# Substantive Application under the Fast Track Approval Act 2024 for the Hananui Aquaculture Project

Prepared for:
Ngāi Tahu Seafood Resources Limited

Prepared by: Stantec

26 November 2025

Project/File:
310001082

Stantec New Zealand

# Revision Schedule

| Revision No. | Date | Description | Prepared by | Quality Reviewer | Independent Reviewer | Project Manager Final Approval |
|---|---|---|---|---|---|---|
| 0 | 7.11.2025 | Draft for client review | Ethan Archer, Naomi Darvill and Richard Peterson | Richard Peterson | Frances Lojkine | |
| 1 | 21.11.2025 | Draft for NTH | | | | |
| 2 | 26.11.2025 | Final | Ethan Archer, Naomi Darvill and Richard Peterson | | Frances Lojkine | Rob Searle |

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# Acronyms / Abbreviations

| Acronym / Abbreviation | Full Name |
|---|---|
| AEE | Assessment of Effects on the Environment |
| AMT | Adaptive management triggers |
| ASA | Aquaculture Settlement Area |
| BMP | Baseline monitoring plan |
| Chl-a | Chlorophyll-a |
| CIA | Cultural Impact Assessment |
| CMA | Coastal Marine Area |
| CRFTCA | COVID-19 Recovery (Fast-track Consenting) Act 2020 |
| CVA | Cultural Values Assessment |
| DO | Dissolved oxygen |
| DOC | Department of Conservation |
| EMMP | Environmental Monitoring and Management Plan |
| EPA | Environmental Protection Authority |
| EQZ | Environmental quality zones |
| ES | Environment Southland |
| FTAA | Fast-Track Approvals Act 2024 |
| HAP | Hananui Aquaculture Project |
| HDPE | High-density polyethylene |
| IUCN | International Union for Conservation of Nature |
| MACA | Marine and Coastal Area (Takutai Moana) Act 2011 |
| MMMP | Marine Mammal Management Plan |
| MPI | Ministry for Primary Industries |
| MSAP | Murihiku Southland Aquaculture Pathway 2025 |
| MWG | Manawhenua Working Group |
| NTKM | Ngāi Tahu ki Murihiku |
| NTS | Ngāi Tahu Seafood Resources Limited |
| NZCPS | New Zealand Coastal Policy Statement 2010 |
| NZTCS | New Zealand Threat Classification System |
| OHCs | Organohalogenated contaminants |
| RCP | Southland Regional Coastal Plan 2013 |
| RMA | Resource Management Act 1991 |
| RMLT | Rakiura Māori Lands Trust |
| RPS | Southland Regional Policy Statement 2017 |
| SBMP | Seabird Management Plan |
| SMP | Shark Management Plan |
| SoRDS | Southland Regional Development Strategy |
| SPR | Stage Progression Report |
| TAMI | Te Ao Mārama Incorporated |
| TN | Total nitrogen |
| TP | Total phosphorus |
| TTatM | Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines |
| UAE | Undue Adverse Effects |

# Part 1 Introduction

# 1 Introduction

## 1.1 Overview

The proposed Hananui Aquaculture Project (HAP) is the development of exposed coastal water finfish (salmon) farming within an approximately 1,285 ha area off the northern coast of Rakiura/Stewart Island ('Rakiura'). The HAP involves:

- The construction and operation of four marine farms using polar circle pens, and their associated mooring lines, anchors and anchor blocks and feed and accommodation barges.
- The marine farms will be positioned within an approximately 1,285 ha area which is 2 - 6 km from the shore, in a location that, following extensive investigations, has been selected due to its suitability for aquaculture and to minimise seabed effects, among other environmental effects.
- The project will be developed in two stages:
    - Stage 1: Consists of one block of 10 pens at each of the four farm sites and a total discharge of 15,000 tonnes of feed per annum across all four farm sites for the purpose of growing finfish.
    - Stage 2: As a maximum, a second block of 10 pens will be introduced at each of the four farm sites. The total feed discharge will rise to 25,000 tonnes of feed per annum. Progression to Stage 2 will be dependent on the monitoring results from the Stage 1 and effects remaining within thresholds under a proposed adaptive management regime.
- The design of the pens has been developed to avoid or minimise adverse effects on seabirds, marine mammals and sharks. This includes a single net system (i.e. no separate predator nets), with an underwater net mesh size of 40 mm or less, jump fences, and top nets to minimise the risk of birds entering the pens.
- Installation of navigational aids, including buoys, marks and lighting, to indicate the proposed site to seafarers and to mark any navigational risks.
- Monitoring, surveying and sampling activities (both before construction commences and during operation of the marine farms), including in relation to the water column, seabed, seabirds, marine mammals and sharks.

The HAP has been the subject of previous applications – to Environment Southland under the Resource Management Act 1991 (RMA) and to the Environmental Protection Authority (EPA) under the COVID-19 Recovery (Fast-track Consenting) Act 2020 (CRFTCA). The HAP outlined within this report is a revised proposal that also responds to matters raised by the expert panel for the CRFTCA application.

The HAP is consistent with both Ngāi Tahu Seafood Resources Limited's (NTS's) and the wider Te Rūnanga o Ngāi Tahu Group's mandate to build a strong economic base for the iwi while demonstrating Ngāi Tahu values in everything that is done. The purpose and objectives of the HAP are to realise the opportunity for sustainable aquaculture development in the area that will provide for sustainable Ngāi Tahu food security, economic development, and employment. The HAP is a critical part of the Southland region's strategy for the aquaculture industry as set out in the Murihiku Southland

Aquaculture Pathway 2025, and will offer significant economic and employment benefits for the Murihiku / Southland community. In addition, it will directly contribute to New Zealand's goals for the aquaculture industry being met, specifically the New Zealand Aquaculture Development Plan 2025-2030 which anticipates that up to $1.2 billion in annual revenue in 2035 will be from new open ocean salmon farms.

The HAP has been developed alongside Papatipu Rūnanga via the manawhenua working group. NTS has also undertaken a considerable amount of engagement with stakeholders in developing the HAP. This has been combined with technical assessments and comprehensive hydrodynamic, water quality and depositional modelling to inform how the location, design and operation of the HAP will avoid or minimise adverse effects on the environment to the greatest extent practicable. Comprehensive conditions and management plans are proposed to address any risks and residual uncertainty. There are no adverse effects that are sufficiently significant to be out of proportion to the HAP's substantial regional and national benefits.

## 1.2 Background

Ngāi Tahu have voyaged across the waters of Te Ara a Kiwa/Foveaux Strait ('Te Ara a Kiwa') for harvesting, trade, and connection for centuries, with Te Ara a Kiwa being actively used as a productive mahinga kai, continuing to this day.

NTS was formed in 1992 to manage the fishing quota that Ngāi Tahu received under the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 and to manage and develop Ngāi Tahu commercial seafood business generally, for the benefit of Ngāi Tahu Whānui. A fundamental component of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992, and in turn the intent behind the Māori Commercial Aquaculture Claims Settlement Act 2004 (Aquaculture Settlement Act), is to encourage and support Māori into fisheries and aquaculture activity. The HAP is an active expression of this intent. Further discussion on Ngāi Tahu Settlements and Te Tiriti o Waitangi is provided in section 3 of this report.

For some time Ngāi Tahu has been interested in the potential for finfish aquaculture to sustainably complement New Zealand's wild fisheries resources. NTS holds consents for aquaculture space in Tasman, Marlborough and Canterbury, and has been involved in aquaculture research programmes.

In 2013, Environment Southland (ES) embarked on an Aquaculture Zoning Plan. Te Ara a Kiwa was one of the areas investigated for feasibility for aquaculture. While developing the Southland Regional Development Strategy (SoRDS) – Action Plan 2015-2025, the SoRDS organisation, with input from Ngai Tahu among other parties, also investigated 5 potential sites in Southland for future aquaculture development. NTS and the Ministry for Primary Industries (MPI) revisited Te Ara a Kiwa as a potential site, beginning more detailed investigations in 2018 and finding it more suitable for exposed aquaculture than previously thought and more suitable than other areas of Southland. The HAP arose from, but is separate to, work undertaken for the Māori Fisheries Settlement and Southland Regional Aquaculture Agreement under the Commercial Aquaculture Claims Settlement Act 2004. A detailed description of site selection process and alternatives considered is provided in section 11 of this application.

NTS initially lodged a resource consent application under the Resource Management Act 1991 (RMA) with ES in December 2019 for the HAP site in Te Ara a Kiwa. It was withdrawn and a new application was made under the CRFTCA in 2022. A description of the previous applications is provided in section 7 of this report.

## 1.3 Use of the FTAA

The HAP is a Listed Project under Schedule 2 of the Fast-track Approvals Act 2024 (FTAA). Under Section 42(1) of the FTAA, Ngāi Tahu Seafood Resources Limited (NTS) is the authorised person seeking all necessary approvals for the project under Section 42(4) of the FTAA, being:

- Resource consents that would otherwise be applied for under the Resource Management Act 1991 ('the RMA')
- An aquaculture decision that would otherwise be made under the Fisheries Act 1996 ('the Fisheries Act')
- A wildlife approval that would otherwise be applied for under the Wildlife Act 1953 ('the Wildlife Act').

This is a substantive application for the above approvals, in accordance with the requirements of the FTAA, including Sections 42, 43, 44 and Schedules 5 (for the resource consents and aquaculture decision) and 7 (for the wildlife approval).

This application does not seek approval for an activity deemed to be ineligible, as defined in Section 5, in accordance with Section 43(1)(c) (refer to **Appendix A**). In relation to Section 5(1)(e) in particular, the project is not located in an aquaculture settlement area declared under Section 12 of the Māori Commercial Aquaculture Claims Settlement Act 2004 (although it is adjacent to one held by Te Rūnanga o Ngāi Tahu).

Under Section 29 of the FTAA, before lodging a substantive application for a listed project, the authorised person must consult with specific persons and groups: All relevant persons and groups have been consulted with, and a summary of that consultation is included in section 4.1 of this report.

In accordance with Section 30 of the FTAA, the consent authority (Environment Southland) provided written notice on 24 September 2025 that there are no existing resource consents within the project area to which Sections 124C(1)(c) or 165ZI of the RMA would apply (refer to **Appendix C**).

The HAP is consistent with the purpose of the FTAA, which is "*to facilitate the delivery of infrastructure and development projects with significant regional or national benefits*". The HAP will bring significant benefits to Southland and New Zealand, including high-value, long-term employment opportunities, hundreds of millions in added value to the economy, additional diversification to the Southland economy, social, cultural, economic and community benefits for Ngāi Tahu, a substantial increase to New Zealand's export earnings, and by accelerating the Government's growth targets for aquaculture and iwi-led development. This is explained in more detail in section 5 of this report.

Section 40 of the FTAA states: If a substantive application seeks an approval under this Act,—

*(a) the process under this Act for obtaining the approval (including any steps under subpart 2) applies instead of the process for obtaining any corresponding approval under a specified Act; and*

*(b) the process under this Act for obtaining any aquaculture decision in connection with an approval described in section 42(4)(a) (resource consent) (including any steps under subpart 2) applies instead of the process for obtaining an aquaculture decision under the Fisheries Act 1996.*

As a substantive application is being sought under the FTAA, the processes under that Act apply.

## 1.4 Structure of this document

This report is structured in six parts:

- Part 1 (Introduction) – provides an introduction to this substantive application and an overview of how it complies with the requirements of the FTAA. Importantly, this Part also provides the Ngāi Tahu context for the application, against which all the Parts of the document and the appended technical reports should be considered. Section 4 of Part 1 describes the consultation that NTS has undertaken to date in relation to the HAP. Section 5 of Part 1 describes the regional and national benefits of the HAP.
- Part 2 (The Proposed Activity) – describes the various activities that make up the HAP and the approvals being sought.
- Part 3 (Assessment of Effects on the Environment) – describes the current environment at the proposed site, evaluates its overall suitability for aquaculture, and then assesses a wide variety of potential effects on the environment.
- Part 4 (Alternatives, monitoring and mitigation) – discusses alternatives considered in relation to the HAP, proposed monitoring, and mitigation of potential adverse effects on the environment.
- Part 5 (Fast-track Approvals Act 2024 Requirements) – sets out the framework for each of the approvals sought and evaluates the proposal against the FTAA requirements. Sections within this part relate to the RMA activities, the Fisheries Act approval required and the Wildlife Act activities. Part 5 includes an analysis of the proposed activities in relation to the relevant RMA provisions and policy and planning documents (noting that there are no equivalent requirements for the Fisheries Act or Wildlife Act approvals).
- Part 6 (Conclusion) – provides a final summary and conclusion for this report.

This report is supported by 15 specialist technical reports, which should be referred to for more detail on the potential adverse effects on the environment that have been identified and are outlined in this report. Each of the technical reports is appended to this report. In each appendix the qualifications and experience of the principal author of the technical report is also included.

# 2 Application context

## 2.1 Introduction and approach

This report leads with discussion of Ngāi Tahu matters. This prominence is reflective of Ngāi Tahu holding manawhenua manamoana over the proposed area and acknowledges that NTS is an iwi-owned company applying for consent in its iwi takiwā.

For Ngāi Tahu it is important that the site is acknowledged first. This is undertaken through a description of the site and values. The broader context of Ngāi Tahu as manawhenua and the contemporary structure of Ngāi Tahu is then explained, followed by overview of different assessments used to understand and incorporate the views, aspirations and values of Ngāi Tahu ki Murihiku (NTKM).

## 2.2 Ngāi Tahu ki Murihiku site narrative

The HAP site is sheltered within Te Ara a Kiwa by Rakiura/Stewart Island and at the base of Hananui/Mt Anglem. From a NTKM perspective, Te Ara a Kiwa is not simply a body of water—it is a living space woven with whakapapa, atua, and intergenerational identity. It is a place where the metaphysical and physical worlds are profoundly entwined. The coastline and seascape are shaped by Tangaroa, Tāwhirimātea, and Tāne, whose energies are constantly playing off each other. These atua are not abstract concepts but active presences that influence the characteristics and interactions of the environment and wellbeing of people. This understanding is central to how NTKM relate to and assess the appropriateness of any activity in this space[1].

Te Ara a Kiwa is a repository of mātauranga (knowledge) and pūrākau (myth). For example, it holds the story of Kiwa and the whale Kewa, who chewed through the land that once connected Te Waipounamu to Rakiura Stewart Island. These stories are oral maps, ecological memory, and cultural anchors that guide how NTKM understand and navigate the environment. Consequently, these places and names entwine Ngāi Tahu with the lands and waters and with the past, present, and future.

The seascape is rich in biodiversity and mahinga kai practices, central to Ngāi Tahu sustenance and identity.

Ngāi Tahu whānau continue to voyage across the waters of Te Ara a Kiwa for harvesting, trade, and connection. The HAP lies within sight of significant landmarks such as Rakiura (Stewart Island), Hananui (Mount Anglem), and Motupōhue (Bluff), all of which are embedded in Ngāi Tahu pepeha and whakapapa. The currents, reefs, and viewshafts are not just physical features—they are part of a living cultural landscape that continues to shape and be shaped by Ngāi Tahu presence.

Te Ara a Kiwa has provided a space of resilience and continuity for Ngāi Tahu, including during the loss of land and access to resources experienced by NTKM during and as a result of colonisation. It is a place where mātauranga has adapted and evolved, and where whānau have continuously expressed their relationship with Te Ara a Kiwa. Te Ara a Kiwa is a taonga, a teacher, and a tūrangawaewae. NTS inherently understands that any activity proposed here must honour those relationships, and further to

[1] See section 3. *Place of Ngā Hua o Āpiti Hono Tātai Hono: Proposed Hananui Aquaculture Area* (updated July 2025) (**Appendix B** to this report).

uphold rangatiratanga and the responsibilities of kaitiakitanga that NTKM have maintained for generations.

The site narrative, including the relationship of NTKM with Te Ara a Kiwa, has formed a foundation for the inception and development of the HAP. In turn the site narrative provides the context in which to consider the impacts of this proposal on Ngāi Tahu values, associations, relationships, cultural practices, uses, and aspirations. These impacts have been considered by NTKM as manawhenua and manamoana, and have guided the development of the proposed activity.

## 2.3 Ngāi Tahu

### 2.3.1 Te Rūnanga o Ngāi Tahu

The HAP is within the Ngāi Tahu takiwā[2]. Ngāi Tahu hold ahi kā, manawhenua and manamoana over the proposed site. In the Ngāi Tahu Claims Settlement Act 1998 (NTCSA), the Crown recognises Ngāi Tahu as the tāngata whenua of, and as holding rangatiratanga within, the takiwā of Ngāi Tahu Whānui[3]. The statutory responsibilities of Te Rūnanga o Ngāi Tahu (Te Rūnanga) are described in detail in section 3 of this report. Te Rūnanga is made up by 18 Papatipu Rūnanga who can be described as the governing councils of traditional Ngāi Tahu hapū and marae based communities.

#### 2.3.1.1 Ngā Pou o Te Rūnanga o Ngāi Tahu

Since the passing of the Settlement Act, the Office of Te Rūnanga o Ngāi Tahu has distributed $573m to Ngāi Tahu Whānui across a range of initiatives and activities aligned to the tribe's six pou. Through the HAP, NTS will directly support these pou as set out in Table 2-1.

*Table 2-1: Ngā Pou o Te Rūnanga o Ngāi Tahu*

| Pou | Pou Objective | HAP outcomes |
|---|---|---|
| Te Ao Tūroa - the natural environment | Protecting and enhancing Ngāi Tahu rights and interests as kaitiaki of the natural environment and supporting the capability and capacity of Papatipu Rūnanga. | This focus on kaitiakitanga and intergenerational investment has guided NTS's decision to apply for consent for the HAP. The project has been in development for a considerable time, with the investigation of potential space and the commissioning of technical reports all seeking to ensure a project that would both provide for Ngāi Tahu and respect the environment in which it would occur. In this way it is consistent with both NTS's and the wider Te Rūnanga o Ngāi Tahu Group's mandate to build a strong economic base for the iwi while demonstrating Ngāi Tahu values in everything that is done.<br><br>The design of the project has been guided by NTKM regarding the overall footprint of the project, effects on the seabed, the need to maintain high quality water, and the need to not adversely impact indigenous biodiversity. NTKM continue to be interested in exercising their kaitiaki responsibilities through involvement in monitoring and any working groups associated with the HAP. |
| Papatipu Rūnanga – Local Development | Papatipu Rūnanga realise their aspirations through the demonstration of tino rangatiratanga (self- | NTS already has a seafood plant in the local community and support Ngāi Tahu fishers through the supply of quota. This further investment through the HAP will add to its strong presence in the region. While the aquaculture |

[2] Te Rūnanga o Ngāi Tahu Act 1996, section 5
[3] Ngāi Tahu Claims Settlement Act 1998, Apology, Paragraph 7

| Pou | Pou Objective | HAP outcomes |
|---|---|---|
| | determination) with an influential local/regional voice. | project is likely to provide opportunities for NTKM, it will also contribute to the wider economic development of the region. This contribution includes opportunities for Ngāi Tahu whānau enterprises, and this is vital to enhancing tino rangatiratanga and sustaining a vibrant Murihiku community.<br><br>NTS's business focuses on intergenerational investment, ensuring sustainability of marine resources for the future and assisting Ngāi Tahu Holdings to grow wealth. |
| Ngāi Tahutanga – Culture & Identity | Identifying pathways and supports to strengthen and protect our authentic Ngāi Tahu cultural knowledge and practices. | The HAP aspirations align with the Ngāi Tahu Cultural Strategy outcomes – the shared aspirations of growing leadership, resources, engagement, value, protection and supporting new forms of cultural expression. A new industry will bring many opportunities to future Ngāi Tahu generations.<br><br>NTS will work with NTKM to record and promote their cultural association with Rakiura where appropriate as part of the HAP. |
| Oranga – Wellbeing | Building an understanding of our whānau and their personal situations, their health, housing, economic circumstances and social wellbeing and from this creating opportunities for whānau to achieve their aspirations. | The HAP vision aligns with the Oranga objectives to create opportunities for Ngāi Tahu whānau to thrive and improve their individual and whānau wellbeing. Involvement in monitoring and membership of any working groups developed in relation to the project will assist with Oranga. |
| Mātauranga – Education | Supporting our whānau to access education and development opportunities from our pēpi through to our pōua and tāua. | The HAP is viewed by iwi as an opportunity and platform to enhance our science and innovation education from children through to tertiary; iwi view STEAM, Innovation and Technology as critical tools for tribal developments. Involvement in monitoring and membership of any working groups developed in relation to the project will assist with Mātauranga. |
| Te Whakaariki - strategy and influence | Upholding the mana of the people in all we do, empowering ourselves and those around us and leading by example. | The HAP aims to be an international leader in aquaculture – our cultural narrative and brand, aligned with our tribal values, enhances the acceptance and opportunities this industry presents us as a people. Being an aquaculture industry leader also ensures the mana of the whenua, of the moana and of our people is upheld for future generations. |

### 2.3.2 Ngāi Tahu Seafood

Te Rūnanga is the sole Trustee of the Ngāi Tahu Charitable Trust that in turn owns and operates Ngāi Tahu Holdings Corporation Limited (Ngāi Tahu Holdings). Ngāi Tahu Holdings, on behalf of Te Rūnanga, manages the iwi asset base which has a diverse portfolio across property, farming, tourism, honey, as well as seafood. Part of Ngāi Tahu Holdings' role is to create wealth for the iwi that is used to support Ngāi Tahu Whānui across a broad range of interests including health, environment, education, te reo, and cultural revival. Ngāi Tahu Seafood Resources Limited (Ngāi Tahu Seafood) is a wholly owned subsidiary of Ngāi Tahu Seafood Limited, which is in turn a wholly owned subsidiary of Ngāi Tahu Holdings.

NTS was formed in 1992 to manage the fishing quota that Ngāi Tahu received under the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 and to manage and develop Ngāi Tahu commercial

seafood business generally, for the benefit of Ngāi Tahu Whānui. A fundamental component of the Fisheries Settlement, and in turn the intent behind the Māori Commercial Aquaculture Claims Settlement Act 2004 (Aquaculture Settlement Act), is to encourage and support Māori into fisheries and aquaculture activity. The HAP is an active expression of this intent.

As NTS is an indirect subsidiary of Te Rūnanga created to support charitable outcomes for Ngāi Tahu Whānui, the expectations and responsibilities of Te Rūnanga (as trustee of the Ngāi Tahu Charitable Trust) as outlined above are also applicable to NTS. It is anticipated by both Te Rūnanga and Ngāi Tahu Whānui that the proposed HAP will:

1. acknowledge the responsibilities of Ngāi Tahu ki Murihiku and be consistent with local tikanga and kawa.
2. directly support Ngāi Tahu aspirations as set out in:
    a. Mō Kā Uri – The 25 year intergenerational vision of Kāi Tahu to 2050 formulated around:
        i. Tūturu te noho: Our communities, places and practices
        ii. Tūturu te hono: Our connection to culture and identity
        iii. Tūturu ake nei: Our collective future, influence and responsibility.
    b. He Rautaki Mō Te Huringa o Te Āhuarangi - Ngāi Tahu climate change strategy, approved by Te Rūnanga in 2018, the Strategy provides direction across the whole spectrum of Ngāi Tahu interests, assets and activities to ensure Ngāi Tahu are sustained for future generations.

### 2.3.3 Papatipu Rūnanga

Te Rūnanga encompasses 18 Papatipu Rūnanga who uphold the manawhenua and manamoana in their respective rohe, including NTKM (see Figure 2-1). Each Papatipu Rūnanga can act autonomously, and has its own interests, opportunities and challenges across social, economic, environmental and cultural portfolios. It is primarily through Papatipu Rūnanga that the collective Ngāi Tahu voice in the region is represented and heard at the local government and community level.

In Murihiku, there are four Ngāi Tahu Papatipu Rūnanga, who form NTKM. These four Papatipu Rūnanga are:

- Ōraka-Aparima
- Awarua
- Waihōpai
- Hokonui

Their respective shared interest areas are shown in Figure 2-1 and outlined in Table 2-2 and include the HAP site.

The four Papatipu Rūnanga are signatories to the Charter of Understanding He Huarahi mo Nga Uri Whakatupu 2016 with the four Southland local authorities and three Otago local authorities. The Charter establishes and provides for a clear understanding of the basis and on-going conduct of the relationship between the signatory Councils and tangata whenua in the context of both the RMA and Local Government Act 2002. The Charter is endorsed by Te Rūnanga o Ngāi Tahu.

The Charter is a forerunner to Mana Whakahono agreements and has a broader reach, covering local government and environmental governance, but holds the same intent as a Mana Whakahono agreement and should be considered in a similar manner by decision-makers.

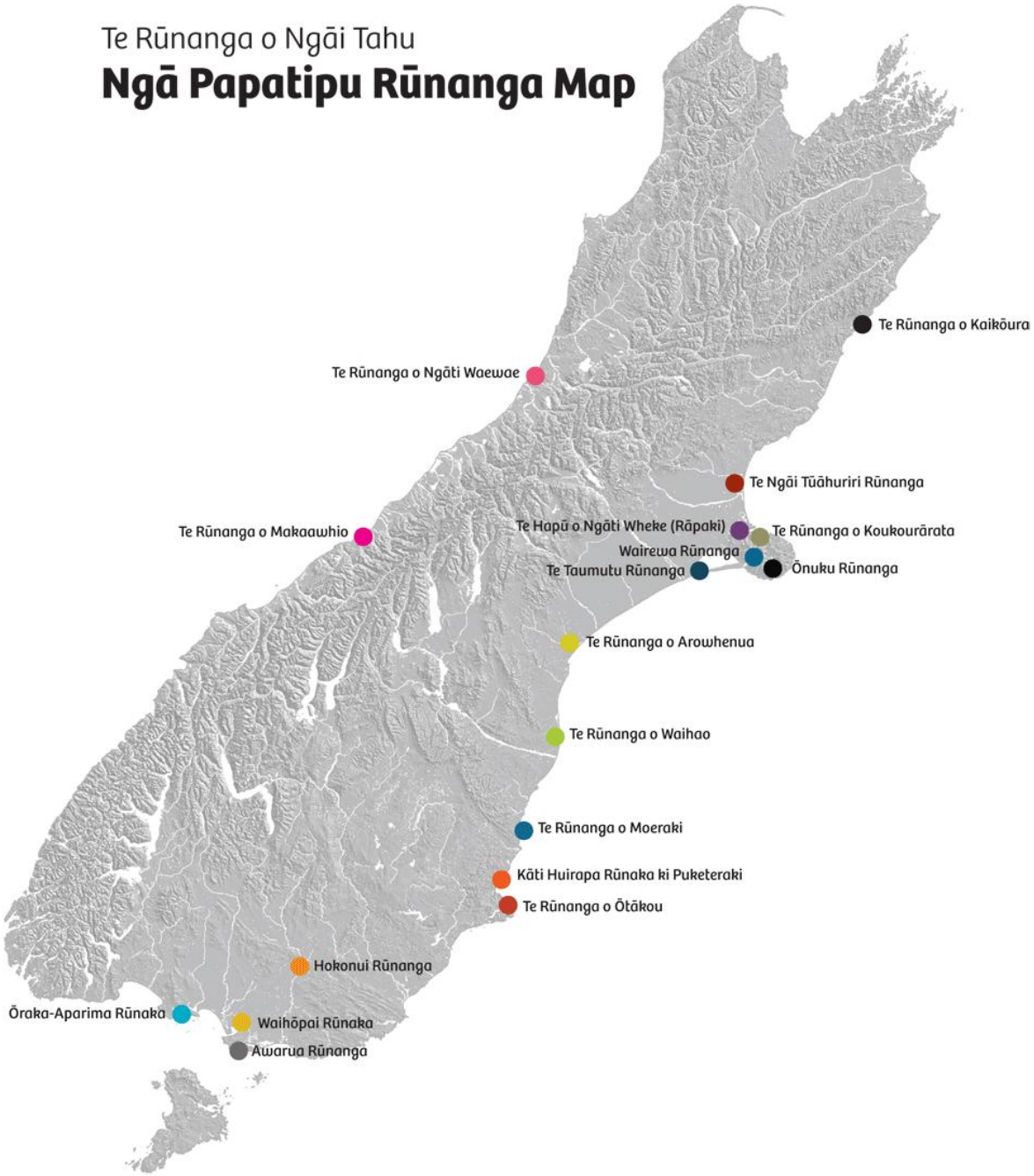


*Figure 2-1: Papatipu Rūnanga location map*

*Table 2-2: Papatipu Rūnanga areas of interest*

| Papatipu Rūnanga | Takiwā | Rūnanga office/Marae |
|---|---|---|
| Ōraka-Aparima | The takiwā of Te Rūnanga o Ōraka Aparima centres on Ōraka and extends from Waimatuku to Tawhititarere sharing an interest in the lakes and mountains from Whakatipu-Waitai to Tawhititarere with other Murihiku Rūnanga and those located from Waihemo southwards. | Riverton and Colac Bay |
| Awarua | The takiwā of Te Rūnanga o Awarua centres on Awarua and extends to the coasts and estuaries adjoining Waihopai sharing an interest in the lakes and mountains between Whakatipu-Waitai and Tawhititarere with other Murihiku Rūnanga and those located from Waihemo southwards. | Bluff |
| Waihōpai | The takiwā of Waihōpai Runaka centres on Waihōpai and extends northwards to Te Matau sharing an interest in the lakes and mountains to the western coast with other Murihiku Rūnanga and those located from Waihemo southwards. | Invercargill |
| Hokonui | The takiwā of Hokonui Runaka centres on the Hokonui region and includes a shared interest in the lakes and mountains between Whakatipu-Waitai and Tawhitarere with other Murihiku Rūnanga and those located from Waihemo southwards. | Gore |

The area of interest for each Papatipu Rūnanga also extends into the adjacent coast and moana.

#### 2.3.3.1 Te Ao Marama Inc

Te Ao Mārama Incorporated (TAMI) works on behalf of NTKM on environmental and local government matters. TAMI's priorities and activities occur within the context of the mandate provided by the Papatipu Rūnanga. For this project, TAMI has been engaged in the development of the application and to provide specialist advice such as the cultural values and Ngā Hua o Āpiti Hono Tātai Hono reports.

## 2.4 Overview of Ngāi Tahu Assessments

To acknowledge the responsibilities of manawhenua manamoana, and provide a clear voice throughout the development of the HAP, NTS commissioned a Cultural Values Assessment (CVA), Cultural Impact Assessment (CIA) and Ngā Hua o Āpiti Hono Tātai Hono[4] assessment. This project and in turn the assessment of effects on the environment (AEE) is nestled within the site narrative and the outcomes of those reports which includes feedback from Papatipu Rūnanga. Sitting alongside these assessments, section 3 of this report explains in detail Treaty of Waitangi and Treaty Settlement considerations.

### 2.4.1 Cultural Values Assessment, Cultural Impact Assessment, and Ngā Hua o Apiti Hono Tatai Hono

As noted above, in developing the proposal, and assessing how the HAP impacts upon NTKM at the proposed site, NTS has commissioned Te Ao Mārama Inc and Tipa and Associates on behalf of NTKM to undertake the three assessments summarised in Table 2-3.

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[4] Updated in July 2025 based on the assessments undertaken in 2022, as requested by NTKM. NTKM advised in April 2025 that the CVA and CIA did not need to be updated.

*Table 2-3: NTKM assessments*

| | Ngā Hua o Āpiti Hono Tātai Hono, 2025 | Te Ara a Kiwa CVA, 2019 | CIA for Hananui Aquaculture Project, 2020 |
|---|---|---|---|
| **Purpose** | Details how manawhenua understand that place within their paradigm and what is and is not appropriate. It is not confined to describing and considering only values. | Cultural value assessments can identify and describe values pertaining to an area or resource. | The CIA builds on the CVA through discussions on how effects of a proposed activity may be mitigated, drawing on the values of place and foundational assessment of the CVA . |
| **Features** | Āpiti Hono Tātai Hono assesses and considers what is held within a land or seascape, drawing on NTKM understanding from whakapapa, mana, kawa, tikanga, mātauranga, identity, connections, practices, history, and future aspirations. These considerations are the context in which to determine what is appropriate at place and the relationships NTKM have with their whenua and moana. | CVA differ from cultural impact assessments in that they may not include a description of effects as they do not relate to a specific activity. They can provide a broad overview and direction as to the relevant issues and how these should best be addressed. | The CIA is based on an international Western approach. They are a tool to facilitate meaningful and effective participation of Māori in impact assessment.<br>In RMA practice, cultural impact assessments should be regarded as technical advice, much like any other technical report such as ecological or hydrological assessments. |
| **Author** | Te Ao Mārama Inc. | Te Ao Mārama Inc. | Tipa and Associates |

The CVA and CIA are based on international, Western impact assessment practice. They are tools which have been used to facilitate meaningful and effective participation of NTKM in the assessment of impacts, but also to enable a formal and iterative process for engagement and shaping of the proposals. Cultural impact assessments should be regarded as technical advice, much like any other technical report such as ecological or hydrological assessments.

Āpiti Hono Tātai Hono applies a very different assessment approach and purpose to that of CVA and CIA; it is not another name for an impact assessment technique. NTKM have developed Āpiti Hono Tātai Hono (methodology approved for use in Murihiku in October 2021) to assess and consider what is held within a land or seascape, drawing their understandings to determine what is appropriate or not at place. It is important to understand the function of Apti Hono Tatai Hono in both the AEE and the ongoing operation of the HAP. As this assessment uses a Ngāi Tahu designed methodology, further explanation is provided below.

Together, the three assessment methodologies provide a depth of analysis by:

1. The CVA providing a foundation for understanding place and the ancestral relationship of manawhenua with Te Ara a Kiwa and specifically the proposed location for the HAP.
2. Āpiti Hono Tātai Hono anchoring the philosophical and cultural foundations and articulation of intergenerational associations and relationships of manawhenua manamoana that determine appropriateness.
3. The CIA , and with Āpiti Hono Tātai Hono directs the proposed consent conditions.

It is fundamentally important to recognise in all three assessments that when NTKM speak of land and sea scape, it is holistic and the entwining of whakapapa and te ao tūroa. The term ‘landscape’ is therefore not used or defined in the same way as Western landscape architects commonly do, nor

should it be considered in that way. Landscape practice and the term ‘cultural landscapes’ are a Western derivation, not Te Ao Māori.

### 2.4.2 Āpiti Hono Tātai Hono

Manawhenua have spoken of Āpiti Hono Tātai Hono as a ‘korowai wrapped around us, we know who we are and will never be lost’. It is an expression of rangatiratanga. It acknowledges the continuous evolution and growth of a living culture across the continuum of time and whakapapa. It is Te Ao Ngāi Tahu.

Āpiti Hono Tātai Hono is applicable to all types of environmental assessment as it is premised on a holistic overview of Ira Atua Ira Tangata that makes no distinction between ‘cultural’ or ‘natural’ or any other dissociative landscape/water classifications. Āpiti Hono Tātai Hono draws on the collective knowledge of NTKM, being those whānau with responsibilities handed down to them, as well as the expertise of manawhenua undertaking and leading the assessment, and is accomplished through site visits and wānanga. Āpiti Hono Tātai Hono characterises the landscape into six layers based on Ira Atua Ira Tangata (Figure 2-2), with Ira Atua taking primacy as the tuakana (elder, more senior line).

Āpiti Hono Tātai Hono provides a holistic understanding of place which, at a high level, creates a foundational basis for the CIA. The CIA therefore transpose the appropriate matters and management considerations of Apiti Hono Tatai Hono into a site-specific impact assessment.

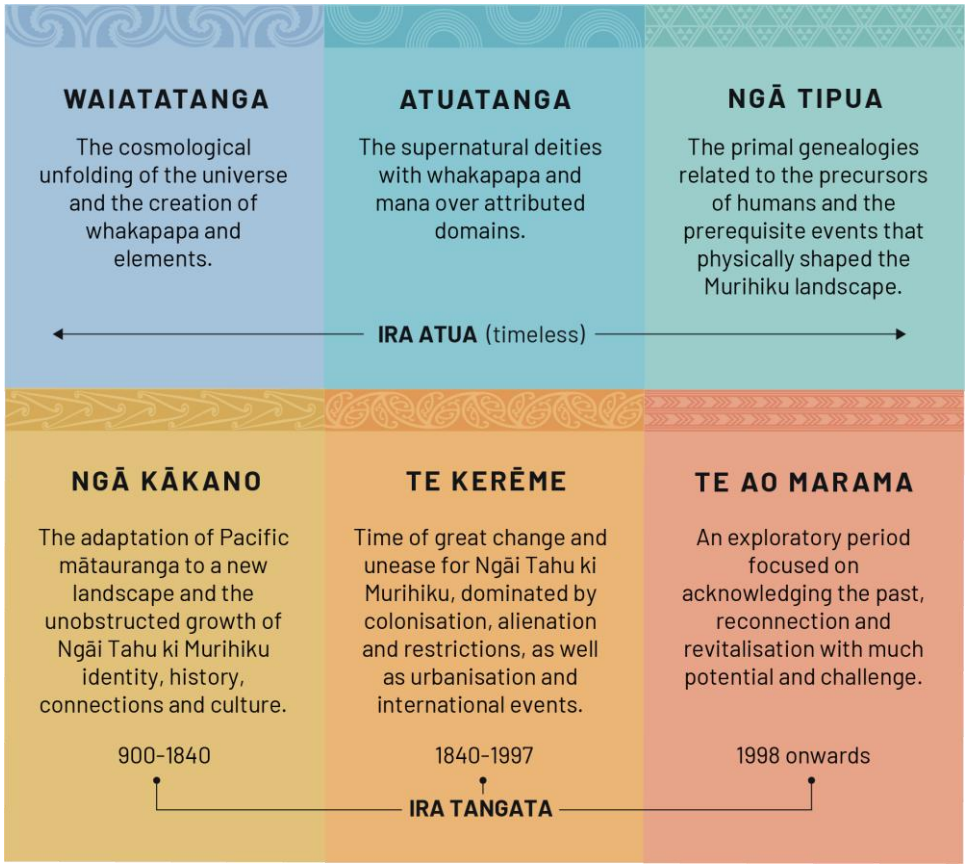


*Figure 2-2: Ira Atua Ira Tangata*

In Ngā Hua o Āpiti Hono Tātai Hono for Hananui Aquaculture Project, manawhenua stated (**Appendix D**, Te Ao Marama on behalf of NTKM 2025, p. 12):

> *The strait dominates this assessment, not the land. While they are intimately connected, Te Ara a Kiwa cannot be truly understood from land. Ngāi Tahu ki Murihiku understanding is derived from its associations and relationships with Te Ara a Kiwa as sailors, fishers, residents, travelers, etc.*
>
> *Te Ao Mārama Inc, based on our knowledge, understanding, site visit, and wānanga with whānau, has found that the proposed Hananui Aquaculture project and activity area is appropriate because it will enhance the ability for job creation and to reconnect whānau back to this site. It is considered that the project has been proposed in a way that fits in with the environment rather than us fitting within the environment. The tohu that were visible and felt during the site visit attested to this, those signs come from joining our kōrero with the atua – we are all connected. There has been considerable thought from the applicant that retains much of the viewshafts to and between landforms of significance.*

## 2.5 Ngāi Tahu Interests and Aspirations

> *"Ngāi Tahu want to be at the forefront of this sustainable and developing industry, as we undertake aquaculture projects which are aligned with our tribal values of rangatiratanga and kaitiakitanga, to help achieve the aspirations of our people,"* Upoko o Awarua Tā Tipene O'Regan.

It is explained above that Ngāi Tahu do not see themselves as separate to the environment, but rather part of it. To explain this further, Āpiti Hono Tātai Hono follows the NTKM understanding that humans are the teina whakapapa, simply, the younger or junior ancestral line to the environment. Therefore, the wants and needs of people follow after that of Ira Atua.

Ngāi Tahu has a long-standing and active interest in the protection, and sustainable use and development of coastal waters within the realm of Tangaroa. Ngāi Tahu sees the opportunity for open water finfish aquaculture to sustainably complement New Zealand's wild fisheries resources and contribute to tribal development and welfare. This builds on inter-generational mahinga kai practice in Te Ara a Kiwa by Ngāi Tahu. These considerations, in combination with the Southland Regional Aquaculture Agreement 2021 under the Māori Commercial Aquaculture Claims Settlement Act 2004, has provided the impetus for the development of the HAP.

The HAP is consistent with both NTS's and the wider Te Rūnanga mandate to build a strong economic base for the iwi and diversifying its current seafood portfolio and growing Ngāi Tahu "Finprint" while demonstrating Ngāi Tahu values in everything that is done. The purpose and objectives of the HAP are to realise the opportunity for sustainable aquaculture development in the area that will provide for Ngāi Tahu food security, economic development, and employment as kaitiaki and an expression of rakatirataka.

### 2.5.1 Values, Aspirations, and Policy

In coming to their position on the HAP, NTKM have taken time in considering their values, and testing the project against multiple checks and balances. This work has included three assessments, multiple hui and wananga, and reviews against the Murihiku Iwi Management Plan, Te Tangi a Tauira, and Ngāi Tahu strategies and policies. This approach also illustrates what is important in manawhenua decision

making and matters that need to be considered in the AEE. Manawhenua have repeatedly told NTS that they expect the HAP to be an exemplar model, both in consenting and ongoing operations, and that they will continue to hold NTS accountable.

The purpose of the NTKM CVA is to 'describe the features of the land, coastal and marine environs of Te Ara a Kiwa to explain the history, past and present uses, important places and our values associated with Te Ara a Kiwa' (Te Ao Marama 2018, p. 10). These values are also found in Ngā Hua o Āpiti Hono Tātai Hono (**Appendix D**).

Following the consideration of these values in the CIA, it states that NTKM are committed to (**Appendix E**, Tipa and Associates 2020, p. 51):

- protecting titi and tio
- supporting abundant taonga species
- protecting the quality of the coastal waters of Rakiura
- protecting wahi tapu / wahi taonga
- protecting cultural landscapes of which unimpeded views from Hananui is a central component
- enhancing access along coastal margins
- addressing issues relating to new infrastructure becoming established in what is perceived to be relatively unmodified locations.

These commitments, alongside the recommendations of Ngā Hua o Āpiti Hono Tātai Hono express the aspirations of NTKM for the HAP. They also connect to the Ngāi Tahu 2025 aspirations of connection and reconnection, and the evolution of a living culture, learning from the past and walking confidently into the future.

These values and aspirations should be considered with the Aquaculture and Marine Farm Ngā Kaupapa – Policy in section 3.6.11 of Te Tangi a Tauira (the Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008):

- *Ensure that aquaculture activities recognise and provide for pre-existing customary rights and commercial fishing rights provided by the Māori Fisheries Settlement in 1992.*
- *Establish a process with local government agencies to identify suitable areas for aquaculture and the allocation of coastal space to ensure NTKM rights are protected. This includes involvement in the development of programmes that assess the ecological health, carrying capacity and cumulative effects from all coastal users within Southland's coastal waters.*
- *Have active involvement in the consent process for aquaculture and marine farming. Operations should include information on waste disposal and provisions for reducing effects on existing local species.*
- *Recognise and be involved in the development of programmes that recognise for protection of ecological, heritage, wāhi tapu and wāhi taonga values. This includes involvement in ongoing management, setting of consent conditions and monitoring and compliance programmes.*
- *Ensure participation into research of the impacts of marine farms on natural character and visual amenities.*
- *Ensure participation into research that investigates increased sediment dispersal, and the effects of such on seabed habitats under and around marine farms.*
- *Ensure that aquaculture does not have adverse effects on customary fishing and practices, fishing resources or fisheries. This includes maintaining access to sources of abundant local kaimoana, kaimātaitai and mahinga kai populations.*

- *To ensure participation into research on the potential changes to nutrient supplies in coastal waters as a result of increased demand and the possible degradation and displacement of existing natural fish and shellfish populations.*
- *To ensure that the potential introduction of unwanted organisms is monitored to ensure impacts on existing biodiversity is limited.*

## 2.6 Use in a FTAA Context

This application embeds NTKM approaches, assessments, and advice throughout, as well as policy and strategic documents from Te Rūnanga and NTKM, and Treaty Settlement principles and provisions. This section has considered those matters with the FTAA requirements.

Section 7 of the FTAA requires that those persons making decisions under the FTAA (e.g. on RMA approvals, Wildlife Act approvals and aquaculture decisions) must act in a manner that is consistent with the obligations arising under existing Treaty settlements. Existing Treaty settlements relevant to this application are described in section 3 of this report. The Fisheries Settlement, which was the pre-curser to the Aquaculture Settlement, must be implemented in accordance with the principles of the Treaty of Waitangi.

In making aquaculture decisions, consideration must be had for customary, commercial, or recreational fishing interests that may be affected by aquaculture activities. The Treaty of Waitangi is fundamental to the HAP as outlined in the previous section.

### 2.6.1 Relationship with the RMA and planning hierarchy of documents

Additionally, when considering a consent application (RMA approval) under the FTAA, the panel must take into account Sections 5, 6 and 7 of the RMA and relevant statutory documents prepared under the RMA.

Section 5 of the RMA defines sustainable management as including enabling people and communities to provide for their social, economic and cultural wellbeing (while ensuring the matters listed in sections 5(2)(a) – (c) are provided for). For Ngāi Tahu, social, economic and cultural wellbeing relies not only on connection to and sustainable use of the natural environment and its resources, but ongoing economic development to assist the iwi in maintaining ahi kā and social cohesion.

Section 6 of the RMA list matters of national importance that decision makers must recognise and provide for, while Section 7 lists ‘other’ matters that decision makers must have particular regard to. For the HAP consent application this is twofold:

1. The proposal has been considered as part of the broader Ngāi Tahu asset base and the future needs of Ngāi Tahu as an iwi.
2. Significant time and consideration have been taken by NTS to understand the NTKM perspective at place, in an authentic and engaged way.

