Registered Survey and better of an annual planting certificate
holder hereby that the plan has been made from Survey conducted
by me or under my direction, that both the said Survey are correct
and have been made in accordance with the regulations made by
Statutes in that behalf.
Date 18/9/11
S. O. 54851

Chief Surveyor
Signature
Approved for Lease purposes only

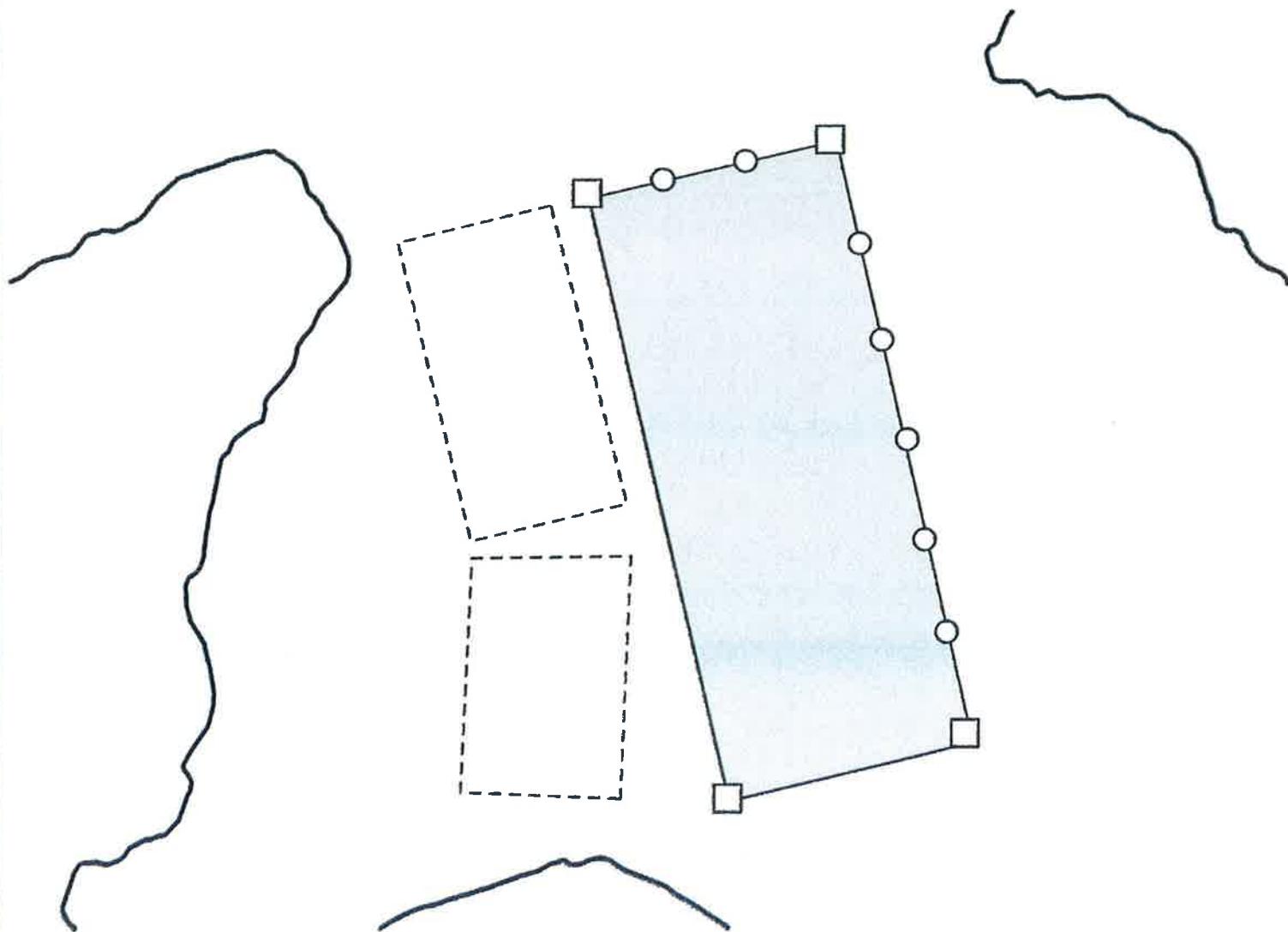
Deposited this day of 19

District Land Registrar
S. O. 54851




LOCAL AUTHORITY WHANGAROA COUNTY
Surveyed by D. H. BOAK & PARTNERS
Scale 1:4000 Date Dec. 1929

Plan of Oyster Leases 3214
Whangaroa Harbour.

SHRINK NORTH AUCKLAND
BLK VII WHANGAROA S.D.
SHEET 11



KEY

-  White Marker Posts with notices showing Consent Number
-  White Marker Posts with notices showing Consent Number and marked with white reflective tape. Reflective tape marks shall be no less than 100mm x 50mm in size.
-  White Marker Posts not more than 75m apart



NAVIGATION MARKINGS
for
Marine Farm CON20051288401
Sanford Limited
Whangaroa Harbour

Scale: N.T.S.

App'd:

Harbour Master

Plan No.

3950