It is essential and an inherent practice for NTS to consider the project within this culturally engaged context. While all relevant subsections of Sections 6, 7 and 8 of the RMA have been considered from the NTKM perspective by NTS, Sections 6(e) and 7(a) are of particular relevance. The proposed HAP, and the consent application under the FTAA, provide an opportunity for Ngāi Tahu whānui, as manawhenua and manamoana, to recognise and provide for their traditional and contemporary

relationship with Te Ara a Kiwa consistent with Section 6(e), and to do so as kaitiaki consistent with Section 7(a).

Statutory documents prepared under the RMA also inform the approach to the project and the preparation and consideration of the consent application across wide-ranging provisions when considered through this Ngāi Tahu lens. In terms of the New Zealand Coastal Policy Statement 2010 (NZCPS), to be consistent with Policy 2 and achieve Objective 2 it is necessary for the preparation and consideration of the consent application to:

- recognise the continuing relationship that Ngāi Tahu has with areas of the coastal environment, including places where they have lived and fished for generations (as illustrated in the Ngā Hua report and Statutory Acknowledgement for Rakiura/Te Ara a Kiwa (Rakiura/Foveaux Strait Coastal Marine Area)
- incorporate mātauranga Māori as decisions are made on the application
- provide for opportunities for kaitiakitanga to be exercised over waters, and
- recognise the importance of Māori values, which are not simply cultural values but extend to the way that Māori value all parts of the natural and physical environment.

While these collective considerations are the basis of NTS's approach to all of its activities, decision makers have the challenge of understanding Ngāi Tahu values and paradigms through a Ngāi Tahu, Āpiti Hono Tātai Hono lens, rather than from a Western perspective. For example, 'protecting characteristics of the coastal environment that are of special value' may have quite a different meaning in Ngāi Tahu terms to the commonly understood Western approach of preventing activities occurring in these areas, in order to 'protect' them.

Section 2 of this report, the later sections that address the technical assessments of effects on the environment, and the statutory analysis contained in section 13.5 have all attempted to provide an introduction to Ngāi Tahu values and paradigms and set the project within the Ngāi Tahu context, to ensure that the project and any consent that may be granted can give effect to the NZCPS, recognising that understanding the holistic context of a site and an activity requires upholding and respecting more than one paradigm or world view.

Provisions across the Southland Regional Policy Statement 2017 (RPS) and the Southland Regional Coastal Plan 2013 (RCP) are also relevant to recognising the Ngāi Tahu relationship with the environment and natural resources. As has been discussed in section 2 of this report, the relationship is a dynamic, vibrant and contemporary relationship that Ngāi Tahu seeks to maintain. Policy TW.4 of the RPS recognises that 'only tangata whenua can identify their relationship…with their ancestral lands, water, sites, wāhi tapu and other taonga'. To respect this, the statutory analysis contained in section 13.5 of this report has addressed manawhenua values throughout the analysis, rather than restricting it to only those provisions that specifically mention tangata whenua or cultural values.

In the HAP application, the combination of the CIA (**Appendix E**, informed by the CVA) and the Ngā Hua report (**Appendix D**) provides for a richer understanding of the importance and implications of the proposal from a Ngāi Tahu perspective, and thus a fuller implementation of the relevant objectives and policies in the statutory documents.

It is imperative to NTS that this application not be a 'tick box' exercise regarding Ngāi Tahu values and paradigms and that it properly considers manawhenua and the local expression of rangatiratanga, kaitiakitanga and tikanga. The intent of this application documentation is to place a pou that recognises that for Ngāi Tahu every element of the environment – including people, the physical world, and the

spiritual world – are interconnected and must always be considered in every aspect of assessment and decision making in relation to the use and protection of resources. This is especially the case in relation to this application because the applicant is a Ngāi Tahu entity. In the spirit of that approach the CIA and the Ngā Hua report have been used as a bridge to connect the two worlds – consideration of matters raised in the CIA and Ngā Hua are woven into each of the technical sections of this report, and into the policy analysis. It is NTS's hope that all people interacting with the project and the application will sense the underlying threads of the six Te Rūnanga o Ngāi Tahu pou and the NTKM assessments that run through the application.

# 3 Ngāi Tahu settlements and Te Tiriti o Waitangi

## 3.1 Introduction

Section 7 of the FTAA requires that all persons exercising functions, powers and duties under the Act must act in a manner consistent with obligations under Treaty Settlements. Section 49 requires that the EPA obtain a Section 18 report for listed applications (being a report on Treaty Settlements and other obligations). The below is intended to assist with those considerations, and further to satisfy the requirement under Schedule 5 clause 5 that an application for a resource consent must provide information about any Treaty settlements that apply in the area.

Te Rūnanga is the iwi authority that represents the interest of Ngāi Tahu whānui. Te Rūnanga recognises and supports the rakatirataka and mana of Papatipu Rūnanga.

Ngāi Tahu Settlements create a platform to rebuild the social, cultural, environmental and economic base of Ngāi Tahu.

As detailed in section 4 of this report, Papatipu Rūnanga, via direct consultation with NTKM Chairs and the MWG, have been engaged throughout the development of the HAP. This kanohi ki te kanohi engagement ensures that the voices, aspirations, and mātauranga of manawhenua are integral to the project's design, decision-making, and implementation. The purpose of meeting directly with manawhenua is to uphold the principles of rangatiratanga and kaitiakitanga, strengthening shared understanding, building trust, and ensuring the project aligns with local tikanga and iwi aspirations for the moana. The outcomes of this engagement are captured in the CVA, CIA, and Āpiti Hono Tātai Hono reports, which collectively articulate how the HAP can proceed in a manner that protects taoka species, sustains cultural integrity, and delivers enduring benefits for Ngāi Tahu whānui and future generations.

The proposal has responded to any concerns raised and reflects the aspirations of Papatipu Rūnanga, and is supported by Te Rūnanga.

The HAP sits at the confluence of the Ngāi Tahu Claims Settlement Act 1998, the 1992 Fisheries Settlement, and the outcomes sought by the Māori Commercial Aquaculture Claims Settlement Act 2004 as an expression of iwi-led aquaculture and contemporary mahinga kai. The HAP builds on the shoulders of those settlements and will in turn enable the use of adjacent aquaculture settlement space. The proposal is an active representation of the intent of those settlements described.

Ultimately, the HAP enables Ngāi Tahu to engage in te taiao as kaitiaki and Ngāi Tahu rangatiratanga, by contributing to the social, cultural, environmental and economic foundation of Ngāi Tahu for current and future generations.

## 3.2 Context

Te Tiriti o Waitangi/Treaty of Waitangi recognises and guarantees to Ngāi Tahu Whānui their rangatiratanga over their lands, waters and other resources.

Major land purchases within the Ngāi Tahu takiwā between 1844-1864 resulted in the loss of 34.5 million acres of land, more than half of the land mass of New Zealand, for £14,750. Ngāi Tahu were

promised reserves, schools and hospitals, however, received only 35,757 acres. This left Ngāi Tahu in a state of poverty, landlessness, and without access to traditional resources including mahinga kai, both on land and sea. Repeated breaches of the Treaty of Waitangi sparked the Ngāi Tahu Claim, Te Kerēme.

For seven generations Ngāi Tahu Whānui pursued Te Kerēme. Te Kerēme encompassed claims spanning from land to sea. Te Kerēme was presented to the Waitangi Tribunal as the “nine tall trees” which referred to the grouping of eight major land purchases and mahinga kai as the ninth tall tree. The settlement of Te Kerēme is reflected through a suite of instruments which are described further in the section below.

The Ngāi Tahu Settlements are a platform from which Ngāi Tahu has begun to rebuild its social, economic and cultural footprint and position. NTS is part of that rebuild. The development of the HAP has a direct relationship to settlement, and in turn the future of Ngāi Tahu. The ninth tall tree, mahinga kai, is as essential to the future of Ngāi Tahu as it is the past. Ngāi Tahu seeks to be at the forefront of the aquaculture industry – this is consistent with the mahinga kai practices of Ngāi Tahu, building on the platform of settlement for the future of Ngāi Tahu, and as a tangible example of rangatiratanga and kaitiakitanga in practice.

## 3.3 Ngāi Tahu Settlements

The Ngāi Tahu Settlements collectively comprise:

- Te Rūnanga o Ngāi Tahu Act 1996;
- Ngāi Tahu (Pounamu Vesting) Act 1997;
- Ngāi Tahu Deed of Settlement 1997; and
- Ngāi Tahu Claims Settlement Act 1998 (NTCSA)
- National Treaty of Waitangi settlements delivered via:
    - the 1992 Fisheries Deed of Settlement;
    - Treaty of Waitangi (Fisheries Claims) Settlement Act 1992, implemented via:
        - Fisheries Act 1996;
        - Fisheries (South Island Customary Fishing) Regulations 1999; and
        - Māori Fisheries Act 2004;
    - Māori Commercial Aquaculture Claims Settlement Act 2004.

The Settlements listed above and discussed below arise from breaches of Treaty of Waitangi obligations on the Crown. The principles of the Treaty of Waitangi continue to guide the implementation of those Settlements and together form an essential and ongoing legal framework. Settlements relevant to the HAP are discussed further below.

### 3.3.1 Te Rūnanga o Ngāi Tahu Act 1996

Te Rūnanga o Ngāi Tahu Act 1996 (TRoNT Act) establishes the modern structure of Ngāi Tahu. Te Rūnanga o Ngāi Tahu is the governing tribal council of Ngāi Tahu Whānui established by the TRoNT Act. Section 15 of the TRoNT Act states:

*(1) Te Rūnanga o Ngāi Tahu shall be recognised for all purposes as the representative of Ngāi Tahu Whānui.*

*(2) Where any enactment requires consultation with any iwi or with any iwi authority, that consultation shall, with respect to matters affecting Ngāi Tahu Whānui, be held with Te Rūnanga o Ngāi Tahu.*

Papatipu Rūnanga are regional bodies that were established by Ngāi Tahu Whānui in the nineteenth century to assist the progress of Te Kerēme – the Ngāi Tahu Claim. There are 18 Papatipu Rūnanga, and today they act as the governing councils of the traditional Ngāi Tahu hapū and marae-based communities.

### 3.3.2 Deed of Settlement 1997, Ngāi Tahu Claims Settlement Act 1998

The Deed of Settlement and Ngāi Tahu Claims Settlement Act (NTCSA) include various mechanisms which provide pathways for the implementation of the settlement.

The relationship Ngāi Tahu has with the natural environment was at the heart of Te Kerēme, and much of the Settlement gives expression to that relationship with te ao tūroa. The Settlement began the process of restoring and recognising Ngāi Tahu place names, history, ownership of taonga, and positions on decision making bodies, such as the New Zealand Conservation Authority. These tools are immensely significant to the iwi as symbolic recognition of whakapapa, but more importantly, allowing Ngāi Tahu to exercise kaitiakitanga and in recognition of the ninth tall tree of Te Kerēme – mahinga kai.

However, and in light of the context of how Te Kerēme came about, importantly the Deed of Settlement and NTCSA also established a platform for the future development of Ngāi Tahu as an iwi and for ongoing partnership with the Crown.

This platform can be described through foundational principles of the Settlement which include:

- Ngāi Tahu hold and exercise rangatiratanga. The Ngāi Tahu Takiwā covers most of Te Waipounamu and its surrounding islands, including Stewart Island/Rakiura and the sub-Antarctic Islands. This constitutes over half of New Zealand's landmass, coastlines, and waterways, and includes a statutory zone of maritime interest. The Crown and Parliament recognise and affirm Ngāi Tahu rangatiratanga in the Takiwā through:
    - Article II of Te Tiriti o Waitangi;
    - the Deed of Settlement between Ngāi Tahu and the Crown; and
    - the NTCSA.
- The Crown recognises Ngāi Tahu as "the tāngata whenua of, and as holding rangatiratanga within, the takiwā of Ngāi Tahu."[5]
- The Crown committed to the Settlement as the beginning of a process of healing and a new age of co-operation.[6]
- The Crown and agents of the Crown must act in good faith. The Crown recognises in the Apology that previously the Crown failed to act in good faith, and left Ngāi Tahu in a state of poverty and deprived Ngāi Tahu the opportunity to develop.[7] Settlement now provides an opportunity for development.
- In providing for settlement mechanisms, acknowledging Ngāi Tahu as holding mana and rangatiratanga in the takiwā, acknowledging the new age of co-operation and the need to act in good faith, the Settlement also speaks to the continuing evolution of Ngāi Tahu as a tribe and

[5] Ngāi Tahu Claims Settlement Act 1998, Apology
[6] Ngāi Tahu Claims Settlement Act 1998, Apology
[7] Ngāi Tahu Claims Settlement Act 1998, Apology

> as a people. In and of itself, the Settlement is acknowledging that Ngāi Tahu will continue to develop, create an economic footprint for the benefit of Ngāi Tahu people, and form a new basis from which Ngāi Tahu can express its ancestral relationship with the Ngāi Tahu takiwā into the future.

An important part of the Ngāi Tahu settlement was economic redress. This was a pragmatic solution which provided Ngāi Tahu with pūtea and opportunities to rebuild the economic basis of the tribe. As described above, NTS and the HAP arise from the platform of settlement, and the rebuilding of the social, economic and cultural foundation of Ngāi Tahu.

#### 3.3.2.1 Settlement redress provisions in or near the application site

The following are relevant in the consideration of the HAP application:

- In the Deed of Settlement the Crown recognised Ngāi Tahu as a statutory advisor under Fisheries Acts.
- Recognition of Taonga Species,[8] and methods to work with Ngāi Tahu in the management of Taonga Species[9]. Taonga Species are listed in Schedule 97 of the NTCSA.
- Development of protocols[10] and a closer working relationship between the Department of Conservation and Ngāi Tahu, and appointment to statutory boards[11].
- Acknowledgement of Ngāi Tahu place names by the New Zealand Geographic Board. There are various place names which have been identified in the vicinity of the HAP site which speaks to the ongoing relationship with the area. In particular, Mt Anglem/Hananui is of note.
- Statutory Acknowledgements, which are a tool included in the NTCSA through which the Crown acknowledges the values and relationship of Ngāi Tahu with particular sites and areas within the takiwā. Relevant statutory acknowledgements in this location are:
    - Hananui (Mt Anglem) Schedule 18; and
    - Rakiura/Te Ara a Kiwa (Rakiura/Foveaux Strait Coastal Marine Area) Schedule 104

The text of these two statutory acknowledges clearly speak to the relationship of Ngāi Tahu with Te Ara a Kiwa and Rakiura. The text in particular highlights Te Ara a Kiwa as a mahinga kai and the importance of that to the identity of Ngāi Tahu and the role of Ngāi Tahu as kaitiaki. These statutory acknowledgements describe the basis of an ongoing and enduring relationship – a relationship with place which is not suspended at a particular point in time but that evolves and moves forward.

The text of Schedule 18 also describes the whakapapa and relationship with Hananui – from which the name of the project is taken.

#### 3.3.2.2 Assessment

The HAP is a contemporary mahinga kai which continues an intergenerational tradition of working the kai in this area. As noted above the relationship of Ngāi Tahu with the environment was at the heart of Te Kerēme, and this has run through the outcomes and mechanisms in the Deed of Settlement and NTCSA.

[8] Ngāi Tahu Claims Settlement Act 1998 Section 287 to 296
[9] Ngāi Tahu Claims Settlement Act 1998 Section 303
[10] Ngāi Tahu Claims Settlement Act 1998 Sections 281 to 286
[11] Ngāi Tahu Claims Settlement Act 1998 Sections 272 to 276

The HAP is consistent with, and builds on, the foundations of the Deed of Settlement and NTCSA. It is consistent with the Statutory Acknowledgments. It provides Ngāi Tahu with autonomy, in holding mana and rangatiratanga in this area, to continue to sustainably access and use natural resources in a way that is consistent with kaitakitanga. Viewed as a whole, and noting that mahinga kai formed the ninth tall tree of Te Kerēme, the HAP is a living example of Ngāi Tahu rebuilding the social, economic and environmental footprint of the tribe as intended by Te Kerēme, the Deed of Settlement and NTCSA. The proposal has been developed with Papatipu Rūnanga ki Murihiku as Papatipu who hold rangatiratanga and mana at place.

### 3.3.3 Māori Fisheries Settlement 1992

Māori customary fishing rights were secured and guaranteed by Article 2 of the Treaty of Waitangi between Queen Victoria representing the English Crown and Māori tribes. Over many years Māori claimed the Crown had breached Treaty fishing rights through a series of actions and the introduction of the Quota Management System (QMS) in 1986. The QMS removed statutory recognition of Māori customary rights to fishing and fisheries, previously secured by Section 88.2 of the Fisheries Act. The Crown allocated quota (catching rights) as a private property conferring those catching rights in perpetuity. Requests for relief and subsequent judgements through the Waitangi Tribunal (in particular the reports for Ngāi Tahu and the Muriwhenua) and the courts prompted the Crown to enter into negotiations with Māori to resolve Treaty fishing claims over commercial fisheries.

In 1989, the Crown and Māori negotiators agreed on an interim settlement, which was given effect by the Māori Fisheries Act 1989. This interim settlement saw the creation of a Māori Fisheries Commission that progressively received 10 percent of the quota (catching rights) for all fish species that were in the QMS and approximately $10 million to hold and manage on behalf of all Māori. The Commission's role was also to promote Māori involvement in the business and activity of fishing. Where the Crown was unable to provide the agreed 10 percent of quota for fish species in the QMS, Māori were provided the equivalent value in further cash.

Commercial fishing claims were finally settled with the signing of a Deed of Settlement (the Sealord Deal) in September 1992. This Deed was given effect through the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 and saw the creation of the Treaty of Waitangi Fisheries Commission (Te Ohu Kai Moana), which took over the responsibilities of the Māori Fisheries Commission and enhanced its accountability to Māori.

In the Settlement, the Crown recognised the full extent of Māori customary rights to fishing and fisheries by:

- providing funds for Māori to buy a 50 percent stake in Sealord Products Limited (now Sealord Group Limited) which, as one of the largest fishing companies in New Zealand at the time, was a major owner of fisheries quota
- undertaking to provide Māori with 20 percent of commercial fishing quota for all new species brought within the QMS
- undertaking to ensure the appointment of Māori on statutory fisheries bodies, and
- agreeing to make regulations to allow self-management of Māori fishing for communal subsistence and cultural purposes.

#### 3.3.3.1 Assessment

It is important to understand that the implementation of the Deed of Settlement is not only through legislation but also the continuing relationship between the Crown and Māori.[12] Further, the Deed of Settlement was agreed to on the basis that the implementation of the Fisheries Settlement would continue to be subject to the principles of the Treaty of Waitangi and give rise to Treaty obligations on the Crown.

NTS, in addition to activities in aquaculture, manage settlement quota received by Ngāi Tahu and more broadly tribal commercial seafood interests.

The proposal builds on the foundation of the Fisheries Settlement through the development of a contemporary approach to mahinga kai. As described below the Fisheries and Aquaculture Settlements are inherently linked.

### 3.3.4 Māori Commercial Aquaculture Claims Settlement Act 2004

The Māori Commercial Aquaculture Claims Settlement Act 2004 (Aquaculture Settlement Act) provides for the settlement of Māori commercial aquaculture claims since 1992. It provides for settlement on an ongoing basis. Obligations arising under the Aquaculture Settlement Act are provided for by the Crown through a 20% equivalent value of settlement obligations. Assets may be in the form of space, cash, or other equivalent assets. Aquaculture is, as described by the Minister of Fisheries at the time, Hon David Benson-Pope, the "unfinished business" of the 1992 Fisheries Settlement.

Aquaculture settlement is undertaken on a regional basis and delivered through Regional Agreements. The Southland Regional Agreement recognises the rights and interests of Ngāi Tahu to undertake aquaculture within their takiwā. These rights are based within whakapapa, rangatiratanga, mana, and kaitiakitanga. The current Southland Regional Aquaculture Agreement provides for an authorisation to 16.6 ha of marine space. This space, also referred to as an Aquaculture Settlement Area (ASA), is located adjacent to the HAP site. Te Rūnanga is the Iwi Aquaculture Organisation for Ngāi Tahu under the Aquaculture Settlement Act. The authorisation is held in the name of Te Rūnanga o Ngāi Tahu. Resource consent must still be applied for by Te Rūnanga to develop the space for aquaculture.

The signing of the Agreement delivered on the Crown's settlement obligations and was viewed by the Crown as a pathway for iwi to undertaking aquaculture and as integrally involved in the sustainable growth of the aquaculture industry:

> *"Moving beyond the formal requirements of settlement, the Government's Aquaculture Strategy commits to delivering settlement in a way that meaningfully ensures Māori can make the most of their settlement assets. We as the Crown are making our intentions clear that we want settlement to be a pathway to iwi undertaking aquaculture.[13]"*
>
> *"In relation to the Agreement we have signed today, as rangatira and kaitiaki, it is important that Ngāi Tahu has the opportunity to be integrally involved in the sustainable growth of the aquaculture industry in Aotearoa.[14]"*

[12] Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 preamble (l) (viii)
[13] Hon Rino Tirikatene - Oceans and Fisheries: 5 October 2021 Speech at the signing of the Southland Regional Aquaculture Agreement
[14] Hon Kiritapu Allan – Conservation: 5 October 2021 Speech signing of Southland Regional Aquaculture Agreement.

#### 3.3.4.1 Assessment

Aquaculture settlement is relevant to this application in two key ways:

1. The adjacent ASA is intended to be developed pending the success of the HAP. The ability for Te Rūnanga to activate that space relies on its relationship with the HAP – it cannot be developed in isolation. The HAP is therefore directly related to the successful implementation of the Aquaculture Settlement Act. It is also noted that consent is required for that space.
2. Behind the Aquaculture Settlement Act sits an intent to enable iwi to participate in the aquaculture industry and indeed, for Māori to be a "major contributor to the development of the aquaculture industry".[15] The HAP is consistent with that intent and even more so as it will enable the development of the adjacent ASA.

### 3.3.5 Principles of the Treaty of Waitangi

While the FTAA does not strictly speaking require an assessment of the application against the principles of the Treaty of Waitangi, it is necessary to understand and consider relevant Treaty Principles due to the inextricable relationship between the Treaty of Waitangi and the settlements listed in section 3.3 of this report. Relevant principles include:

- Rangatiratanga - acknowledging Ngāi Tahu rangatiratanga and mana within the Ngai Tahu takiwā. This includes giving substantial weight to the aspirations, values and views of Ngāi Tahu as manamoana and manawhenua.
- Partnership – acting toward Ngāi Tahu reasonably, with utmost good faith and ultimately as a partner.
- Active protection – requires informed decision making, and actively protecting Ngāi Tahu interests under the Treaty.
- Redress – as described above the Ngāi Tahu Settlements do not present an end point, redress is also realised through ongoing opportunities to grow the economic base of Ngāi Tahu, to support the expression of tino rangatiratanga of Ngāi Tahu.

These principles and the explanation that underlies them are applied by the Waitangi Tribunal and the Courts as relevant to each proposal that is being considered. From a Ngāi Tahu perspective, acting in a manner that is consistent with the principles of the Treaty of Waitangi means acting towards Ngāi Tahu reasonably and with utmost good faith, acknowledging Ngāi Tahu rangatiratanga and mana within its takiwā (derived from The Crown's Apology 1997).

#### 3.3.5.1 Assessment

Through tino rangatiratanga Ngāi Tahu seeks to create and control its destiny, exercising rangatiratanga and kaitiakitanga for wāhi tapu, mahinga kai and taonga tuku iho, including all natural resources. It is critical to Ngāi Tahu that their engagement with water, land and all natural resources is recognised for its role in Ngāi Tahu identity, culture and tikanga. In order to act in a manner consistent with the principles of the Treaty of Waitangi, the HAP's development, implementation and ongoing operation, this application has been developed alongside manawhenua/manamoana as recorded in Āpiti Hono Tatai Hono, the CVA and CIA. It recognises and respect the underlying Ngāi Tahu context to the project.

[15] David Benson Pope, Aquaculture reform – Securing a sustainable future for aquaculture | Beehive.govt.nz, 10 July 2004

### 3.3.6 Conclusion – Te Tiriti o Waitangi and Settlements

The HAP sits at the confluence of the relationship between Te Kerēme, Settlement, the Fisheries Settlement and the Aquaculture Settlement:

- Ngāi Tahu have a long history with Te Ara a Kiwa. The proposal enables the ongoing expression of the ancestral relationship that Ngāi Tahu have with the area consistent with the Statutory Acknowledgements and settlements more broadly.
- The proposal has been developed alongside Papatipu Rūnanga who hold rangatiratanga in this area, providing for views and values at place.
- The activities of NTS have origins in both the 1998 Ngāi Tahu Settlement and also the 1992 Fisheries Settlement by building on the foundations provided through those settlements to enable the development of Ngāi Tahu and rebuilding of a sound, economic base.
- As noted above mahinga kai is the ninth tall tree of Te Kerēme. The HAP is an opportunity for Ngāi Tahu to be actively involved in the aquaculture industry and as kaitiaki.
- Realising the development of iwi-led aquaculture requires various scales and pathways. In this instance, the HAP will support the ability of Ngāi Tahu to operationalise and activate the adjacent ASA in the future. The development of the HAP FTAA application has demonstrated that aquaculture development is appropriate in this area. Space gazetted under the Southland Regional Agreement, being adjacent to the HAP site, creates a relationship to the Māori Commercial Aquaculture Claims Settlement Act in that the HAP will assist Ngāi Tahu in realising the full benefit of the settlement space. The project enables involvement in a contemporary mahinga kai, in an area traditionally associated with mahinga kai.

# 4 Consultation and engagement

Under Section 29 of the FTAA, before lodging a substantive application for a listed project, the authorised person must consult with specific persons and groups.

Consistent with the Te Rūnanga mandate[16] and in-line with what is generally regarded as a partnership approach, NTS has undertaken extensive engagement to shape the location and design of the HAP and the proposed management of effects - as well as build trust and transparency in the project.

Engagement undertaken to date is detailed in **Appendix F** and summarised in the following sections.

## 4.1 FTAA application

Section 29(1)(a) of the FTAA requires the authorised person for the project to consult the persons and groups referred to in Section 11 of the FTAA. The required consultation has been undertaken and is summarised in Table 4-1 below.

*Table 4-1: s29(1) FTAA consultation requirements*

| Section of the FTAA | Persons / Group | Description |
|---|---|---|
| s11(1)(a) | Environment Southland Regional Council (including Harbourmaster) (ES) | See **Appendix F** |
| | Southland District Council and Invercargill City Council | Hui with representatives on 29 May 2025. See **Appendix F.** |
| s11(1)(b) | Te Rūnanga o Ngāi Tahu (as the statutorily recognised representative body for Ngāi Tahu Whānui) | **Appendix G** |
| s11(1)(c) | Te Rūnanga o Ngāi Tahu (as the applicant for Customary Marine Title) | **Appendix G** |
| s11(1)(d) | N/A | Ngā hapū o Ngāti Porou will not be affected by the project |
| s11(1)(e) | Department of Conservation (DOC) | See **Appendix F** |
| | Ministry for the Environment (MfE) | See **Appendix F** and **Appendix H** |
| | Ministry of Primary Industries (MPI) | See **Appendix F** |
| s11(1)(f) | N/A | The project does not include a land exchange. |

All persons and groups specified in the FTAA have therefore been consulted with prior to lodgement of this application. These same persons and groups had also previously been engaged on the HAP and therefore were familiar with previous iterations of the project. It is important to note that, in addition to Te Rūnanga o Ngāi Tahu, extensive consultation has been carried out with Ngāi Tahu ki Murihiku. As explained in section 2.3.1 of this report, Te Rūnanga o Ngāi Tahu (Te Rūnanga) is the iwi authority that represents the interests of Ngāi Tahu Whānui. In practice, Te Rūnanga will generally defer to the views of Papatipu Rūnanga.

[16] As described in section 2 of this report, NTS is an indirect subsidiary of Te Rūnanga created to support charitable outcomes for Ngāi Tahu Whānui, and the HAP is within the Ngāi Tahu takiwā. Therefore, the expectations and responsibilities of Te Rūnanga (as trustee of the Ngāi Tahu Charitable Trust) are also applicable to NTS. Specifically, the project is consistent with both NTS's and the wider Te Rūnanga o Ngāi Tahu mandate to build a strong economic base for the iwi, while demonstrating Ngāi Tahu values in everything that is done.

Key stakeholders consulted with, being ES, DOC and MPI reviewed draft technical reports that were relevant to their interests, and had their feedback (including any residual concerns from the previous iteration of the project) addressed. They also reviewed and had input into the proposed conditions.

Other parties not listed in Table 4-1 have been consulted with, including:

- Papatipu rūnanga of Ngāi Tahu ki Murihiku – Awarua Rūnanga, Waihōpai Rūnanga, Ōraka-Aparima Rūnanga and Hokonui Rūnanga
- Tītī Islands Administering Body
- Tītī Islands Committee
- Rakiura Māori Land Trust
- Future Rakiura
- Predator Free Rakiura
- Stewart Island / Rakiura Community & Environment Trust (SIRCET)
- Great South – The Southland Regional Development Agency
- Southland Conservation Board
- South Port Ltd
- Local tourism operators
- Fishery industry groups.
    - The BCO5 Association (BCO5)
    - Bluff Oyster Management Company (BOMC)
    - CRA8 Rock Lobster Industry Association Inc
    - PauaMAC5
    - Southern Inshore Fisheries Management Company Ltd (Southern Inshore)

## 4.2 Engagement background

Beginning in 2019 NTS has worked with the parties identified in section 4.1 above, with the level of collaboration guided by the responses of the parties to initial approaches. Engagement has varied from simple provision of information to detailed meetings to discuss concerns, technical reports and consent conditions. NTS has also sought guidance from them as to other parties who should be approached.

Key groups or stages of this consultation are summarised in the following subsections.

### 4.2.1 Proposal and condition development through partnership

In February 2019, NTS met with the chairs of the four Murihiku papatipu rūnanga to provide an outline of the project and seek guidance on how best to consult with papatipu rūnanga before lodgement of the RMA consent application. Throughout 2019, NTS then provided presentations to explain the project and possible environmental effects to the following:

- Rakiura whānau;
- Te Whaka a Te Wera Mātaitai Committee members;
- Oraka/Aparima, Hokonui and Awarua rūnanga representatives;
- Rakiura Tītī Islands Committee members;

- Rakiura Tītī Islands Administering Body members, and
- the Waihopai rūnanga upoko/chair.

All of the groups above were invited to a site visit, and included in several follow-up hui and communications throughout 2020. Key outcomes included the Rakiura Tītī Islands Administering Body members expressing an interest in participating in any monitoring or surveying of tītī if consent was granted. Overall, general support for the proposal was expressed by all groups. For the Murihiku Papatipu Rūnanga a Manawhenua Working Group was established, as described in section 4.2.2 below to enable detailed engagement on draft management plans and the approach to the application, particularly the material contained in section 2 of this report. Engagement with manawhenua has enabled the application to be framed from a Ngāi Tahu point of view. In addition, the project team collaborated directly with Te Rūnanga o Ngāi Tahu kaimahi on the development of section 3 of this report in particular, and also as appropriate on section 2 of this report.

Extensive engagement and discussion has been undertaken over the last 5 years with staff and technical reviewers from ES, MPI (including Fisheries New Zealand and Biosecurity New Zealand) and DOC. This involved providing draft technical reports for their comments, follow-up refinements, then providing final reports to inform the development of management plans and consent conditions. Several workshops were undertaken to discuss the draft management plans and consent conditions and there were a number of detailed meetings between each party and NTS technical advisors. The purpose of this partnership approach was to reach general agreement across all these parties on the nature and significance of effects, mitigation and monitoring, and conditions, prior to lodgement of the application under the FTAA.

Throughout 2020 - 2021, other key local groups invited to discuss and provide their views on the project included the Bluff Oyster Management Company and Skippers, and the Rakiura Māori Land Trust. In 2022, NTS attended a Rakiura Community Benefits and Aspirations Hui to discuss the project and present the concept of three charitable trust funds, and conducted two public information sessions in Motupōhue/Bluff and Rakiura.

### 4.2.2 Manawhenua Working Group

NTS established a Manawhenua Working Group (MWG) following guidance from the chairs of the four Murihiku papatipu rūnanga. The purpose of the MWG was to provide a mechanism for regular contact with manawhenua and to allow for their review of technical reports, draft management plans and proposed consent conditions. The MWG contains representatives nominated from each of the four papatipu rūnanga - Te Rūnanga o Awarua, Te Rūnanga o Ōraka-Aparima, Te Rūnanga o Waihōpai and Te Rūnanga o Hokonui and was established in 2021. NTS met with the MWG for various hui from 2021 – 2022. The group has provided critical input into the development of the marine species management plans, the incorporation of the Āpiti Hono Tātai Hono assessment, and consent term sought by NTS, to better reflect papatipu rūnanga concerns. NTS met with Ngāi Tahu ki Murihiku in April 2025 to provide them with an update on the HAP, and one of the outcomes of this hui was the reestablishment of the MWG as part of the next phase of engagement for the HAP. For the FTAA application that is the subject of this report the MWG has again provided valuable insight through its review of various technical assessments and consent conditions, by offering feedback on matters of importance to manawhenua.

# 5 Consistency with the purpose of the FTAA

## 5.1 Overview

The purpose of the FTAA is set out in Section 3 as follows:

> *The purpose of this Act is to facilitate the delivery of infrastructure and development projects with significant regional or national benefits.*

The HAP is a significant investment in the sustainable growth of New Zealand's aquaculture sector, with wide-ranging benefits for Ngāi Tahu, Southland communities, and the national economy. It builds on the established operations of Ngāi Tahu and delivers a step-change in scale and economic impact, offering tangible outcomes in line with iwi aspirations, regional development goals, and national export strategies. These significant benefits include:

- Creating high-value, long-term employment opportunities across the aquaculture sector and beyond, reducing unemployment and stimulating regional economic resilience.
- Delivering hundreds of millions in added value to the economy, especially Southland.
- Realising the aspirations of Ngāi Tahu, with profits being directly reinvested in iwi priorities: from education and housing to cultural revitalisation and intergenerational wellbeing—giving life to the principles of Te Tiriti o Waitangi in a tangible, enduring way.
- Substantially increasing New Zealand's export earnings by harnessing the growing global demand for sustainably farmed seafood.
- Accelerating the Government's Aquaculture Development Plan, helping to meet targets for open ocean salmon farming and iwi-led aquaculture development.
- Underpinning the development of knowledge and expertise in large scale salmon aquaculture, with the potential for it to be a catalyst to enable further sustainable growth of the sector.

As demonstrated in the following subsections, the HAP has clear significant regional and national benefits and is therefore consistent with the purpose of the FTAA.

## 5.2 National and regional economic and employment benefits

The economic benefits of the HAP have been assessed and quantified in the economic assessment (Market Economics Ltd 2025, **Appendix I**). The economic impacts are summarised below in Value Added (VA[17]) and employment terms[18] and are differentiated between the one-offs and ongoing effects. Market Economics Ltd considers that the HAP will deliver significant economic benefits.

[17] Value added measures all payments to factors of production (land, labour and capital), and excludes the purchases of intermediate inputs. It broadly equates with gross domestic product (GDP) as a measure of economic activity at the national level, and gross regional product at the regional level.

[18] Employment is measured in Modified Employee Count (MEC) terms. This is the number of full-time and part-time employees as well as working proprietors on an annual basis. This provides a measure of labour demand associated with the estimated level of economic activity.

### 5.2.1 Establishment (one-off) phase

- Local[19] VA: $61 million to $78 million[20]
- National VA: $175 million to $215 million[21]

These impacts arise from capital expenditure and associated supply chain activity during the construction and setup phase.

### 5.2.2 Operational (ongoing) phase

- National VA: $1.7 billion to $2.05 billion[22]
- Southland VA: $781 million to $888 million[23]

Market Economics Ltd notes that the Southland VA is equivalent to approximately 10% of the VA delivered by the Tiwai Smelter.

### 5.2.3 Employment and regional economic development

The HAP is projected to create hundreds of direct and indirect jobs[24], offering opportunities across marine farming, logistics, processing, port services, administration, and other roles. Importantly, these roles will be rooted in regional communities, especially in Bluff and Rakiura, helping to build economic resilience. This is important both for the wider community, but also Ngāi Tahu as manawhenua who have an invested interest in the economic and social well-being of Murihiku.

One-off employment (construction phase):

- National employment: 660 to 840 jobs
- Southland employment: 200 to 260 jobs

Ongoing employment (operational phase):

- National employment: 850 to 1,040 jobs[25]
- Southland employment: 415 to 480 jobs

Market Economics Ltd states that in terms of the income from jobs, the total economic activity associated with the HAP will return up to $841m to households, of which $386m will be to households in Southland improving livelihoods and supporting regional economic development, particularly in Bluff and Rakiura.

There is significant potential for Southland which currently farms 22% of New Zealand salmon. The goal as identified in Great South's (Southland's Regional Development Agency) Beyond 2025 Regional

[19] The Southland region with Invercargill City, Gore District and Southland District.
[20] High imports $61m, and for domestically supplied $78m, using a 2% discount rate.
[21] The high import scenario will deliver up to $175m of VA compared to the $215m of VA for the domestically supplied scenario, using a 2% discount rate and analysis over a 30 year period.
[22] The high import scenario VA impact is $1.7bn, and $2.05bn for the domestically supplied scenario, using a 2% discount rate and the analysis covers a 30 year period.
[23] $781m under the high import scenario, and $888m under the domestically supplied scenario, using a 2% discount rate and the analysis covers a 30 year period.
[24] The employment impacts are illustrated in terms of the peak employment impacts and refer to Modified Employment Count (MEC). An MEC is a headcount of employees as well as an adjustment to include working proprietors.
[25] Difference is mostly linked to import levels (of fish feed), and the flow on effects of manufacturing.

Long-Term Plan is for aquaculture in Southland to become at least a $1 billion industry by 2035, which could see an increase in salmon production from the current 5,000 tonnes to 40,000 tonnes. This scale of increase in production could mean growing the region's population by 5,180 with 2,940 new jobs. HAP is a key project underpinning the forecast growth of employment in the Southland region.

## 5.3 Regional social and community benefits

In addition to the social and community benefits that flow from the economic and employment benefits described above, NTS has also put considerable thought into addressing how additional local social and community benefits might be secured through the HAP. In consultation with the relevant communities NTS has proposed establishing four community funds. Each proposed fund would have a different primary focus combining to enhance the overall wellbeing and hauora of the Bluff, Rakiura and Murihiku communities, and of the wider environment. Each trust fund would receive funds based on the number of salmon harvested each year. As Hananui production increases, through staged development, so too will the annual funding provided to the three proposed funds.

**Hananui Community Funds**: The purpose of these funds is to support community projects that are important to the local communities.

This would require the establishment of two separate funds, one for the Rakiura community and one for the Bluff community, to be managed by trustees comprising community representatives, including Rūnanga representatives, living in each of the communities.

**Hananui Environmental Fund:** The purpose of this fund is to support local projects and initiatives that help enhance/restore the Murihiku environment. The fund would be governed by NTS and would include a project selection panel consisting of representatives of local organisations, Rūnanga and external experts for advice on projects as required.

**Hananui Health & Education Fund:** The purpose of this fund is to support the health and education of people in the Murihiku takiwā through the provision of assistance such as treatment, targeted public health programmes and initiatives, and scholarships. The fund would be managed by local experts with relevant health care and education experience and would include rūnanga representation.

This concept has been presented to various community group representatives and at the Bluff and Rakiura community drop-in sessions and the general feedback on the concept of establishing these four funds was positive, with more details to be worked through and finalised if consent is granted.

## 5.4 Regional benefits – infrastructure and industry development

Beyond its direct impact on the sector, the project is expected to stimulate significant investment and growth across a range of upstream and supporting industries.

These include the development and expansion of hatcheries, feed mills, and processing facilities. Additionally, the project will drive investment in port infrastructure, including berthage, cold storage, logistics, and export capabilities, enhancing regional connectivity and efficiency.

This integrated value chain not only strengthens the economic viability of the aquaculture sector but also creates opportunities for innovation, job creation, and regional development in the Southland region.

This further supports iwi-led aquaculture by Ngāi Tahu and future development of the ASA adjacent to the HAP.

## 5.5 National benefits – export growth and market demand

The project's potential to significantly boost New Zealand's seafood exports is a cornerstone of its transformative nature. With global demand for sustainably farmed salmon on the rise, the HAP is estimated to generate hundreds of millions in export revenue annually.

At full scale, the HAP will contribute approximately $500m in annual gross revenue[26], representing a 150 to 200 percentage increase over current national salmon farming export revenues[27].

This is not merely an increase in trade; it represents New Zealand strategically capitalising on an expanding international market, which would enhance its trade balance and strengthen its position in the global aquaculture market as a key supplier of high-demand, sustainable produce.

Market Economics Ltd (**Appendix I**) notes that "to put the value of the export potential in context, the Tiwai smelter generates annual export earnings in the order of $1.2bn (year ending 2025Q3). This suggests that the HAP will generate foreign earnings equating to a quarter (26%) of annual aluminium exports (through Bluff Sea port)".

The letter from Invest NZ in **Appendix H** reinforces the significant contribution to the New Zealand economy that is anticipated.

## 5.6 Regional and national benefits – major project to meet the region's and the Government's growth targets in aquaculture

The HAP is a major infrastructure and economic development initiative that aligns with national strategies, regional development priorities, and iwi aspirations. Its scale, sustainability, and intergenerational focus position it as a cornerstone project for the future of New Zealand's aquaculture industry. It is a key example of commercial scale iwi-led aquaculture.

### 5.6.1 New Zealand Aquaculture Development Plan 2025–2030

The HAP is a direct contributor to the Government's aquaculture strategy, as set out in the New Zealand Aquaculture Development Plan 2025–2030, which targets $3 billion in annual aquaculture revenue by 2035. The project aligns with key milestones, including:

- Expansion into open ocean farming: HAP will contribute around 25% of the revenue target and over 21% of the production target for open ocean salmon by 2035.
- Support for iwi-led aquaculture development: HAP is led by Ngāi Tahu, whose mission includes delivering long-term economic, cultural, and social benefits to iwi members.

The New Zealand Aquaculture Development Plan 2025–2030 is considered in more detail in section 13.5.6 of this report.

[26] According to the Murihiku Southland Aquaculture Pathway 2025 and the letter from Invest NZ in **Appendix H**.
[27] Aquaculture New Zealand reported that salmon exports were $203 million in 2024.

### 5.6.2 Going for Growth with Māori | Tōnui Māori

The HAP directly supports the Government's objectives under the Going for Growth with Māori | Tōnui Māori framework by advancing Māori economic development through targeted infrastructure investment to drive employment and sustainable growth and accelerating Māori business exports.

### 5.6.3 Murihiku Southland Aquaculture Pathway 2025

The Murihiku Southland Aquaculture Pathway 2025 (MSAP) was prepared by Great South in partnership with iwi, and on behalf of Murihiku Southland communities, businesses, councils and key stakeholders. It estimates that revenue from aquaculture within the region could reach between $1b to $2.8b in next 15 to 25 years. The HAP is specifically identified in the MSAP as a key part of realising aquaculture growth in the region.

The MSAP is considered in more detail in section 13.5.7 of this report.

# Part 2 The Proposed Activity

# 6 Project description and activities

## 6.1 Site location

The proposed site is located off the northern coast of Rakiura/Stewart Island, 13 km north-west of Oban. The proposed site ranges from approximately 2 km offshore at its closest point to approximately 6 km offshore and is shown in Figure 6-1. The proposed site covers an area of approximately 1,285 ha.

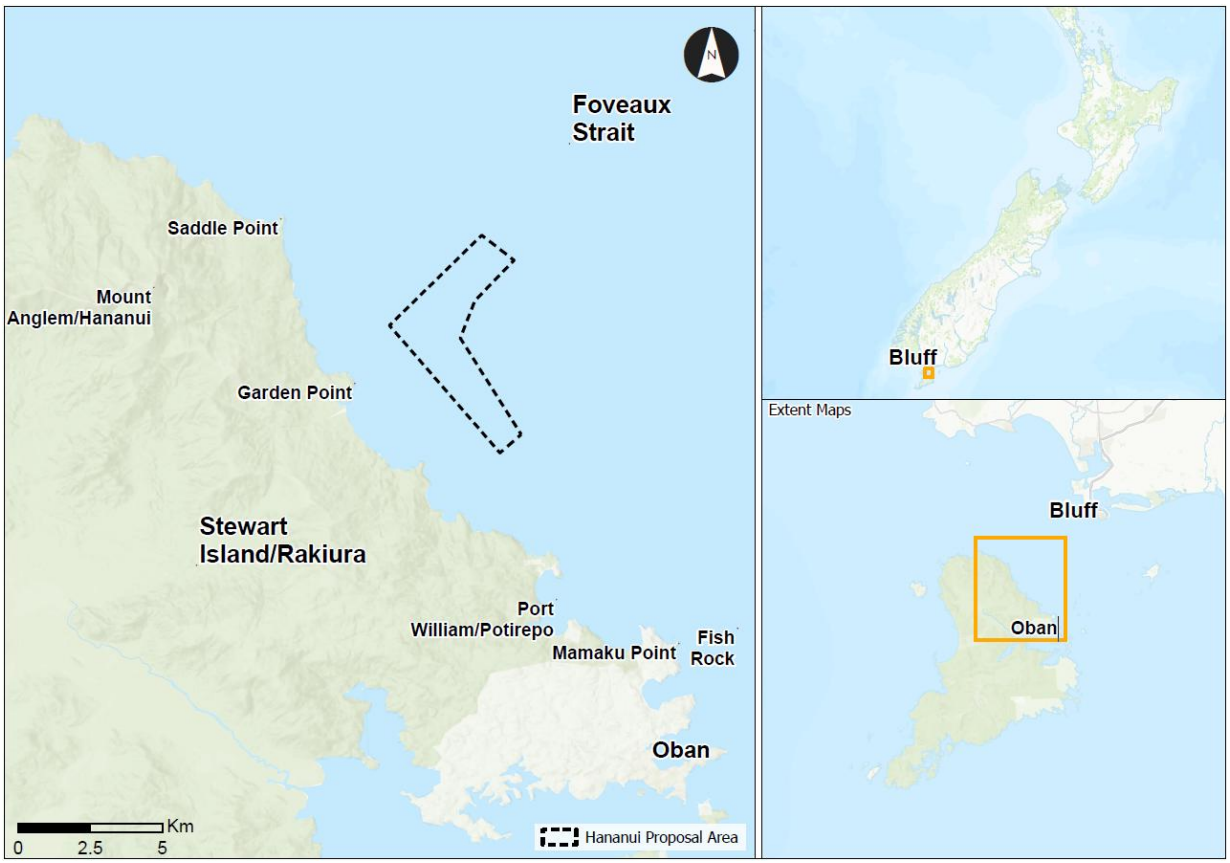


*Figure 6-1: Proposed site location (source: Stantec, 2025).*

The site can be described as open coastal water. Characteristics of the site in the context of the wider Te Ara a Kiwa/Foveaux Strait are outlined in section 9 of this report.

The site is located within the rohe (tribal area) of Ngāi Tahu.

## 6.2 Site owners and occupiers

The proposed site is located in the coastal marine area (CMA) at least 2 km offshore from Rakiura. Pursuant to Section 11 of the Marine and Coastal (Takutai Moana) Act 2011, neither the Crown nor any person owns the CMA. Ngāi Tahu assert and maintain rangatiratanga and customary rights in this area.

Te Rūnanga o Ngāi Tahu has made applications for customary marine title and protected customary rights in the Southland CMA, including over the proposed site. The applications have not yet been determined, so there are no customary title holders at the proposed site.

Land on Rakiura in the vicinity of the site is National Park, also owned by the Crown, with one block of Māori Freehold Land next to Murray River held by the Rakiura Māori Lands Trust (the RMLT). The available contact addresses for the RMLT are:

- Richard Manning (chair) [redacted]
- Eliza Snelgar (administrator) [redacted]

# 6.3 Proposed structures and vessels

## 6.3.1 Marine farm layout and occupation of space

Four marine farms are proposed at the site. Figure 6-2 illustrates the proposed site boundaries and the farm layout within the site (noting the layout is subject to minor adjustments as explained further below), which have been influenced by several factors explained further below.

At maximum development, each of the four farms will consist of two blocks of ten net pens in a 2x5 grid, and associated mooring and anchoring systems. The two blocks within each farm will be separated by approximately 300 m. One feed barge is proposed for each farm, for a total of four feed barges on site. At full production, the net pens and feed barges will occupy approximately 100 ha of coastal space, less than 8% of the proposed site.

The Southland Regional Coastal Plan 2013 (the RCP) defines occupation of space within the CMA in two ways – exclusive occupation and preferential occupation.[28] It is proposed that an exclusive occupation area surrounds each farm and its associated barge. This area will be measured 200 m outwards from the compensation buoys on the mooring grid and from the sides of the feed barges, leading to a total area of exclusive occupation of up to 460 ha). If any farms are relocated (as discussed further below), the exclusive occupation areas will be adjusted accordingly. It is proposed that NTS has preferential occupation for the remainder of the HAP site.

[28] *'Exclusive occupation restricts access to the person(s) or company with the right to occupy unless that occupier grants permission for others to have access. Preferential occupation allows the use of an area by the general public expect in circumstances where the person with the occupation right wants to use the area'* (RCP, Chapter 9, page 1).

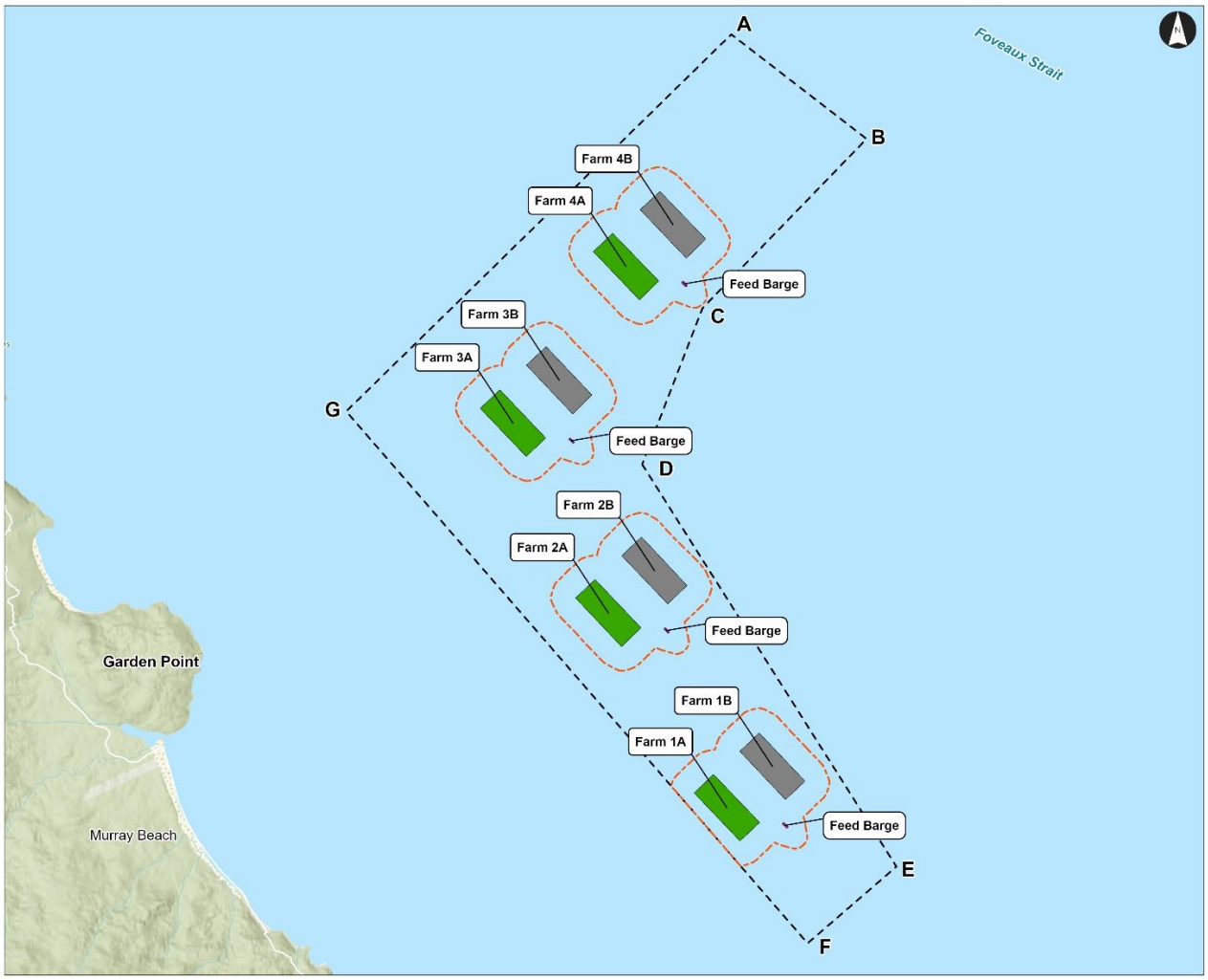


*Figure 6-2: Marine farm layout within proposed site. Stage 1 blocks are shown in green, and Stage 2 blocks are shown in grey. The orange line indicates the exclusive occupation areas being sought.*

The size and layout of the proposed site have been designed based on multiple drivers:

- The proposed marine farms are sited over sandy habitat, at least 1 km from biogenic habitat along the predominant tidal axis (southeast–northwest) and 500 m in other directions, in line with best-practice guidance and expert advice. The HAP site has been distanced from Rakiura to the furthest extent practicable, being 2 km, in order to balance navigational, environmental and visual factors.
- The separation distances between marine farms will be combined with rotational stocking of the marine farm sites (described in more detail in section 6.4 of this report) to keep year classes of fish separated. However, all four proposed farms will be operated in coordination and some measure of control over the surrounding sea space is therefore required (the proposed exclusive and preferential occupation is explained above and in section 8.2.1 of this report).
- While rotational stocking of the marine farms is proposed, with a fallow period after each harvest, over time it may be necessary to slightly adjust or move marine farms to other parts of the site depending on results of monitoring and biosecurity responses and in accordance with the proposed adaptive management processes.

The farm layout shown in Figure 6-2 and assessed in this application and the supporting technical assessments, while very close to the likely final layout, may be subject to minor adjustments. As demonstrated in the front-end engineering design report in **Appendix J**, it is feasible to install the proposed farm structures within the proposed site. However, due to the nature of the environmental conditions and the scale of the project, it is acknowledged that difficulties such as the stability of anchoring conditions in exact locations may be uncovered during detailed design and installation, that need to be addressed by shifting structures within the general areas identified for the proposed farms. The potential adjustment of farm positions through detailed design or installation will be managed by way of proposed condition 1029. Farms may also need to be shifted within the proposed site as part of the proposed adaptive management regime (see further details in section 10.1 and 12). This will be managed by way of proposed condition 8330.

## 6.3.2 Sea pens

### 6.3.2.1 General design

Sea conditions at the proposed site require sea pens that can withstand both the strong currents that run through Te Ara a Kiwa and the wind and wave conditions that can occur at the site. Existing inshore salmon farming in New Zealand typically uses rectangular steel frameworks for net pens, constructed either as a fixed steel grid, or as a hinged flexible steel platform at the surface, with nets suspended beneath the frame. Both systems are too rigid to withstand the sea conditions at the proposed site.

NTS is therefore proposing to use 168 m circumference circular pens for the marine farms at the proposed site, such as those produced by various aquaculture suppliers including Akva Group and Scale AQ. These types of pens are currently in use in dynamic exposed coast and open coast areas such as Storm Bay in Tasmania, Australia and other parts of the world including Norway. They are also proposed for use at the Blue Endeavour open ocean salmon farm in Marlborough, New Zealand, which resource consent was granted for in 2022. While subject to a preferred supplier and detailed design being undertaken (discussed further in section 6.3.5), the pen design is described in the subsections below.

### 6.3.2.2 Above water

The structures from which the nets are suspended are constructed of high-density polyethylene (HDPE) and are black in colour. For the HAP, the use of a large diameter 630 mm HDPE pipe in the floating collars was determined to be necessary for both strength and floatation. A mix of galvanized steel or injection moulded brackets are used in the construction of brackets which tie the two floating pipes together, as shown in Figure 6-3.

[29] The implications of this e.g. reasons for consent, adverse effects and management of effects have been taken into account in this application and the supporting technical assessments.
[30] As above, this has also been taken into account in this application and the supporting technical assessments, except it would require further assessment in relation to water column and seabed matters.

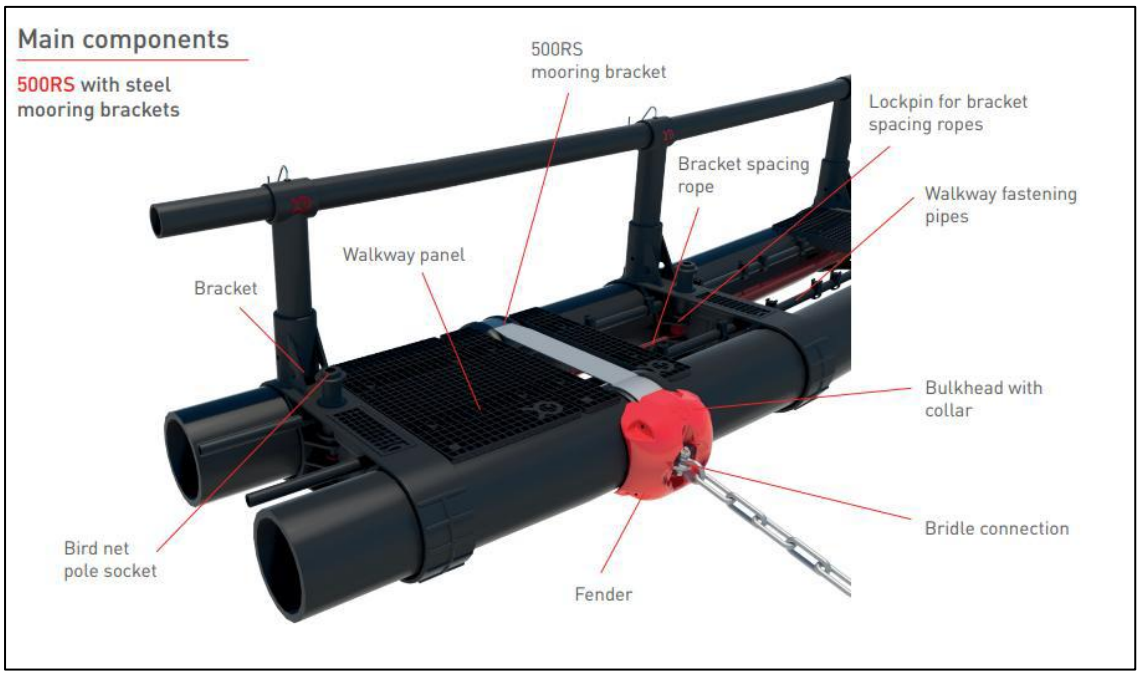


*Figure 6-3: AKVA 500RS floating collar and brackets (stanchions)*

On the floating collar structure, a vertical jump fence up to 3.5 m high assists with excluding pinnipeds (seal and sea lions) from the net pens, and a smaller jump fence keeps the salmon within the net pens. Dark-coloured bird netting with a maximum half mesh size of 60 mm will be placed over the top of the pens, attached to 5.9 m bird net poles located on the collar structure. An example of a pen with similar above water structures to that proposed is shown in Figure 6-4.

*Figure 6-4*: Example of circular pen with jump fence and bird netting (Source: AKVA Polarcirkel 500R plastic pens)

#### 6.3.2.3 Below water

In general, aquaculture operators typically use either a single net system or dual system for the below water pen nets. A single net system uses one layer of netting to contain the salmon within the sea pen, as opposed to a dual net system which has an inner net containing the salmon and an outer net which acts as a predator barrier and a secondary containment. For the HAP, a single net system is proposed for the below water nets.

For the single net system, NTS is proposing the use of predator resistant materials (for example semi-rigid or core stiffened or heavy monofilament nets) with a maximum half mesh size of 40 mm. This

mesh size has been specifically selected based on expert feedback to reduce risk to Hoiho as well as other diving seabirds, sharks and marine mammals.

The physical characteristics of the net material provide effective predator exclusion and greater resistance to predatory attacks, as well as effective escape prevention to contain the fish. Each net would also have a 'false' bottom separated from the outer net or a mortality collection system that would hold/contain dead fish away from access to marine species swimming underneath the nets. A diagram of a pen and the below water net similar to that proposed is shown in Figure 6-5.

Nets will be suspended from the floating collars in the water column to a maximum depth of 22 m below the sea surface. However, a minimum 5 m clearance will be kept between the bottom of the pen and the seabed. This means that in some instances the net depth will be less than 22 m. As with the above water bird netting, the below water netting is proposed to be dark coloured.

Submerged artificial lighting is used in marine farming of salmon to delay the maturation of the fish. For sea pens of the size proposed by NTS, current advice from marine farming structure providers is that up to eight 680 watt LED lights would be required for each pen. Lights are generally installed at a depth of approximately 3-7 m below the water surface and designed to direct light downwards to the maximum extent possible.

Studies at New Zealand King Salmon's Kopāua salmon farm in Pelorus Sound[31] (which has six 640 watt LED lights installed in each pen) found the illuminated footprint of each light was approximately 3 m wide, with measurable light confined to within the pens and a 'slight glow' visible from 10 m beyond the pens. Light levels were too low at the surface to be measured by a light meter, both within the pen and at a distance of 10 m away from the pen.

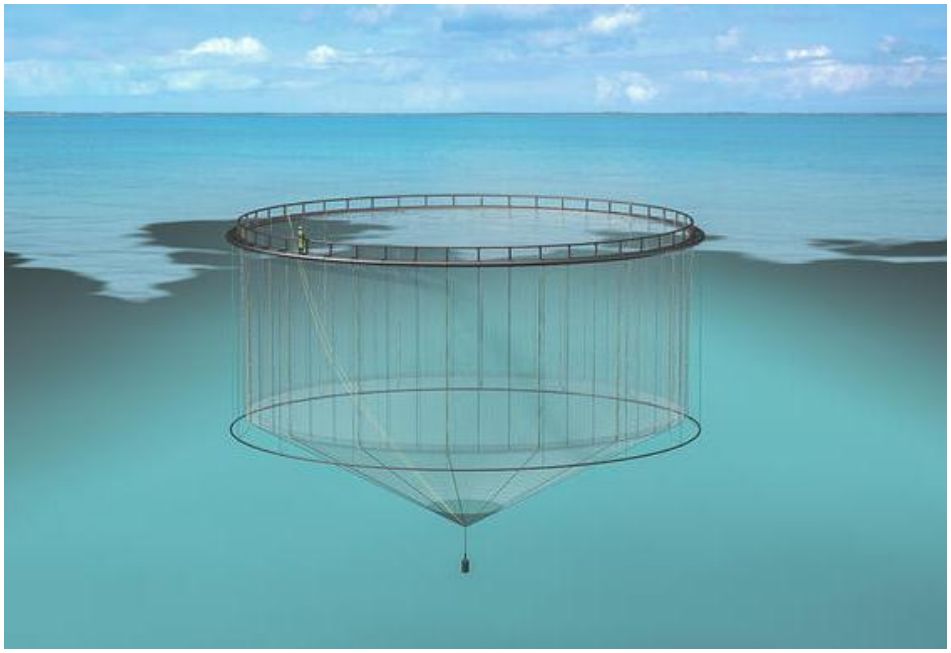

*Figure 6-5: Net pen general diagram (Source: AKVA)*

[31] Bennett H, Cornelisen C 2018. Effects of underwater lighting on the marine environment at the Kopaua salmon farm. Prepared for New Zealand King Salmon Co. Ltd. Cawthron Report No. 3149

### 6.3.3 Feed barges/vessels

There will be one feed barge associated with each proposed marine farm, moored equidistant between the two blocks of sea pens at each farm.

Various aquaculture suppliers can provide barges suitable for the environmental conditions at the site, including Southern Ocean Solutions FB450 and customized barges, Scale AQ Nova and Aasguard, and Akva AC 600 PV. The latter was used for the front-end engineering design report contained in **Appendix J**. All of the barges may be used for onsite accommodation and would have on board staff amenities, control rooms, workshop and maintenance facilities, and mortality processing (ensilage systems) and storage. Both salmon mortalities and human sewage generated on board would be retained and removed to shore for disposal following biosecurity guidance.[32]

Feed barges provide feed to each sea pen by feed blowers that blow feed/pellets through floating pipes to a rotor spreader that distributes feed throughout the pen. Real-time camera monitoring of the water column within the pens allows the feeding response to be monitored, and feed provision adjusted to minimise wastage.

Other temporary service barges and other work vessels will be on site from time to time for restocking supplies, delivering smolt and harvesting. Small service vessels will be operating around the barge and will be berthing beside the barge. These smaller vessels will be used to transport staff around the farm, service the farm and clean pens. These vessels will operate up to 5-7 days per week between 5-12 hours per day.

Transportation of smolt to site will be via regionally based or externally sourced well-boat. Dead hull harvest vessels will be used each week to transport the salmon back for processing. A service vessel will also be used to deliver feed and other supplies to the farm. These vessels will typically operate each week and will generally only be at the farm site for a few hours per day (and typically during daylight hours).

A net cleaning vessel will also be used and will be working up to 7 days a week cleaning nets.

### 6.3.4 Sea pen and feed barge anchoring systems

Te Ara a Kiwa would be one of the most exposed sites in which salmon farming has been undertaken to date in New Zealand. As well as selecting sea pens that will withstand the sea and weather conditions at the proposed site, it has been necessary for NTS to investigate how sea pens and feed barges would be anchored to the seabed, in order to ensure that they will remain in place through the worst-case conditions anticipated at the site. Indicative mooring designs are included in the front-end engineering design report contained in **Appendix J**. In summary, the indicative mooring system will comprise of the following, noting that there may be refinements following detailed engineering design:

- 2500 kg dual shank anchors with concrete block or steel sinkers are likely to be required,
- 26 mooring lines and anchors are required for each block of sea pens
- Grid lines, bridles and buoy lines are also required to hold the sea pens in configuration. The mooring grid consists of a combination of anchor chain and mooring line, rising to a node plate on the mooring line grid for the pens. Each of the net pens is then connected to the mooring grid at the node plates. Node plates are connected to each other by grid lines. Each node plate

[32] Note that this answers a query from manawhenua contained in the CIA.

is maintained in position in the water column by compensator buoys on the sea surface, attached to the node plate by buoy lines (see Sheet 3 of DSA Ltd drawings in **Appendix J**)

- Feed barges will be moored using 8 anchor chains, connected to 2500 kg dual shank anchors.

Some minor disturbance of the seabed is likely to occur as part of the installation of the anchoring systems, although any disturbance will be temporary in nature and restricted to the immediate area of each anchor and anchor block (where required). Sensitive biogenic habitat will be avoided in the installation of the anchoring system.

### 6.3.5 Structural integrity

The front-end engineering design report in **Appendix J** was undertaken to inform the conceptual design of the pen, mooring and anchoring systems described above and evaluate the structural integrity of the marine farming structures. Metocean conditions (bathymetry, wave conditions, wind conditions, currents and tidal range) were examined. Mooring analyses were carried out to verify the feasibility of securing both grids and feed barges under extreme environmental loading (based on 1-in-10 and 1-in-50-year return period wind, wave, and current conditions) and tsunami-related load cases of tsunami wave amplitude of 2.6 m (a 500 year return period event) and an associated current surge of 1.43 m/s. Norwegian, Scottish and international design standards were also used to develop the proposed conceptual design. The analysis and conclusions relate to the proposed site, as opposed to exact marine farm locations within the site (and so would still be applicable to any future changes to the marine farm locations within the proposed site). This assessment also responds to queries by manawhenua through the CIA about the structural stability of the net pens and from fishing industry representatives. Detailed design and final specifications of the farm systems will still need to be undertaken, and proposed condition 11 is relevant to this design process.

### 6.3.6 Aids to navigation

As a result of recommendations contained in the navigational risk assessment (discussed in section 10.6 of this report) aids to navigation will be installed around the proposed site as shown in Figure 6-6. Subject to feedback from the ES Harbour Master under proposed condition 12, the following aids to navigation are proposed:

- A northern cardinal mark on the northern corner of the proposed site, with a range of 6 nautical miles.
- An eastern cardinal mark outside the proposed site, midway between the line connecting the north-eastern most and south-easternmost corners of the proposed site, with a range of 3 nautical miles.
- A southern cardinal mark at Newton Rock which is close to the southern corner of the proposed site, with a range of 3 nautical miles.
- A western cardinal mark at the western corner of the proposed site, with a range of 3 nautical miles.
- Special marks on the four corners of each farm, of which two at each farm will be lit.

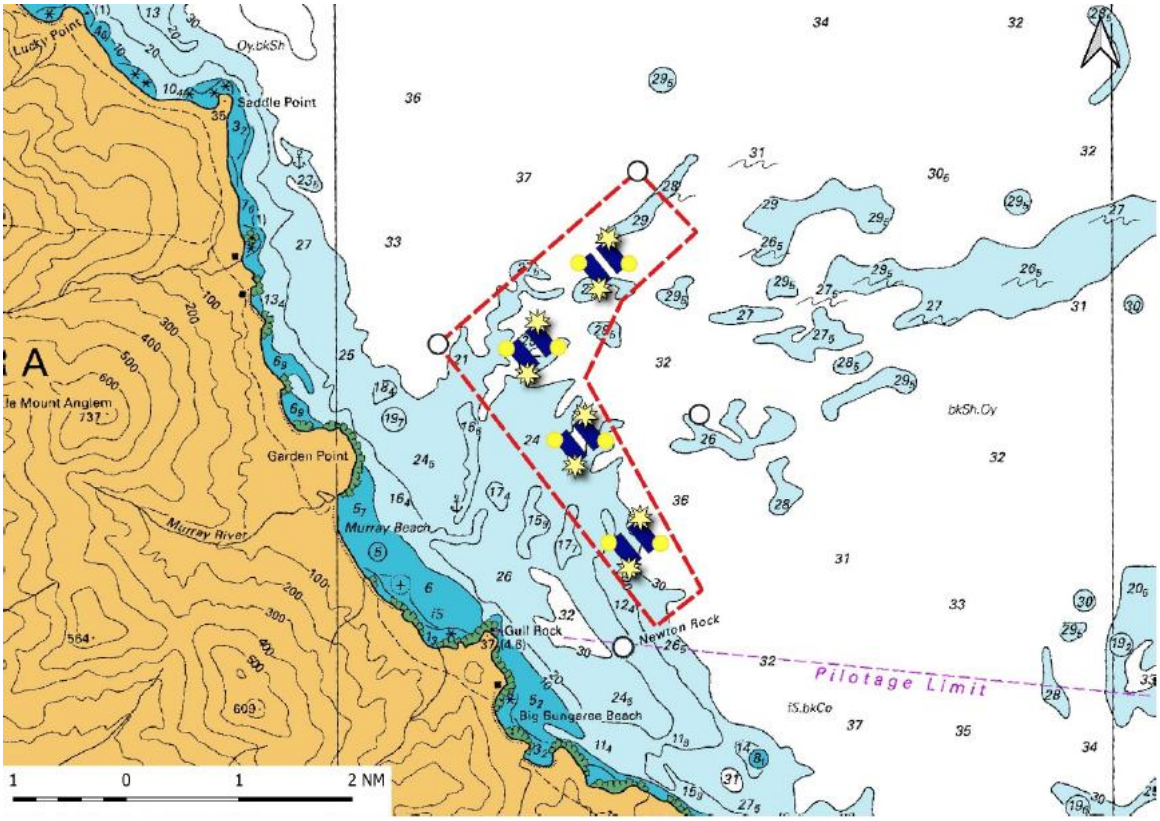


*Figure 6-6: Proposed aids to navigation marks for the HAP site. Star denotes lit special marks, white circles are cardinal marks, yellow circles are unlit special marks. (Source: Navigational Risk Assessment, Navigatus, 2025)*

## 6.4 Proposed marine farming activities

Aside from the occupation of the CMA by structures, the principal activity involved in marine finfish aquaculture is the stocking of net pens and the feeding of the penned fish.

NTS is proposing single year class farming at each proposed marine farm. Single year class farming involves the introduction of a single generation (year-class) of fish to a marine farm and their growth from smolt to harvest weight, followed by a fallowing period before restocking of the farm.33 While acknowledging that each marine farm exists within a conjoined hydrodynamic region, many salmon farming regions internationally recognise this issue, and accept that single year class stocking on separate farms is an acceptable solution. NTS will implement other primary measures including scheduled fallowing, and prescribed stocking windows together with supplementary biosecurity controls (as explained further in section 10.4 of this report). The comprehensive nature of the biosecurity and fish health management regimes is therefore designed to make up for this lack of separation/ conjoined hydrodynamic region to as great a degree as possible.

Smolt are introduced to the sea and grown in the net pens up to a harvest weight of approximately 4.5-5 kg. Fish are fed a diet of extruded feed pellets, typically made up of 25% oil and 38% protein (derived

[33] This approach contrasts with much of the current New Zealand finfish aquaculture industry, where new generations of fish are regularly introduced to a farm (resulting in multiple year classes on any one farm) in order to maintain harvest supply throughout the year.

from fish meal, land animal proteins and vegetable proteins) with the balance being carbohydrate and vitamins and minerals. Feed is stored on the feed barges and conveyed to the pens using an airflow system (blowers) run from the barges.

As well as the single year class farming NTS is proposing to stock the marine farms in a rotational order. The general intent is that across the site, farms will be at different phases of production, when one marine farm is at peak feed discharge and nearing harvest, one farm will be at mid growth cycle and nearing/at grading, one will have just had smolt introduced and one will be fallow. This approach ensures that the peak effects of the HAP will be reduced and that opportunity is provided for the environment to recover from the effects of each farm during fallow periods. This will also enable an effective monitoring programme to be undertaken and for adaptations to be made as necessary on an ongoing basis (as discussed further in section 12 of this report).

Marine farming typically involves measures to deal with fish mortalities (deaths of individual organisms, from a variety of causes, are not uncommon in all types of marine farming). Mortalities will be removed from the pen as soon as practically possible after detection, for biosecurity reasons and to minimise attraction of predators such as seals, sea lions and sharks. This frequency is ideally daily, but where that is not possible (for example because of weather conditions, farm maintenance and health and safety requirements for marine farm staff) the frequency of removal will be no less than twice a week.

To ensure an adequate flow of water through the pens, nets will be cleaned in-situ to remove biofouling. Net cleaning will be carried out as frequently as required to maintain the water quality in the pens and minimise biofouling. In-water cleaning to minimise biofouling on the pens, feed barges and mooring structures will also be undertaken on a regular basis.

### 6.4.1 Staged development of the proposed site

As well as adopting a single year class farming approach, NTS is proposing a staged development for the project, both to allow trialling of equipment and locations for marine farming structures within the proposed site, and to allow for gradual development and monitoring of environmental effects on the seabed and water column from the discharge of feed.

Two stages are proposed, as follows.

- Stage 1 – one 10 sea pen block will be installed at each proposed marine farm, and stocked with smolt in the rotational order described above. During stage 1, feed discharges across the four farms will be a combined total of 15,000 tonnes per annum.
- Stage 2 – following completion of two full production cycles, validation of Stage 1 modelling, demonstration of compliance, and refinement of Stage 2 modelling with inputs from Stage 1, a second block of 10 sea pens will be introduced at each of the four farms. Overall, the combined total feed discharge across all four farms could rise to 25,000 tonnes per annum (the proposed maximum). Ongoing monitoring will occur to ensure environmental effects remain within compliance limits, with management actions refined and implemented if compliance limits are exceeded.

As noted above, progression to Stage 2 will be dependent on the monitoring results from Stage 1, and effects remaining within thresholds under the adaptive management regime. It is proposed that a minimum of two full production cycles will be completed across all four farms before NTS will consider moving to Stage 2.

The proposed approach to adaptive management is described in detail in section 12.4 of this report. The assessment of effects contained in Part 3 of this application (and supported by technical reports) has been undertaken on the basis of this staged development proposal.

It is anticipated that at Stage 2, full production will achieve an estimated harvestable yield of 14,400 tonnes of fish per year.

## 6.5 Key refinements to the proposal

A number of refinements have been made to the HAP since lodgement of the application under the CRFTCA and in response to issues raised in that previous process. These are summarised in Table 6-1 below. It has been particularly important to NTS that the views of NTKM have shaped refinements to the proposal.

*Table 6-1: Summary of key changes to the HAP in relation to proposed activities*

| Updated HAP Aspects | Proposal Details | |
|---|---|---|
| | **CRFTCA Proposal** | **FTAA Proposal** |
| Distance from shore | 1.5 – 6 km offshore | 2 – 6 km offshore |
| Total area | 2,500 ha | 1,285 ha |
| Area of exclusive occupation | 460 ha | 460 ha |
| Number of farms | 4 | 4 but in different positions |
| Number of fixed barges | One per marine farm, except for the southeast marine farm (South A and South B) which can have a maximum of two barges. | One per marine farm |
| Blocks of sea pens (per farm) | 2 | 2 |
| Sea pens (per farm) | 10 | 10 |
| Stocking | Single year class rotational basis | Single year class rotational basis |
| Staging | 4 | 2 |
| Total feed discharge at stage 1 | 10,000 tonnes per annum | 15,000 tonnes per annum |
| Total feed discharge at full production | 25,000 tonnes per annum | 25,000 tonnes per annum |
| Net system | Single or dual (i.e. with a separate outer predator net) | Single |
| Net depth | Up to 22 m | Up to 22 m. However, a minimum 5 m clearance will be kept between the bottom of the pen and the seabed. This means that in some instances the net depth will be less than 22 m. |
| Under water net mesh size | No larger than 45 millimetres half mesh (knot to knot) | No larger than 40 millimetres half mesh (knot to knot) |
| Above water bird net mesh size | Equal to or less than 60 millimetres half mesh (knot to knot) | Equal to or less than 60 millimetres half mesh (knot to knot) |

# 6.6 Other activities

Clause (1)(e) of Schedule 5 of the FTAA requires a consent application to include ‘a description of any other activities that are part of the proposal to which the consent application relates’. The proposal to which the consent application relates is described in sections 6.1 - 6.5 above. There are no other activities that are part of the proposal to which the consent application relates.

# 7 Previous applications summary

For projects listed in Schedule 2 of the FTAA, the following information about previous applications for the same activities is required (see Sections 43(2) and 13(4) of the FTAA):

*s13(4)(u)* *whether any activities that are involved in the project, or are substantially the same as those involved in the project, have been the subject of an application or a decision under a specified Act and,-*

*(i)* *if an application has been made, details of the application:*

*(ii)* *if a decision has been made, the outcome of the decision and the reasons for it*

*specified Act* is defined in Section 4 of the FTAA as an exclusive list of legislation. The only specified Act under which an application for activities associated with this project has been made is the RMA.

On 11 December 2019 an application for resource consents for what was then known as the Te Ara a Kiwa Aquaculture project was lodged by NTS with ES. The details of that application are outlined in Table 7-1. The application was supported by twelve technical reports and three draft marine species management plans.

*Table 7-1: Details of previous application under RMA*

| Key detail | Summary |
|---|---|
| Location | Te Ara a Kiwa, 13 km north-west of Oban. Site located between 1.5 km and 6 km offshore |
| Site area | 2,500 hectares |
| Number of marine farms | Seven:<br>• 1 broodstock farm (used for rearing and holding breeding stock until their transfer to a land based hatchery for egg and milt retrieval)<br>• 2 smolt farms (used to grow smolt from a size of between 25-100 g to an average weight of 1.5 kg)<br>• 4 grow-out farms (used for grow-out of fish from 1.5 kg to an average harvest weight of 4.5 kg) |
| Type and number of pens | Polar circle pens<br>• 6 x 90 m circumference pens (broodstock farm)<br>• 40 x 120 m circumference pens (smolt farms)<br>• 32 – 40 x 160-168 m circumference pens (grow-out farms) |
| Barges | Six – one for each smolt and grow-out farm |
| Ultimate feed discharge | 49,480 tonnes per annum |
| Stages | Six stages proposed, with a first stage of approximately 9,000 tonnes per annum of feed discharged |

Following acceptance of the application by ES, a Section 92 request for further information was received. In responding to that request NTS made a number of changes to the application, as outlined in Table 7-2. Updated technical assessments were provided to support that changed proposal.

*Table 7-2: Changes to RMA application*

| Key detail | Summary |
|---|---|
| Location | No change |
| Site area | No change |

| Key detail | Summary |
|---|---|
| Number of marine farms | Four:<br>• 4 grow-out farms (used for grow out of smolt to an average harvest weight of 4.5 kg), broodstock and smolt to be held on land<br>• Farms spaced out across the proposed site, over sand habitat to avoid biogenic habitat<br>• Single year class farm and rotational introduction of stock to each farm |
| Type and number of pens | Polar circle pens<br>• 32 – 40 x 160-168 m circumference pens (grow out farms) |
| Barges | Five – one for each of three farms, two for the fourth farm due to the proposed arrangement of the pens |
| Ultimate feed discharge | 25,000 tonnes per annum |
| Stages | Four stages proposed, with a first stage of approximately 10,000 tonnes per annum of feed discharged |

On 2 February 2022, NTS received notification from the Hon Stuart Nash, Minister for Economic and Regional Development (acting under delegated authority from the Minister for the Environment) that the project had become a 'referred' project under Sections 23 and 24 of the CRFTCA. At this time, the Section 92 request from ES for the application under the RMA had not been fully completed.

On 14 November 2022, NTS lodged an application for resource consent under the CRFTCA with the Environmental Protection Authority (EPA). On the same day, and prior to lodging the application with the EPA, NTS formally withdrew the application under the RMA to ES. No decision was therefore made on the project under a specified Act in the FTAA.

For completeness, the applicant notes that the application made under the CRFTCA was declined by an expert hearing panel. A series of changes have been made to the HAP since the RMA s92 version outlined in Table 7-2 above, many of which also address issued raised through the CRFTCA process. An outline of the changes from the application that was declined under the CRFTCA and the application that is the subject of this report is outlined in Table 6-1 in section 6 of this report (see section 6.5 above).

# 8 Statutory framework

## 8.1 Overview

NTS is seeking the following approvals for the project:

- Resource consents that would otherwise be applied for under the RMA (under Section 42(4)(a) of the FTAA)
- An aquaculture decision that would otherwise be made under the Fisheries Act (under Section 80 of the FTAA)
- Wildlife approvals that would otherwise be authorities applied for under the Wildlife Act (under Section 42(4)(h) of the FTAA)

The following sections set out the decision-making framework for these approvals under the FTAA.

## 8.2 Resource consents

This section is provided in accordance with Schedule 5, clause 5(3)(a) and (b) of the FTAA and provides a description of the resource consents required for the project.

### 8.2.1 Overview of activities

The activities that make up the proposal are:

- Installation of structures within the CMA – net pens, feed barges, feed lines, moorings, anchors, anchor blocks, buoys, lights and aids to navigation.
- Disturbance of the seabed associated with the installation of structures at the site, specifically the installation of anchors and anchor blocks, and through the natural movement of mooring systems on the seabed once the structures are installed.
- Occupation of the CMA by marine farming structures and navigation aids, including an area of exclusive occupation that surrounds each farm and its associated barge. This area will be measured 200 m outwards from the compensation buoys on the mooring grid and from the sides of the feed barges, leading to a total area of exclusive occupation of up to 460 ha).. All vessels are proposed to be excluded from the area of exclusive occupation unless approved by NTS, in order to manage navigational, collision, biosecurity, health and safety, structure damage and entanglement risks. Preferential occupation of the remainder of the HAP site is proposed to provide space over the term of the consent to allow space for coordinating the running of the four marine farms, to relocate marine farms if it becomes necessary to manage effects on the environment and to allow for the implementation of new technology.
- Marine farming, including the introduction of exotic fish species (chinook salmon) to the CMA, deposition of material (including waste feed, fish faeces and material from in-situ structure cleaning) on the seabed, discharge of feed to fish in sea pens, and discharges of chemicals used for decontamination, cleaning and disinfection, and therapeutants required for biosecurity management.
- Other activities associated with the activities above, including the use of barges for on-site accommodation, the use of underwater lighting and regular underwater cleaning of sea pen structures, nets, moorings, anchor blocks and feed barges, and any associated emission of noise.

## 8.2.2 Consents required

The Southland Regional Coastal Plan 2013 (the RCP) contains a specific chapter on marine farming (Chapter 15). The RCP defines marine farming as:

> *the activity of breeding, hatching, cultivation, rearing, or on-growing of fish, aquatic life, or seaweed for harvest, but does not include –*
>
> *a any such activity undertaken pursuant to regulations made under Section 91 of the Fisheries Act 1983; or*
>
> *b any such activity where fish, aquatic life, or seaweed are not within the exclusive and continuous possession or control of the holder of a marine farming permit issued under Section 67J of the Fisheries Act 1983; or*
>
> *c any such activity where the fish, aquatic life, or seaweed being farmed cannot be distinguished, or be kept separate from naturally occurring fish, aquatic life, or seaweed –*
>
> *and "to farm" has corresponding meaning which includes any operation in support of, or in preparation for, any marine farming.*

While rules in Chapter 15 cover the activity of marine farming, the various RMA defined activities that typically occur as part of marine farming are covered by rules in Chapters 7, 9,10 and 11 of the RCP. Only some of these rules apply to the proposed HAP. Notably, rules in Chapter 9 regarding occupation, and in Chapter 11 regarding structures are prefaced by the phrase 'Except as provided elsewhere in the Plan…'. The comprehensive nature of the definition of marine farming, particularly the reference to 'any operation in support of' means that the marine farming rules in Chapter 15 provide the framework for farming, structures and occupation of the CMA. Table 8-1 therefore summarises the various rules that result in consent being required for the HAP under the RCP.

*Table 8-1: RCP rules that trigger consent*

| Activity | Rule | Activity Status | Comment |
|---|---|---|---|
| **Marine farming** Marine farming in areas other than those referred to in Rules 15.1.2 – 15.1.6 | 15.1.7 | Discretionary | No permitted activity rules apply to marine farming in Southland.<br><br>Rules 15.1.2 – 15.1.6 list parts of the Southland CMA where marine farming is a prohibited activity or (in the case of the Bluff Port Zone) a non-complying activity. Areas listed in the Rules 15.1.2 – 15.1.6 are:<br>• The internal waters of the Southland region from Awarua Point to Puysegur Point (Fiordland)<br>• Marine reserves<br>• Awarua Bay, east of the Tiwai causeway<br>• Port Pegasus<br>• Lords River<br>• Paterson Inlet, except Big Glory Bay and the Salmon Farming Refuge Zone<br>• Port William from Peters Point to the eastern most extremity of the headland enclosing the northern end of Port William |

| Activity | Rule | Activity Status | Comment |
|---|---|---|---|
| | | | • Bluff Port Zone<br><br>Marine farming at the proposed site is not within any of these areas and is therefore a **discretionary** activity under Rule 15.1.7. This rule also applies to any structures required for marine farming (including any monitoring structures) and to occupation of the CMA. |
| **Introduction of exotic fauna, and indigenous fauna not of local genetic stock, into the coastal waters of Stewart Island, Fiordland and their offshore islands**<br>Except as provided for in Rules 15.1.1 to 15.1.4, the deliberate introduction of exotic fauna and indigenous fauna not sourced from the Southland region into the coastal waters of Stewart Island (as shown on Figure 5.4.3.1) and the coastal marine area of Fiordland, and offshore islands | 5.4.3.2 | Non-complying | King salmon are proposed to be farmed at the HAP site and would meet the definition of 'exotic fauna' under the RCP.<br><br>Rule 15.1.1 relates to the addition of new species to an existing marine farm, and so does not apply to the proposed activity. Rules 15.1.2 to 15.1.4 prohibit marine farming in the internal waters of Fiordland, in marine reserves, and in Awarua Bay east of the Tiwai causeway, so do not apply to the proposed site.<br><br>Introduction of salmon (as exotic fauna) to the water at the proposed HAP site is therefore a **non-complying** activity. |
| **Applying fauna health products and feeding of nutrients to vegetation and fauna**<br>The application of fauna health products and the feeding of nutrients to vegetation and fauna within the coastal marine area | 7.3.8.1.1[34] | Discretionary | The explanation to Rule 7.3.8.1.1 provides the context that 'the feeding of nutrients' refers to marine farming where the farmed species need to be fed, as in the HAP. No permitted activities apply to the feeding of nutrients to fauna in the Southland CMA.<br><br>Rule 7.3.8.1.1 therefore applies to the discharge of feed to the net pens as part of the HAP. Rule 7.3.8.1.1 also applies for the application of therapeutants such as antibiotics, parasiticides and anaesthetics which may occur from time to time as part of the HAP[35]. A discharge permit will be required as a **discretionary** activity. |
| **Cleaning, maintaining and painting of structures within the coastal marine area** | 7.3.8.2.1 | Permitted | Regular cleaning of the sea pen structures, moorings, anchor blocks and feed barges is proposed as part of the marine farm development. |

[34] Note that as this rule applies to the activities proposed for the HAP, Rule 7.2.2 of the RCP (which relates to discharges of contaminants to Natural State waters) does not apply.
[35] As explained in the marine biosecurity assessment of effects (**Appendix Q**), there is no intention to use antibiotics if avoidable. However, in some situations, antibiotic treatments for stock may be a necessary component for managing disease outbreaks.

| Activity | Rule | Activity Status | Comment |
|---|---|---|---|
| The cleaning, maintaining and painting of structures within the coastal marine area, provided that:<br>a. No discharge of paint or abrasive blasting materials containing bioaccumulating, toxic or noxious substances enters the coastal marine area; and<br>b. No viable unwanted or pest organisms are released into the coastal marine area | | | Feed barges proposed for the project have no independent propulsion and will not be used in navigation, and therefore are not defined as 'ships' under the RCP. They are therefore considered to be structures and cleaning of them falls within this rule.<br><br>While many biofouling organisms will be rendered unviable through the destructive nature of physical cleaning processes, it is not possible to guarantee that all organisms will be killed through the cleaning process, although the proposed location of the marine farms above high energy, primarily sandy, benthos means the survival potential for any organisms that do survive the removal process is likely to be minimal on the seabed.. The high current speeds in the area also mean that it is not practical to capture all of the waste material from cleaning. Based on a conservative assessment therefore, the proposal cannot comply with condition b. of Rule 7.3.8.2.1, and cannot therefore be a permitted activity. |
| **Cleaning, maintaining and painting of structures within the coastal marine area**<br>Except as provided for by Rules 7.3.2.10 and 7.3.8.2.1, the cleaning, maintaining and painting of structures | 7.3.8.2.2 | Controlled | Rule 7.3.2.10 applies to the Bluff Port Zone and is therefore not relevant to this proposal.<br><br>As noted above, the cleaning of marine farm structures (including feed barges) cannot comply with Rule 7.3.8.2.1, and it will therefore be classified as a **controlled** activity.<br><br>The matters that Council will restrict its control to are:<br>• Methods used<br>• Action taken to avoid, remedy or mitigate the effects of any discharges<br>• Position or disposal of cleaning materials, waste or marine growths; and<br>• Any monitoring requirements that may be appropriate. |
| **Deposition of material on the seabed**<br>Except for materials described in Rules 10.2.1, 10.2.2, 10.2.6, 10.2.7 and 7.3.5.1, deposition of material on the seabed, from activities occurring in the coastal marine area | 10.2.4 | Discretionary | The introduction to section 10.2 of the RCP notes that deposition can arise from residual material from activities taking place in the CMA, including fin-fish marine farming. The deposition of material on the seabed arising from the HAP is therefore subject to rules in section 10.2 of the RCP.<br><br>The material deposited as a result of fin-fish farming is not covered by Rules 10.2.1, 10.2.2 or 7.3.5.1 and is not in Fiordland (Rules 10.2.6 and 10.2.7). Consent is therefore required as a **discretionary** activity under Rule 10.2.4. |

| Activity | Rule | Activity Status | Comment |
|---|---|---|---|
| **Navigation aids greater than two metres in height**<br>The construction of navigation aids, greater than two metres in height and their occupation in the coastal marine area | 11.7.6.2 | Discretionary | As outlined in section 6.3.6 of this report, four navigation aids are recommended for the proposed site that are not part of the actual marine farming structures. The distance from which light needs to be seen for navigational safety, and the typical wave conditions at the site, mean that each aid will need to be more than 2 m above water. Consent is therefore required as a **discretionary** activity. |
| **Moorings in other areas**<br>The placement of moorings, and their occupation of the coastal marine area in areas, other than those specified in Rules 11.7.7.1, 11.7.7.3, 11.7.7.4, 11.7.7.5 and 11.7.7.13 | 11.7.7.8 | Discretionary | Anchors, anchor blocks and moorings are a fundamental part of the marine farming structures, and so are considered to fall under Rule 15.1.7. For the sake of completeness, Rule 11.7.7.8 has been identified as applicable to the project, if the moorings are to be considered separately from the structures. |

While the core activity of marine farming has a discretionary activity status (Rule 15.1.7), taking a 'bundling' approach to all of the relevant activities, the HAP requires consent as a **non-complying** activity overall.

### 8.2.3 Permitted activities

Schedule 5, clause 5(5)(a) of the FTAA requires that if a permitted activity is part of the proposal to which the consent application relates, a description that demonstrates that the activity complies with the requirements, conditions, and permissions for the permitted activity is provided.

Table 8-2 outlines the permitted activity rules that apply to the HAP under the RCP. At this stage, no decisions have been made about land-based facilities and so any consent requirements or permitted activities have not been assessed.

*Table 8-2: Permitted activities*

| Activity | Rule | Activity Status | Comment |
|---|---|---|---|
| **Discharge of dead farmed marine organisms away from the shore and internal waters**<br>The discharge of dead farmed marine organisms into the coastal marine area where that discharge:<br>i. is not within internal waters; and<br>ii. is not within 1,000 metres of mean high water spring | 7.3.2.5 | Permitted | Rule 7.3.2.5 has been included in this table for completeness. For the HAP NTS is proposing that dead fish will be retrieved from the pens, ensiled or placed in leak proof containers, taken ashore and consigned for biosecure disposal (e.g. by rendering, landfilling or composting) in a way that prevents their return to the aquatic environment in an unsterilised form. |

| Activity | Rule | Activity Status | Comment |
|---|---|---|---|
| **Discharge of waste products of marine species from the processing of marine species at sea**<br>The discharge of waste products into the coastal marine area from the processing of marine species at sea provided that such disposal does not lead to:<br>1 floating or suspended waste; or<br>2 emission of objectionable odour; or<br>3 any conspicuous change in the colour or visual clarity of the water; or<br>4 deposition of waste on the shoreline; or<br>5 deposition of waste on the seabed in volumes that smother vegetation and fauna. | 7.3.2.8 | Permitted | Rule 7.3.2.8 has been included in this table for completeness. For the HAP, in order to avoid attracting any marine species, NTS is not proposing to discharge to the CMA any waste products that arise from fish harvesting. |
| **Hull cleaning of ships in the coastal marine area**<br>Hull cleaning of ships within the coastal marine area, provided that:<br>(a) no discharges of paint or abrasive blasting materials containing bioaccumulating, toxic or noxious substances enters the coastal marine area;<br>(b) no viable unwanted or pest organisms are released into the coastal marine area; | 7.3.8.2.3 | Permitted | The draft biosecurity management plan provided with this application (discussed in section 12.6 of this report) includes in water cleaning methods that can be used to comply with the requirements of Rule 7.3.8.2.3 for the work vessels associated with the marine farms. A variety of other options also exist for hull cleaning and NTS will make a decision about which option to use depending on the circumstances when hull cleaning is identified as being required. |
| **Erection of lights other than navigation aids**<br>The erection of lights other than navigation aids on new and existing structures…where:<br>(a) all lights on the structure and any area of occupation associated with the structure will be positioned and aimed within the occupied site away | 11.2.1 | Permitted | Apart from the navigational lighting required for each of the farms and the feed barges (see section 6.3.6 of this report for a description of these lights), some lighting of the structures may be required for health and safety purposes. If lighting is required it will be positioned and aimed as required by Rule 11.2.1, and the offshore location of the proposal means that it will not cause the light spill effects controlled by Rule 11.2.1(b).<br>Underwater lighting to control fish maturation is also proposed, but will also meet the requirements of Rule 11.2.1(a) and (b). |

| Activity | Rule | Activity Status | Comment |
|---|---|---|---|
| from residential properties and public roadways; and<br>(b) the amount of light spill (horizontal and vertical) measured at a height of 1.0 metre above ground at a horizontal distance of 2.0 metres or more inside the boundary of any property used for residential purposes shall not exceed 2.5 lux | | | |
| **Maintenance and repair**<br>Notwithstanding any rules to the contrary in the Plan, the maintenance and repair of lawful structures where materials used are of a like nature to the original…provided that:<br>i. any disturbance to the foreshore or seabed is restored to its previous state within one month of the completion of works;<br>ii. there is no change in the dimensions of the structure;<br>iii. any repainting shall be the same as the previous colour, or in a like or similar colour to the surrounding environment;<br>iv. steps are taken where practical to minimise the extent of any debris entering the coastal marine area;<br>v. the passage of fish through, or past, the structure is not prevented. | 11.4.1 | Permitted | Maintenance of the marine farm structures may be required over the term of the consent. The conditions of the permitted activity rule will be complied with, or a variation to the applicable consent sought. |
| **Reconstruction, alteration or upgrading**<br>Notwithstanding any rules to the contrary in the Plan the reconstruction, alteration or upgrading of a lawful structure…provided that: | 11.4.2 | Permitted | Reconstruction, alteration or upgrading of the marine farm structures may be required over the course of the consent. The conditions of the permitted activity rule will be complied with, or a variation to the applicable consent sought. |

| Activity | Rule | Activity Status | Comment |
|---|---|---|---|
| i. any disturbance to the foreshore or seabed is restored to its previous state immediately following the completion of works;<br>ii. there is no change in dimensions of the structure;<br>iii. any repainting shall be the same as the previous colour, or in a like or similar colour to the surrounding environment;<br>iv. steps are taken, where practical, to minimise the extent of any debris entering the coastal marine area;<br>v. the structure is not listed in Section 5.7 of this Plan;[36]<br>vi. the passage of fish through, or past, the structure is not prevented. | | | |
| **Generation of noise in the coastal marine area**<br>Excluding Rule 5.3.8, unless subject to other rules in this Plan, it is a permitted activity for any activity within the coastal marine area to generate noise provided that the following noise limits are not exceeded, at any point at the landward boundary of the coastal marine area:<br>i. between 7:00 a.m. and 10:00 p.m. the L10 shall not exceed 50 dBA;<br>ii. between 10:00 p.m. and 7:00 a.m. the following day, the L10 noise level shall not exceed 40 dBA;<br>iii. between 10:00 p.m. and 7:00 a.m. the following day, the $L_{max}$ noise level shall not exceed 70 dBA. | 5.3.4 | Permitted | NTS has not yet confirmed the equipment (for example feed delivery systems, barge generators, vessel engine) that it will use at the HAP site, which would be generators of noise.<br><br>However, noise studies of proposed salmon farm sites in the Marlborough Sounds have shown compliance with these limits with salmon farms very close to shore. The most offshore of the proposed sites that have been studied in Marlborough was proposed to be approximately 1.5 km offshore and was not predicted to result in day time noise levels greater than 25 dBA at the shoreline. For the NTS proposal the closest structure would be approximately 2 km offshore.<br><br>Compliance with the noise standards contained in the RCP is therefore expected to be achieved. |

[36] Section 5.7 of the RCP lists sites from the Historic Resources Strategy.

| Activity | Rule | Activity Status | Comment |
|---|---|---|---|
| Noise shall be measured and assessed in accordance with the provisions of NZS 6801:1991 "Measurement of Sound" and NZS 6802:1991 "Assessment of Environmental Sound". | | | |

The information requirements and the decision-making framework for the resource consents being sought as part of this application are addressed in section 13 of this report.

### 8.2.4 Lapse period and duration of consents

A lapse period of five years (Section 26(1) Schedule 5 FTAA) is sought in relation to the resource consents that are required.

A duration of 25 years is sought for the resource consents that are required for the HAP, recognising the generational management of activities that NTKM practices.

## 8.3 Aquaculture decision

The purpose of an aquaculture decision is to determine whether a proposed aquaculture activity would unduly affect commercial fishing, recreational fishing or customary fishing. Where a coastal permit for an aquaculture activity is being sought under the FTAA, the FTAA provides a process for associated aquaculture decisions to be made simultaneously (Section 80 of the FTAA). The following sections of the FTAA are relevant:

Under Section 48 of the FTAA, when the EPA provides the substantive application to the panel convener, the EPA must request that the relevant chief executive[37] make a recommendation, in accordance with clauses 14 to 16 of Schedule 5, on the aquaculture decision to be made under section 80 of the FTAA. The panel must make an aquaculture decision in accordance with clause 20 of Schedule 5.

The information requirements and the decision-making framework for the aquaculture decision being sought as part of this application are addressed in section 14 of this report.

## 8.4 Wildlife approval

A wildlife approval is defined under clause 1 of Schedule 7 of the FTAA to mean a lawful authority for an act or omission that would otherwise be an offence under any of Sections 58(1), 63(1), 63A, 64, 65(1)(f), 70G(1), 70P, and 70T(2) of the Wildlife Act.

Almost all native mammals, birds, reptiles and frogs are absolutely protected under the Wildlife Act, except marine mammals, and those species listed in Schedules 1-6 of the Wildlife Act. Species

[37] ***relevant chief executive*** *means,—*
*(a) in relation to an aquaculture decision, the chief executive as defined in section 2(1) of the Fisheries Act 1996.*
This is the chief executive of MPI.

identified in the expert reports appended to this application that interact with the HAP site, that are protected under the Wildlife Act, include:

- White sharks and basking sharks
- All birds except those listed in Schedule 5 of the Wildlife Act. This includes 50 of the 51 seabirds identified in the seabird report that are most likely to occur in the project area (it does not include the black-backed gull which is listed in Schedule 5 of the Wildlife Act).

Under s42(4)(h) of the FTAA, this substantive application seeks a wildlife approval that would otherwise be sought under Section 53 of the Wildlife Act for capture, holding, handling, releasing, disturbing and incidental killing of wildlife which may result from their entanglement and entrapment in the proposed marine farming structures. In the event of incidental entanglement or entrapment, best practice management approaches are proposed to safely handle and release wildlife to prevent injury or death. There remains a residual risk that white sharks, basking sharks and seabirds may die during or following entanglement or entrapment, and management approaches are also proposed to handle and dispose of dead wildlife.

The information requirements and the decision-making framework for the wildlife approval being sought as part of this application are addressed in section 15 of this report.

# Part 3 Assessment of Effects on the Environment

# 9 Site description

This section of this application describes the current environment largely from a biophysical perspective, but also identifies commercial activities within Te Ara a Kiwa. The values of the proposed site and its surrounding area from a Manawhenua perspective are described in detail in section 2 of this report.

## 9.1 Overall suitability for aquaculture

As noted in section 6.1 of this report, the proposed site is located off the northern coast of Rakiura at a distance of between 2 and 6 km offshore. An important consideration in choosing the site has been its suitability for aquaculture.

Opportunities for aquaculture have been considered in Southland since 2013 when ES embarked on an Aquaculture Zoning Plan. The purpose of that project was to provide 'overall strategic planning guidance for aquaculture in the Southland region by identifying areas where aquaculture may be constrained by the environment and other unique features or habitats'. Broken into a Stage 1, Stage 2 and Stage 3A, the project investigated Southland's CMA in an increasing level of detail. In Phase 1 potential opportunities and constraints for marine aquaculture throughout the region were identified. The most significant constraint identified was proximity to conservation areas, followed by exposure to heavy seas and wave action.

Phase 2 took the 'satellite' view of the region's CMA provided by the Phase 1 work and refined it further by looking at specific constraints – particularly the characteristics of the water column and wave environment, the ecological values in each area, adjacent land uses, and whether mataitai/customary areas and/or marine reserves existed in the vicinity. In total 52 separate areas of the Southland CMA were considered in Phase 2 of the project. Twenty of the areas had significant regulatory or ecological constraints identified (e.g. presence of marine reserves, marine mammal sanctuaries or nationally significant habitat) which would make it unlikely that consent could be gained to establish aquaculture in the areas, but 32 areas could be farmed if technological constraints posed by the site or water column characteristics could be addressed.

Phase 3A of the project consisted of an evaluation and ranking of locations that might be worth investigating in further detail for aquaculture proposals. The majority of the top ranked sites are located in areas where marine farming is currently prohibited, and so the report notes that further investigations of these sites would not be warranted unless the regulatory framework was adjusted.

Te Ara a Kiwa was considered as a specific area in the Phase 2 report of the Southland Aquaculture Zoning Plan. Habitat and current were identified as minor potential constraints, but the wind and wave conditions were identified as a potentially significant constraint. It is worth noting that no area investigated under the Phase 2 work was found to be completely free of constraints.

The Phase 3A (site perspective ranking evaluation) report ranked Te Ara a Kiwa as:

- high for water characteristics (temperature, salinity and depth)
- high for seabed suitability from the perspective of seabed type

- having a low-medium current speed
- likely to experience wave height greater than 1.8m (which based on the technology available at the time was not seen as a positive)
- very exposed to prevailing winds, waves and swell
- a Statutory Acknowledgement Area, with known marine mammal habitat and known significant habitat (likely the biogenic reef areas on the seabed).

Overall, Te Ara a Kiwa ranked relatively low in terms of areas worth further investigation in the Southland CMA, principally because of the potential wave height and exposure to winds, wave and swell. It is important to note that the ranking evaluation carried out under the Phase 3A report applied to Te Ara a Kiwa as a whole. Investigations completed by NTS and MPI in 2018 however showed that the wave and wind climate along the northern coast of Rakiura was not as extreme as had been assumed in the studies completed for the Southland Aquaculture Zoning Plan. This more favourable assessment was because of the effect of the northern end of Rakiura (from Saddle Point round to the Rugged Islands) providing a sheltering effect to the northern coastline of the island. These investigations addressed the major constraints identified through the Southland Aquaculture Zoning Plan, and the beneficial characteristics of the site mean that it is now seen as a very good site for major aquaculture development.

The Phase 2 report for ES's Aquaculture Zoning Plan[38] provides an outline of the environmental conditions required for salmon farming in Southland, which are reproduced in Table 9-1 below and compared to conditions measured at the proposed site.

*Table 9-1: Key environmental parameters for salmon farming*

| Factor | Southland Aquaculture Phase 2 report | | HAP site (according to the water column assessment in Appendix K) |
|---|---|---|---|
| Temperature | Minimum | >6°C | 11.4°C |
| | Maximum | <20°C | 15.1°C |
| | Optimal | 17°C | |
| Salinity | | 10 – 36 ppt | 34.5 – 35.3 ppt (average) |
| Dissolved oxygen | Minimum | >5 mg/litre | 8.1 – 9.1 mg/litre |
| Current speeds | Average lowest | 5 – 7 cm/sec | |
| | Average | | 0.56 m/sec (56 cm/sec) |
| | Highest maximum | 140 cm/sec | |
| Depth | Minimum | 20 m | 20 m |
| | Maximum | None | 40 m |
| Waves | Maximum | <3 m | |

[38] MWH, 2014: Phase 2 Aquaculture Zoning Report, prepared for Environment Southland.

The exposed nature of sites in Te Ara a Kiwa had led the Aquaculture Zoning Plan Phase 2 report to note wave height as a potentially significant constraint, and current speed as a potentially minor constraint to aquaculture. The Phase 2 report appears to have been prepared before:

- it became common knowledge through work undertaken in Marlborough that higher current speeds were better for the mitigation of adverse effects from seabed deposition of material from salmon farming, and
- technological advancements and international trends to move aquaculture into more offshore and exposed environments, and the pen, net and mooring technology that was being advanced to allow this transition also becoming common knowledge.

NTS therefore does not consider that current speeds in the area are a constraint (in contrast, they are considered to be an advantage of the proposed site over more enclosed waters around Rakiura), and this has been confirmed by the operational engineering work undertaken in the front-end engineering design report (see **Appendix J**). Based on data obtained by DSA Ltd, maximum observed significant wave heights are 3.48 m from the east and a projected 1 in 50 year significant wave height of 3.48 m in the same direction. This view of NTS is supported by the Government gazetting a 16.6 ha space for adjacent to the HAP site for aquaculture settlement (as discussed in section 3.3.4 of this report), meaning the Crown was satisfied that the area is suitable for aquaculture.

Overall, the proposed site is considered to be suitable for aquaculture using the parameters contained in the Phase 2 report for ES's Aquaculture Zoning Plan.

## 9.2 Natural State Water Classification - RCP

The RCP identifies the majority of the waters in Southland's CMA as being 'Natural State', as shown in Figure 9-1. The 'Natural State' water classification is taken from Schedule 3 of the RMA which describes it as 'water managed in its natural state' where 'the natural quality of the water shall not be altered'. Further description of the classification in Southland is provided in the explanations to various objectives and policies relating to 'Natural State', for example:

> "*Much of the coastal water within the Southland region is considered natural notwithstanding the fact that it may now contain some marine organisms that only a few years ago did not, or were thought not to, exist*" (Explanation from Objective 7.2.2.2).
>
> "*The inference is that the water is of a high quality. Much of the coastal water surrounding Southland is perceived to be of very high quality because it is largely unaffected by people's activities on the land or the sea*" (Explanation from Policy 7.2.2.2).
>
> "*It is difficult to absolutely state that any of the waters of the Southland region are as natural as they may have been 100 years ago. However, there are some waters that at this point in time are considered to be as natural as one could reasonably expect and for which there is no need to improve on the existing water quality. These waters include those where the quality of water is largely unaffected by the activities of people in nearby catchments or by the seawater flowing into an area via normal oceanographic currents. These waters have general water quality characteristics featuring low BOD (biochemical oxygen demand), nitrogen and phosphorous levels which are indicators of high water quality. For the intents and purposes of this Plan, the present state of these waters is considered to be natural and pristine*" (Explanation from Rule 7.2.2.2).

ES does not have data which enables a description of the 'Natural State' to be determined. Monitoring undertaken for the HAP provides some guidance on what the state of the waters in the vicinity of the HAP is and this is described in the following section.


*Figure 9-1: 'Natural State' water classification in the Southland Regional Coastal Plan.*

## 9.3 Metocean conditions

The following reports provide information on metocean conditions at the HAP site and in Te Ara a Kiwa:

- Water column assessment (SLR Consulting New Zealand Ltd (SLR), 2025, **Appendix K**)
- Front-end engineering design report (**Appendix J**)
- Navigational risk assessment (**Appendix L**)

Te Ara a Kiwa is approximately 80 km long. Water depths within the site range from approximately 20 to 40 m. The predominant current direction follows a northwest–southeast axis, with a mean depth-averaged current speed of 0.56 m/s. SLR notes that these current velocities are considered high relative to many coastal aquaculture sites in New Zealand and are a key factor in maintaining water quality by promoting rapid dispersion of farm-derived inputs.

Maximum wind speed at the HAP site has been observed to be 26.62 m/s from the southwest with a projected 1 in 50 year wind speed of 29.46 m/s in the same direction. Maximum significant wave heights have been observed to be 3.48 m from the east and a projected 1 in 50 year significant wave height of 3.48 m in the same direction. The tidal range at the HAP site is 2.4 m.

Temperature measurements collected during 2018/19 and 2025 surveys indicate that the water column is well mixed throughout the year. The results suggest a relatively narrow annual temperature range of approximately 11–15°C, with minimal vertical stratification.

Salinity measurements were similarly consistent across depths and sampling periods. In 2025, salinity ranged from 34.5 to 35.3 ppt, which is typical of open coastal waters with limited freshwater influence. SLR notes that the absence of significant salinity gradients between surface and bottom waters further supports the conclusion that the water column is well mixed.

SLR concludes that "*overall, the physical characteristics of the proposed farming area indicate a dynamic and well-flushed environment with strong vertical and horizontal mixing. These conditions are favourable for open-ocean aquaculture, as they minimise the potential for nutrient accumulation, oxygen depletion, and phytoplankton blooms, while supporting the rapid dispersal of farm-derived wastes*" (**Appendix K**, p.5).

## 9.4 Water quality

The water column assessment in **Appendix K** provides a description of the water quality characteristics at the proposed site. Nutrient (nitrogen and phosphorus), phytoplankton (using chlorophyll-a as a proxy), and dissolved oxygen (DO) are the key water quality parameters relevant to fish farming activities.

Baseline monitoring in 2025 recorded total nitrogen (TN) concentrations ranging from 190 to 700 µg/L (mean 405 µg/L), which SLR notes likely reflects natural upwelling and mixing processes occurring in this area. Total phosphorus (TP) concentrations ranged from 5 to 46 µg/L, and chlorophyll-a (chl-a) concentrations were typically low (0.1–1.5 µg/L), indicating low phytoplankton biomass despite the relatively high nutrient concentrations. DO concentrations were high (8.1–9.1 mg/L; 101–106%), indicating well oxygenated waters.

## 9.5 Seabed and benthic habitats

The assessment of seabed effects (Bennett et al. 2025, **Appendix M**) provides a description of the seabed at and surrounding the HAP site. This is based on the following field work:

- Sediment sampling and macrofaunal analysis using grab samples at 31 sites undertaken in October 2018 and January 2019.
- Multibeam echosounder (MBES) survey – in January and February 2022, Discovery Marine Limited, on behalf of Land Information New Zealand, undertook a multibeam seabed survey in Te Ara a Kiwa, including the HAP site and surrounds.
- Video surveys and biological ground-truthing using drop-camera and remotely operated vehicle (ROV) were undertaken in 2018 and 2019. Additional surveys were undertaken in March 2023 and April 2025 targeting sites selected based on the MBES data and areas of uncertainty from previous sampling.

As noted in Table 9-1 above, water depth at the site varies from 20 – 40 m. The bathymetry of the HAP site and surrounding seafloor is shown in Figure 9-2. The seabed forms part of the broader sandbank system and is characterised by mobile sandy habitats with elongate ridges, sand wave fields, and shallow channel-like depressions. Rocky outcrops are absent from the HAP site and the seabed appears to be primarily shaped by sediment mobility and tidal currents. Isolated rock outcrops occur at up to 2 km offshore southeast of the HAP site, and there is a broad depression northeast of Saddle Point (max. depth 57 m).

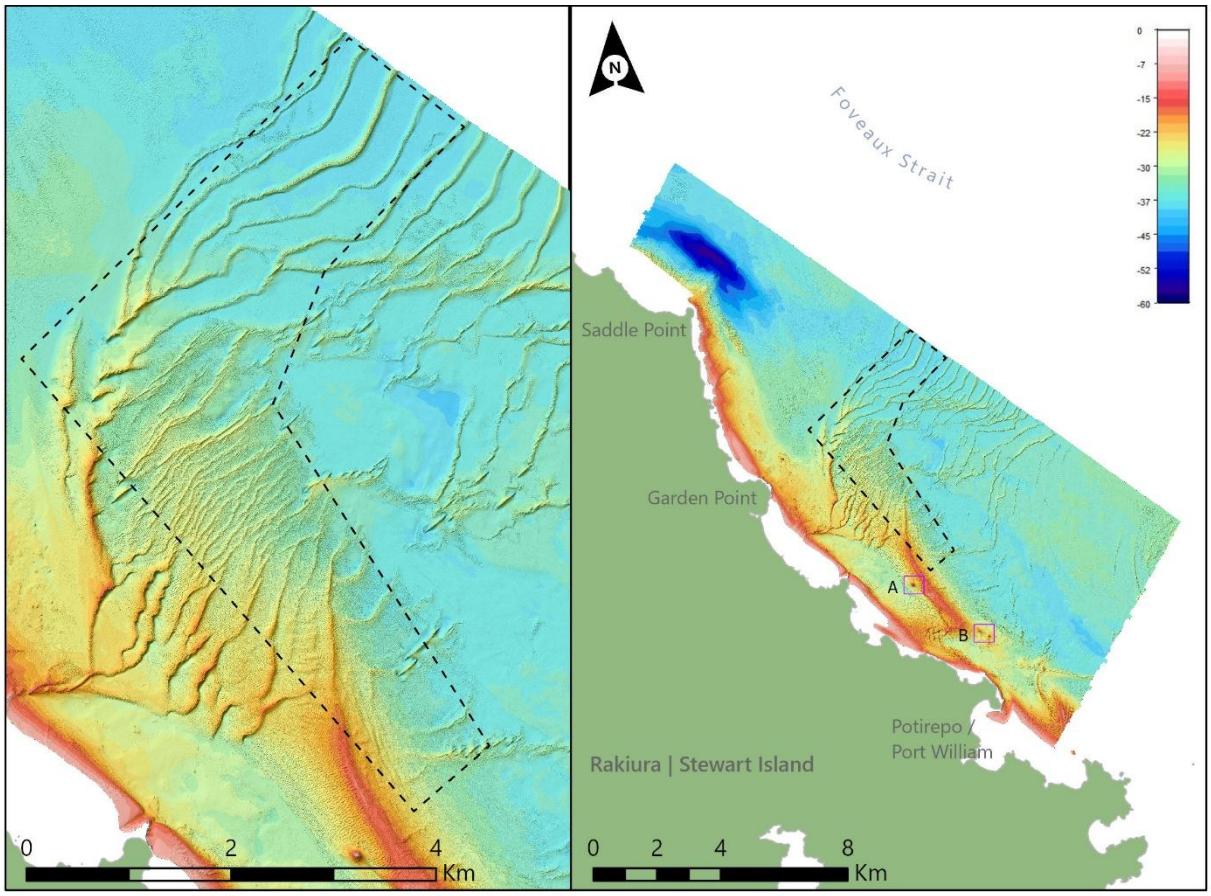


*Figure 9-2: Multibeam echosounder (MBES) bathymetry of the HAP site (dashed black line) and the surrounding seafloor. In the map extent on the right, detail A shows Newton Rock and detail B shows smaller rock outcrops surveyed by video.*

On the basis of MBES data, sediment sampling and video validation surveys, Cawthron has developed a habitat map, as shown in Figure 9-3.

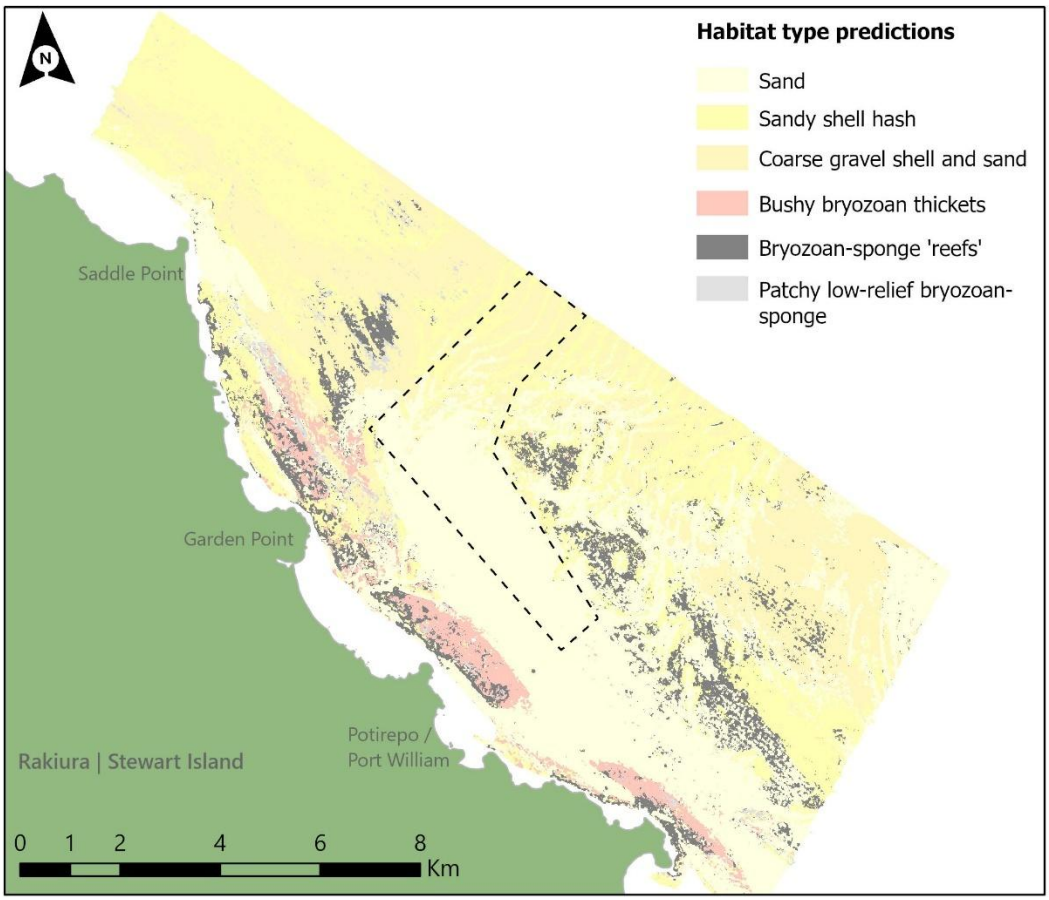


*Figure 9-3: Habitat at the HAP site (dashed black line) and surrounding seafloor.*

The seabed habitat types identified within the HAP site can be described as follows:

- Sand - covering approximately 66% of the HAP site. Some shell hash was present, mainly in the troughs of sand ripples or waves. Epifaunal assemblages were very sparse, with brittle stars occasionally observed and large bivalves very rarely. Tufts of bushy bryozoans or small patches of encrusting sponges and bryozoans were very occasionally observed on isolated shell debris
- Sandy shell hash – covering approximately 16% of the HAP site. This habitat consists of relatively flat sandy terrain with moderate to high amounts of shell hash. Tufts of bushy bryozoans or small patches of encrusting sponges and bryozoans were occasionally observed on shell debris. Epifaunal abundance and diversity was marginally higher than in pure sand habitats.
- Coarse gravel and sand – covering approximately 18% of the HAP site. This habitat features a mix of coarse sediments, including gravel, shell debris, and cobbles, with very occasional isolated patches of biogenic structure such as bushy and erect bryozoans and sponges.

Habitat modelling predicted trace amounts of biogenic habitat within the proposal area (<0.1%); however, these were assessed as modelling artefacts, shell fragments, or isolated biogenic clumps with limited ecological significance, essentially artefactual flecks within a sand-dominated substrate and not representative of true biogenic habitat (see **Appendix M** for further explanation). Verified biogenic habitats (bryozoan-sponge reefs, bushy-bryozoan thickets, patchy low-relief bryozoan-sponge habitat) were absent from the HAP site.

Outside the HAP site, seabed habitat types, in addition to the above, are:

- Bushy bryozoan thickets – these thickets, primarily composed of *Orthoscuticella innominata* and associated calcareous tube worms, support high epifaunal diversity, including sponges, brachiopods, large bivalves, and fish species such as blue cod and tarakihi (*Nemadactylus macropterus*).
- Bryozoan sponge reefs – these structurally complex habitats are formed by reef-building bryozoans (e.g. *Celleporaria agglutinans*, *Cinctipora elegans*) and sponges (e.g. *Chondropsis cf. kirkii*), and host a wide range of associated fauna.
- Patchy low-relief bryozoan-sponge habitat - this habitat consists of sparse, low-profile assemblages of sponges and small frame-building bryozoans, interspersed with areas of coarse gravel, shell, and sand, and supporting low densities of visible benthic fauna. Compared to more structurally complex bryozoan-sponge reefs, these low-relief habitats exhibit markedly lower biodiversity and habitat complexity.

A full summary of the conspicuous biota observed within the HAP site is contained in Table 1 of Bennett et al. No taxa classified as Threatened or At Risk in the New Zealand Threat Classification System (NZTCS), or as Threatened in the International Union for Conservation of Nature (IUCN) Red List were observed in the HAP site or wider survey area.

Reef-building bryozoans, bushy bryozoans, large erect / encrusting sponges, fragile branching bryozoans, tube worms, brachiopods and large bivalves are identified by Bennett et al as being of particular ecological significance and known to be sensitive to anthropogenic impacts. These taxa are long-lived, slow to recover and / or provide key structural complexity. While isolated instances of these species have been found within the HAP site they do occur in greater density in the vicinity of the site.

Te Ara a Kiwa holds the well-known wild Bluff oyster fishery that has been commercially harvested by dredging for over 150 years. Field work has previously been undertaken to understand the density of oysters within the proposed site[39]. This survey found low densities of oysters and that the distribution was patchy and confined to the peripheries of the survey area.

Cawthron notes that historically Te Ara a Kiwa supported extensive biogenic reefs. However, oyster dredging over more than a century, amongst other activities such as bottom-fishing and vessel anchoring, has resulted in biogenic reefs being fragmented and substantially reduced in extent.

## 9.6 Fauna

Four reports that form part of this application provide information on larger fauna within the proposed site and the wider Te Ara a Kiwa:

- Marine mammal effects assessment (**Appendix N**)
- Seabird effects assessment (**Appendix O**)
- Shark effects assessment (**Appendix P**)
- Wild fish report (**Appendix Q**)

Section 2 of the marine mammal effects assessment (**Appendix N**) discusses the marine mammal species most likely to be affected by the proposed project. The marine mammal effects assessment uses a wide study area, stretching from West Cape on the southwestern coast of the South Island

[39] Michael, K 2020, *Hananui Aquaculture Project: the potential effects of salmon aquaculture on wild oysters (Ostrea chilensis) in Foveaux Strait*. NIWA Client Report No: 2019085WN

round to the Taieri River in Otago to characterise the marine mammals present in the area (see Figure 2 of **Appendix N**). At least 24 cetacean (whales and dolphins) and four pinniped (seals and sea lions) species have been recorded within this area. Species more common to the HAP include seals (NZ fur seals, leopard seals), NZ sea lions, 5 species of dolphin (Hector's, bottlenose, dusky, common dolphins and orca) and 7 species of whales (Southern right whales/tohorā, humpback, sei, blue, pilot, sperm and beaked whales). From this group, the species that are more likely to be affected by the proposed project are identified as New Zealand fur seal, New Zealand sea lion, bottlenose dolphins, southern right and humpback whales and orca.

Section 3 of the seabird effects assessment (**Appendix O**) describes the seabirds likely to be found in the waters surrounding northern Rakiura and the nearby coastlines. A total of 51 bird species have been recorded in the area or are considered likely to occur there, including four species of penguin (yellow-eyed penguin/hoiho, little penguin/kororā, Fiordland crested penguin/tawaki and Snares crested penguin), 35 species of albatross and petrels, White-fronted tern, Australasian gannet, five shag species, two species of gull and two species of shorebirds. Key species are identified in section 4 of the seabird effects assessment (**Appendix O**) based on the potential for effects on them as a result of the proposed activities. Fourteen species of seabirds are identified as key species for consideration, either because they exhibit diving behaviour (leading to the greatest risk of effects), have local breeding populations and are listed as *At Risk* or have local shoreline breeding populations that could be susceptible to disturbance.

The shark effects assessment (**Appendix P**) notes that the two shark species most likely to interact with marine farms in Te Ara a Kiwa are white shark (*Carcharodon carcharias*) and the broadnose sevengill shark (*Notorynchus cepedianus*). The report notes that: *'White sharks are present at Stewart Island/Rakiura from late summer to early winter, but they are largely absent during the rest of the year. Sevengill sharks occur throughout New Zealand coastal waters and are abundant around Stewart Island/Rakiura and Te Ara a Kiwa/Foveaux Strait, except in winter when their numbers decline substantially'*. The proposed site overlaps with white shark habitat, and a major white shark aggregation site is located 10 km away at the Tītī Islands. A further 26 species of sharks and their relatives have been recorded in the Te Ara a Kiwa area, but for the reasons outlined in the shark effects assessment are considered unlikely to interact with the proposed marine farms and so have not been considered further.

Table 9-2 contains a list of the marine mammal, seabird and shark species that have been considered as most relevant to the proposal in the assessments above. It also provides the threat/conservation status for each species according to the NZTCS[40] and the IUCN Red List of Threatened Species[41]. Classifications range from Not Threatened to Threatened – Nationally Critical (under the NZTCS) and Critically Endangered (under the ICUN Red List).

The wild fish report (**Appendix Q**) notes that upwards of 125 finfish species are likely to be present in Te Ara a Kiwa – 21 pelagic species, 52 reef/rocky bottom species, 20 reef/rocky bottom triplefin species, 28 benthic/demersal species and 4 elasmobranchs other than sharks. Adult finfish species expected to be found in the area include blue cod, brill, butterfish, leatherjacket, sole, red gurnard, rough skate, sand flounder, turbot, spiny dogfish and elephant fish. As discussed in section 9.7 below, a number of these species are impacted by the commercial fisheries operating within Te Ara a Kiwa. Oysters, paua, kina, mussels, scallops and rock lobster are also found in Te Ara a Kiwa. The following wild freshwater fish species which have been identified as potentially being present in Te Ara a Kiwa (as

[40] https://www.doc.govt.nz/about-us/science-publications/conservation-publications/nz-threat-classification-system/
[41] https://www.iucnredlist.org/

all three of these freshwater species spend their larval stages in the marine environment) are listed as threatened or at risk on the NZTCS or threatened on the ICUN Red List:

- Shortjaw kokopu (Threatened – Nationally Vulnerable on the NZTCS, Endangered on the ICUN Red List)
- Giant kokopu (At Risk – Declining on the NZTCS, Vulnerable on the ICUN Red List)
- Long fin eel (At Risk – Declining on the NZTCS, Endangered on the ICUN Red List).

*Table 9-2: Threat status of fauna species most relevant to the proposal. Species' conservation threat status is listed for both the NZTCS and the IUCN Red List.*

| Common name | Species name | NZTCS classification | IUCN Red List classification |
|---|---|---|---|
| **Marine mammals** | | | |
| **Residents** | | | |
| New Zealand fur seal | *Arctocephalus forsteri* | Not Threatened | Least Concern |
| New Zealand sea lion | *Phocarctos hookeri* | Nationally Endangered | Endangered |
| Hector's dolphin | *Cephalorhynchus hectori hectori* | Nationally Vulnerable | Endangered |
| Bottlenose dolphin | *Tursiops truncatus* | Nationally Vulnerable | Least Concern |
| **Potential offshore species** | | | |
| Long-finned pilot whale | *Globicephala melas* | Not Threatened | Least Concern |
| Sperm whale | *Physeter macrocephalus* | At-Risk - Declining | Vulnerable |
| Beaked whales | *Ziphiidae spp. (7 species)* | Data Deficient to Not Threatened | Data Deficient to Least Concern |
| **Migrants** | | | |
| Southern right whale | *Eubalaena australis* | Nationally Increasing | Least Concern |
| Humpback whale | *Megaptera novaeangliae* | Migrant | Endangered |
| **Visitors** | | | |
| Dusky dolphin | *Lagenorhynchus obscurus* | Not Threatened | Data Deficient |
| Common dolphin | *Delphinus delphis* | Not Threatened | Least Concern |
| Leopard seal | *Hydrurga leptonyx* | Migrant | Least Concern |
| Orca (killer whale) | *Orcinus orca* | Nationally Critical | Data Deficient |
| Sei whale | *Balaenoptera borealis* | Not Threatened | Not Threatened to Data Deficient |
| Blue whale | *Balaenoptera musculus brevicauda & B. m. intermedia* | Nationally Vulnerable to Migrant | Critically Endangered to Data Deficient |
| **Seabirds** | | | |
| **Penguins** | | | |
| Hoiho | *Megadyptes antipodes* | Threatened – Nationally Endangered | Endangered |
| Southern little penguin | *Eudyptula minor* | At Risk - Declining | Least Concern |
| Fiordland crested penguin | *Eudyptes pachyrhynchus* | At Risk - Declining | Near Threatened |
| **Petrels** | | | |
| Tītī / Sooty shearwater | *Puffinus griseus* | At Risk - Declining | Near Threatened |
| Cook's petrel | *Pterodroma cookii* | At Risk – Relict | Vulnerable |

| Common name | Species name | NZTCS classification | IUCN Red List classification |
|---|---|---|---|
| Whenua Hou diving petrel | *Pelecanoides whenuahouensis* | Threatened – Nationally Critical | Critically Endangered |
| Southern diving petrel | *Pelecanoides urinatrix chathamensis* | At Risk – Relict | Least Concern |
| **Tern & gannet** | | | |
| White-fronted tern | *Sterna striata striata* | At Risk – Declining | Near Threatened |
| **Shag** | | | |
| Foveaux shag | *Leucocarbo stewarti* | Threatened – Nationally Vulnerable | Endangered |
| Spotted shag | *Stictocarbo punctatus* | Threatened – Nationally Vulnerable | Least Concern |
| Pied shag | *Phalacrocorax varius* | At Risk - Recovering | Least Concern |
| Little shag | *Phalacrocorax melanoleucos* | At Risk - Relict | Least Concern |
| Black shag | *Phalocrocorax carbo novaehollandiae* | At Risk - Relict | Least Concern |
| **Gulls** | | | |
| Red-billed gull | *Larus novaehollandiae* | At Risk - Declining | Least Concern |
| **Sharks** | | | |
| White shark | *Carcharodon carcharias* | Threatened | Vulnerable |
| Broadnose sevengill shark | *Notorynchus cepedianus* | Not Threatened | Vulnerable |

## 9.7 Commercial and recreational use

Commercial maritime uses in the area primarily relate to passing cruise ships and large cargo vessels arriving or departing South Port (Bluff Harbour), as well as smaller vessels undertaking activities such as fishing or transporting passengers. Commercial fishing activity within the proposed HAP site includes dredging for Bluff oysters, blue cod potting, mixed finfish set netting, occasional bottom trawling, and rock lobster potting. The site is also adjacent to coastal fisheries for pāua and kina. Recreational use of the marine area is summarised the recreation and tourism assessment (**Appendix R**) as involving relatively low levels of recreational activity including fishing, boating and diving. On Rakiura the North West Circuit track runs along the coastline in the area, and hunters accessing hunting blocks will gain access via the marine area.

The use of the marine area by commercial fisheries and the potential effects on those activities are summarised in the assessment of effects on commercial fishing (**Appendix S**).

Aquaculture activities are currently restricted to Big Glory Bay, approximately 18-20km away to the southwest adjacent to Whaka a Te Wera/Paterson Inlet.

The navigational risk assessment (**Appendix L**) describes navigational routes and vessel traffic in the area of the proposed site and the wider Te Ara a Kiwa area. Two main navigational routes exist in Te Ara a Kiwa, the transit route through the Strait (divided into a northern and southern transit route) and the route formed by vessels travelling between Rakiura and Bluff (including the regular ferry service). These navigation routes are shown in Figure 9-4 below. Overall vessel movement data in Figure 9-4 is derived from Automatic Identification System (AIS) data. AIS is required to be fitted to all vessels over 500 gross tonnes and may be fitted on smaller vessels.

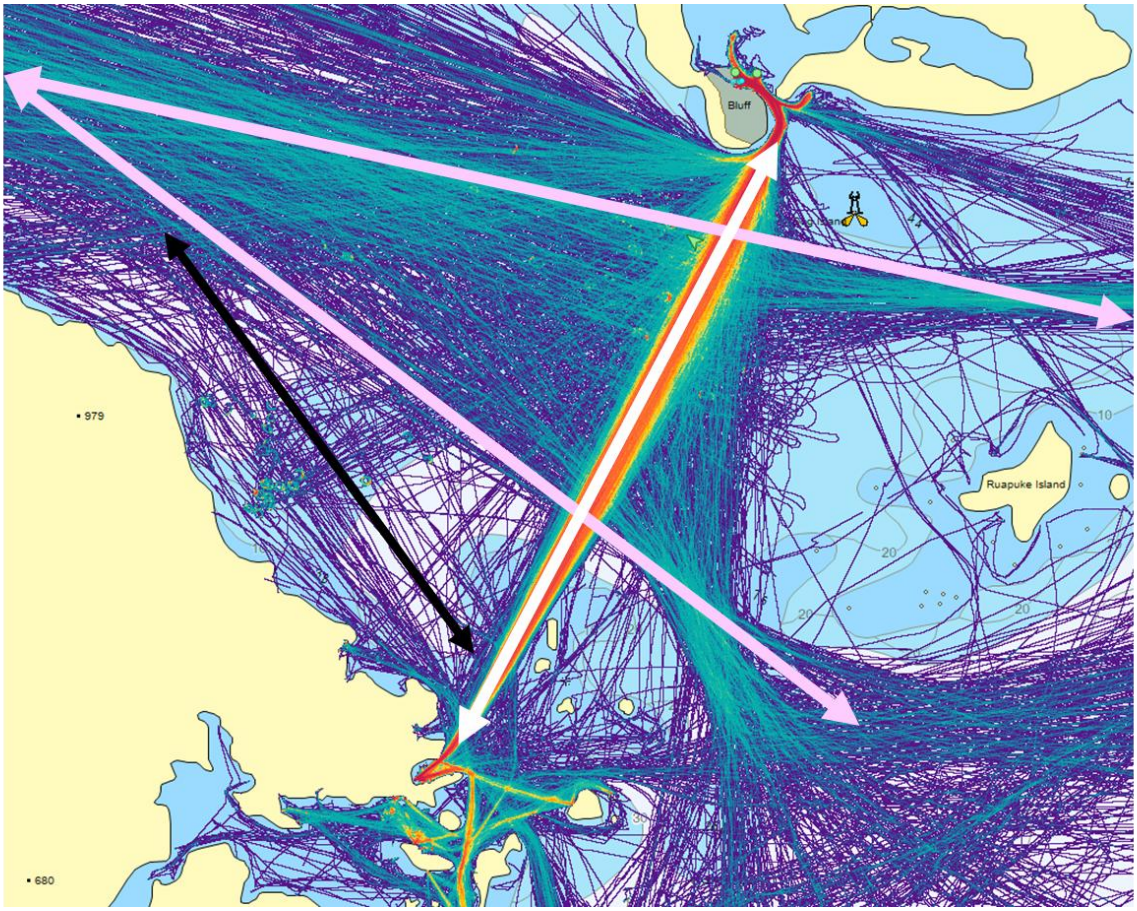


*Figure 9-4: Major navigational routes and vessel traffic in Foveaux Strait with arrows overlaid indicating navigational routes (white between ports, pink transiting Foveaux Strait, and black the inshore cruise ship route between Paterson Inlet and the West Coast) (2023)*

There are two charted anchorages in relatively close proximity to the proposed site, one south of Saddle Point and the other off Murray Beach. Vessels choosing to anchor in the vicinity of the proposed site are generally waiting to berth at South Port. While anchorages are 'charted', larger ships are not required to drop anchor at these precise points and may, dependent on sea and wind conditions, choose to anchor further out or along the coast. AIS data available for 2024 shows the general locations where large ships have anchored in the vicinity of the proposed site (see Figure 9-5). The navigational risk assessment states that '*18 different vessels (16 cargo ships and 2 tankers) anchored off the north-eastern coastline of Stewart Island in 2024, 6 of these vessels anchored within the proposed Project area. These vessels anchored in the area a combined 24 times with no more than two vessels ever anchoring in the area at the same time. The duration of these anchorages ranged from approximately 5 hours 30 minutes to 264 hours (11 days)'.*

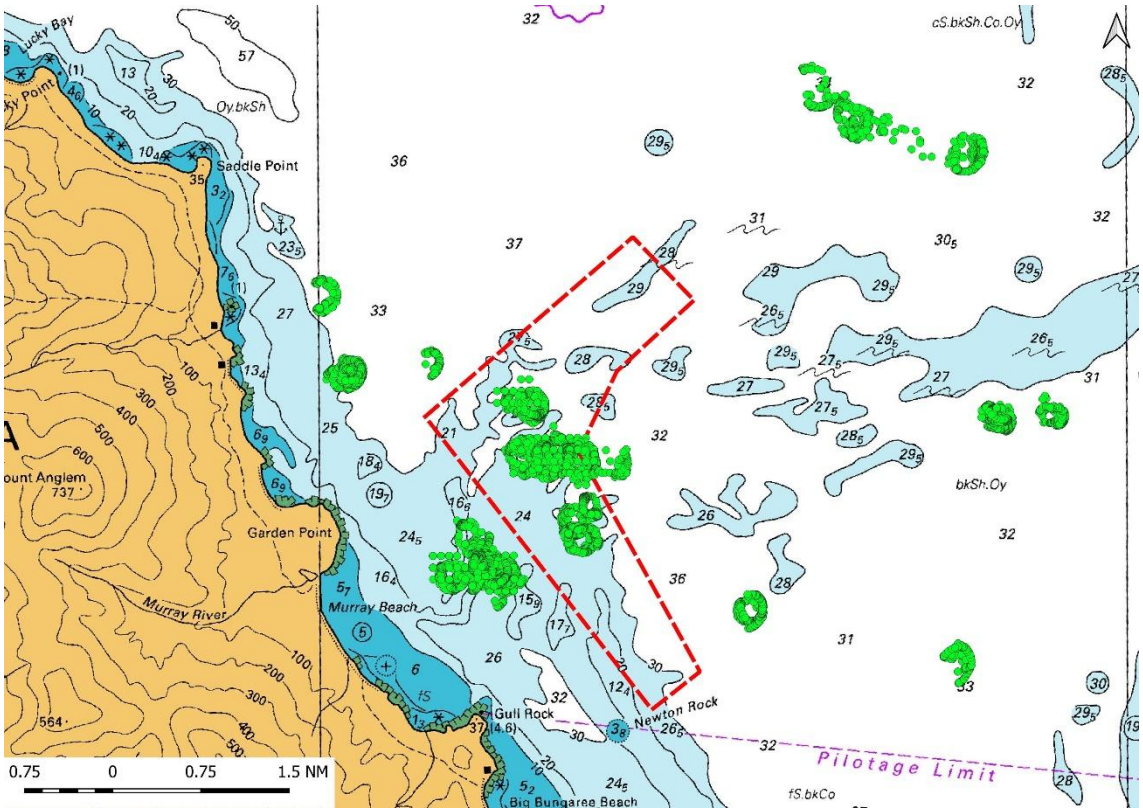


*Figure 9-5: AIS data for anchorage occurrences in and near the proposed marine farming area in 2024*

## 9.8 Natural character, landscape and amenity values

The natural character, landscape and visual assessment (Isthmus 2025, **Appendix T**) describes natural character, landscape and visual amenity values at three scales, being Te Ara a Kiwa, the northern coastline of Rakiura (referred to as the 'site catchment') and the HAP site. Isthmus explains that the site catchment is the most relevant scale for understanding values and the effects on them in the context of the HAP.

### 9.8.1 Natural character values

Te Ara a Kiwa is abundant in marine fish, mammals and avifauna that are mobile and move through the area. The seafloor habitat types include sandy seafloor conditions and limited biogenic habitat. The water column attributes are healthy and benefit from the strong currents through the Strait. Cargo, fishing, passenger and recreational vessels, particularly around Bluff, Oban, Big Glory Bay and passing through the Strait offer a sense of commercial and recreational activity in contrast to the remoteness across most of Rakiura.

The site catchment and the HAP site itself is a subset of the open coastal waters of Te Ara a Kiwa. The same attributes described above in relation to Te Ara a Kiwa are also present at the site catchment scale and at the HAP site scale, albeit that the seafloor at the site is predominantly sand (avoiding biogenic habitat present elsewhere in Te Ara a Kiwa) and the area is favoured for cargo vessel mooring and passage and various fishing activities and efforts.

Overall, the natural character values of the site catchment (the northern coastline of Rakiura) are assessed by Isthmus to be high.

### 9.8.2 Landscape values

Isthmus describes landscape values of the site catchment as comprising physical aspects, perceptual aspects and associative aspects, which are summarised as follows:

Physical aspects

- The enclosing coastline and landforms of Rakiura.
- Dense mixed indigenous coastal forest.
- The Northwest Circuit walking track and associated huts.
- The local waters of Te Ara a Kiwa and its strong tidal currents.
- The marine mammal, wild fish, avifauna, benthic and water column biodiversity.
- Charted anchorages, and localised commercial and recreational marine traffic.

Perceptual aspects

- The remoteness of the open water strait and the means by which visitors access and visit the waters and the northern coast of Rakiura.
- The perceived increasing remoteness of the Northwest Circuit walking track and well-spaced huts along the northern coastline.
- The contrasting perceptions of the commercial shipping and fishing vessels and activities on the sheltered waters of Te Ara a Kiwa.
- The distinctive landform profile when viewed from vessels on the waters of Te Ara a Kiwa or from aircraft travelling south in the direction of Rakiura.
- Views to and from Rakiura and Te Ara a Kiwa are of broad landscape and seascape patterns that have a high level of legibility and coherence, other than when interrupted by the commercial shipping and fishing vessels and activity.

Associative aspects

- Te Taurapa o te Waka – the sternpost of the waka – Southern Te Waipounamu.
- Te Puka a Maui – Rakiura (Stewart Island) is often referred to as the anchor stone of Maui's canoe.
- The site catchment is part of Te Ara a Kiwa - Kiwa is a whale that traversed the Pacific Ocean (Te Moananui a Kiwa) connecting all peoples to this place.
- The site catchment is strongly associated with traditional and contemporary fishing practices, particularly for Ngāi Tahu.
- The Rakiura tourism experience is relatively remote, with limited access by passenger and commercial vessels and small aircraft, along with very limited tourism infrastructure outside of Oban.

Overall, the landscape values of the site catchment (the northern coastline of Rakiura) are assessed by Isthmus to be very high (including the heightened inshore and terrestrial values).

### 9.8.3 Amenity values

Amenity values are defined in Section 2 of the RMA as:

'Those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence and cultural and recreational attributes.'

In terms of the proposed site and its surrounding environment, Isthmus notes that there are many variables that can influence the visibility and potential visual effects of a marine farm, including weather and sea conditions, the colour of the components of the marine farm, the look of the structures, the angle of view and elevation of the viewpoint, backdrop and distance of the viewer.

### 9.8.4 Nearby areas of outstanding natural features and landscapes and outstanding natural character

The Rakiura terrestrial environment is identified as an outstanding natural landscape in the Southland District Plan (refer to introduction to Chapter NOSZ – Natural Open Spaces Zone (Fiordland/ Rakiura Zone). Rakiura, defined as "the entire island and its surrounding islets with the exception of the modified area of Oban and Halfmoon Bay" is also identified as an outstanding natural landscape in the RCP (refer to Policy 5.2.1).

Studies have been undertaken in 2019 as part of district and regional plan reviews, which are still underway, which have sought to better define outstanding natural landscapes and features and areas of outstanding natural character in Southland. These include the:

- Stewart Island/Rakiura Landscape and Coastal Natural Character Study 2019 (RLCNS)
- Boffa Miskell Southland/Murihiku Regional Landscape Assessment 2019 (SMRLA)
- Southland/Murihiku Regional Coastal Environment Study – Coastal Natural Character Assessment 2019 (SMRCES)

These studies assessed that Rakiura and its coastline have outstanding natural landscape values and outstanding natural character values. Isthmus interprets from these studies that a 2 km offshore buffer would provide an appropriate offset from the identified outstanding natural landscape and outstanding natural character values.

## 9.9 Existing activities in the area - permitted baseline

Under clause (1) (b) of Schedule 5 to the FTAA, the panel is required to take into account the provisions of Part 6 of the RMA. Section 104 (2) of Part 6 of the RMA directs that when forming an opinion with respect to the actual and potential environmental effects of an activity, a consent authority may disregard an adverse effect if a national environmental standard or a plan permits an activity with that effect. This consideration is generally known as the 'permitted baseline'.

While a number of permitted activities are contained within the RCP none of them permit activities that have sufficiently similar effects to the proposed activities for the HAP to justify being included as part of a disregarded 'permitted baseline'.

Activities that ES has not considered it necessary to manage in the RCP for Southland are also relevant. Under Section 30(1)(d) of the RMA, ES is responsible for controlling land (the foreshore and seabed) and activities in relation to the surface of water in the CMA. Vessel movements and anchoring

(with the exception of fishing vessels) can be controlled by regional councils, and ES prohibits the anchoring of vessels in some locations in Southland (under Rules 11.7.7.7, 11.7.7.12 and 11.7.7.13). Vessel anchoring is not controlled by the RCP within the proposed HAP site and can cause effects beyond the initial deployment of the anchor, particularly if the seabed is disturbed by anchor chain if a vessel is anchored for some time. The seabed (including biogenic habitat such as bryozoan sponge reefs and bushy bryozoan thickets) in the area are therefore potentially subject to disturbance events, caused by vessel anchoring, between 15 – 24 times per year based on vessel anchoring data from 2017 – 2019 and 2024. Effects of the proposed marine farming activity on biogenic habitat therefore need to be assessed against the existing permitted level of disturbance to that type of habitat within the area.

Effects of the presence of the marine farms in the proposed HAP on the occupation of coastal space by anchored vessels (i.e. anchored vessels being located further along or offshore than currently) also fall within this permitted baseline and so have not been considered further in this report.

The proposed HAP site and the wider Te Ara a Kiwa is subject to extensive commercial and recreational fishing activities, including both bottom trawling and oyster dredging. The seabed (including biogenic habitat such as bryozoan sponge reefs and bushy bryozoan thickets) is therefore subject to disturbance by fishing methods every year.

# 10 Assessment of effects

In accordance with Schedule 5 (clause 5(4), clause 6 and clause 7) and Schedule 7 (clause 2(1)(j)), of the FTAA this section provides an assessment of the actual and potential environmental effects associated with the HAP.

The relevant actual and potential environmental effects, as summarised in the following sub-sections of this report, are considered to be:

- Seabed effects,
- Water column effects,
- Effects on marine life, being:
    - Marine mammals,
    - Seabirds,
    - Sharks, and
    - Wild fish,
- Biosecurity and disease risk effects,
- Effects on natural character, landscape and visual amenity,
- Effects on navigation,
- Effects on commercial fisheries,
- Effects on recreation and tourism,
- Noise effects, and
- Effects from waste materials and hazardous substances.

Manawhenua perspectives on the effects of the HAP have been expressed through direct engagement and documented in both the CVA and CIA (**Appendix E**) and Ngā Hua o Āpiti Hono Tatai Hono (**Appendix D**), across previous iterations of the HAP.

NTKM were consulted on which cultural reports, from their perspective, should be recommissioned or updated. NTKM confirmed they were comfortable with the proposed changes to HAP under the FTAA and requested that only the format of Ngā Hua o Āpiti Hono Tatai Hono be updated to reflect current practice but no change to the underlying analysis. Key manawhenua perspectives on effects are summarised in the following subsections.

## 10.1 Seabed effects

The assessment of seabed effects (Bennett et al. 2025, **Appendix M**) assesses the effects of the proposed activity on the seabed within the proposed site, considering the effects of fish faeces and uneaten food on the seafloor sediment chemistry and biological communities, and effects that can occur as a result of the installation and ongoing presence of the sea pen structures.

The assessment draws on comprehensive depositional modelling undertaken for the area, baseline data collected at and around the HAP site, and relevant literature.

### 10.1.1 Effects from deposition of organic material

The deposition of farmed fish faeces and uneaten feed can lead to over-enrichment of seabed sediments. Microbial decomposition of this organic material can alter sediment chemistry and benthic ecology. The magnitude and spatial extent of these seabed effects depend on multiple interrelated factors. These include farm operational factors such as stocking density, feed type and delivery system and feed monitoring, and pen design. They also include environmental factors such as water depth, current velocity, seabed topography and benthic conditions In dispersive, coarse-sediment environments like at the HAP site, the coarse sandy sediments across the proposal area are well oxygenated, which may facilitates the decomposition of farm wastes. While organic matter is expected to be readily resuspended and widely dispersed, producing a broader but less intense footprint of effects, than at sheltered inshore sites.

Bennett et al. undertook depositional modelling to estimate the intensity and spatial extent of organic material on the seabed from the HAP. Modelling was done for the Stage 1 (initial development of one block of 10 pens at each of the four farm sites, based on an annual feed input of 16,000 tonnes, a 7% overestimate of the proposed maximum annual feed input of 15,000 tonnes), and Stage 2 (full development of two blocks of 10 pens at each of the four farm sites based on an annual feed input of 27,000 tonnes, an 8% overestimate of the proposed maximum annual feed input of 25,000 tonnes)) scenarios. Improvements were made to the modelling from what was done for the HAP application made under the CRFTCA to more accurately represent the physical processes that determine solid waste deposition, increasing confidence in predictions (as outlined in Table 6 of Bennett et al. reproduced in Table 10-1). Layers of conservatism have also been applied to the modelling approach such as using conservative decay rates, modelling slightly higher feed inputs than that proposed, as noted above, and using more conservative values to define the depositional footprint of measurable effects than typically used at other salmon farms in New Zealand. As a result, effects are more likely to be overestimated than underestimated by the modelling.

*Table 10-1: Table 6 of the assessment of seabed effects reproduced: Summary of key differences made to the depositional modelling approach since the last application and their implications.*

| Updated modelling | Previous modelling | Implications |
|---|---|---|
| Model duration of 24 months. | Model duration of 6 weeks. | Modelling for a longer duration incorporates a greater range of ocean conditions into model predictions to create more robust statistics and depositional footprint estimates. |
| Feed inputs to farms vary over time to mimic intended operating conditions. | Farms modelled with constant feed input at peak feed. | Using more realistic feed inputs leads to more realistic estimates in solid waste. New modelling includes effects from feed loading prior to peak feed periods, and feed cessation during harvest and fallow periods. |
| Model outputs based on 3-month average around operational peaks. No model outputs produced during initial 3-month spin-up period. | Model outputs based on 2-week averages at peak feed, with 4-week spin-up period. | Using a longer averaging period around peak feed periods captures more variability in ocean conditions and waste distribution.<br>Allowing the model to spin up for the first 3 months leads to more accurate calculations of waste. |
| Three classes of faecal particles modelled with different sinking rates. | One class of faecal particles modelled using a single mean sinking rate. | Improved resolution of the near-field footprint through inclusion of fast-sinking particles and improved resolution of the far-field footprint through inclusion of slow-sinking fine particles. |

| Updated modelling | Previous modelling | Implications |
|---|---|---|
| Inclusion of variable bed roughness in hydrodynamic model and resuspension dynamics. | Uniform bed roughness assumed based on soft sediment habitat. | Inclusion of variable bed roughness based on benthic habitat provides a more realistic representation of near-seabed currents variability and resuspension dynamics. |

Despite the conservative modelling and assumptions (combined with a relatively precautionary development pathway involving staged expansion, staggered stocking and fallowing), monitoring and adaptive management is proposed to address residual uncertainty that remains for seabed effects from the HAP. The proposed monitoring and adaptive management approach is explained in more detail in section 12 of this report.

In determining seabed effects, Bennett et al. defined three zones:

- Zone of maximum effect (ZME) – this is based on the initial deposition of material and does not account for resuspension of material (the solids flux metric). The solids flux metric has traditionally been used to determine seabed effects at low-flow sites in New Zealand. At the peak feed input for Stage 1, the modelling showed:
    - A footprint receiving a high level of deposition (>5 kg/m$^2$/yr) extending up to 150 m from the pen edges across sandy seabed habitats.
    - A footprint receiving a level of deposition >0.5 kg/m$^2$/yr (noting that this is half the established threshold for 'measurable effects', being 1 kg/m$^2$/yr) extending up to 680 m from the pen edges across sandy seabed habitats

  At the peak feed input for Stage 2, the modelling showed:
    - A footprint receiving a high level of deposition (>5 kg/m$^2$/yr) extending up to 250 m from the pen edges across sandy seabed habitats.
    - A footprint receiving a level of deposition >0.5 kg/m$^2$/yr (noting that this is half the established threshold for 'measurable effects', being 1 kg/m$^2$/yr) extending up to 680 m from the pen edges
- Primary footprint – this footprint factors in secondary transport of waste particles via resuspension (the residual solids metric). Residual solids is a more realistic metric for determining deposition at high-flow sites such as the HAP site. At the peak feed input for both stages, the primary footprint based on residual solids largely remained within the HAP site and did not overlap with mapped biogenic habitats.
- Outer limit of effects (OLE) - intended to represent the maximum spatial extent at which farm-related effects might be detectable and is based on 0.7 g/m$^2$ which is an order of magnitude lower than thresholds associated with moderate enrichment of soft sediment sites elsewhere. At peak feed input for Stage 1, the footprint extends beyond the HAP site but there is minimal overlap with biogenic habitats. At peak feed input for Stage 2, the OLE overlaps with some nearby bryozoan-sponge reef, low-relief habitat and bushy-bryozoan thickets.

Bennett et al. also notes that trace material may disperse at least 15 km northwest and 17 km southeast. However, at these distances, material will be diluted and assimilated, with any seabed enrichment unlikely to be distinguishable from natural variability.

Based on the modelling undertaken, the proposed operation of the HAP including fallowing, the proposed monitoring and management, and the refined understanding of existing seabed characteristics, Bennett et al. conclude the following (Table 10, pp 64 – 68):

- Aggregation of scavengers and predators will be minor in the ZME, less than minor in the primary footprint and negligible beyond this.

- Alteration of macrofaunal communities and loss of sensitive taxa will be more than minor in the ZME, minor in the primary footprint and negligible beyond this
- Alteration of epifaunal communities will be minor in the ZME, primary footprint and the OLE.
- Potential near-bottom oxygen reduction will be minor in the ZME, nil in the primary footprint and nil beyond this.
- Nutrients resulting in increased algal growth will be less than minor in the ZME, less than minor in the primary footprint and minor in the OLE.

As above, it is noted that effects based on primary footprint are likely to be more accurate at the HAP site than effects based on the ZME.

Through the consultation that NTS had with ES (refer to section 4.1 of this report), Nigel Keeley peer reviewed the assessment of seabed effects on behalf of ES. Dr Keeley supported the approach to the modelling and assessment, and agreed with the conclusions relating to potential ecological effects resulting from the deposition of organic matter, stating that effects are more likely to have been overestimated than underestimated.

### 10.1.2 Effects from farm additives

In addition to organic enrichment effects, there is potential for seabed impacts associated with additives in feed (e.g. zinc), antifoulants (typically copper-based), and therapeutants used to treat stock (e.g. antibiotics, parasiticides, anaesthetics).

Antifouling paints, which contain copper, are now used far less in finfish aquaculture than in the past and are not proposed for nets at this site, although antifouling paints may still be used on vessel hulls as part of biosecurity management (see draft biosecurity management plan in **Appendix V**). Zinc is routinely added to fish feeds as an essential additive for fish health.

Deposition of metals generally follows the same pattern as organic material, most concentrated directly beneath pens and diminishing with distance. At the HAP site, the dispersive hydrodynamic conditions mean that excessive concentrations of copper and zinc are unlikely to accumulate, although they may persist in sediments and be resuspended and dispersed in a wider area of the marine environment.

Therapeutants are currently not used to any significant extent in marine aquaculture in New Zealand. Information on their effects in local marine environments is limited. However, Bennett et al. explain that most therapeutants are water-soluble and degrade relatively rapidly, suggesting low environmental persistence. Potential risks of their use relate to impacts on non-target organisms (e.g. phytoplankton, zooplankton, sediment bacteria) and the development of resistant bacteria or parasites. Non-water-soluble compounds would be expected to disperse in a similar pattern to organic material, concentrating beneath farms. However, if accumulation of more persistent compounds such as zinc is managed effectively, effects from less persistent therapeutants are likely to be minimal.

As explained in the marine biosecurity assessment of effects (**Appendix U**), there is no intention to use antibiotics or other therapeutants at the HAP site if avoidable. Best-practice measures, including rotational use of sites, fallowing, and good husbandry, reduce the likelihood that therapeutants will be required. However, in some situations, antibiotic treatments, or other therapeutants, for stock may be a necessary component for managing disease outbreaks. Antibiotics are a last line response to bacterial infection in fish, and they are used to protect animal welfare. Where a bacterial condition is diagnosed and can be treated, there is a welfare obligation to provide whatever treatment is efficacious. NZ law

permits the prescription of antibiotics “off-label” to farmed fish. The use of anaesthetic (e.g. the fully registered AQUI-S) would also be sporadic where there is a need to examine individuals.

Any use of therapeutants as part of the HAP will be undertaken with veterinarian oversight and managed and the effects monitored according to the biosecurity management plan (draft in **Appendix V**).

Bennett et al. consider that the effects from farm additives will be minor immediately beneath the pens and negligible outside these areas.

### 10.1.3 Effects of farm structures

Shading from farm structures can reduce sunlight reaching the seabed, potentially affecting photosynthetic organisms and associated food webs. However, within the HAP site, few, if any, photosynthetic taxa are present. Bennett et al. consider that the effects from shading will be negligible.

Farm structures can create new habitat for fouling organisms, which may alter local ecological dynamics. Fouling biomass dropping from structures can change the physical and biological composition of the seabed, potentially contributing to organic enrichment through decomposition. Scavengers such as starfish and sea cucumbers may aggregate beneath farms to feed on fallen material, which could influence the composition of the benthic epifaunal community.

Farm structures will be sited over predominantly sandy habitats with varying degrees of shell and gravel. Biofouling can be effectively managed through regular monitoring and maintenance of farm infrastructure, including periodic removal of fouling organisms in accordance with the biosecurity management plan (draft in **Appendix V**). Bennett et al. consider that the effects from biofouling drop-off will be minor immediately beneath the pens and negligible outside these areas.

### 10.1.4 Effects of initial installation of structures

Disturbance from mooring installation may cause physical damage to the seabed and short-term resuspension of sediments. Both factors could affect biota in the area directly surrounding the installation area. Consequences for sensitive species include habitat destruction, smothering, sedimentation-induced reductions in feeding efficiency, and possible mortality.

At the HAP site, any organisms present at the point of installation are likely to be displaced or damaged and this may include species such as sponges, bryozoans, brachiopods and large bivalves (e.g. oysters, scallops, dog cockles and horse mussels). Bennett et al. notes that the anchor sites are in sand-dominated habitat with relatively low diversity and very patchy distribution of epibiota.

Resuspension of sediments during mooring installation is expected to be limited to areas directly around anchor sites and will only occur during the installation period and the hours or days immediately following, and is therefore unlikely to have lasting impacts on benthic communities within the area. Farm development will be carried out by experienced crew using best-practice installation methods. Additionally, strong currents will help minimise these effects by rapidly dispersing suspended sediments.

Bennett et al. consider that the effects from the mooring installation will be less than minor.

### 10.1.5 Manawhenua perspective on seabed effects

In the CIA (**Appendix E**), whānau raised the following questions regarding potential effects on the seabed:

- the spatial extent of the area affected, assuming that sea currents move material from under the pens to other areas of Te Ara a Kiwa
- where all the potential places are that organic material from the farms could be deposited
- whether there would be an 'exclusion zone' around the seabed

Management considerations under Ngā Hua o Āpiti Hono Tatai Hono to be considered by NTS include matters relating to the seabed:

- Ensure that water, ecosystem, and species connections are well understood from a Ngāi Tahu perspective, identified, and maintained; restored if broken.
- Nutrients and waste from the proposed activity do not negatively impact and build up in damaging concentrations in the immediate or surrounding area.

NTS has committed to a series of mitigation measures to address NTKM comments. NTS has kept NTKM informed and has consulted directly on the mitigation measures through the MWG. NTKM has also previously requested that NTS keep whānau advised of technology that could be used to intercept material and prevent deposition.

The results outlined in sections 10.1.1 - 10.1.4 above address the queries from manawhenua about the extent of the depositional footprint from the proposed marine farms at the HAP site. These results have been discussed with manawhenua.

In relation to high flow sites like the HAP site, there is currently no waste capture or seabed restoration technology that has been proven in these types of conditions to be effective. Waste capture or seabed restoration technology has to date only been implemented in more sheltered coastal waters, where the currents are much lower. Effects are not considered likely to be as significant at a high flow site like the HAP site because of the higher current speeds, but NTS will continue to keep up to date with developments in the field so that implementation of proven methods can be considered. NTS will continue to explore alternative options and technologies to mitigate the seabed affects associated with deposition.

## 10.2 Water column effects

The water column assessment (SLR, 2025, **Appendix K**) assesses the effects of the proposed activity on the water column in Te Ara a Kiwa in relation to nutrient effects, effects on dissolved oxygen (DO) levels, and the effects of submerged artificial lighting.

The assessment draws on comprehensive hydrodynamic and water quality modelling undertaken for the area under the Stage 1 (initial development of one block of 10 pens at each of the four farm sites, maximum annual feed input of 15,000 tonnes) and Stage 2 (full development of two blocks of 10 pens at each of the four farm sites, maximum annual feed input of 25,000 tonnes) scenarios. The assessment also draws on baseline data collected at and around the HAP site, and relevant literature.

Through the consultation that NTS had with ES (refer to section 4.1 of this report), Nigel Keeley peer reviewed the water column assessment on behalf of ES. Dr Keeley agreed with the findings about the

relative significance of the nutrient discharges from the farm in relation to the receiving environment and the potential for subsequent downstream ecological effects.

### 10.2.1 Nutrient enrichment

Farmed fish excrete dissolved inorganic nutrients, and additional nutrients (primarily nitrogen and phosphorus) are released from faecal material, uneaten feed, and through the remineralisation of organic matter deposited on the seabed. In the water column, this nutrient enrichment can affect phytoplankton growth and community composition, and promote phytoplankton blooms.

In most New Zealand coastal waters (such as Foveaux Strait), nitrogen is the primary limiting nutrient for phytoplankton growth because dissolved inorganic nitrogen (particularly nitrate and ammonium) is rapidly depleted relative to the large available pool of dissolved inorganic phosphorus. Accordingly, any increase in phytoplankton growth in response to nutrient inputs would be expected only from additional nitrogen, as phosphorus is already present in sufficient quantities and therefore does not constrain growth in these systems. As such, there is no specific discussion on the potential effects of the proposed activities on phosphorus in the water column, as it is highly unlikely that there would be any meaningful ecological response. The effects of nutrient enrichment of the proposed activities on the water column are appropriately managed by focussing on nitrogen. Phytoplankton abundance is typically measured using chlorophyll-a (chl-a) as a proxy.

The mean increase in total nitrogen (TN) concentration within 100 m of the pens is predicted to be 8.6 µg/L during Stage 1 and 9.2 µg/L during Stage 2. Short-lived maximum concentrations within 100 m of the pens are predicted to be 31.9 µg/L in Stage 1 and 28.6 µg/L in Stage 2. These peak concentrations occurred in the hour following slack tide, when water movement and mixing is at its lowest, and rapidly decline as tidal currents increase. Within the HAP site (and beyond 100 m from the pens), mean increases are predicted to be 7.7 µg/L for Stage 1 and 8.2 µg/L for Stage 2, representing an approximate 2 - 7% increase relative to the mean background concentration.

Outside the HAP site, predicted changes in TN concentrations are very low, generally less than 4 µg/L at Stage 2 (representing a 1% increase from background and being extremely difficult to distinguish from natural variability), and extend along the dominant current axis for approximately 4 km before becoming negligible. In nearby sheltered embayments, including Port William, Horseshoe Bay, and Halfmoon Bay, predicted TN increases are less than 1 µg/L, and in Patterson Inlet, less than 0.5 µg/L. SLR considers that these changes are not ecologically meaningful and are unlikely to noticeably influence phytoplankton growth or bloom dynamics in these areas.

SLR concludes that overall, the water column modelling results indicate effects of nutrient enrichment on water quality and ecological processes are considered to be low and localised within the HAP site and negligible outside of the farming area in the wider Te Ara a Kiwa.

While phytoplankton blooms are unlikely to develop within the farm area itself due to the short residence time of water and the lag required for algal cells to metabolise nutrients and reproduce, sheltered embayments are more susceptible to bloom formation. However, model predictions indicate that TN increases within these embayments as a result of farming inputs are extremely small (≤1 µg/L), which would not be expected to have a notable effect on phytoplankton growth.

Ammonia is one of the main forms of nitrogen in fish waste and at elevated concentrations, it can be toxic to aquatic organisms. SLR states that ammonia toxicity is not an issue for marine farms with appropriate stocking densities in well-flushed locations, such as Te Ara a Kiwa. Based on the predicted

maximum TN concentrations, SLR considers that there is a negligible risk of ammonia toxicity resulting from the proposed farming activities.

As recommended by SLR, an environmental monitoring plan will be developed and implemented as a condition of consent. The intent of the monitoring is to verify that nutrient concentrations, and phytoplankton responses, remain within the ranges anticipated by the modelling and analyses.

### 10.2.2 Oxygen depletion

DO concentrations near finfish farms can be reduced, primarily due to fish respiration consuming oxygen but also due to the microbial degradation of phytoplankton or waste material. For slow-moving, sessile (non-moving) or penned animals (such as the farmed salmon), which are less able to avoid or move out of areas of reduced oxygen, DO can result in sublethal effects, e.g. reductions in growth rates, swimming ability, fecundity and immune resistance, and lethal effects (mortality).

Water column modelling estimates that, on average, DO will be depleted by 0.2 mg/L near the pens with short-lived maximum depletion of up to 0.9 mg/L during slack tides. Such decreases in DO from background concentrations of 8.0 mg/L are highly unlikely to result in adverse effects occurring to the farmed fish or nearby fauna, as 5 mg/L is the threshold at which sublethal effects are typically reported to occur.

Overall, the modelling indicates that any reduction of DO will be localised to the farm blocks where the effect is considered by SLR to be low. SLR also considers that there will be no ecologically meaningful effects from oxygen depletion in the surrounding environment during either the Stage 1 or Stage 2 scenarios.

As above, monitoring of DO as part of an EMP will be undertaken to verify that DO concentrations remain within the ranges anticipated by the modelling and analyses.

### 10.2.3 Underwater lighting

Introducing artificial lighting to the marine environment has the potential to affect biological processes within and adjacent to the lit pens. Potential effects are:

- attraction of phototactic organisms, such as zooplankton and larval fish
- vertical migration and benthic settlement of organisms, and
- aggregation and visibility of prey (e.g. baitfish) and enhanced predation by wild fish and marine mammals.

The potential area affected by artificial lighting is dependent on the type of lighting used, the water clarity and the subsequent visual footprint created (i.e., the light’s horizontal and vertical extent and wavelengths produced).

The proposed lighting will include a maximum of eight 680 watt LED lights per pen at approximately 3-7 m water depth. SLR concludes that effects from the proposed submerged LED lighting are expected to be highly localised (<10 m from pens) and very low, with no measurable impact on wider ecological processes.

### 10.2.4 Manawhenua perspective on water column effects

In the CIA (**Appendix E**), whānau raised the following questions regarding potential effects on the water column:

- Is nutrient enrichment going to be a concern
- Is there a risk of algal blooms
- What contaminants could impact the water quality.

Management considerations under Ngā Hua o Āpiti Hono Tatai Hono to be considered by NTS include matters relating to the water column and underwater lighting:

- The geographical characteristics of the seascape must be understood and worked within. This includes tidal movements, sounds of natural processes (e.g. tide moving rocks), wayfinders/route markers, ocean beds, etc.
- Ensure that water, ecosystem, and species connections are well understood from a Ngāi Tahu perspective, identified, and maintained; restored if broken.
- Nutrients and waste from the proposed activity do not negatively impact and build up in damaging concentrations the immediate or surrounding area.
- Underwater lighting does not continuously impede the movement of sea mammals nor endanger them.
- Consider what fishing, mooring, lighting, and navigation practices should be encouraged or discouraged in which areas and at what times/seasons.
- Lighting is not to detract from the night sky – navigational and safety lighting is expected but not at a concentration or lux to that of a city where the stars regularly cannot be seen.

NTS has committed to a series of mitigation measures to address NTKM comments. NTS has kept NTKM informed and has consulted directly on the mitigation measures through the MWG.

## 10.3 Effects on marine life

This section of the report provides an assessment of the potential effects on marine species such as marine mammals, seabirds, sharks and wild fish. In all cases the intent of the HAP is to avoid attraction of marine species to the marine farms in the first instance, and to avoid or mitigate any adverse effects on any species that are attracted. This approach is laid out in a series of draft management plans, which are discussed in section 12.5 of this report and appended as noted in that section.

### 10.3.1 Marine mammals

#### 10.3.1.1 Potential effects on marine mammals

The marine mammal effects assessment (Clement, 2025, **Appendix N**) assesses the potential interactions between marine farms at the proposed site and whales, dolphins, NZ fur seals and NZ sea lions. The assessment determines that the species most likely to be affected by the proposal are as follows:

- NZ fur seals (NZTCS - Not Threatened),
- NZ sea lions (NZTCS - Nationally Endangered),
- bottlenose dolphins (NZTCS - Nationally Vulnerable),

- southern right whales (NZTCS - Nationally Increasing),
- humpback whales (NZTCS - Endangered) and
- orca (NZTCS - Nationally Critical).

Clement notes that potential effects include habitat exclusion/displacement, entanglement, disturbance from underwater noise, attraction to artificial lighting and possible flow-on effects due to alteration to trophic pathways. Most marine mammals regularly range for hundreds to thousands of kilometres and Clement notes that the northern coastal waters of Rakiura represent a small fraction of habitats used by marine mammals. In addition, many of the marine mammal species are only present in Southland's coastal waters at certain times of the year, such as during breeding or migration. Due to these spatial and temporal factors, the likelihood of these effects are considered by Clement to be low to moderate. However, given that some of the possible consequences of rare events (e.g. entanglement) could have regional and / or population-level effects (i.e. injury or death of an endangered or threatened animal, in particular for NZ sea lions), avoidance and mitigation measures are warranted.

The proposed farm layout and design of the farm system (in particular the single-net system using predator-resistant material, and the jump fences) are key avoidance and mitigation measures. To ensure that the most appropriate avoidance and mitigation measures are in place, a marine mammal management plan (MMMP) has been developed (draft in **Appendix W**). This includes several suggested best management practices and a comprehensive monitoring programme. Best management practices will be to:

1. Minimise the attraction of marine wildlife to farms, for example by minimising feed wastage, collecting and disposing of farmed fish mortalities and minimising noise and lighting.
2. Minimise entanglement, , for example by keeping ropes and nets under tension, using predator-resistant net material, implementing a net inspection regime, and recording all entanglements.

The monitoring programme will document and quantify marine mammal presence and subsequent interactions (or lack of) with the farms. The programme will allow an understanding to be built up of marine mammal presence around the site and, at the same time, monitor how that presence as well as interactions / incidents change over time to inform whether management and avoidance and mitigation actions should be updated.

Based on the implementation of the MMMP, Clement considers that the adverse effects on marine mammals will be less than minor.

#### 10.3.1.2 Manawhenua perspective on effects on marine mammals

With the presence of new infrastructure that brings lighting and noise to the CMA, whānau expressed concern that the passage of whales through Te Ara a Kiwa could be disrupted and noted that not all whales eco-locate to locate obstacles. NTKM also noted that seals and sea lions are taonga species and raised the risk of entanglement if seals and sea lions were attracted to the marine farms as a new food source.

In the CIA, whānau suggested that the MMMP should cover:

- A disentanglement protocol in the unlikely event that there is an entanglement
- Any operational mitigation procedures that will need to be reviewed for effectiveness during operations
- Determine timelines for any subsequent reporting requirements.

NTKM noted that a range of best management practices exist to help reduce the risk of entanglements and other adverse effects and has requested a role in monitoring and reporting in relation to marine mammals.

Management considerations under Ngā Hua o Āpiti Hono Tatai Hono to be considered by NTS include matters relating to marine mammals:

- Ensure that water, ecosystem, and species connections are well understood from a Ngāi Tahu perspective, identified, and maintained; restored if broken.
- Underwater lighting does not continuously impede the movement of sea mammals nor endanger them.

The draft MMMP addresses the matters identified as important by manawhenua, with a particular focus on reducing the risk of entanglement to the smallest it can practically be. NTS has kept NTKM informed and has consulted directly on the avoidance and mitigation measures through the MWG.

## 10.3.2 Seabirds

### 10.3.2.1 Potential effects on seabirds

The seabird effects assessment (BlueGreen Ecology Limited 2025, **Appendix O**) investigates the potential effects on key seabird species that occur in the area of the proposed project. Fourteen of the 51 species either recorded or potentially occurring in close proximity to the HAP site have been identified as key species in terms of potentially being impacted by the proposed HAP. The key species assessed are as follows:

- yellow-eyed penguin (hoiho) (NZTCS - Threatened – Nationally Endangered)
- Southern little penguin (kororā) (NZTCS - At Risk – Declining)
- Fiordland crested penguin (NZTCS - At Risk – Declining)
- sooty shearwater (tītī) (NZTCS - At Risk – Declining)
- Cook's petrel (NZTCS - At Risk – Relict)
- Whenua Hou diving petrel (NZTCS - Whenua Hou are Threatened – Nationally Critical)
- Southern diving petrel (NZTCS - At Risk – Relict)
- White-fronted tern (NZTCS - At Risk – Declining)
- Foveaux shag (kawau) (NZTCS - Threatened – Nationally Vulnerable)
- spotted shag (pārekareka) (NZTCS - Threatened – Nationally Vulnerable)
- pied shag (kāruhiruhi) (NZTCS - At Risk – Recovering)
- little shag (kawaupaka) (NZTCS - At Risk – Relict)
- black shag (NZTCS - At Risk – Relict), and
- red-billed gull (tarapunga) (NZTCS - At Risk – Declining).

BlueGreen Ecology considers that the risks to sea birds from the proposed project include entanglement, habitat exclusion, changes to food supply, disturbance, marine litter, attraction to lights and vessel/propeller strike. Benefits include the provision of roosting sites close to foraging areas. Potential benefits and effects are assessed by BlueGreen Ecology using the EIANZ assessment methodology (Roper-Lindsay et al. 2018). This methodology uses different terminology to the RMA when describing the level of potential effects. For the purposes of this section of the report it has been

confirmed with BlueGreen Ecology that in the context of this project a very low or low potential effect would be considered to be less than minor under the RMA, and a moderate effect would be considered to potentially be more than minor, but does not equate to a significant adverse effect (Leigh Bull pers. comm.).

For most key species, BlueGreen Ecology considers the potential adverse effects to be low to very low taking into account the recommended avoidance and mitigation measures, the exceptions being:

- a potential moderate level of effect on Foveaux shag and spotted shag from entanglement,
- a potential moderate level of effect on Whenua Hou diving petrel from attraction to the artificial lighting.

Key avoidance and mitigation measures that are recommended, which NTS will implement are:

- Using predator resistant underwater net material with appropriate mesh size (less than 40 mm, which is primarily informed by head width measurements taken from six hoiho specimens held at Te Papa which ranged from 47.2-53.9 mm), and top nets with a mesh size of no more than 60 mm42, along with good management of nets (e.g. keeping nets taut and well maintained) to reduce the chances of birds becoming entangled.
- Minimising lighting, including underwater lighting, particularly skyward illumination.
- Preparation and implementation of a Waste Management Plan to ensure waste material and debris are collected and disposed of correctly.
- Implementing a Seabird Management Plan (SBMP) (see draft in **Appendix X**) along with monitoring and reporting of negative seabird interactions.

The draft SBMP (**Appendix X**) includes:

a) a monitoring programme with procedures for recording and reporting seabird presence in the vicinity of farm structures;
b) a framework for mitigation and management actions and techniques to minimise seabird interactions and incidents with farm structures;
c) measures to record and respond to seabird interactions/incidents with farm structures;
d) procedures for the implementation of the SBMP, including training of staff;
e) a management review process that has the flexibility to accommodate future advances in infrastructure and other developments in line with the evolution of the science behind best management practices for management of seabird interactions and incidents with marine farms.

Based on the implementation of the SBMP, BlueGreen Ecology considers that the adverse effects on seabirds will be low to very low, except for a potential moderate level of effect on Foveaux shag and spotted shag from entanglement, and a potential moderate level of effect on Whenua Hou diving petrel from attraction to the artificial lighting.

Effects on seabirds, particularly due to entanglement, have been a primary concern for DOC. Through the consultation that NTS had with DOC in relation to seabirds (refer to section 4.1 of this report), key avoidance and mitigation measures such as net mesh size were considered in detail.

[42] At this stage, a 60 mm mesh size is considered to be acceptable for minimising the risk of entanglement, while balancing engineering and operational factors. It is acknowledged that smaller mesh sizes would reduce the risk of entanglement even further. NTS intends on refining and optimising the above water net design over time (including by potentially reducing the mesh size) based on the proposed monitoring.

#### 10.3.2.2 Manawhenua perspective on effects on seabirds

In the CIA (**Appendix E**), whānau note that a range of seabirds found in and around Rakiura are taonga species, and that from the perspective of Ngāi Tahu all taonga bird species are to be protected. Whānau were concerned about the effects of construction in relation to:

- Noise
- Lighting
- Increased presence of predators
- Increased vehicle traffic
- Disruptions at key times e.g. the risks of birds leaving the nests during nest time
- Debris and rubbish entering the marine environment.

Whānau also noted the immense value of tītī. A comprehensive baseline survey of bird populations was requested before construction of the marine farms commences. The MWG also questioned the vulnerability of tītī fledging when they first leave the islands and their potential vulnerability to risk associated with HAP.

Management considerations under Ngā Hua o Āpiti Hono Tatai Hono to be considered by NTS include matters relating to seabirds:

- Ensure that water, ecosystem, and species connections are well understood from a Ngāi Tahu perspective, identified, and maintained; restored if broken.
- Materials (e.g. nets) and structures do not restrict or hamper the movement of seabirds through the space.

Section 10.3.2.1 above has addressed the effects of concern identified by manawhenua and recommended avoidance and mitigation measures to reduce the risk of adverse effects to the greatest extent practicable. As for marine mammals, NTS has commissioned a Seabird Management Plan (SBMP) (draft in **Appendix X**). The draft SBMP addresses each of the matters identified as important by manawhenua, with a particular focus on reducing the risk of entanglement or disruption to seabirds. NTS has kept NTKM informed and has consulted directly on the mitigation measures through the MWG.

### 10.3.3 Sharks

#### 10.3.3.1 Potential effects on sharks

The shark effects assessment (Finucci, 2025, see **Appendix P**) assesses the potential interactions of sharks with marine farms at the proposed site, focusing on great white shark and broadnose sevengill shark as the two species most likely to interact with the proposed site. A further 26 species of sharks and their relatives have been recorded in the Te Ara a Kiwa area. However, Finucci considers that the possibility of any shark species, other than white shark and sevengill shark, having a direct incident with the finfish farm is low or unlikely because of their small size, them being relatively uncommon in the area, or the species not being known to interact significantly with fish farms elsewhere.

Finucci explains that it is inevitable that white and sevengill sharks will be attracted to the proposed farm. White sharks are classified as Threatened under the NZTCS and Vulnerable under the IUCN Red List, while sevengill sharks are classified as Not Threatened under the NZTCS and Vulnerable under the IUCN Red List. Evidence suggests that White sharks are most likely to come into contact with the

marine farms at the proposed site in summer, autumn and early winter, and Sevengill sharks in the warmer months. However, there is currently limited evidence in New Zealand of shark and fish pen interactions.

Finucci considers that the primary adverse effect on sharks is entanglement and entrapment (fatal or non-fatal). The implementation of avoidance and mitigation measures should reduce interactions between shark species and the proposed fish farm in Te Ara a Kiwa. Key avoidance and mitigation measures that are recommended, and which NTS will implement are:

- Using predator resistant net material with appropriate mesh size to reduce the chances of sharks becoming entangled.
- Ensuring animal husbandry is of the highest possible standard to reduce fish mortality. Where mortality does occur, prompt removal of the fish from the pens to reduce predator attraction to the marine farms.

Regular net inspections, vigilance in monitoring the immediate vicinity of the marine farms for sharks and the implementation of a shark management plan are also seen as important measures to reduce risks. A draft shark management plan (SMP) has been prepared (**Appendix Y**). The SMP is designed to meet the following specific objectives:

a) Minimise shark incidents with the finfish farm;
b) Determine how the operation of the finfish farm will be managed adaptively to avoid, remedy and mitigate adverse effects on sharks;
c) Ensure best practice is adopted to avoid entanglement or entrapment of sharks, having regard to best international practice, ongoing research, and allowing for technological improvement in net design and construction;
d) Establish a monitoring programme to assess the effectiveness of the SMP;
e) Establish reporting and response procedures in the event of protected, threatened, or at-risk shark entrapment, entanglement, injury, or death. Reporting and response procedures for shark species managed under the Quota Management System are also provided.

Five species of shark and two species of ray are identified as ‘animals’ for the purpose of controlling their taking under the Wildlife Act 1953. Of the species listed, only great white shark and basking shark have been recorded in Southland (see Appendix 1 of Finucci 2025, **Appendix P**). Great white sharks have been discussed above. There is limited, if any, presence (and abundance) of basking sharks in the proposed farm locations. To date, there is only one documented record of a basking shark from the region in a report from west of Rakiura in 1976[43]. Basking sharks have not been observed in coastal New Zealand waters for over two decades; most records today are observed in offshore, deep waters (>250 m)[44]. No basking shark has ever been reported to interact with an aquaculture operation (in New Zealand or globally). Measures proposed to ensure adverse effects on basking sharks are the same as those developed for large marine mammals, as basking sharks are also large, filter-feeding animals. As outlined in the SMP, in the very unlikely event of an incident with a basking shark occurring, farm staff will follow the same protocols for managing the basking shark incident as they would for large marine mammal incidents.

[43] Fenaughty, J. N.; O’Sullivan, K. (1978) Southland Trawling. Prospects for the bottom trawl industry. Fisheries Technical Report No. 154.
[44] Finucci, B.; Dunn, M.R.; Pinkerton, M.H.; Sutton, P. (2022). Characterisation of New Zealand protected shark captures, to 2021. New Zealand Aquatic Environment and Biodiversity Report No. 289.

Based on the implementation of the avoidance and mitigation measures, Finucci considers that adverse effects on sharks will be low.

#### 10.3.3.2 Manawhenua perspective on effects on sharks

Through the CIA (**Appendix E**), NTKM state that native fish species include great white sharks and that any indigenous biodiversity is very significant and the expectation is that it will not be adversely affected by the proposed marine farms. The position of NTKM is that the marine farms should reduce, eliminate or mitigate potential impacts on sharks.

Management considerations under Ngā Hua o Āpiti Hono Tatai Hono to be considered by NTS include matters relating to sharks:

- Ensure that water, ecosystem, and species connections are well understood from a Ngāi Tahu perspective, identified, and maintained; restored if broken.

NTS has commissioned a draft SMP (see **Appendix Y**). The draft SMP proposes measures to reduce, eliminate or mitigate potential impacts as requested by manawhenua, with a particular focus on reducing the risk of entanglement. NTS has kept NTKM informed and has consulted directly on the mitigation measures through the MWG.

### 10.3.4 Wild fish

The wild fish report (Taylor and Dempster 2021, **Appendix Q**) provides information on the wild fish species likely to be present in the vicinity of the proposed site and the potential effects of salmon farming on those species. The report compiles an inventory of finfish species likely to be present in Te Ara a Kiwa, and identifies 125 finfish species – 21 pelagic, 52 reef/rocky-bottom species, 20 reef/rocky-bottom triple fin species, 28 benthic/demersal species, and 4 elasmobranchs other than sharks. The inventory is not definitive, but provides an initial list to assist with assessing potential effects.

Taylor and Dempster identify that wild finfish can be affected by three possible pathways from the discharge of farm derived organic material (waste feed and organic waste from the farmed fish):

- By making feed available to wild fish
- By impacting the seabed through deposition of organic material, and
- By making the presence of the marine farms known through the suspension/resuspension of fine particles within the water column.

In addition, independent of discharges, marine farms can:

- Act as fish aggregation devices (FADs) – the structures attract certain fish species to aggregate beneath them
- Attract fish due to the ‘structure effect’ – where fish develop a close association with structures in the water column, and
- Attract fish through a combination of the chemical cues of waste material suspended in the water column and the fish aggregation effect of the structures.

Taylor and Dempster note however that a wide variety of interacting factors, including the species of fish, the level of waste deposition from farming fish, and whether the affected fish become temporarily or permanently resident at the marine farms will all affect the degree to which effects on wild fish occur, and whether they are positive or adverse.

In terms of effects, aggregation of wild finfish around marine farms constitutes an effect from the farms, but on its own cannot be considered to be either positive or adverse, it is simply a change in the natural environment around the farms. Effects on the aggregated finfish can arise as a result of the consumption of waste feed, including changes in the biological condition of the fish (elevating the fat content of the wild fish), increased body and liver condition (with possible consequential adverse effects on egg quality because of the change in the fat content of the diet) and potentially minor modifications to the parasite and pathogen loads of the wild fish. Taylor and Dempster also considered the likelihood of changes in the organohalogenated contaminants (OHCs) in wild fish, but concluded that any OHCs received by the wild fish as a result of their consumption of waste feed would not raise levels within the fish to such an extent that the fish would be affected. The same conclusion was reached for any increase in heavy metals such as mercury, lead, cadmium and zinc in wild fish as a result of their consumption of waste feed.

Deposition of organic waste on the seabed may result in the accumulation of OHCs in benthic invertebrates that could be prey for fish species, however Taylor and Dempster consider that levels of accumulated OHCs would be lower than reported in overseas studies due to the dispersive nature of the site. The possibility of organic waste increasing populations of benthic invertebrates could result in a general increase in prey species for wild fish, a potentially positive effect.

Taylor and Dempster, and the assessment of effects on commercial fishing (Fathom 2025, **Appendix S**) make recommendations for a monitoring programme for wild fish. Commercial fishing groups are supportive of the HAP, and NTS will continue to work with them into the future in relation to commercial fishing and how monitoring can be included in various stock surveys and food safety testing (National Chemical Residues Programme (NCRP)).

Overall, effects of marine farming on wild fish in Te Ara a Kiwa are likely to be no more than minor.

#### 10.3.4.1 Manawhenua perspective on effects on wild fish

Taonga species include numerous fish species that remain of cultural significance to Ngāi Tahu. At the time of the CIA, NTS had commissioned but not yet received a wild fish assessment (Taylor and Dempster 2021).

Management considerations under Ngā Hua o Āpiti Hono Tatai Hono to be considered by NTS include matters relating to wild fish:

- Promote practices and methods that ensure kaimoana and birdlife will be of a quality and quantity for future generations to harvest and safely consume. The ocean and coastal margins are our pātaka kai and a key source of sustenance for us, tītī, and other species.
- Consider what fishing, mooring, lighting, and navigation practices should be encouraged or discouraged in which areas and at what times/seasons.
- Nutrients and waste from the proposed activity do not negatively impact and build up in damaging concentrations in the immediate or surrounding area.

The principle means to avoid adverse effects on wild fish populations is to manage the level of waste feed from the marine farms. NTS will implement measures to ensure that as little waste feed occurs as possible to ensure adverse effects are avoided to the extent practicable.

## 10.4 Biosecurity and disease risk effects

The marine biosecurity assessment of effects (Forrest and Johnston 2025, **Appendix U**) considers the risk 'pathways' that could introduce new organisms to the region, or exacerbate the spread of those already present, as well as the farm-scale processes that could lead to the establishment and proliferation of potentially harmful organisms in the project area. A draft biosecurity management plan (BMP) has also been developed (**Appendix V**).

The movements of vessels, equipment and farm stock into the HAP site from outside Southland could introduce new pests that could subsequently be spread or new pathogens (diseases) that could enter wild populations. Proposed avoidance and mitigation of effects in the draft BMP includes managing external vessels and other equipment such as with adherence to 'clean hull' standards, sourcing stock from hatcheries with high biosecurity standards, routine health surveillance, and cleaning and disinfecting equipment. Forrest and Johnston consider that the proposed mitigation will reduce these potential risks to a negligible level.

The proposal will add to the within-region movements of vessels which could spread organisms already established in Southland's waters. However, the biosecurity significance of the HAP itself is inherently low due to the restricted area of operation, with no interaction with remote or pristine areas of Southland. Based on proposed avoidance and mitigation measures in the draft BMP including hull biofouling standards, cleaning and disinfection procedures and other related measures, Forrest and Johnston consider the potential risk will be negligible to minor.

At the farm scale, the farm structures could attract biofouling. Biofouling could then act as amplification reservoirs for pathogens that could affect Bluff oysters (Tio). Proposed avoidance and mitigation measures in the draft BMP includes surveillance and maintenance/cleaning of biofouling to keep it at low levels, and targeted management to reduce risk to Bluff oysters. Forrest and Johnston consider these potential risks to be extremely low to minor.

Also at the farm scale, salmon stock could act as sources of pathogens for passing wild finfish. Proposed avoidance and mitigation measures in the draft BMP includes best practice husbandry, water quality monitoring, farm fallowing, cleaning and disinfection regimes, vaccination, health surveillance, net cleaning and bird exclusion netting. Forrest and Johnston consider this potential risk to be extremely low.

In relation to the potential disease risk to the wild Bluff oyster fishery, a potential concern is the *Bonamia* spp. infection of oysters. Due to the proposed avoidance and mitigation measures, as well as an update in the regional risk profile (primarily that non-native *Bonamia ostreae* is predicted to reach the oyster fishery within 7-14 years), an organism-specific risk assessment concluded that the incremental *Bonamia* spp. risk from HAP to wild oyster populations is extremely low.

Forrest and Johnston conclude that despite avoidance and mitigation through adoption of international best management practices, residual risks are inherent in all open water aquaculture operations, and cannot practically be eliminated. Nonetheless, with an effective BMP the overall effect of the HAP is assessed as no more than minor.

### 10.4.1 Manawhenua perspective on biosecurity effects

In the CIA (**Appendix E**), whānau requested information to assist with understanding:

- The risk to non-cage indigenous biodiversity
- How any diseases will be treated and what the impact of the treatment are likely to be
- The extent, given the location of the farm in Te Ara a Kiwa, of the spread of disease
- The risk of any contaminants reaching the oyster beds or other highly valued sites.

NTKM also noted that a conscious effort would be needed to ensure that the construction and operation of the marine farms does not introduce invasive species or enable invasive species to secure a foothold and flourish. A potential risk to the marine farms was identified from the anchorages of large vessels in close proximity to the proposed marine farms. The expectation of NTKM is that a biosecurity management plan would ensure that protocols were in place to manage these issues, but that this needed to be discussed to ensure that NTKM are confident in the provisions relating to biosecurity management.

Management considerations under Ngā Hua o Āpiti Hono Tatai Hono to be considered by NTS include matters relating to biosecurity:

- Promote practices and methods that ensure kaimoana and birdlife will be of a quality and quantity for future generations to harvest and safely consume. The ocean and coastal margins are our pātaka kai and a key source of sustenance for us, tītī, and other species.
- Nutrients and waste from the proposed activity do not negatively impact and build up in damaging concentrations the immediate or surrounding area.

NTS agrees that biosecurity and the protection of highly valued sites in Te Ara a Kiwa and around Rakiura is critical to the establishment and ongoing effective operation of the proposed HAP site without causing significant adverse effects. Time has therefore been invested by NTS in preparing a draft biosecurity management plan. NTS has kept NTKM informed and has consulted directly on the proposed avoidance and mitigation measures through the MWG.

NTS is intending to work with Navigatus, the Harbour Master in Awarua and Maritime New Zealand in relation to the potential movement of vessel anchorages, and will keep NTKM advised of developments.

## 10.5 Effects on natural character, landscape and visual amenity

The HAP has employed two methodologies to understand land and seascape from two paradigms – a western and a Mātauranga Māori perspective. The western perspective is conveyed in the natural character, landscape and visual assessment (**Appendix T**). The Mātauranga Māori perspective is conveyed in Ngā Hua o Āpiti Hono Tātai Hono (**Appendix D** and described in section 2.4 of this report). As explained in the memo in **Appendix EE**, these two methodologies work alongside each other to achieve greater insights into significance, appropriate use and development, and to manage and mitigate effects on land and seascape. While the approaches are different, reflecting different cultural lenses being applied to the topic, both approaches reach similar overall conclusions about the appropriateness of the HAP.

The natural character, landscape and visual assessment (Isthmus 2025, **Appendix T**) assesses effects on natural character, landscape and visual amenity values at three scales, being Te Ara a Kiwa, the northern coastline of Rakiura (referred to as the 'site catchment') and the HAP site. Isthmus explains that the site catchment is the most relevant scale for assessing effects from the HAP. Graphics of the full HAP development to show how it would look from several viewpoints in the surrounding area are provided as an appendix to that report.

Natural character effects are considered in terms of:

- Biotic attributes;
- Abiotic attributes; and,
- Experiential attributes.

Isthmus notes that the effects on biotic attributes appear to be relatively limited and the adaptive monitoring and management of the effects of the HAP on the ecological communities of Te Ara a Kiwa and the site catchment provide options for the ongoing avoidance or mitigation of any potential adverse effects that might not yet be certain.

In terms of abiotic attributes, Isthmus considers that biosecurity and waste will be adequately managed, and concentrations of dissolved oxygen and nutrients will be well dispersed by strong tidal currents. The presence of moored or drifting cargo vessels in the charted mooring areas within and close to the site adds a sense of commercial use and utility to the area. The navigational safety lighting will be visible from areas close to the HAP and from some areas on the coastal edge of northern Rakiura. However, other than when visible as co-ordinated flashing lights, the lights will be difficult to distinguish from other safety lighting on commercial and recreational vessels.

In terms of experiential attributes, Isthmus considers that the HAP is unlikely to disturb recreational fishing to any noticeable extent and will be consistent with commercial fishing activities occurring within Te Ara a Kiwa. The HAP site is unlikely to be visible from the Bluff – Oban passenger ferry. The presence of additional commercial vessels passaging between the HAP site and Bluff port will add to the traffic in the area, however, it will be consistent with the existing vessels and use of Te Ara a Kiwa as a service and passage area for the port. In some places along the North West Circuit tramping track and along the side track to Hananui/Mount Anglem, the structures and activity at the HAP site will be visible. It is currently a common site to see cargo vessels at the charted anchorages or drifting within or close to the HAP site, so the presence and passage of cargo vessels is part of the existing natural character experience for this part of the North West circuit and the side track to Hananui/Mount Anglem.

Overall, the effect of the HAP on the high natural character values of the site catchment are assessed by Isthmus to be low-moderate (which equates to a 'minor' effect in relation to RMA terminology according to Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines (TTatM)). Isthmus considers that there will be no effects on outstanding natural character values.

Landscape character effects are considered in terms of

- Integration with the existing form and character of the 1285 ha seascape site; and,
- Effects on character of the surrounding landscape and seascape setting of Te Ara a Kiwa.

In terms of effects on physical aspects, Isthmus notes that nearby landforms will not be physically affected. The HAP will be largely underwater, with some limited floating elements and structures within and on the surface of the water, is recessed into the landscape and seascape, with much of the

physical aspects not immediately obvious. Sand and sediment on the seafloor that will be disturbed by the installation of anchor blocks will re-establish around the anchor blocks.

In terms of effects on perceptual aspects, Isthmus considers that the HAP will be a small feature within the overall landscape composition of Te Ara a Kiwa and will only be experienced from localised parts of the strait. The relationship and scale of the HAP in relation to the surrounding landscape and seascape is illustrated in the visual simulation from the drone in Figure 43 in the Graphic Attachments. The HAP will add to the commercial vessel traffic and use of the area and will become a known feature and reference point along the coastline. As the HAP will not be visible from the Bluff – Oban passenger ferry route the project itself will not have any effect on the perceptual aspects of the ferry journey. Passing aircraft will have an oblique view over the HAP if passing close to the site, which will appear as a regular pattern on the surface of the water. The HAP will become part of the experience for users of the North West Circuit between Potirepo / Port William and Saddle Point, although will only potentially be visible from the open beaches and elevated or open sections of the track and will be in the context of charted anchorages and the regular cargo vessels in the area.

In terms of effects on associative aspects, Isthmus considers that the HAP will continue the relationship that NTKM has with Te Ara a Kiwa. The HAP site being relatively small and featureless will not detract from the creation stories and whakapapa of Te Ara a Kiwa which are associated with the broad landscape and seascape area. The HAP will reinforce the commercial fishing and marine farming values that are associated with the area. The presence of a marine farm is unlikely to change any contemporary associations with the area in terms of recreational fishing and tourism.

Overall, the effect of the HAP on landscape values of the site catchment are assessed by Isthmus to be low-moderate (which equates to a ‘minor’ effect in relation to RMA terminology according to TTatM). Isthmus considers that there will be no effects on outstanding natural landscapes or outstanding natural features.

Visual amenity effects are considered in relation to:

- Marine visitors to and users of the HAP site;
- Viewpoints on the Northwestern tramping circuit, particularly at Big Bungaree Beach, Murray Beach and Christmas Village Bay;
- Visibility from the track and summit of Hananui; and,
- Potential visibility to passing aircraft.

Isthmus notes that the main visible elements of the HAP are the floating blocks of pens, the floating feed hoses, the feed barges, the navigational safety buoys and lights and the visiting boats for maintenance and harvesting. Variables that can influence the visibility and potential visual effects of a marine farm include weather and sea conditions, colour of the components of the marine farm, size, density and buoyancy of surface structures, the angle of view and elevation of viewpoint, backdrop, and distance of the viewer from the visible structures of the marine farm.

Multiple users and viewpoints have been assessed by Isthmus. The viewpoints are provided in the Graphic attachment to **Appendix T**. The closest viewpoint is taken from approximately 500 m away, on the seaward side of the HAP, where the pen structures, such as netting, rails etc, are apparent and clear against the backdrop of Rakiura and the barges and feed infrastructure are prominent. However, by 2 km away, the pens and barges become less distinct and become linear forms and with further distance become difficult to discern. Views from Christmas Village Bay, Big Bungaree Bay and Murray

Beach show the pens being visible but difficult to discern, and the barges more visible, although only a small component of the wider panorama of Te Ara a Kiwa. In the case of the view from land at Big Bungaree Bay, only Farm 1 and part of Farm 2 is visible.

The overall effects of the HAP on visual amenity values are assessed by Isthmus to be low (which equates to a 'less than minor' or 'minor' effect in relation to RMA terminology according to TTatM).

Through the consultation that NTS had with ES (refer to section 4.1 of this report), Mike Moore (consultant landscape architect) peer reviewed the natural character, landscape and visual assessment on behalf of ES. Mr Moore largely agreed with the conclusions on effects on natural character, landscape and visual amenity values.

Ngā Hua o Āpiti Hono Tātai Hono (**Appendix D**) provides an assessment from the manawhenua perspective providing a holistic consideration of land and sea scape, entwining whakapapa and te ao tūroa and anchoring the associations and relationships of manawhenua manamoana. The assessment methodology and accompanying report direct what manawhenua consider to be appropriate at place. The Ngā Hua report must be read as a whole, but the following provides an indication of the context within which NTKM and Ngāi Tahu have considered the HAP:

> *Te Ara a Kiwa, from its sounds to its colours are entrenched in Ngāi Tahu ki Murihiku identity, society, pūrākau, and mātauranga. Te Ara a Kiwa is at the heart of many whānau stories, traditions, and cultural practices. Ngāi Tahu ki Murihiku has intergenerational knowledge and connection with Te Ara a Kiwa, and it remains part of the traditions and networks of Ngāi Tahu. Te Ara a Kiwa is an interconnected land and sea scape rich in biodiversity and mahinga kai. The tides and currents of Te Ara a Kiwa connects Ngāi Tahu ki Murihiku spatially and culturally.*
>
> *Ngāi Tahu ki Murihiku understanding of Te Ara a Kiwa is complex and multi layered and not defined by the notion of linear time. Whānau do not regard their tīpuna and traditions located in some distant time separate from them but instead project their stories upon their immediate present. Not only is the past projected onto the present, but it is also engaged with as a living entity. When voyaging to these places and while on Te Ara a Kiwa, we do not stand alone nor disconnected from our whakapapa.*
>
> *Consequently, the landscape/seascape holds many traditions of creation and moves through time to give a representation of the extensive exploration by our tīpuna from Te Waipounamu to Rakiura and beyond to the tītī Islands. It is a place of continued deep connection where one can feel at peace on a temperamental ocean, looking towards the anchoring presence of Rakiura that has held the celestial waka of Aoraki then Māui. From the sea, you look towards the history of Ngāi Tahu ki Murihiku now embedded in the landscapes of Te Waipounamu, Ruapuke, Whenua Hou, and the tītī islands as well as within the currents and waters.*

In the Ngā Hua o Āpiti Hono Tātai Hono assessment, Te Ara a Kiwa, the strait, dominates the assessment, not the land, from the NTKM perspective as the activity is in the domain of Tangaroa. NTKM is satisfied that the HAP has been designed and will be implemented to ensure that the following considerations are addressed to ensure that the activity is appropriate at place:

- For the landscape to retain its timeless identity and its connections between Tangaroa, Tāwhirimātea and Tāne, land and waters, people and place;

- Ensuring the resources are available for future generations. Mahinga kai in this area includes sea birds, marine mammals, kaimoana, seaweeds, plants, waters, clays, stones, gravels and sands;
- Recognition of Te Kerēme and post-Settlement aspirations and opportunities.
    - Acknowledge the suppressing and isolating impacts of colonisation on Ngāi Tahu Whānui.
    - Enable and uphold Ngāi Tahu mātauranga, identity, culture, and practices in the ongoing management of Te Ara a Kiwa.
    - Provide for the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 and Māori Commercial Aquaculture Claims Settlement Act 2004.

For NTKM the HAP is considered to be appropriate within this environment and will enable manawhenua to remain connected with place as described above. It is where the physical outcomes of Settlement redress will be undertaken.

## 10.6 Effects on navigation

The navigational risk assessment (Navigatus, 2025, **Appendix L**) assesses the level of navigational risk associated with the proposed site and the marine farms within it. Two types of risk have been considered:

- navigational risk to vessels due to the presence of marine farm structures and feed barges moored within the proposed site
- the threat to any vessels resulting from a mooring failure at any of the proposed marine farms.

The Ngā Hua report also raised questions about the effects of navigational lighting and the effects of the proposed marine farms on navigational safety.

The proposed site is positioned somewhat to the south of the natural navigational routing through Te Ara a Kiwa (primarily for large vessels), but its location coincides with some recreational and commercial vessel activity operating off or passing along the Rakiura coast. Vessels waiting to access the port at Bluff also frequently anchor in the area, either at the charted anchorages or in the vicinity of the proposed site. Navigatus is satisfied that the immediate area around the proposed site is not navigationally complex and generally has low levels of marine traffic.

Vessels that currently transit through the area of the proposed site will have to alter their current routes to avoid the marine farms. Smaller coastal vessels will be able to choose to transit between the proposed site and the shore, and larger vessels will need to take a more northerly route than may currently be the case to avoid the proposed marine farms and associated anchoring systems. Large vessels waiting to access the port at Bluff will no longer be able to use the currently charted Murray River anchorage located inshore of the proposed site, although smaller vessels (<500 gross registered tonnes and <50 m in length) would still be able to use it.

As with the large ship navigation and the distance to the main shipping routes, the proposed location of the HAP will not have any impact to the navigation of the majority of cruise vessels that transit through Foveaux Strait as they head from the east coast and west coast. For those cruise vessels that are navigating between the west coast and Rakiura via the north-eastern coastline, they will pass close to the area of the farms.

Navigatus concludes that provided that the risks associated with the project are properly mitigated, the risk will be as low as reasonably practicable and acceptable. In summary, the key measures to mitigate adverse effects are:

- Installing suitable navigational marking and lighting and charting the position of the marine farm's structures. Suitable navigational marking and lighting has been proposed by Navigatus (refer to section 6.3.6 of this report).
- Designing the marine farm to be secure to reduce the risk of structural failure (break away).
- Monitoring of the mooring conditions, and procedures to respond to mooring issues and to failures of other vessels in the general vicinity.

The proposed measures to avoid and mitigate navigation-related effects are important to stakeholders that NTS has consulted with (refer to section 4.1 of this report) such as the ES Harbourmaster and CRA8 Rock Lobster Industry Association Inc.

## 10.7 Effects on commercial fisheries

The assessment of effects on commercial fishing (Fathom 2025, **Appendix S**) assesses the effects of the proposed activity on commercial fishing, which are primarily spatial displacement of fishing effort and environmental changes affecting wild fish. Other potential effects such as wild seafood safety and quality, and diver safety, are also considered.

Based on the best available information, the level of spatial displacement of commercial fishing at the proposed site will be minor for all species and fishing methods. Spatial displacement of commercial fishing effort will not have any impacts at a fishery-wide level, although it may have some adverse effects on individual fishers who regularly fish at the site. Effects on individual fishers are anticipated by Fathom to be no more than minor.

Commercial fishing may also be adversely affected if the environmental effects of marine farm operations cause changes in the distribution, behaviour, physiology or abundance of commercially harvested species. The proposed salmon farm may attract some commercially harvested species and, in particular, may cause localised changes to the distribution of blue cod. Based on the available information, Fathom notes that any such impact is likely to be localised and no adverse effects on the distribution or abundance of commercially harvested species at a population level have been identified.

The proposed site, and the location of the farms within the site, is intended to avoid biogenic habitats which may be of particular significance for fisheries management (e.g., as habitats for juvenile finfish or settlement and recruitment of oysters).

Commercial fishers may express concerns about seafood safety and quality issues, diver safety, debris on the seafloor, vessel interactions, and increased local recreational fishing pressure. However, Fathom considers that these effects can be managed appropriately by consent conditions and operational practices.

## 10.8 Effects on recreation and tourism

The recreation and tourism assessment (Thrive 2025, **Appendix R**) assesses the effects of the proposed activity on recreation and tourism values.

Consultation with a range of stakeholders, including fishing charter operators, yacht clubs, dive operators, hunters, and tourism providers, was undertaken to inform potential effects on recreation, and revealed a diversity of perspectives. While some concerns were raised regarding visual impacts and potential increases in vessel traffic, most stakeholders acknowledged that the proposed farm is not located on main transit or destination routes and anticipated only minor operational impacts, provided access to key coastal sites is maintained.

From a landscape and amenity perspective, Thrive considers that the remote and open-water character of the area for passing boats or remote experience for terrestrial recreationists such as hikers and hunters will not be altered by the marine farm to a significant degree. The farm's infrastructure will be minimally visible from land due to its offshore location and the curvature of the earth, and the area already experiences the presence of large cargo vessels. Navigational lighting has been designed to minimise visual intrusion while ensuring marine safety.

A key consideration is whether the introduction of salmon farming infrastructure might attract or displace wild fish, thereby changing fishing opportunities. Thrive considers that the effect on recreational fishing is likely to be neutral or positive, given the current low level of recreational fishing effort in the area.

Another consideration for recreation is that of navigational safety. The project has been carefully designed to avoid restricting access to the coastline or popular fishing and hunting sites, with comprehensive navigational safety measures, such as cardinal marks and sufficient but not extraneous lighting, planned to guide vessels and prevent hazards. Thrive considers that these measures may even improve safety for mariners navigating this challenging environment.

Overall, any effects on recreational values and on public access as a result of the HAP would be no more than minor. Access for manawhenua to the coastal margin and marine waters (an issue raised by Ngā Rūnanga in the CIA) is also not anticipated to be affected by the proposed HAP.

## 10.9 Noise effects

Marine farms can be a source of noise in the coastal environment, with typical noise sources including generators that provide power to the feed barge, feeding systems for the net pens, and mechanical plant on the farm site for activities such as net cleaning and net lifting.

Rule 5.3.4 of the RCP sets general noise limits for activities within the CMA as outlined in Table 10-2.

*Table 10-2: RCP noise limits*

| Time | Noise limit | Location |
|---|---|---|
| 7:00am – 10:00pm | 50 dBA $L_{10}$ | At the landward edge of the CMA |
| 10:00pm – 7:00am (the following day) | 40 dBA $L_{10}$<br>70 dBA $L_{max}$ | At the landward edge of the CMA |

NTS has not yet confirmed the equipment (for example feed delivery systems, barge generators, vessel engine) that it will use at the HAP site if consent is granted. However, noise studies of proposed salmon farm sites in the Marlborough Sounds have shown compliance with these limits with salmon farms very close to shore. The most offshore of the proposed sites that have been studied in Marlborough was proposed to be approximately 1.5 km offshore and was not predicted to result in day-time noise levels greater than 25 dBA at the shoreline. For the HAP, the closest structure would be approximately 2 km

offshore. Compliance with the noise standards contained in the RCP is therefore expected to be achieved.

While the area is somewhat remote, the regular anchoring of ships offshore of Murray Beach while they wait to enter Bluff Harbour, and the fishing and oyster dredging activities in the general vicinity of the proposed site, mean that any person on the water is likely to be experiencing an existing level of anthropogenic noise that is greater than a completely remote, unused area of Southland's CMA. In this context any noise from marine farms at the proposed site is not expected to alter the experience of anyone travelling through the CMA. Effects from underwater noise have been considered in section 10.3.1 of this report.

Overall, therefore any adverse effects from noise emissions from the HAP site will be minor.

## 10.10 Effects from waste materials and hazardous substances

In addition to the deposition of uneaten feed and fish faeces on the seabed, finfish marine farms can be a source of waste in the CMA, for example through management of dead fish (morts) and floating inorganic waste material or debris generated as part of normal activities at the site, particularly on the feed barges. For manawhenua, concern was expressed through the CIA at the introduction of plastics to the marine environment.

Through the draft biosecurity management plan NTS has committed to regular removal of morts from the net pens, ideally daily and generally at least twice per week. Morts will be disposed of in a biosecure manner onshore. NTS will develop standard operating procedures for each proposed farm that will include management of materials on site to reduce as far as possible the generation of any waste, and keep it contained on the feed barges. NTS will also promptly respond to any reports of farm derived waste materials on the shore of Rakiura and undertake yearly general beach clean-up activities along the northern coastline of Rakiura, consistent with the company's previous contributions to beach clean-up activities in 2012, 2013, 2015 and 2018. Consent conditions are proposed to this effect. The management of waste material and debris is also a key part of the marine species management plans.

These initiatives will minimise the risk of adverse effects from waste materials at the proposed site, and also address the concerns raised by manawhenua.

Hazardous substances at the proposed site would include fuel for the feed barges and generators and cleaning chemicals to ensure biosecurity is maintained. All materials will be appropriately stored and handled, and NTS will adopt standard operational procedures to ensure this at all times.

## 10.11 Summary of effects assessment

Sections 10.1 - 10.10 of this report provide an assessment of the potential adverse effects from the HAP, with more detailed assessments provided in the corresponding appendices. Table 10-3 provides a summary of the conclusions of the effects assessment, taking account of the proposed avoidance and mitigation measures outlined in the sections above and as described in more detail in section 12. Positive effects are discussed in detail in section 5 of this report.

Overall, adverse effects of the HAP are expected to range from nil or negligible to more than minor, but not significant. Most adverse effects are no more than minor. The only adverse effects anticipated to be

more than minor, but not significant, are the potential alteration to macrofaunal communities on the seabed directly beneath the pens, the risk of entanglement of Foveaux and Spotted shag in above water and below water nets, and the potential collision of Whenua Hou diving petrels with structures due to attraction to underwater lighting.

*Table 10-3: Summary of effects assessment*

| Potential effect | Expert assessment of the level of potential effect, after mitigation (if relevant) | Level of effect in RMA terminology, after mitigation |
|---|---|---|
| Deposition of organic material | Minor or less, except for alteration to macrofaunal communities which could be more than minor in the Zone of Maximum Effect (based on conservative metric) | Minor or less, except for alteration to macrofaunal communities which could be more than minor in the Zone of Maximum Effect (based on conservative metric) |
| Farm additives | Minor | Minor |
| Farm structures | Minor | Minor |
| Initial installation of structures | Less than minor | Less than minor |
| Nutrient effects | Low | Minor |
| Dissolved oxygen levels | Low | Minor |
| Underwater lighting | Very low | Less than minor |
| Habitat exclusion / displacement | Negligible to less than minor | Less than minor |
| Entanglement | Nil to negligible | Negligible |
| Underwater noise | Nil to negligible | Negligible |
| Artificial lighting | Nil to negligible | Negligible |
| Alterations in trophic pathways | Nil to negligible | Negligible |
| Entanglement | Low or very low, except moderate for Foveaux and Spotted shag | More than minor |
| Habitat exclusion | Low or very low | Minor |
| Roost sites closer to foraging areas | Net gain for some species | Positive |
| Changes to food supply | Low or very low | Minor |
| Disturbance | Low or very low | Minor |
| Marine litter | Low or very low | Minor |
| Vessel/propellor strike | Low or very low | Minor |
| Artificial lighting | Low or very low, except moderate for Whenua Hou | More than minor |
| Entanglement / entrapment | Less than minor to more than minor (unmitigated)<br>Relatively low (mitigated) | Minor |
| Habitat exclusion / displacement | Less than minor to more than minor (unmitigated) | Minor |
| Change in diet, habitat quality | Less than minor | Less than minor |
| Underwater sound | Negligible | Negligible |
| Underwater lighting | Negligible | Negligible |
| Aggregation of wild finfish | Neutral | Nil |
| Consumption of waste feed | - | Minor |
| Increase of prey species | Positive | Positive |
| Introduction of new pest organisms into region | Negligible | Negligible |
| Spread of pest organisms already in region | Negligible to minor | Minor |
| Attraction of marine pests to structures | Extremely low to minor | Minor |
| Disease risk to passing wild finfish | Extremely low | Negligible |

| Potential effect | Expert assessment of the level of potential effect, after mitigation (if relevant) | Level of effect in RMA terminology, after mitigation |
|---|---|---|
| Disease risk to wild Bluff oyster fishery | Extremely low | Negligible |
| Natural character values of the site catchment – biotic attributes | Low-moderate | Minor |
| Natural character values of the site catchment – abiotic attributes | Low-moderate | Minor |
| Natural character values of the site catchment – experiential attributes | Low-moderate | Minor |
| Landscape values of the site catchment | Low-moderate | Minor |
| Visual amenity - Users of the site - the immediate setting of the HAP site | Low | Minor |
| Visual amenity - Public viewpoints within the immediate setting – Northwestern circuit and huts | Very low | Less than minor |
| Visual amenity - Te Ara a Kiwa | Low | Minor |
| Visual amenity - Night-time visibility | Low | Minor |
| Navigational risk to vessels due to the presence of marine farm structures | Moderate for large vessels, low for small vessels | More than minor |
| The threat to vessels resulting from a mooring failure | Low | Minor |
| Spatial displacement of fishing effort | Minor | Minor |
| Environmental changes affecting wild fish | Localised impact, no adverse effects at a population level | Minor |
| Wild seafood safety and quality | - | Negligible |
| Diver safety | - | Negligible |
| Debris on the seafloor | - | Negligible |
| Vessel interactions | - | Negligible |
| Increased recreational fishing pressure | - | Negligible |
| Recreational values | No more than minor | Minor |
| Public access | No more than minor | Minor |
| Noise generated by operation of marine farm | N/A | Minor |
| Accidental release of marine farm waste | - | Less than minor |
| Accidental release of hazardous substances | - | Less than minor |

# Part 4 Alternatives, management and mitigation

# 11 Alternatives

The assessment of effects on the environment contained in section 10 of this report has concluded that there will be no significant effects. Under the FTAA, there is no requirement to assess alternatives for any of the activities except the discharge of contaminants to the coastal marine area. However, for an application of this size it is good practice to have considered alternatives, and this section of the report therefore provides a summary of the alternatives that have been considered (for all reasons) over the last seven years as the HAP has developed.

While Section 105 of the RMA requires a consideration of any possible alternative methods of discharge, including discharge into any other receiving environment, the offshore coastal nature of the proposed site means that discharge into any other receiving environment is not possible.

## 11.1 Selection of the proposed site

The various alternative sites that have been considered for aquaculture in Southland since 2013 are outlined in sections 1.2 and 9.1 of this report. These alternative sites, located throughout Murihiku have been evaluated at various levels of detail, from ‘satellite’ reviews to feasibility studies, by Government, local councils, industry and Ngāi Tahu. NTS has also supported Te Rūnanga o Ngāi Tahu in an advisory capacity in relation to the consideration of potential sites for settlement of the Crown’s obligations under the Aquaculture Settlement legislation.

The HAP site that is the subject of this application is unique among the various sites that have been considered by NTS, it is selected to take advantage of a sheltered environment with cool water, high current flow, and a low wave climate—ideal conditions for sustainable salmon farming, with technology in regular use internationally and close proximity to port infrastructure and services. It avoids main navigational, routes, avoids main commercial fishing grounds and significant tourism and recreational areas compared to other parts of Rakiura and Murihiku. The site is also suitably located having regard to the relevant RMA planning provisions as discussed in section 13.5 of this report. It is therefore the best alternative of all of the sites that have been considered over recent years.

## 11.2 Consideration of alternatives for this application

### 11.2.1 Site boundaries

The site that was previously considered for the RMA and CRFTCA applications was approximately 1.5km offshore at its closest point.

For this application, the landward boundary was shifted so that its closest point is 2 km from the shore, to further reduce any adverse effects on landscape values. The southern boundary (and southern farm position) was adjusted to reduce visual impact from Bungaree Hut, compared to the previous application.

## 11.2.2 Area of site

A larger site area of approximately 2,500 ha was previously considered for the RMA and CRFTCA applications. The proposed boundaries were to include areas of biogenic habitat to the east of the marine farm locations to offer protection of that habitat from activities such as ship anchoring and oyster dredging. The proposed boundaries also included a clear, straight, navigation line along the northern edge of the site that was desired from a vessel navigation perspective.

The area of the site was reduced for this application, to approximately 1,285 ha, to no longer encompass the biogenic habitat to the east nor provide a straight navigation line along the northern edge of the site. This reduction in site area was able to be undertaken while still providing enough space to allow for minor shifts in the marine farms due to mooring conditions, so that the marine farms can be adequately separated to minimise the possibility of disease transfer, and to allow adaptation of the space in response to monitoring and adaptive management.

## 11.2.3 Key design and operation details

### 11.2.3.1 Alternative farm locations within the site

NTS has considered multiple marine farm layouts within the HAP site. Guiding principles have been that marine farms are located over sand/gravel habitat, are as far from the coastline as possible, are adequately spaced from one another to minimise the risk of disease transfer between farms and that farming should result in adverse effects on the seabed as low as practicable during peak feed cycles.

### 11.2.3.2 Alternative sea pen materials and designs

Salmon farming in New Zealand is currently largely undertaken using rectangular steel pens. Polar circles such as those proposed by NTS are in use in Akaroa Harbour and at a site in Beatrix Bay in Marlborough, (but at a much smaller size than proposed as part of the HAP) and will be installed shortly at NZ King Salmon's Blue Endeavour site in Cook Strait. The proposed pen size for the farms has been selected based on engineering feasibility to provide enough reserve buoyancy and strength to withstand the environmental conditions (refer to front-end engineering design report in **Appendix J**) while being of sufficient size to maximise the farming potential at the site within environmental limits.

Steel rectangular pens would not be suitable at the site in terms of ability to withstand the conditions and would have had more effects on landscape and visual amenity. Sub-surface (that is submersible) technology is not yet proven in New Zealand conditions, is still being trialled internationally and is reported to require deeper water than available at the HAP site, so did not represent a suitable alternative.

Various below water and above water net mesh sizes have been considered by NTS, including a below water net mesh size of no larger than 45 mm half mesh (knot to knot) for the previous CRFTCA application. Other aspects of the pen and net designs that have been considered include:

- Underwater net materials and whether to use soft nets, semi-rigid nets or rigid nets,
- Underwater net shapes, and
- Whether to use a single net system or dual system for the below water pen nets.

The below water and above water net designs need to balance preventing farmed fish from escaping, excluding predators and reducing the risk of entanglement of marine species, while maintaining

structural integrity due to currents and wind loading, providing adequate water circulation, and minimising biofouling.

#### 11.2.3.3 Alternative sea pen orientations

Two orientations of the sea pens are possible at the HAP site – with the current and perpendicular to it. Sea pen arrangements running perpendicular to the current were modelled by Cawthron and resulted in lower seabed enrichment in the primary depositional footprint under conditions without resuspension, principally because only two pens in a row caused lower cumulative levels of enrichment on the seabed in the vicinity of the pens. There is however a real possibility that the mooring infrastructure required to hold the pens perpendicular to the current in a grid of 2 x 5 cages would have to be so large to appropriately manage the risk of breakaway that it would not be economic for the project. NTS is continuing to investigate this possibility but currently considers that the 'with the current' orientation is the only one that can be reliably and economically moored at the HAP site, and it is therefore the orientation included in this application. The 'with the current' orientation is also seen as an important mitigating factor to reduce the risk of marine mammal entanglement.

Different sizes of lines of net pens were also considered as part of the development of the proposal. The challenge is to strike a balance between the level of production desired from the site and the cost of infrastructure associated with different configurations of net pens. Reducing the number of pens in any block of pens could potentially result in an additional marine farm being required to meet the same ultimate level of production, with associated increased costs in mooring and anchoring infrastructure, the necessity for an additional feed barge, and the possibility of an increased cumulative effect on the seabed as a result of a further area of primary deposition. The arrangement of marine farms that is the subject of the application has been selected because it results in the lowest seabed deposition effects while providing the desired ultimate level of production and managing the capital cost of the project.

#### 11.2.3.4 Level of production and stages of development

The level of production that is sought through this application at its full (Stage 2) development has been assessed as having no significant adverse effects on the environment. While a smaller overall production level could have been sought, the economic feasibility and benefits of this particular site, and its ability to sustain a production level that could make a significant contribution to meeting the objectives of the Southland Regional Development Strategy (SoRDS), the Murihiku Southland Aquaculture Pathway 2025 and the New Zealand Aquaculture Development Plan 2025-2030 have been some of the major factors in the decision made to seek the eventual level of production outlined in this application.

A higher production scenario equivalent to and greater than that of the SoRDS 25,000T goal was considered. However, to balance environmental effects and uncertainties of exposed ocean aquaculture, NTS considers the proposed two-stage development and production scenarios in this application are sufficient to support the various goals. In the future, once the development is at full production and effects have been fully monitored it may prove possible to achieve larger production amounts either at the HAP site or at other locations in Murihiku, but that is not proposed at this time. Larger stages were also considered by Cawthron in the process of developing scenarios for modelling, but could have resulted in too large a change in too short a period of time – too great a change in discharge levels would have the potential to cause excessive enrichment to the seabed unnecessarily.

The number of stages to reach full production was also considered, with implementation of 6 or 4 stages also being considered. The principal difficulty with the alternative staging scenarios was management of effects on the seabed. Advice received by NTS during the preparation of earlier version of the HAP was that commencing marine farming at each of the marine farm sites would be best done with a feed discharge of 100% in order to enable the actual seabed enrichment to be determined as quickly as possible in the overall project implementation. The HAP as outlined in this report has therefore adopted a 2 stage approach whereby one block of ten net pens will be installed at each site and farmed at 100% of the proposed feed level for each block, monitored and then the second block of pens installed to reach full production. This also an easier and more efficient way to stage the project, as it can be based on the introduction of structures at each farm site, the alternatives that involve more stages require adjustments to feed levels in each of the farm blocks at each stage, which are harder to control and manage with the accuracy required for staged development.

The overall level of production and stages of development sought are therefore considered to be the best alternative for the development of the site.

#### 11.2.3.5 Alternative farm operations

NTS considered multi-year class farming, which is the predominant method presently undertaken for salmon farming in New Zealand. Multi-year class farming is where new generations of fish are regularly introduced to a farm (resulting in multiple year classes on any one farm) in order to maintain harvest supply throughout the year. However, this system has a higher risk of disease transfer between the different fish ages.

Instead, NTS is proposing single year class farming, combined with stocking the four marine farms in a rotational order. This will have a lower risk of disease transfer between farmed fish, provide fallowing periods, and have lower seabed effects resulting from all four marine farms combined because only one farm will be at peak feed discharge at any one time.

# 12 Management and monitoring

## 12.1 Overview

In addition to the locational requirements of the HAP discussed in section 11 of this report, many aspects of the proposed design and installation of structures and the proposed operation of the marine farm have been proposed by NTS to avoid, remedy or mitigate adverse effects on the environment. The proposed effects management and monitoring measures have been arrived at by a combination of the following:

- Recommended by the authors of the various technical assessments,
- Informed by engagement with manawhenua and local community,
- Agreed to through engagement with stakeholders including ES, DOC, MPI and MNZ,
- Informed by the effectiveness or otherwise of measures used at other marine farms in New Zealand and internationally, and
- Carefully balanced against the feasibility and practicality of marine farming in an exposed ocean environment.

The proposed management and monitoring measures have shaped the development of a robust suite of proposed resource consent conditions (**Appendix CC**) and wildlife approval conditions (**Appendix DD**).

The proposed management and monitoring approach addresses residual risks and levels of uncertainty that are inherent in aquaculture and particularly in an open ocean environment which is novel in New Zealand. The following subsections detail key aspects of the proposed management and monitoring.

## 12.2 Design and installation of structures

A crucial aspect for managing the risk of entanglement and entrapment of marine species is the pen design. Dual net systems, which have an outer predator exclusion net, are known to be more likely to give rise to entanglement issues than single net systems. Therefore, a single net system which uses predator resistant materials (for example semi-rigid or core stiffened or heavy monofilament to provide resistance to easy tearing) is proposed. A maximum half mesh size of 40 mm for below water nets has been determined to be small enough to minimise entanglement by diving birds while still being feasible in terms of drag within the water. Above water, jump fences will exclude pinnipeds and netting with a maximum half mesh size of 60 mm. The proposed use of less than or equal to 60 mm mesh size for above water bird nets reflects a considered balance of engineering, operational, and environmental factors. NTS intends on refining and optimising the above water net design over time (including by potentially reducing the mesh size) based on the proposed monitoring. Regular inspection of nets and ropes and keeping them under tension is also critical and is part of the management plans discussed in section 12.5.

Dark and recessive-coloured materials for structures (excluding barges) are proposed for reducing landscape and visual effects.

A front-end engineering design report (**Appendix J**) has informed the conceptual design of the pen, mooring and anchoring systems so that the HAP's physical components maintain their structural

integrity. The conceptual design will be subject to refinements during detailed design which is proposed to be undertaken as a condition of consent.

Suitable navigational marking and lighting and charting the position of the marine farm structures, in accordance with maritime regulations, will reduce the risk of vessel allision and collision. A movement monitoring regime will also likely be employed to alert the farm operator if any farm structures have broken free of their moorings.

## 12.3 Farm operation

Management measures proposed as part of the farm operation (other than as related to effects on biosecurity, seabed and water quality and marine species discussed in the sections below) include:

- Disturbance and noise from boat traffic – minimising boat traffic associated with the marine farm operation within 200 m of the coastline.
- Feed inputs – measures in place to monitor feeding and the amount of feed to avoid feed loss.
- Non-navigational lighting – minimise non-navigational lighting used at night including by using curtains, blinds or shutters on barge windows and by only using lights for deck and boat handling work while that work is being undertaken.
- Waste management – implementation of a waste management plan and annual inspections of the adjacent coastline for marine farm-related waste and debris and removal of any inorganic waste or debris found for disposal at an authorised facility.
- Hazardous substances - all materials will be appropriately stored and handled, and NTS will adopt standard operational procedures to ensure this at all times.
- Marine farms must be operated as single year class farms and the four marine farms shall be managed on a rotational stocking basis, which means that the farms will be stocked at staggered intervals and that farms will be at different stages across the production cycle.

## 12.4 Seabed and water quality

Adaptive management has become a key tool for managing aquaculture developments in New Zealand, and has been applied to mussel farming in the Wilson's Bay Marine Farming Zone and the Tasman Aquaculture Management Areas, to mussel farming at the Clifford Bay Marine Farms site, and to salmon farming at new salmon farming sites in Marlborough since 2011. It will also be an approach taken for the approved, but not yet operational, Blue Endeavour salmon farm in Cook Strait and the Pare Hauraki Kaimoana marine farm in the Hauraki Gulf.

The goal of an adaptive management approach is to enable an activity to proceed despite a measure of uncertainty about its effects, in a manner that is consistent with a precautionary approach, by sufficiently reducing uncertainty and adequately managing any remaining risk. This is relevant for finfish farming due to inherent uncertainties of effects within complex, dynamic marine environments and in new locations where empirical data are limited. Ongoing monitoring combined with clear environmental thresholds allow marine farm operators to make operational adjustments in a timely manner to address adverse effects that approach or exceed those thresholds. Adapative management is also valuable for enabling innovation to overcome operational challenges in open ocean marine farming.

As discussed in sections 10.1 and 10.2 of this report, comprehensive water column and seabed depositional modelling has been undertaken to predict adverse effects on the water column and seabed associated with the HAP. Layers of conservatism were built into the modelling and analyses such that

water column and seabed effects are more likely to have been overestimated than underestimated. However, there is inherent uncertainty for these types of effects in Te Ara a Kiwa which is a highly dispersive and dynamic marine environment, where far-field effects and sensitive taxa responses are less predictable. For Cawthron (**Appendix M** and **Appendix Z**) and SLR (**Appendix K**), an adaptive management approach is appropriate for managing seabed and water column effects associated with the HAP.

The proposed adaptive management approach for the HAP which is set out in the proposed resource consent conditions in **Appendix CC** is illustrated in Figure 12-1 and summarised in the following subsections.

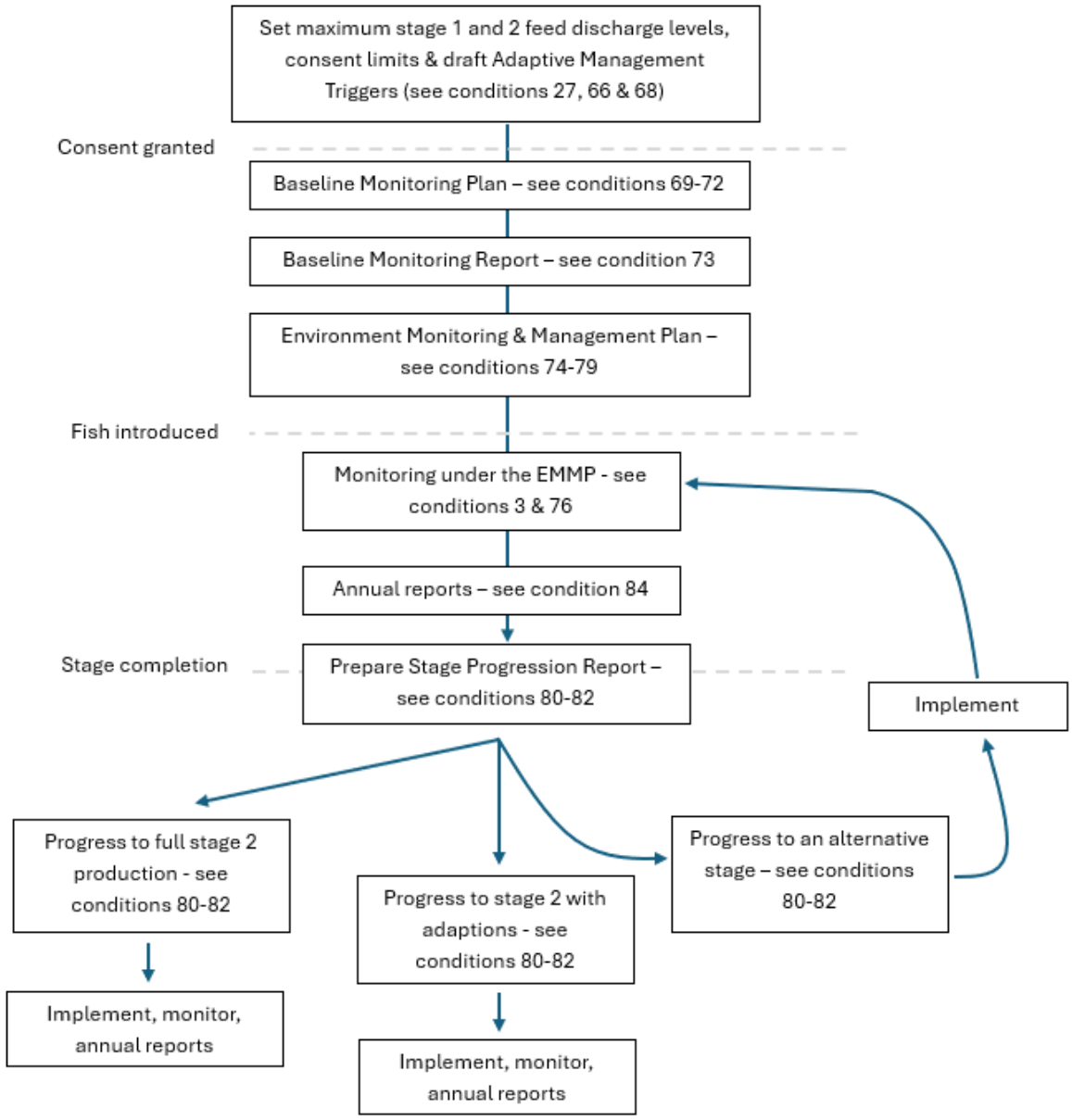


*Figure 12-1: Overview of the seabed deposition and water column adaptative management process*

The approach requires compliance with feed limits (condition 27) and water column and seabed compliance limits (condition 66). Compliance with the water column and seabed compliance limits will be achieved through the monitoring and implementation of farm adaptions where Adaptive Management Triggers (AMT) are exceeded. Consistent with the recommendations in relevant technical reports, the details of the monitoring approach and the AMT will be confirmed through monitoring and management plan certification processes, which are required to take into account the recommendations of the relevant technical reports. It is considered that this approach is appropriate for this application given the relatively high level of certainty that has been provided by the water column and seabed assessments and given the relatively low level of effects that both assessments predict will arise. This approach also provides the consent holder with greater flexibility to respond to the results of monitoring or advances in best practice, without having to vary consent conditions, and while providing appropriate protection to the important values of the area.

### 12.4.1 Compliance limits

It is proposed that compliance limits will be set through condition 66 for seabed deposition and water column effects. These are intended to establish the level of effects that must be avoided during the operation of the marine farms at the HAP site. Compliance with these limits will be ensured through the implementation of the Environmental Monitoring and Management Plan, and particularly through:

- Monitoring;
- Comparison of monitoring results to adaptive management triggers; and
- Implementation of farm adaptions where adaptive management triggers are exceeded.

### 12.4.2 Environmental quality zones and adaptive management triggers

Draft environmental quality zones (EQZ) and adaptive management triggers (AMT) are provided in an Appendix to the resource consent conditions in **Appendix CC**. These will be confirmed through the Environmental Monitoring and Management Plan following baseline monitoring and prior to the first fish being introduced to the marine farms, and may be reviewed at later stages. The AMT will form robust and reliable quantitative thresholds, against which monitoring results will be compared, and if exceeded the consent holder will be required to take action, which may include implementing adaptions to farm operations and may include relocating some farm positions. The AMT have been recommended by expert assessment, and will be set at a level that ensures adaptive management actions are undertaken before farm effects reach the compliance limits set in condition 66.

For seabed deposition, a two-tier approach to AMT is proposed (see Figure 12-2). If tier 1 triggers are exceeded, the consent holder will be required to undertake more detailed monitoring. If tier 2 triggers are exceeded, the consent holder will be required to undertake adaptive management actions.

For water column effects, a single tier approach to AMT is proposed. If the triggers are exceeded, the consent holder will be required to undertake adaptive management actions. This less complex approach for water column management is considered appropriate given the greater certainty that exists regarding the potential water column effects of the marine farming at the HAP site.

Comparison of monitoring results against the AMT will be reported annually through the Annual Report and will form a key element of the Stage Progression Report (see sections 12.4.6 and 12.4.7 below).

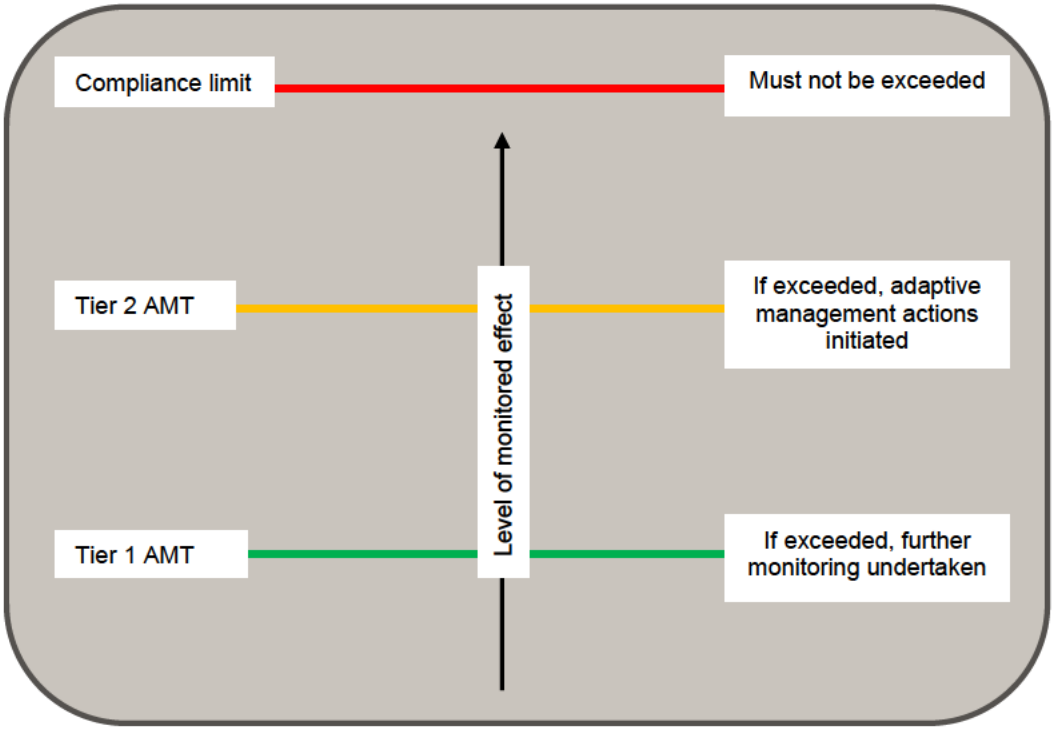


*Figure 12-2: Overview of Seabed Adaptive Management Triggers*

### 12.4.3 Baseline monitoring

A baseline monitoring plan (BLMP) will be prepared for baseline monitoring to be undertaken prior to fish being introduced to the site. Baseline monitoring will establish pre-operational seabed and water column conditions and inform subsequent monitoring phases.

Preliminary recommendations for baseline seabed monitoring are provided in the seabed monitoring report in **Appendix Z**. Baseline seabed sampling must be undertaken across multiple seasons to capture natural inter-annual and seasonal environmental and ecological variability.

The baseline water column monitoring will be to further understand the natural range of key water quality indicators such as DO, temperature, salinity, TN, TP, and Chl-a.

### 12.4.4 Environmental monitoring and management plan

An Environmental Monitoring and Management Plan (EMMP)[45] will be prepared and provided to ES for certification prior to fish being introduced to the water at the HAP site. It will detail the compliance limits, the EQZ and AMT, the monitoring programme and the adaptive management regime.

[45] It is envisaged that this will be one document comprising the Environmental Management Plan (EMAP) and Environmental Monitoring Plan (EMOP) recommended in **Appendix U**.

## 12.4.5 Ongoing monitoring

### 12.4.5.1 Seabed monitoring

The seabed monitoring report in **Appendix Z** provides a preliminary set of recommendations for baseline monitoring (as mentioned in section 12.4.3 above) and monitoring during Stage 1 of the HAP. The monitoring approach will be detailed in the EMMP and will be reviewed and updated, particularly following progression to Stage 2.

Key aspects of the monitoring approach include:

- Its purpose is to validate depositional model predictions and inform adaptive management of seabed effects, supporting decision making for progression between stages.
- It is guided by the Open Ocean Aquaculture Best Management Practice Guidelines.
- It will involve a zone-based and tiered framework, which is commonly applied to salmon farm monitoring in New Zealand. This framework recognises that depositional effects are most pronounced in proximity to the farm and decrease with distance.
- The monitoring approach is tailored to each of the two primary seabed habitats present in the wider area around the HAP site (sandy habitat and biogenic habitat).
- For sandy seabed habitat, a range of parameters will be measured, for example sulphides, redox, infaunal and epifaunal composition and metals.
- Biogenic habitat monitoring is a precautionary measure, designed to provide early detection of an effect if it arises. This will involve habitat mapping and video surveys, collection of sediment samples from sentinel sediment locations at the edge of the biogenic habitats and may include physical samples.

### 12.4.5.2 Water column monitoring

Ongoing monitoring of water quality during the operation of the marine farming activity will include monitoring to confirm that TN concentrations are similar to those predicted, the potential effects of nutrient enrichment on phytoplankton growth, and DO depletion. Phytoplankton abundance is typically measured using chlorophyll-a (chl-a) as a proxy. Recommended AMT for TN, DO and chl-a are provided in an appendix to the resource consent conditions in **Appendix CC**.

## 12.4.6 Annual reports

Annual reports will be provided to the consent authority with:

- Details of all monitoring undertaken.
- Statistical analysis of the trends in the monitoring data, including comparison with monitoring data from previous years.
- Comparison of the annual monitoring data with the compliance limits, EQZ and AMT set out in the EMMP.
- Actions that will be implemented where monitoring data or incident records indicate non-compliance with consent conditions or the EMMP.

### 12.4.7 Stage progression report

A stage progression report (SPR) will be prepared to determine whether the marine farm can progress to Stage 2, while continuing to meet compliance limits and the EQZ and AMT outlined in the EMMP. Progression to Stage 2 will only be allowed after a minimum of two full production cycles have been completed at Stage 1 or after an alternative stage has been completed as recommended by the SPR.

Additionally, progression to Stage 2 will be subject to evaluation of monitoring results to confirm that environmental effects are consistent with, or less than, those predicted for Stage 1 and that the progression to Stage 2 is not likely to result in unacceptable adverse effects. Model validation may also be undertaken as directed in the EMMP.

### 12.4.8 Potential alternatives / adaptation

If progression to Stage 2 is not recommended, then the SPR will recommend alternatives such as alternative levels of feed inputs or alternative farm locations.

## 12.5 Marine species management plans and monitoring

Another key tool for managing the effects of aquaculture activities is the development and implementation of management plans to set in place procedures to manage or avoid adverse effects on marine species.

The following draft management plans have been prepared:

- Marine mammal management plan (MMMP) (**Appendix W**)
- Seabird management plan (SBMP) (**Appendix X**)
- Shark management plan (SMP) (**Appendix Y**)

The fundamental approach for each draft management plan is to first seek to avoid attracting marine species to the marine farms and them becoming habituated and associated with the farms. If individuals of any marine species do investigate the marine farms, each of the plans sets out management measures specific to the marine species, although there are commonalities across the three plans:

- Measures to avoid attracting marine species to the marine farms
- Measures to address entanglement risks
- Measures to avoid harm to marine species from other activities, for example measures that control boat speeds and behaviour around the marine farms to avoid propellor strike incidents for seabirds, marine mammals and sharks
- Measures to avoid the marine farms acting to block marine species migration through the HAP site, and therefore avoiding effects of displacing animals into areas of higher shipping activity in Te Ara a Kiwa
- Monitoring of species in the vicinity of the marine farms
- Reporting of any incidents or interactions.

Fundamental measures (such as mesh size for nets, colour and maintenance of nets under tension as much as possible) are incorporated into proposed consent conditions contained in **Appendix CC**.

Monitoring and reporting on marine species interactions is proposed within the marine species management plans. Collection of information, including prior to establishing the marine farm (i.e. baseline monitoring) will help inform and manage the effects that marine farming at the HAP site may have on species over time. This may help fill information gaps, such as cumulative effects on sharks, seabird habitat displacement, and spatial and temporal trends for marine mammals. It will also help assess the effectiveness of the management plans and inform changes to mitigation measures. A large range of data will be collected during monitoring, such as date, time, species, behaviour, weather and operational context.

Some aspects of the marine species management plans will need to be developed and finalised following the granting of consent when certain details of the HAP operation can be advanced. It is proposed that feedback on the management plans is sought from DOC and representatives of NTKM, and that the management plans are then certified by ES, prior to the introduction of marine farm structures at the site.

There may be a need to amend the management plans throughout the term of the approval such as in response to operational changes and to ensure that they remain aligned with any changes to good practice. In this respect, it is proposed that the management plans will be reviewed two years after the installation of the first pens and every five years thereafter. For the MMMP and the SMP, it is also proposed that they be reviewed in response to a discovery of a mortality or serious injury resulting from the marine farming activity.

## 12.6 Biosecurity management plan and monitoring

A draft biosecurity management plan (BMP) is attached in **Appendix V**. The BMP has been developed on the basis of, and to respond to, the risks identified in the biosecurity assessment discussed in section 10.4 of this report. It is based on MPI's Aquaculture Biosecurity Handbook and related technical documentation, salmon farming biosecurity standards developed by Aquaculture New Zealand, and international best practice.

The objectives of the BMP are to ensure measures are implemented and carried out to achieve the following:

1. Minimise the risk of introduction to the farm site of potentially harmful organisms.
2. Early on farm detection of potentially harmful organisms.
3. Effective on-farm control and containment of potentially harmful organisms.
4. Ensure effectiveness of risk mitigation.

In addition, the BMP introduces measures to maintain fish health and performance on the farm by:

1. Monitoring fish health within the farm.
2. Responding to any abnormal clinical presentation of the fish.

As with the marine species management plans, some aspects of the BMP will need to be developed and finalised following the granting of consent when certain details of the HAP operation can be advanced. Therefore, it is proposed that feedback on the BMP is sought from Biosecurity New Zealand and representatives of NTKM, and that the final BMP is then submitted to ES for certification, prior to the introduction of fish at the HAP site. Further, there may be a need to amend the BMP throughout the operation of the marine farm such as in response to operational or regulatory changes. In this respect, it

is proposed that the BMP will be reviewed annually or in response to a significant change in the operating parameters of the farm that could present an altered biosecurity risk to the farm itself or the wider environment.

Monitoring is a key component of a number of measures contained in the draft BMP, including the health of stock, for fouling by wild oysters and mussels in relation to managing *Bonamia*, and for marine pests.

## 12.7 Proposed conditions

The proposed management and monitoring measures have shaped the development of a robust suite of proposed conditions for the resource consent and wildlife approval, which are contained in **Appendix CC** and **Appendix DD** respectively.

# Part 5 Fast-track Approvals Act 2024 Requirements

In deciding whether to grant the approvals sought through this application, the Panel must consider the requirements in Section 81 of the FTAA. The relevant decision-making criteria set out in Schedule 5 for RMA approvals and aquaculture decisions, and in Schedule 7 for Wildlife Act approvals, are set out in sections 13, 14 and 15 of this report below.

# 13 Resource Management Act approvals

## 13.1 Introduction

Clause 17(1) of Schedule 5 provides the framework against which the HAP must be assessed in relation to the resource consents being sought. Clause 17(1) states:

*For the purposes of section 81, when considering a consent application, including conditions in accordance with clauses 18 and 19, the panel must take into account, giving the greatest weight to paragraph (a),—*

*(a) the purpose of this Act; and*

*(b) the provisions of Parts 2, 3, 6, and 8 to 10 of the Resource Management Act 1991 that direct decision making on an application for a resource consent (but excluding section 104D of that Act); and*

*(c) the relevant provisions of any other legislation that directs decision making under the Resource Management Act 1991.*

These matters are assessed in the following subsections.

No other legislation that directs decision making under the RMA is relevant.

## 13.2 Purpose of the FTAA

The purpose of the FTAA is set out in Section 3 as follows:

> *The purpose of this Act is to facilitate the delivery of infrastructure and development projects with significant regional or national benefits.*

Section 5 of this report sets out the reasons why the HAP is consistent with the purpose of the FTAA and has clear regional and national benefits.

## 13.3 Part 2 of the RMA

Schedule 5, clause 17(2) of the FTAA states that references in the FTAA to Part 2 of the RMA must be read as reference to sections 5-7. Section 5 sets out the purpose of the RMA. Section 6 sets out matters of national importance and Section 7 describes ‘other’ matters. The HAP is assessed against these sections in Table 13-1.

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*Table 13-1: Analysis of Sections 5, 6 and 7 of the RMA*

| Provision | Assessment |
|---|---|
| **Section 5** | |
| In this Act, sustainable management means managing the use, development and protection of natural and physical resources in a way or at a rate that allows people and communities to provide for their social, economic and cultural wellbeing and for their health and safety, while… | Development of the proposed site for aquaculture will allow NTS to contribute to the social, economic and cultural wellbeing of the iwi, and reconnect whānau back to this site. Economic and employment benefits are also expected to flow to other parts of the Southland economy and community, and contribute to regional and national strategies and goals for the aquaculture industry being achieved. |
| **Section 5(2)(a)** | |
| Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations | Modelling of the effects of the HAP on the seabed and water column predicts that their potential to maintain ongoing use will be sustained, and that no significant adverse effects on natural or physical resources, including the water column, seabed, ecosystems, marine species, landscape and natural character values, will occur, provided that staged development and adaptive management are implemented for the project. |
| **Section 5(2)(b)** | |
| Safeguarding the life-supporting capacity of air, water, soil, and ecosystems | Modelling of the effects of the HAP on the seabed and water column predicts that the life-supporting capacity of Te Ara a Kiwa will not be affected by the proposed project. Staged development and adaptive management will be used to provide further safeguards by starting development at a proportion of the full proposed development, monitoring effects and only permitting an increase in production if effects are shown to be acceptable. The life-supporting capacity of the water and ecosystems of Te Ara a Kiwa will therefore be safeguarded. |
| **Section 5(2)(c)** | |
| Avoiding, remedying or mitigating any adverse effects of activities on the environment | Measures are suggested throughout sections 10 and 12 of this report to ensure that adverse effects on the environment are avoided, remedied or mitigated. |
| **Section 6(a)** | |
| The preservation of the natural character of the coastal environment (including the coastal marine area) …and the protection of [it] from inappropriate subdivision, use and development | The natural character of the CMA at the proposed site has been assessed as moderate-high. No more than minor adverse effects are anticipated, and natural character will remain moderate-high with the establishment of marine farms at the proposed site.<br><br>Assessment of the proposal has determined that there will be no adverse effects on the natural character of the surrounding terrestrial environment.<br><br>Manawhenua have assessed the activity within the cultural landscape and concluded that it is an appropriate activity at the site.<br><br>Natural character will therefore be preserved as required by Section 6(a) of the RMA and protected from inappropriate development. |
| **Section 6(b)** | |
| The protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development | The coastal terrestrial area receiving environment is identified in the RCP as an outstanding natural landscape. Further studies have suggested up to 2 km offshore being a buffer to the Rakiura outstanding natural landscape (refer to section 9.8.4 of this report). |

| Provision | Assessment |
|---|---|
| | Assessment of the proposal has determined that there will be no adverse effects on outstanding terrestrial landscape values.<br><br>Manawhenua have assessed the activity within the cultural landscape and concluded that it is an appropriate activity at the site.<br><br>Outstanding natural landscape values will therefore continue to be protected, even with the establishment of the proposed site. |
| **Section 6(c)** | |
| The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna | Areas of bryozoan-sponge reef in Te Ara a Kiwa may be significant habitats for indigenous fauna. Potential adverse effects on biogenic habitat have been assessed as being nil to minor due to the proposed avoidance and mitigation measures. Effects will be avoided or mitigated to the extent it is practicable to do so and as far as necessary to protect areas of significant habitats of indigenous fauna. |
| **Section 6(d)** | |
| The maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers | The proposed site is located sufficiently far offshore that it is not anticipated to cause a reduction in public access to and along the northern coast of Rakiura. |
| **Section 6(e) and section 7(a)** | |
| The relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga. | The ancestral relationship of Ngāi Tahu and NTKM with the CMA, Te Ara a Kiwa, and taonga species underpins all of the activities that NTS undertakes. This operating philosophy will be maintained for the HAP. As explained in section 2 of this report NTKM has a deep and enduring relationship with the proposed HAP site and its surrounds, and have advised NTS that the project is considered to be appropriate at the proposed site. , NTKM have maintained an ongoing relationship with the area, residing close by and fishing within it and more broadly accessing it as a mahinga kai, as noted in the Ngā Hua report. Significantly, NTKM have expressed in their assessment of the proposal that it will help them to continue to connect Ngāi Tahu whānau to the site, an important part of maintaining their relationship with the area. They note that '*It is clear that historically a large net in the middle of Te Ara a Kiwa wasn't needed to feed our people, however since our mātauranga has kept generating, our association is now reliant on creating jobs and outcomes for our own people and feeding people through different methods including aquaculture*' (Ngā Hua report, **Appendix D**).<br><br>In the Rakiura/Te Ara a Kiwa statutory acknowledgement the Crown acknowledges the cultural, spiritual, historic and traditional association of Ngāi Tahu to Rakiura/Te Ara a Kiwa. The text of the statutory acknowledgement describes the dense whakapapa of the area, and the place of Ngāi Tahu within it. The HAP is a continuation of the cultural, spiritual, historic and traditional association. It is an active expression of rangatiratanga and the future progression of the intergenerational ancestral relationship with Te Ara a Kiwa. All of which recognises and provides for the matters in Section 6(e). The foundational depth of this relationship is of particular importance in the context of Section 6 of the RMA, and relative to other Section 6 matters. |
| **Section 7(a)** | |
| Kaitiakitanga | The role of Ngāi Tahu and NTKM as kaitiaki underpins all of the activities that NTS undertakes. This operating philosophy will be maintained for the HAP. NTS has acknowledged the kaitiaki role of NTKM through ongoing consultation about the development of the |

| Provision | Assessment |
|---|---|
| | project and the FTAA application, including involvement in the draft management plans, and an ongoing commitment to keep working with NTKM should consent be granted.<br><br>The HAP provides an opportunity for Ngāi Tahu to actively engage in Te Ara a Kiwa as kaitiaki through a modern mahinga kai. This is an important part of the enduring and future relationship of Ngāi Tahu with Te Ara a Kiwa. |
| **Section 7(b)** | |
| The efficient use and development of natural and physical resources | The clustering of an estimated 14,400 tonnes of finfish production per annum into one area of the Southland CMA continues the current approach in Southland of clustering marine farm activities. This approach leaves large areas of the CMA not subject to marine farming. Large areas of the CMA around Rakiura are unsuitable for marine farming and developing the proposed site is therefore an efficient use of the existing appropriate space. Locating all NTS operations within one area will also allow efficient use of operational resources to service the marine farms. In this regard it is also notable that the HAP site is in close proximity to the Ngāi Tahu settlement area gazetted under the Maori Commercial Aquaculture Claims Settlement Act 2004. The project therefore represents an efficient use and development of the CMA at the proposed site.<br><br>The efficient use and development of natural and physical resources is consistent with the expression of kaitiakitanga, and forms part of the consideration of the HAP by NTKM. |
| **Section 7(c)** | |
| The maintenance and enhancement of amenity values | Assessment of the effects of the proposed marine farms on visual amenity values has concluded that the effects will be low. The location of the proposed site well offshore from the coast and in an area that is not subject to significant recreational use will also minimise any adverse effects on amenity. The Ngā Hua report (**Appendix D**) states that NTKM consider the development to be appropriate at the site and will help NTKM reconnect whānau to the site. In this sense it will contribute to the maintenance of NTKM amenity values in the area. The amenity values of the proposed site and its surrounding environment will therefore be maintained and are likely to be enhanced for NTKM. |
| **Sections 7(d) and 7(f)** | |
| Intrinsic values of ecosystems<br>Maintenance and enhancement of the quality of the environment | In continuing the ancestral relationship with Te Ara a Kiwa, and in exercising kaitiakitanga, it is important to NTKM that the intrinsic values of ecosystems are appropriately managed and that the quality of the environment is enhanced or maintained.<br><br>Intrinsic values of ecosystems have been discussed in detail in sections 10.1, 10.2 and 10.3 of this report and in the associated technical reports. Adverse effects from the HAP have generally been assessed as minor, or where they may be more than minor, staged development and adaptive management will be used to ensure that adverse effects do not become significant. Receiving water and seabed compliance limits would ensure that the quality of the environment is maintained. The HAP can therefore be undertaken in a way that appropriately manages the intrinsic values of ecosystems and that maintains the quality of the environment as sought by NTKM. |
| **Section 7(g)** | |
| Any finite characteristics of natural and physical resources | Both the seabed and the water column have a finite capacity to assimilate contaminants. If this assimilative capacity is exceeded |

| Provision | Assessment |
|---|---|
| | anoxic sediments with little macrofauna, and frequent algal blooms could be expected to result. In the case of the HAP however, modelling is predicting that the assimilative capacity of the seabed and the water column will not be exceeded, and receiving water and seabed compliance limits can be set well below the level at which assimilative capacity would be exceeded.<br><br>Consistent with the above commentary, inherent in kaitiakitanga is consideration of any finite characteristics of natural and physical resources. NTKM will continue their relationship with Te Ara a Kiwa beyond any Council, Government or other agency. Finite capacity has therefore formed part of the consideration of the HAP by the MWG. |

Overall, the HAP is considered to achieve the purpose of the RMA and is consistent with the principles outlined in Sections 6 and 7 of the RMA.

## 13.4 Part 3 of the RMA

Part 3 of the RMA contains provisions that detail when a resource consent is required in relation to the CMA (Section 12) and discharges (Section 15). The consent requirements for this project are detailed in section 8 of this report.

## 13.5 Part 6, Section 104 of the RMA

Section 104 of the RMA states:

*(1) When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2 and section 77M, have regard to–*

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

*(ab) any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity; and*

*(b) any relevant provisions of—*

*(i) a national environmental standard:*

*(ia) a wastewater environmental performance standard:*

*(ib) a stormwater environmental performance standard:*

*(ic) an infrastructure design solution:*

*(ii) other regulations:*

*(iii) a national policy statement:*

*(iv) a New Zealand coastal policy statement:*

*(v) a regional policy statement or proposed regional policy statement:*

*(vi) a plan or proposed plan; and*

*(c) any other matter the consent authority considers relevant and reasonably necessary to determine the application.*

Section 104(1)(a) of the RMA is addressed by the comprehensive technical assessments that accompany this application, which are summarised in section 10 of this report. No measures to offset or

compensate for adverse environmental effects have been identified as necessary under Section 104(1)(ab) of the RMA.

For an assessment under Section 104(1)(b) and (c) of the RMA, the relevant statutory planning documents and other relevant documents are considered to be:

- New Zealand Coastal Policy Statement 2010 (NZCPS)
- Southland Regional Policy Statement 2017 (RPS)
- Southland Regional Coastal Plan 2013 (RCP)
- Te Tangi a Tauira The Cry of the People – the relevant iwi management plan
- Stewart Island/Rakiura Conservation Management Strategy and Rakiura National Park Management Plan 2012.
- New Zealand Aquaculture Strategy 2019
- New Zealand Aquaculture Development Plan 2025-2030
- Murihiku Southland Aquaculture Pathway 2025

There are no national environmental standards or other regulations that are relevant to the application.

**Appendix AA** identifies all of the relevant objectives and policies from each of the statutory planning documents listed above. Those that relate to the major policy issues covered in sections 13.5.1 - 13.5.7 of this report have been highlighted in **Appendix AA**. All the provisions have been considered and assessed in developing the application even if specific reference is not made to them in sections 13.5.1 - 13.5.7. An overall assessment is provided in section 13.5.9 of this report.

The provisions of the Stewart Island/Rakiura Conservation Management Strategy have been reviewed as part of preparing this application, with those relating to marine ecosystems, habitats and species being particularly relevant. Many of the objectives and policies relate directly to the advocacy, research and administrative tasks of DOC. Where those tasks relate to environmental effects that are covered in this application, the objectives and policies are consistent with those contained in the NZCPS, RPS and RCP. Analysis of those provisions in the sections of this report that follow can therefore be taken as also applying to the relevant objectives and policies in the Stewart Island/Rakiura Conservation Management Strategy. The Rakiura National Park Management Plan addresses activities within the National Park. As the HAP site boundary is located approximately 2 km offshore from the National Park and would not have any land-based activities associated with it on the adjacent shore, the Rakiura National Park Management Plan is not considered to be relevant to the application.

### 13.5.1 New Zealand Coastal Policy Statement 2010 (NZCPS)

The New Zealand Coastal Policy Statement (NZCPS) provides national direction to guide councils in their management of the coastal environment. The relevant objectives and policies of the NZCPS are assessed in Table 13-2.

*Table 13-2: New Zealand Coastal Policy Statement 2010 (NZCPS)*

| Theme | Relevant Provisions | Purpose | Assessment |
|---|---|---|---|
| Marine farming policy framework | Objective 6<br>Policy 6<br>Policy 8 | The NZCPS reflects a refinement in approach to aquaculture throughout New | The project will assist Ngāi Tahu and the Southland community to provide for its social, economic and cultural well-being |

| Theme | Relevant Provisions | Purpose | Assessment |
|---|---|---|---|
| | | Zealand from the 1990s and early 2000s. It recognises the contribution of aquaculture to the social, economic and cultural wellbeing of people and communities and sets out an intent that appropriate locations for aquaculture will be identified.<br><br>Objective 6 and Policy 6 relate to activities generally in the coastal environment and emphasise that the protection of values in the coastal environment does not preclude appropriate use and development, and that functionally there are some uses and developments that can only be located in the CMA. The NZCPS then has policies relating to specific activities, of which aquaculture is one of them (Policy 8).<br><br>Policy 8 is to recognise the significant contribution of aquaculture to social, economic and cultural well-being, by (Clause 2) taking account of the social and economic benefits of aquaculture, including any available assessments of national and regional economic benefits.<br><br>Clause 1 in Policy 8 is to include in regional policy statements and regional coastal plans provision for aquaculture activities in appropriate places (which has not yet been done for Southland). Clause 3 of Policy 8 is not directly relevant. | through its significant contribution to the economy and the provision of employment, as outlined in section 5 of this report.<br><br>As has been discussed in sections 6, 10 and 12 of this report, the HAP has been designed to ensure that adverse effects are avoided, remedied or mitigated, particularly through the proposal to stage development, monitor the receiving environment and adapt the development of the site and marine farming activities should monitoring show that it is necessary.<br><br>The social and economic benefits of the HAP have been discussed in section 5 of this report, demonstrating the significant contribution of aquaculture to wellbeing.<br><br>Formal identification of areas for aquaculture as required by Policy 8 of the NZCPS has not yet occurred in Southland. Nevertheless, the HAP is proposed for an area with water quality suitable for aquaculture. In addition, effects on outstanding natural features, landscapes and natural character would be avoided, and indigenous biodiversity would be protected, as discussed in section 10 of this report.<br><br>The sub-clauses of Policy 6 of the NZCPS have been reviewed in preparing this application and the proposal appropriately addresses those that are relevant (particularly Policy 6(2)). |
| Management of the coastal marine area and coastal environment | Objective 1<br>Policy 1(1)<br>Policy 3 | The focus of the NZCPS provisions is on maintaining the integrity, form, functioning and resilience of the coastal environment, and taking a precautionary approach towards those activities whose effects are uncertain, unknown or little understood but which are potentially significant, while enabling use and development where appropriate. | The main areas around Rakiura where commercial use of the CMA (other than commercial fishing) currently occurs are Te Whaka a Te Wera/Paterson Inlet (including Big Glory Bay), Halfmoon Bay and Horseshoe Bay, and Te Ara a Kiwa (including the northern coastline of Rakiura). Commercial fishing occurs around Rakiura, including major fisheries in Te Ara a Kiwa. The proposed site is thus within an area that already forms the most "working" part of the CMA around the island. NTS proposes to install only those structures that are necessary to enable the level of fish production sought from the site and to locate those structures where they will have the least possible adverse effects, |

| Theme | Relevant Provisions | Purpose | Assessment |
|---|---|---|---|
| | | | but it is acknowledged that in order to undertake the project a relatively large number of structures will be needed (although concentrated within a relatively small area of the wider Te Ara a Kiwa).<br><br>As has been discussed in sections 10 and 11 of this report, the HAP has been designed to ensure that adverse effects (including cumulative effects) are avoided, remedied or mitigated, particularly through the proposal to stage development, monitor the receiving environment and adapt the development of the site and marine farming activities should monitoring show that it is necessary. Assessments have also used conservative assumptions. Effects on the seabed and water column are particularly relevant to these provisions, and significant adverse effects are not expected as a result of the HAP.<br><br>While the effects of salmon farming are well understood, most development to date has taken place in more sheltered, enclosed environments of New Zealand. Te Ara a Kiwa is therefore a different receiving environment for the NZ industry (although it is one of the types of receiving environment that the New Zealand Aquaculture Development Plan 2025-2030 is encouraging movement into) and the HAP at full development would be significantly larger than any existing salmon farming activity in the country. Recognising the requirements of the precautionary approach, NTS is proposing to stage the development over two stages, with monitoring of effects and increases in production levels only if effects are determined to be acceptable. As set out in section 12 of this report it is considered that the proposed adaptive management regime is appropriately precautionary, despite there being no significant adverse effects anticipated.<br><br>The values of the HAP site have been considered in the preparation of each of the technical assessments, and measures adopted to avoid effects on those values that are particularly significant. Alternatives have been considered, and a potential design for the proposed site developed that uses only the number of structures necessary to produce the estimated 14,400 tonnes of fish per annum. This level of production has been settled on following an iterative process of considering potential annual fish production and potential environmental effects. |

| Theme | Relevant Provisions | Purpose | Assessment |
|---|---|---|---|
| Functional need to locate in the coastal marine area | Objective 6<br>Policy 6 | As the CMA is generally a public resource in New Zealand, provisions in the NZCPS seek to ensure that activities that wish to locate within it have a functional need to be there and only have exclusive or preferential occupation where this is fully justified. | Salmon farming in New Zealand currently takes place in both the coastal marine area (Big Glory Bay, Akaroa Harbour and the Marlborough Sounds) and fresh water (the hydro canals in the Mackenzie Country). The freshwater farming is however the only example of its type in the world, with salmon farming overwhelmingly a marine activity. There are no freshwater resources of sufficient size and flow in Southland to maintain freshwater production of the level sought by regional and national strategies. The HAP therefore has a functional need to be located in the coastal marine area. Exclusive occupation of the coastal marine area is only sought by NTS in the immediate vicinity of the sea pens and feed barges, in order to maintain operational safety and protect equipment. Preferential occupation is sought over the balance of the site in order to provide room over the term of a 25 year consent to relocate marine farms if it becomes necessary to manage effects on the environment, and to allow for the implementation of new technology. |
| Recognising and providing for Ngāi Tahu values and uses | Objective 3<br>Policy 2 | Provisions in the NZCPS require that the principles of the Treaty of Waitangi and the principle of kaitiakitanga be taken into account in managing the coastal environment. | Ngāi Tahu is a living culture that is bound through whakapapa to its whenua and moana and will continue to be. As noted in section 2 of this report, the Ngāi Tahu relationship with the environment and the way in which they define their cultural identity is a contemporary and evolving practice. This contemporaneity can be recognised in the statutory process through acknowledging that manawhenua interests extend across all of the objectives and policies in statutory documents and assessing an activity in that way. Reference to manawhenua concerns has therefore been integrated into all the policy analysis sections rather than being contained solely here.<br><br>In addition, acknowledging that NTS is a TRoNT subsidiary and is ultimately accountable to Ngāi Tahu Whanui, as described in section 2 of this report, its development of the proposed site is therefore consistent with objectives and policies that seek to provide for tangata whenua aspirations and the way in which it undertakes the activities will be consistent with tangata whenua values for the coastal marine area. Nonetheless, a process of ongoing consultation and engagement has commenced with NTKM and related parties (as outlined in section 4 of this report), in order to ensure that both the consent application and the eventual development of the site are undertaken in a way that is |

| Theme | Relevant Provisions | Purpose | Assessment |
|---|---|---|---|
| | | | consistent with both Ngāi Tahu objectives for the coastal marine area in its takiwā, and with the objectives and policies of the relevant statutory documents. |
| Ecosystems and indigenous biodiversity | Objective 1<br>Policy 11 | Objective 1 of the NZCPS seeks to safeguard the integrity, form, functioning and resilience of the coastal environment and to sustain its ecosystems by *inter alia* maintaining or enhancing biological and physical processes, and protecting significant natural ecosystems.<br><br>Policy 11 states that to protect indigenous biological diversity:<br>1. avoid adverse effects of activities on…<br>2. avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on…<br><br>**Appendix BB** contains a list of the known taxa, habitats, ecosystems etc on which effects must be avoided (Policy 11(a)(1)) and on which significant effects must be avoided (Policy 11(a)(2)). | A full assessment against Policy 11 is provided in **Appendix BB**.<br><br>As discussed in sections 10 and 12, adverse effects on ecosystems and indigenous biodiversity will be sufficiently avoided or mitigated as far as necessary to protect indigenous biodiversity in the coastal environment. |
| Water quality | Objective 1<br>Policy 23 | Policies 23 (2)-(5) relate to discharges from specific activities (which are not relevant to this application). Policy 23(1) directs that to manage discharges to water in the coastal environment more generally, regard must be had to several matters including the nature and concentration of contaminants, the capacity of the receiving environment to assimilate the contaminants, avoiding significant adverse effects on ecosystems and habitats after reasonable mixing, and minimising adverse effects on the life-supporting capacity of water. | The effects of discharges from marine farms at the proposed site are discussed in section 10.2 of this report and in the water column assessment (**Appendix K**). On the basis of the conclusions of the technical assessment, the integrity, form, functioning and resilience of the coastal environment are not anticipated to be affected. Water quality in the area may be altered, although will continue to be naturally variable. Compliance with a water quality compliance limit can be used as a tool to ensure that the matters outlined in Objective 1 of the NZCPS are safeguarded.<br><br>The water column assessment (**Appendix K**) has addressed the majority of the matters outlined in Policy 23(1) of the NZCPS. The receiving environment at the HAP site does not appear to be particularly sensitive to change, due to its dynamic nature and the well-mixed water column that exists in Te Ara a Kiwa.<br><br>The nature of the contaminants to be discharged is well understood, through experience with salmon farming elsewhere in New Zealand and internationally. |

| Theme | Relevant Provisions | Purpose | Assessment |
|---|---|---|---|
| | | | Effects on water quality from nutrient enrichment and oxygen depletion will be low and localised within the HAP site and negligible outside of the HAP site. The proposed activity is not expected to materially influence phytoplankton biomass or harmful algal bloom dynamics. Significant adverse effects will be avoided.<br><br>Proposed monitoring will confirm the predictions around the assimilation of contaminants in the receiving environment. |
| Landscape and natural character | Objective 2<br>Policy 13<br>Policy 15 | These objectives and policies are to preserve natural character, and protect natural features and landscapes in the coastal environment from inappropriate uses and development. Policies 13 and 15 require that:<br>Adverse effects on areas with outstanding natural character or on outstanding natural features and landscapes are avoided, or<br>Significant adverse effects on the natural character of areas or natural features and landscapes that are not defined as outstanding are avoided.<br>Adverse effects on the natural character of areas or natural features and landscapes that are not defined as outstanding are avoided, remedied or mitigated. | The assessment of effects on landscape, natural character and visual amenity from a Western perspective is summarised in section 10.5 of this report, and is outlined in full in **Appendix T**. The perspective of manawhenua on the effects of the HAP on the cultural landscape of the area (of which the Western conception of 'landscape' is a sub-component) is discussed in section 2 of this report and in the relevant manawhenua reports attached (CIA Potential Impact 15 and Ngā Hua report in **Appendix D**).<br><br>For manawhenua all areas of the environment/cultural landscape are significant, but the relationship with the environment is an ongoing and active one. Specific assessment of the HAP has determined that the activity is appropriate within the landscape. From a cultural perspective therefore, the proposed activities are not 'inappropriate' and both Policy 13 and Policy 15 of the NZCPS will be achieved.<br><br>Adverse effects on outstanding natural features, outstanding natural landscapes and areas of outstanding natural character will be avoided. No significant adverse effects will occur on the natural character of areas that are not defined as outstanding, nor on other natural features and natural landscapes, and effects will be mitigated by the selection of both an appropriate site and structures with recessive colours and circular forms. The proposal is therefore consistent with Policies 13 and 15, and Objective 2 of the NZCPS. |
| Biosecurity | Objective 1<br>Policy 12 | Policy 12 of the NZCPS seeks that conditions be included on resource consents to manage the risks of adverse effects on the coastal environment from the release or spread of harmful aquatic organisms. | Section 10.4 of this report contains a summary assessment of biosecurity risks from the development of the proposed site for salmon farming, and measures to mitigate those risks. More detail in relation to biosecurity is provided in the marine biosecurity assessment of effects in **Appendix U**. Manawhenua have expressed concerns about disease risk and noxious species that are also relevant to these assessments (CIA Potential Impacts |

| Theme | Relevant Provisions | Purpose | Assessment |
|---|---|---|---|
| | | | 14 and 17). NTS has prepared a draft biosecurity management plan (**Appendix V**) to provide confidence that there is a commitment to reducing biosecurity risks to the greatest extent practicable, consistent with Objective 1 and Policy 12 of the NZCPS. |
| Public access and open space | Objective 4<br>Policy 18 | Objectives and policies in the NZCPS focus on access to and along the coast, rather than through the CMA on the surface of the sea. They also seek that public open space and recreation opportunities are maintained or enhanced, recognising that the CMA is an extensive area of public space. | Effects of the HAP on public and manawhenua access have been discussed in section 10.8 of this report, supported by the work outlined in the recreation report in **Appendix R**.<br><br>Access to and along the coastline will not be affected by the proposal, as no on-land facilities are proposed on Rakiura/Stewart Island. On the sea surface, the spacing of the proposed marine farms will ensure that access remains available through the proposed site for small recreational vessels, and recreational users surveyed as part of the recreation report in **Appendix R** generally confirmed that they did not anticipate any effects on access as a result of the presence of the HAP. Access will need to be restricted in the immediate vicinity of the feed barges and the net pens, for biosecurity site management, operational purposes and to ensure vessels do not get entangled with feed pipes between the feed barges and the net pens.<br><br>Within the proposed site, marine farms will be located over sand habitat rather than the areas of biogenic habitat that are likely to provide habitat for recreational fish species, and so should not have notable adverse effects on recreational fishing opportunities. The proposed site is located seaward of the line that demarcates the area excluded from commercial oystering and reserved for recreational oyster dredging. The net pens and the salmon contained within them may act as attractants to wild fish species and provide an improved recreational fishing experience in the near vicinity of the sea pens. In terms of other recreational activities, the current speeds in the area and water depth mean that it is not considered suitable for recreational diving, which (if it occurs) would occur closer to shore in areas not affected by the proposal. Areas where access would be restricted as a result of the HAP therefore have little recreational value when compared to other areas closer to and around Rakiura/Stewart Island. |

## 13.5.2 Southland Regional Policy Statement 2017 (RPS)

The Southland Regional Policy Statement 2017 (RPS) provides a high-level and strategic overview of the resource management challenges for the Southland region and objectives and policies for addressing them. The relevant objectives and policies of the RPS are assessed in Table 13-3.

*Table 13-3: Southland Regional Policy Statement (RPS)*

| Theme | Provisions | Purpose | Assessment |
|---|---|---|---|
| Marine farming policy framework: | Objective COAST.2<br>Objective COAST.5<br>Policy COAST.4 | The RPS recognises the contribution of aquaculture to the social, economic and cultural wellbeing of people and communities and sets out an intent that appropriate locations for aquaculture will be identified in Southland. The RPS (which was prepared after the NZCPS) makes this identification of locations subject to protecting various identified values, and avoiding, remedying or mitigating adverse effects. Specific areas suitable for aquaculture development are not listed or otherwise included in the RPS.<br>As the RCP has not yet been reviewed, identification of areas for aquaculture as required by the NZCPS and RPS has not yet occurred in Southland, despite Objective COAST.2 of the RPS stating that aquaculture be provided for where appropriate. | Approving the consents sought for the HAP would be consistent with Objective COAST.2 as it would provide for new aquaculture activities. The assessment provided in this report and in the accompanying technical reports has shown that any adverse effects from the HAP can be managed. |
| Management of the Southland coastal marine area and coastal environment | Objective COAST.1<br>Policy COAST.1<br>Policy COAST.7 | These provisions set out the overall framework within which activities in the CMA and the wider coastal environment will be managed. The RPS indicates that direction will be provided on appropriate and inappropriate subdivision, use and development within the CMA, and that a framework to avoid or mitigate adverse effects on the coastal environment will be provided, through the RCP. There are no other objectives or policies in the RPS specific to general management of the CMA. | As the RCP has not yet been reviewed following the RPS becoming operative, no specific direction is included in the current RCP. |
| Recognising and providing for Ngāi Tahu values and uses | Objective TW.2<br>Objective TW.3<br>Objective TW.4<br>Policy TW.1<br>Policy TW.2<br>Policy TW.3<br>Policy TW.4 | The RPS reinforces the requirement [that the principles of the Treaty of Waitangi and the principle of kaitiakitanga be taken into account in managing the coastal environment,] and also seeks that mauri and wairua are sustained, mahinga kai are healthy, abundant and accessible to tangata whenua, and that sites of cultural significance are managed and protected. | For the same reasons as discussed in section 13.5.1 and throughout the effects assessment sections of this report, the proposal is consistent with these provisions. |
| Seabed deposition | Objective COAST.3<br>Policy COAST.2 | The RPS objectives and policies seek the same outcome as Objective 1 of the NZCPS, namely that coastal ecosystems and ecological values are maintained and enhanced, indigenous | Adverse effects of seabed deposition and the proposed management of these effects are discussed in sections 10.1 and 12.4 of this report. Based on this, adverse effects on ecosystems |

| Theme | Provisions | Purpose | Assessment |
|---|---|---|---|
| | Policy COAST.5 | biodiversity is protected and that adverse effects on ecosystems are avoided, remedied or mitigated. | and indigenous biodiversity will be sufficiently avoided or mitigated and coastal ecosystems and ecological values will be maintained. |
| Water quality | Objective COAST.3<br>Policy COAST.5 | The RPS seeks to ensure that coastal water quality is maintained, and that adverse effects of marine activities on coastal water quality and ecosystems are avoided, remedied or mitigated. This suggests that a degree of effect on water quality is permissible provided that water quality is still maintained. | Adverse effects on water quality and the proposed management of these effects are discussed in sections 10.2 and 12.4 of this report. Based on this, adverse effects will be sufficiently avoided or mitigated and coastal water quality will be maintained. |
| Indigenous fauna | Policy COAST.2<br>Objective BIO.2<br>Policy BIO.2<br>Policy BIO.3<br>Policy BIO.4 | Objectives and policies in the RPS focus on the protection of indigenous biodiversity through maintaining species and protecting areas of significant habitat. Protecting indigenous biodiversity from adverse effects in the coastal environment must be in accordance with Policy 11 of the NZCPS. | For the same reasons as discussed in section 13.5.1, the HAP is consistent with these provisions.<br><br>All of the technical reports relevant to non-benthic marine species note the small size of the HAP site compared to the wide home ranges of each of the species. Marine species are expected to be maintained even with the proposed marine farms in place and the habitat from which they would be excluded has not been noted as significant.<br><br>In relation to benthic habitat, the bryozoan-sponge reefs and bushy-bryozoan thickets (although degraded and in isolated patches) may be considered to be significant. However, potential adverse effects on them have been assessed as being negligible to minor, taking into account the potential effects listed in Policy BIO.2. Overall, with the proposed management approach, significant habitats of indigenous fauna will be protected. |
| Landscape and natural character | Objective COAST.4<br>Policy COAST.2<br>Policy COAST.3<br>Policy COAST.6<br>Objective LNF.1<br>Policy LNF.4 | Objective COAST.4 requires the natural character of the coastal environment to be restored, rehabilitated or preserved.<br>Objectives and policies in the RPS reiterate the requirements of section 6(b) of the RMA and policies 6 and 15 of the NZCPS in relation to protecting outstanding natural features and landscapes from inappropriate use and development. | For the same reasons as discussed in section 13.5.1, the HAP is consistent with these provisions. |
| Amenity values | Policy COAST.2 | The RPS also contains provisions in relation to amenity values, seeking that they be maintained or enhanced. | The natural character, landscape and visual assessment (**Appendix T**) concludes that adverse effects on visual amenity will be low and the visual amenity values will be maintained. Potential adverse effects have been mitigated to the greatest extent possible by the selection of low profile, recessive-coloured structures. |

## 13.5.3 Southland Regional Coastal Plan 2013 (RCP)

The Southland Regional Coastal Plan 2013 (RCP) contains provisions to manage activities in the CMA. It predates the NZCPS and RPS. The relevant objectives and policies of the RCP are assessed in Table 13-4.

*Table 13-4: Southland Regional Coastal Plan (RCP)*

| Theme | Provisions | Purpose | Assessment |
|---|---|---|---|
| **Marine farming policy framework** | Objective 15.1.1<br>Policy 15.1.1<br>Policy 15.1.3<br>Policy 15.1.4 | In the mid-1990s the RCP settled on a marine farming policy framework for Southland that required that adverse effects be avoided, remedied or mitigated, that resource consents be required for all marine farming, and that monitoring of individual farm sites would be required. In addition, a number of areas within the region were specified as areas where the adverse effects of marine farming were to be avoided, and this was achieved by including a prohibited rule applying to these areas. Those areas are: Marine Reserves, Fiordland's internal waters, Lords River, Port Pegasus, Paterson Inlet (except Big Glory Bay and the Salmon Farming Refuge Zone), and Port William on Stewart Island, and that part of Awarua Bay that lies to the east of the Tiwai Causeway. | The HAP is not in one of the areas where marine farms are to be avoided.<br><br>As has been discussed in sections 6, 10 and 12 of this report, the HAP has been designed to ensure that adverse effects are avoided, remedied or mitigated, particularly through the proposal to stage development, monitor the receiving environment and adapt the development of the site and marine farming activities should monitoring show that it is necessary. |
| **Management of the Southland coastal marine area and coastal environment** | Objective 4.1.1<br>Objective 4.1.2<br>Policy 4.1.1<br>Policy 4.1.2<br>Policy 4.2.2<br>Policy 4.2.3<br>Policy 4.4.3<br>Objective 4.5.1<br>Policy 4.5.1<br>Objective 4.6.1<br>Policy 4.6.1<br>Objective 4.7.1<br>Objective 4.7.2<br>Policy 4.7.1 | The focus of the RCP is on avoiding, remedying or mitigating adverse effects, protecting identified values and obtaining an appropriate level of use of the CMA. Policies in the RCP aim to concentrate compatible activities in areas of existing use and development, giving priority to multiple compatible uses and minimising the size of structures and development in the CMA. | For the same reasons as discussed in section 10 of this report, the HAP is consistent with these provisions. In particular, the HAP site has been selected as being in an area of the Southland CMA that is already subject to significant human use, in order to concentrate activities as sought by the RCP. |
| **Functional need to locate in the coastal marine area and occupation of the** | Objective 4.2.1<br>Policy 4.2.1<br>Objective 4.4.1<br>Policy 4.4.1<br>Policy 4.4.2 | As the CMA is generally a public resource in New Zealand, policies in the RCP seek to ensure that activities that wish to locate within it have a functional need to be there (defined in the RCP as a requirement to be located in the CMA) and only have exclusive or preferential occupation where this is fully justified. | As a marine aquaculture activity, the HAP has a functional need to locate in the CMA. |

| Theme | Provisions | Purpose | Assessment |
|---|---|---|---|
| **coastal marine area** | Objective 9.1.2<br>Policy 9.1.1<br>Policy 9.1.2<br>Policy 9.1.3<br>Policy 9.1.4<br>Policy 9.1.5<br>Policy 9.1.6 | These provisions seek to ensure that any exclusive or preferential occupation of the CMA in Southland is justified and is only what is necessary for the activity. | Both exclusive and preferential occupation of the coastal marine area is sought across the proposed site.<br><br>It is proposed that an exclusive occupation area surrounds each farm and its associated barge. This area will be measured 200 m outwards from the compensation buoys on the mooring grid and from the sides of the feed barges, leading to a total area of exclusive occupation of up to 460 ha). Exclusive occupation is required principally for health and safety reasons, to reduce the risk of collisions between other users of the coastal marine area and the marine farm infrastructure.<br><br>Over the balance of the approximately 1,285 ha site, preferential occupation of the coastal marine area is sought. Marine farms may need to be moved within the site as part of the site development and as part of the adaptive management approach. This, in combination with the need to coordinate the operation of all four farm sites means that preferential occupation across the proposed site will provide the opportunity to do this if required over the term of the consent.<br><br>Consistent with Policies 9.1.2 and 9.1.4 exclusive occupation has only been sought across the area where it is completely necessary. Preferential occupation across the balance of the proposed site is sought for the reasons outlined above. The approach adopted to occupation of the coastal marine area across the proposed site is therefore consistent with the objectives and policies of the RCP.<br><br>Manawhenua sought clarity on the extent of the physical footprint of the marine farm infrastructure in the coastal marine area (CIA Potential Impacts 2 and 4), that the footprint of the offshore pens be minimised and that best practice design by utilised. Each of these matters has been considered and incorporated into the concept design provided as part of the application. |
| **Recognising and providing for Ngāi Tahu values and uses** | Objective 5.6.1<br>Objective 5.6.2<br>Policy 5.6.1 | The RCP is consistent with the NZCPS and the RPS, which require that the principles of the Treaty of Waitangi and the principle of kaitiakitanga be taken into account in managing the coastal environment. | For the same reasons as discussed in sections 10 and 13.5.1, the HAP is consistent with these provisions. |

| Theme | Provisions | Purpose | Assessment |
|---|---|---|---|
| | Policy 5.6.2<br>Policy 5.6.3<br>Policy 5.6.4<br>Policy 5.6.5<br>Policy 5.2.3 | The provisions of iwi management plans are also to be taken into account, and it is sought that mauri and wairua are sustained, mahinga kai are healthy, abundant and accessible to tangata whenua, and that sites of cultural significance are managed and protected. In addition to the matters identified in those documents, the RCP seeks to identify and protect the characteristics of the CMA that are of special value to tangata whenua, including landscapes and natural features. | |
| **Providing for social and economic utilisation** | Objective 5.10.1<br>Policy 5.10.1 | Objectives and policies in the RCP recognise Section 5 of the RMA and its purpose to enable people and communities to provide for, inter alia, their social and economic wellbeing. | As discussed in section 5 of this report, the HAP will result in significant social and economic benefits and is entirely consistent with these provisions. |
| **General management of structures** | Objective 11.2.1<br>Policy 11.2.1<br>Policy 11.2.2<br>Policy 11.2.3<br>Policy 11.2.10<br>Objective 11.4.1<br>Policy 11.4.3<br>Objective 11.5.1<br>Policy 11.5.1 | Objectives of the RCP seek to ensure that structures are located in the most appropriate site so as to avoid, remedy or mitigate adverse effects from their presence, that they are maintained in a safe and sound condition and are properly maintained (to preserve safety and visual amenity), and that they can be removed if no longer required. | The principal potential adverse effects from the presence of the structures themselves (rather than the activities that are undertaken within or on them) are likely to be on natural character, landscape and visual amenity, and through the risk of entanglement for marine mammals, seabirds and sharks. These effects are assessed in sections 10.3 and 10.5 of this report. The structures are not anticipated to have any significant adverse effects in relation to flows of water or coastal processes in the area, particularly as the polar circle designs proposed to be used have been designed to be flexible and move with the sea conditions. The location of the proposed site in an area of the northern coast of Rakiura already subject to human activity, but removed offshore is the best approach to avoid, remedy or mitigate effects.<br><br>Marine farm structures are designed to be temporary (encouraged by Policy 11.2.2) and have been designed and constructed to withstand the probable weather and sea conditions at the proposed site (see front-end engineering design report in **Appendix J**). NTS will undertake regular maintenance on all of the structures at the proposed site, recognising the significance of the investment in infrastructure that is likely to be required. Should marine farming at the site cease at some time after consent is granted, the structures will be removed from the coastal marine area and either re-used or appropriately disposed of. |

| Theme | Provisions | Purpose | Assessment |
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| | | | Manawhenua were concerned (CIA Potential Impact 19), about the long-term maintenance of the salmon farm structures and in addition considered that NTS should commit to ensuring that any debris from marine farming did not adversely affect other users of the coastal marine area and nearby shore. The approach outlined above with respect to regular maintenance will address these concerns, and NTS anticipates regular consultation and input from manawhenua throughout the term of the consent. |
| **Seabed deposition** | Objective 5.4.1.1<br>Objective 5.4.1.2<br>Policy 5.4.1.2<br>Policy 5.4.1.3<br>Objective 10.2.1<br>Policy 10.2.1<br>Policy 10.2.3<br>Policy 10.2.7<br>Policy 10.2.9 | These provisions seek to protect significant habitats of indigenous fauna, protect ecosystems, preserve the habitat of distinctive communities, and protect habitats of species that are important for commercial, recreational, traditional or cultural purposes.<br>Provisions under section 10.2 seek to minimise deposition from human activities and avoid (wherever practicable), remedy or mitigate adverse effects of deposition. Policy 10.2.9 seeks to avoid the adverse effects of deposition on areas with Natural State waters, which applies to the majority of the Southland CMA including the northern coast of Rakiura where the proposed site is located. | Adverse effects of seabed deposition and the proposed management of these effects are discussed in sections 10.1 and 12.4 of this report.<br><br>By application of good management practices, the HAP will minimise the deposition in the CMA in accordance with Objective 10.2.1. However, despite these good management practices, negligible to more than minor adverse effects on the seabed from deposition are predicted to occur in localised areas. That is, adverse effects will not be able to be avoided entirely as is required by Policy 10.2.9. |
| **Water quality** | Objective 7.2.2.1<br>Objective 7.2.2.2<br>Policy 7.2.2.2<br>Policy 7.2.2.4<br>Policy 7.2.3.1<br>Policy 7.2.3.2<br>Policy 7.3.2.1<br>Policy 7.3.8.1.1 | These provisions seek to ensure that coastal water quality is maintained, and that adverse effects of marine activities on coastal water quality and ecosystems are avoided, remedied or mitigated.<br><br>Figure 7.2.2.1 of the RCP identifies the HAP site as having a Natural State water classification. With respect to Natural State waters, Objective 7.2.2.2 is "to protect the natural state of coastal waters wherever it is considered that they can be fairly described as being in their natural state". This objective is to be achieved by (Policy 7.2.2.2) managing "…areas of water in the coastal marine area as Class NS Water (being water managed in its natural state) where (a) water in these areas has been identified as being for the most part unaffected by land use practices and (b) is considered to be in its natural state". | Adverse effects on water quality and the proposed management of these effects are discussed in sections 10.2 and 12.4 of this report.<br><br>The assessment indicates that any noticeable change to water quality from the HAP will be limited to the immediate vicinity of the pens, and not beyond the HAP site boundary. No material impact on water quality will occur in the wider area and certainly not within the wider waters of the Strait. It is considered that this is consistent with the RCP water quality provisions as the predicted localised, small and intermittent changes in specific water quality parameters will not undermine the direction to protect and maintain the natural state of coastal waters. |

| Theme | Provisions | Purpose | Assessment |
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| | | Policy 7.3.8.1.1 is specific to aquaculture and is to encourage the efficient application of feed. | |
| **Indigenous fauna** | Objective 5.4.1.2<br>Policy 5.4.1.2 | These provisions focus on the protection of indigenous biodiversity through maintaining species and protecting areas of significant habitat. | Effects on marine species and habitats are discussed in section 10.3 of this report. For the reasons identified in those sections, and as discussed in sections 13.5.1 and 13.5.2, the HAP is consistent with these provisions. |
| **Landscape and natural character** | Objective 5.1.1<br>Policy 5.1.2<br>Objective 5.2.1<br>Policy 5.2.1<br>Objective 11.2.3<br>Policy 11.2.16<br>Policy 11.2.17 | These provisions seek to preserve the natural character of the CMA, and protect outstanding natural features and landscapes in the region's CMA. Policies require that adverse effects are avoided, remedied or mitigated.<br><br>Policy 5.2.1 is to identify and protect outstanding natural features and landscapes within the CMA. However, the identification of such features and landscapes has not been completed.<br><br>Policy 11.2.17 is to encourage structures and activities to be located, finished, and be of a form, profile, extent and alignment that is not incompatible with the visual amenity, natural character and physical landscape of the area in which it is located. It follows that there can be structures and activities that are compatible with the visual amenity, natural character and physical landscape. | For the same reasons as discussed in section 13.5.1, the HAP is consistent with these provisions. |
| **Amenity values** | Objective 5.3.1<br>Objective 5.3.3<br>Policy 5.3.1 | These provisions seek that activities do not have significant adverse effects on amenity values, nor on the safety of the public, nor on the enjoyment of the coast by the public. Open space is a contribution to the amenity values in the coastal environment. | For the same reasons as discussed in sections 13.5.1 and 13.5.2,, the HAP is consistent with these provisions. |
| **Navigational effects** | Objective 5.3.6<br>Policy 5.3.12<br>Objective 11.2.4<br>Policy 11.2.5<br>Policy 11.2.6<br>Objective 11.7.6.1<br>Policy 11.7.6.1<br>Objective 11.7.7.2<br>Objective 11.7.7.4<br>Policy 11.7.7.2 | These provisions relate to navigational safety. Activities, including lighting, should not affect navigation safety, and marking and navigational aids are to be provided for. Policy 11.8.1 of the RCP seeks to preserve existing navigation routes along the coast and to and from launching places, ports and anchorages. | Effects on navigational safety have been assessed in section 10.6 of this report, and in the navigational risk assessment in **Appendix L**. A series of measures that NTS will implement (following confirmation by the Harbour Master and Maritime New Zealand) have been identified by Navigatus to assist in reducing the navigational risks to as low as reasonably practicable, including appropriate lighting and marking of the proposed site and any marine farms within it. The presence of a charted, marked and lit site also has some benefits in terms of navigational safety in an area that currently has few navigational marks. These measures will assist in |

| Theme | Provisions | Purpose | Assessment |
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| | Objective 11.8.1<br>Policy 11.8.1<br>Policy 11.8.2 | | addressing the comments made by manawhenua in the Ngā Hua report concerning the need to allow smaller vessels (e.g. commercial fishing and charter operators) to transit through the site and to ensure navigational safety in the area around the proposed site.<br><br>While the location of the proposed site approximately 2 km offshore means that existing navigation routes along the coast would be preserved, the Murrays Bay anchorage would cease to be usable by vessels over 500 gross tonnes and the area of the proposed site would no longer be available for anchoring by large vessels (as occasionally occurs at present). Existing navigation routes to anchorages may therefore need to alter for some vessels, but Navigatus (2025) has identified a number of suitable alternative anchoring locations for large vessels within the vicinity. The effect is therefore not considered to be notable and Objective 11.7.7.2 of the RCP will still be achieved. |
| **Biosecurity and introduction of exotic fauna** | Objective 5.4.2.1<br>Objective 5.4.2.2<br>Policy 5.4.2.1<br>Objective 5.4.3.1<br>Policy 5.4.3.1 | Objectives and policies in the RCP (which predates the NZCPS and therefore reflects a different approach to the issue of biosecurity) seek to prevent the introduction of plant species and fauna that could result in adverse environmental effects.<br><br>Objective 5.4.3.1 seeks to avoid the introduction of fauna into the coastal marine area in circumstances that could result in adverse environmental effects. The explanation to this objective states that before deliberately introducing any fauna an assessment of adverse effects needs to be undertaken to ensure that the introduction of the species will not be to the detriment of the existing environment. Policy 5.4.3.1 seeks to prevent the introduction of exotic species of fauna where information relating to that species indicates that its introduction is likely to adversely affect:<br>a) indigenous vegetation; or<br>b) indigenous fauna; or<br>c) alter coastal processes; or<br>d) natural character; or<br>e) life-supporting capacity of ecosystems. | The approach taken by NTS in developing this application is to reduce the risks of the entry and spread of plants and fauna to the greatest extent practicable. Measures should result in the introduction of those species being avoided, but it is not possible to guarantee this, as some risk will always remain simply as a result of an activity that involves structures, farmed stock and service vessels occurring within the CMA.<br><br>The site for the HAP project has been carefully selected to minimise potential for adverse effects arising from the marine farming activity. In addition, good practice management procedures, including biosecurity procedures, are proposed to mitigate adverse environmental effects and the risks associated with the introduction of and farming of salmon at this location. There is no information that suggests that salmon will adversely affect any of the matters listed in Policy 5.4.3.1. |

| Theme | Provisions | Purpose | Assessment |
|---|---|---|---|
| **Public access** | Objective 5.3.3<br>Policy 5.3.2<br>Objective 5.5.1<br>Policy 5.5.1<br>Policy 5.5.2<br>Policy 5.5.3<br>Objective 9.1.1 | These provisions seek to maintain the open space qualities of the CMA and public access to and along the coast (rather than through the CMA on the surface of the sea). Objective 9.1.1 seeks to maintain or enhance the availability of the coastal marine area for public recreation. | Access to and along the coastline will not be affected by the proposal, as no on-land facilities are proposed on Rakiura. On the sea surface, the spacing of the proposed marine farms will ensure that access remains available through the proposed site for small recreational vessels. Access will need to be restricted in the immediate vicinity of the feed barges and the net pens, for biosecurity site management, operational purposes and to ensure vessels do not get entangled with feed pipes between the feed barges and the net pens.<br><br>Within the proposed site marine farms would be located over sand habitat rather than the areas of biogenic habitat that are likely to provide habitat for recreational fish species, and so should not have significant adverse effects on recreational fishing opportunities. The proposed site is located seaward of the line that demarcates the area excluded from commercial oystering and reserved for recreational oyster dredging. The net pens and the salmon contained within them may act as attractants to wild fish species and provide an improved recreational fishing experience in the near vicinity of the sea pens. In terms of other recreational activities, the current speeds in the area and water depth mean that it is not considered suitable for recreational diving, which (if it occurs) would occur closer to shore in areas not affected by the proposal. Areas where access would be restricted as a result of the HAP therefore have little recreational value when compared to other areas closer to and around Rakiura. |
| **Noise** | Policy 5.1.2<br>Objective 5.3.7<br>Policy 5.3.13<br>Policy 5.3.15<br>Policy 5.3.16<br>Policy 5.3.20 | These provisions seek to ensure that adverse effects of noise do not affect people's health and wellbeing, and that natural character and amenity values are not affected by noise. | As discussed in section 10.9, the offshore location of the proposed site, in a location that is not within the vicinity of any residential land use, but is currently used by large vessels waiting to enter South Port and various commercial vessels that frequent the coastline, means that no adverse effects from noise are likely to occur. |
| **Lighting and glare** | Objective 5.3.1<br>Policy 5.3.4<br>Objective 11.2.4 | These provisions recognise the need for navigational and operational lighting, but aim to ensure that lighting is aimed and or shielded to avoid light spill or glare that could cause adverse effects. Objective 11.2.4 also seeks to ensure that adverse effects on natural | Lighting on marine farms at the proposed site would consist of navigational lighting, underwater lighting to control the maturation of the fish, and some operational lighting of the structures and feed barges as necessary to allow work at the site. All operational lighting would be directed |

| Theme | Provisions | Purpose | Assessment |
|---|---|---|---|
| | | character, amenity and navigational safety do not occur. | internally within the site, and the assessment of the effects of underwater lighting contained in section 10.2.3 of this application document has concluded that there will be little to no light spill outside the net pens. This approach will also ensure that lighting at the site is consistent with the principles of the Lightscape Management Plan developed for the recently accredited Stewart Island/Rakiura Dark Sky Sanctuary. NTS will continue to work with manawhenua in relation to lighting required at the site. |

### 13.5.4 Te Tangi a Tauira The Cry of the People – the relevant iwi management plan

Te Tangi a Tauira The Cry of the People (Te Tangi a Tauira) is the iwi management plan prepared by NTKM. It contains policies relating to different areas of the Murihiku region, including Fiordland, High Country and Foothills, Southland Plains and the Offshore Islands. The following is an assessment of the policies that relate to Southland's Coastal Environment (Te Ākau Tai Tonga). The relevant objectives and policies of Te Tangi a Tauira are assessed in Table 13-5.

*Table 13-5: Te Tangi a Tauira The Cry of the People*

| Theme | Relevant Provisions | Purpose | Assessment |
|---|---|---|---|
| **Marine farming policy framework** | Policy 3.6.11.1<br>Policy 3.6.11.7 | Policies in section 3.6.11 relate specifically to aquaculture. The policies seek to ensure that aquaculture activities do not have any adverse effects on customary fishing and practices (including mahinga kai) and that papatipu rūnanga are actively involved in identifying suitable areas for aquaculture and in consent processes for aquaculture. | The HAP is not anticipated to have any adverse effects on customary fishing and practices (including mahinga kai) and consultation is ongoing with papatipu rūnanga. |
| **Management of the Southland coastal marine area and coastal environment** | Policy 3.6.1.1<br>Policy 3.6.1.2<br>Policy 3.6.1.6<br>Policy 3.6.1.7 | The policies in Te Tangi a Tauira seek many of the same outcomes as those in the RCP in relation to general management of the Southland coastal environment. These include that land, water and biodiversity at the interface of Southland's coastal environment are managed in an integrated way, to recognise that the degree of connection between the coastal and inland environments is inherent, to protect and enhance coastal areas of importance, and to protect and enhance kaimoana and kaimataitai for future generations. | The HAP has been developed recognising the integrated nature of the CMA and its interaction with adjacent land, with an offshore location selected in order to avoid effects as far as possible on the coastal interface. Potential effects on kaimoana have been considered, and while not anticipated, can be managed through the staged development and adaptive management of marine farming at the proposed site and by ongoing consultation with papatipu rūnanga. |
| **Functional need to** | Policy 3.6.3.6 | Policy 3.6.3.6 seeks to ensure that activities that wish to locate within the | As discussed in sections 13.5.1 - 13.5.3, the HAP has a functional |

| Theme | Relevant Provisions | Purpose | Assessment |
|---|---|---|---|
| **locate in the coastal marine area** | | CMA have a functional need to be there and do not impact on the coastal environment when an alternative location may be more readily suited for that type of development. | need to be located in the coastal marine area. |
| **Recognising and providing for Ngāi Tahu values and uses** | Policy 3.6.3.1<br>Policy 3.6.3.5<br>Policy 3.6.3.3<br>Policy 3.6.13.2<br>Policy 3.6.13.11<br>Policy 3.6.13.12<br>Policy 3.6.15.1 | These policies relate to species protection, kaimoana, access for customary use and kaitiakitanga. | For the same reasons as discussed in sections 13.5.1 - 13.5.3, the HAP is consistent with these provisions. |
| **General management of structures** | Policy 3.6.3.1<br>Policy 3.6.3.5 | Policies in Te Tangi a Tauira seek consultation with rūnanga when structures are proposed in the CMA, particularly around Rakiura. As well as being soundly constructed, structures should be compatible with the natural character of the surrounding coastal environment and adjacent lands and do not have adverse effects on other people using the coast area. | NTS has been in regular consultation with NTKM since the project's inception. |
| **Water quality** | Policy 3.6.7.3<br>Policy 3.6.7.7<br>Policy 3.6.7.16 | Policies relating specifically to coastal water quality are contained in section 3.6.7. Policy 3.6.7.7 is to avoid the direct discharge of contaminants to coastal waters. Other policies seek to protect and enhance the mauri of coastal waters and for contingency plans to respond to marine emergencies. | The discharge of contaminants to coastal waters is discussed in sections 10.1, 10.2 and 13.5.3 of this report.<br>Based on the engagement with manawhenua, the mauri of the coastal water will be protected.<br>Contingency plans to respond to marine emergencies are discussed in section 12 of this report. |
| **Indigenous fauna** | Policy 3.6.11.3<br>Policy 3.6.13.1<br>Policy 3.6.13.5<br>Policy 3.6.13.6<br>Policy 3.6.13.10<br>Policy 3.6.14.1<br>Policy 3.6.14.2<br>Policy 3.6.14.4<br>Policy 3.6.14.6 | Policies in Section 3.6.13 relate to coastal ecosystems and policies in Section 3.6.14 relate to marine birds. They focus on the protection of indigenous biodiversity through maintaining species and protecting areas of significant habitat. There is a particular focus on species of cultural significance.<br><br>Policy 3.6.14.2 is to protect coastal environments in which marine birds nest and feed. Policy 3.6.14.4 is to avoid compromising marine bird habitats due to inappropriate coastal development. | For the same reasons as discussed in sections 13.5.1 - 13.5.3, the HAP is consistent with these provisions. |
| **Landscape, natural character and visual amenity** | Policy 3.6.13.5<br>Policy 3.6.13.6 | These policies are to provide and recognise for the strong cultural links with coastal landscapes held by NTKM and to avoid changes to coastal landscapes that have detrimental impacts on NTKM relationships and associations with | Consultation will continue to occur with papatipu rūnanga in relation to effects on their links with coastal landscape, in order to give effect to the policies of Te Tangi a Tauira. |

| Theme | Relevant Provisions | Purpose | Assessment |
|---|---|---|---|
| | | coastal land, water, wāhi tapu and wāhi taonga areas. | |
| **Navigational effects** | Policy 3.6.3.5<br>Policy 3.6.3.15<br>Policy 3.6.3.17 | These policies seek the safe use of the CMA, that structures are soundly constructed e.g. moorings, and for NTKM to be engaged with respect to the development of structures that may have impacts on aspects of navigation and public safety. | As assessed in section 10.6 of this report, suitable navigational marking and lighting have been proposed and structures can be soundly constructed to minimise or avoid effects on navigation and public safety. |
| **Lighting and glare** | Policy 3.6.3.11 | The relevant policy in Te Tangi a Tauira seeks to ensure that lights on coastal structures do not adversely affect natural character, amenity and navigation safety of the CMA, nor restrict amenity and traffic safety on land adjacent. | Lighting on marine farms at the proposed site would consist of navigational lighting, underwater lighting to control the maturation of the fish, and some operational lighting of the structures and feed barges as necessary to allow work at the site. All operational lighting would be directed internally within the site, and the assessment of the effects of underwater lighting contained in section 10.2.3 of this application document has concluded that there will be little to no light spill outside the net pens. This approach will also ensure that lighting at the site is consistent with the principles of the Lightscape Management Plan developed for the recently accredited Stewart Island/Rakiura Dark Sky Sanctuary. NTS will continue to work with manawhenua in relation to lighting required at the site. |

### 13.5.5 New Zealand Aquaculture Strategy 2019

In conjunction with the Commercial Aquaculture Claims Settlement Act 2004, Government's Aquaculture Strategy aims for New Zealand to become world-leading in innovative aquaculture and to make the industry more sustainable, productive, resilient and inclusive.

The Strategy aims to build Māori and community knowledge about aquaculture and their input into growth opportunities. It will deliver the Crown's aquaculture settlement obligations in a manner that facilitates early investment in new opportunities. The Strategy also recognises Māori values and aspirations across the work programme.

The Aquaculture Strategy also focuses efforts on:

- the development of sustainable open ocean and land-based farming
- increasing farm efficiency
- increasing product value and environmental performance in existing inshore farming
- building resilience to environment change, and
- supporting the development and adoption of new technologies and practices to reduce the industry's contribution to waste and emissions.

### 13.5.6 New Zealand Aquaculture Development Plan 2025-2030

The New Zealand Aquaculture Development Plan 2025-2030 sets out actions the Government will take to enable the aquaculture industry to reach $3 billion in annual revenue by 2035 – a goal that was set by the Aquaculture Strategy 2019. One of the key pathways to achieving this is extending aquaculture into the open ocean. It is anticipated that up to $1.2 billion in annual revenue in 2035 will be from new open ocean salmon farms. As discussed in section 5 of this report, the HAP will be a significant contribution to this goal being met and is entirely consistent with the Development Plan.

Further, the Development Plan speaks to the sustainability of farmed fish as a source of protein, the efficiency of aquaculture relative to the space it occupies, the high value and low carbon benefits of aquaculture. It also speaks to the opportunities for partnership with iwi and a desire for greater iwi involvement in aquaculture and through aquaculture settlement space. Another key area of the Development Plan is the desire to increase open ocean salmon farming.

The HAP touches on all of these areas and will contribute significantly to the New Zealand Government realising their aspirations for aquaculture in New Zealand. As explained in section 5 of this report, it is estimated that the HAP will contribute approximately $500m in annual gross revenue from the export market. It will contribute significantly to the production target for open ocean salmon. It will also be Ngāi Tahu-led with profits being directly reinvested in iwi priorities.

### 13.5.7 Murihiku Southland Aquaculture Pathway 2025

The Murihiku Southland Aquaculture Pathway 2025 (MSAP) was prepared by Great South (Southland's Regional Development Agency) in partnership with iwi, and on behalf of Murihiku Southland communities, businesses, councils and key stakeholders. The MSAP provides a collective view of aquaculture opportunities in the region and of how Murihiku Southland needs to prepare for an expanded industry. The MSAP estimates that revenue from aquaculture within the region could reach between $1b to $2.8b in next 15 to 25 years.

To set a pathway towards this growth, MSAP articulates 5 goals, 9 focus areas and 17 key actions, which are shown in Figure 1 of the MSAP. Goal 5 seeks to extend aquaculture into the open ocean. Focus area 5 specifically addresses the regulation of aquaculture and supports the review of existing regulations that are identified as being 'out of date'. Advocating for fit for purpose rules and regulations is identified as a high priority, key action.

It explains Murihiku Papatipu Rūnaka's partnership in the aquaculture industry and that they bring:

- Generational knowledge of our moana and ecosystems,
- Established research and policy capability in marine planning and aquaculture,
- Access to iwi talent pipelines and workforce development programmes, and
- A commitment to enduring relationships grounded in tikanga and reciprocity.

The HAP is specifically referenced as a key future opportunity, supported by Murihiku Papatipu Rūnaka.

The HAP is identified as a key part of realising aquaculture growth in the region. The MSAP affirms support for the HAP, stating that it represents "a next-generation opportunity to lead sustainable, culturally aligned, and economically resilient aquaculture — an example of how partnership with iwi and mana whenua can shape the future of the industry" (p. 15).

## 13.5.8 ES Summary of Policy Position on Aquaculture

In October 2025, ES endorsed a summary of its strategic policy position on aquaculture. The summary states:

> *Environment Southland is broadly supportive of the future development of the aquaculture industry in Murihiku Southland. Council recognises the positive opportunities which may flow from such development. This position is consistent with the Southland Regional Development Strategy.*
>
> *Environment Southland also recognises that it is imperative that future aquaculture development is undertaken in a sustainable manner and in recognition of environmental constraints, cultural values, and other occupancies and land uses.*
>
> *Council recognises that the regional implications of aquaculture will be an important consideration of its second-generation Regional Coastal Plan process as well as any potential marine spatial planning process that may occur.*

## 13.5.9 Conclusion

The HAP is largely consistent with the statutory and non-statutory documents identified above, and also with the Treaty Settlement matters outlined in section 3 of this report. The matters that are particularly important for consideration of this application are:

- Manawhenua: The HAP is consistent with the views and aspirations of NTKM, it is an expression of rangatiratanga and kaitiakitanga consistent with Sections 6 and 7 of the RMA. It builds on Treaty Settlement outcomes and will provide for the enduring ancestral relationship of Ngāi Tahu with Te Ara a Kiwa. This is also consistent with sub-ordinate objectives and policies in the NZCPS and Southland Regional Coastal Plan, in addition to; Te Tangi a Tauira, central government goals for aquaculture and iwi-led aquaculture, and Regional growth plans for aquaculture.
- Provision for aquaculture: The provisions require recognition of the significant potential of marine farming for social, economic and cultural well-being and the RPS (giving effect to Policy 8(a) of the NZCPS) sets out an intent that appropriate locations for aquaculture will be identified in Southland. Appropriate locations for marine farming in Southland have not been expressly identified in the RCP as it predates and does not to give effect to Policy 8(a) of the NZCPS which requires regional coastal plans to make provision for aquaculture in appropriate places. Instead, the RCP provisions indicate areas that are not appropriate for marine farm development (by using a prohibited activity status), while recognising that elsewhere in the CMA, the suitability of marine farms should be assessed on a case-by-case basis, including in Natural State waters, and require that any adverse effects from this activity are avoided, remedied or mitigated. The New Zealand Aquaculture Development Plan 2025-2030 seeks significant growth in the aquaculture industry in New Zealand, including from new open ocean salmon farms. Furthermore, the MSAP, which sets out the most current view of ES and the territorial local authorities in relation to aquaculture growth, seeks to create a pathway for the growth of the aquaculture sector in the region, including through the promotion of open ocean aquaculture and more up to date regulation. The MSAP affirms support for the HAP.
- Biodiversity: The NZCPS and RPS contain provisions that require adverse effects on certain taxa, ecosystems, vegetation types and habitats to be avoided to protect indigenous biological diversity in the coastal environment (Policy 11 of the NZCPS and Policy BIO.3 of the RPS). The selection of the site and good management practices will avoid and mitigate potential adverse

effects to the extent it is practicable to do so and as far as necessary to protect indigenous biodiversity in the coastal environment.

- Landscape and natural character: Adverse effects on outstanding natural features, outstanding natural landscapes and areas of outstanding natural character will be avoided as the HAP will be sufficiently buffered from Rakiura and its coastal edge. No significant adverse effects will occur on the natural character of areas that are not defined as outstanding, nor on other natural features and natural landscapes, and effects will be mitigated by the selection of both an appropriate site and structures with recessive colours and circular forms. This is consistent with Policies 13 and 15 of the NZCPS and Policy COAST.3 of the RPS.
- Water quality: Modelling indicates that any noticeable change to water quality from the HAP will be limited to the immediate vicinity of the pens, and not beyond the farm boundary. No material impact on water quality will occur in the wider area and certainly not within the wider waters of Te Ara a Kiwa. This is consistent with provisions, particularly those in the RCP (Objective 7.2.2.2 and Policy 7.2.2.2) as the predicted localised, small and intermittent changes in specific water quality parameters will not undermine the direction to protect and maintain the natural state of coastal waters.
- Seabed: By application of good management practices, the HAP will minimise the deposition in the CMA, which is in accordance with Objective 10.2.1 of the RCP. However, despite these good management practices, negligible to more than minor adverse effects on the seabed from deposition are predicted to occur in localised areas. That is, by its very nature some level of adverse effect from seabed deposition will not be able to be avoided entirely, resulting in some tension with the wording of Policy 10.2.9 of the RCP. However, the RCP was prepared at a time when plans contemplated resource management decision-making would involve an 'overall broad judgement' approach and before case law relating to the use of "avoid" in the context of the NZCPS was available. In these circumstances, Policy 10.2.9 of the RCP needs to be read in the context of policies and rules that enable marine farming to occur within the same large areas of the Southland coastal marine area that are covered by Policy 10.2.9.

Recent case law has clarified that in considering RMA policy documents, particularly in the context of proposals being considered under other enabling statutes, it is appropriate to consider a wider planning context including other statutory and non-statutory planning documents; it is appropriate to recognise that RMA policy is not always determinative and allowance needs to be made for situations where enabling a development to proceed is appropriate notwithstanding RMA policy direction to the contrary; and it is appropriate to consider RMA planning documents in light of the different purpose of the legislation under which an application is being considered (see the decision of the Court of Appeal in *Glenpanel Development Ltd* v *Expert Consenting Panel* [2025] NZCA 154 at [27] – [47]).

The relevant provisions of the policy documents must be taken into account in an overall evaluation of the HAP, but must be given less weight than the purpose of the FTAA (FTAA Schedule 5, clause 17(1)).

## 13.6 Part 6, Section 105 of the RMA

Section 105 of the RMA states that if an application is for a discharge permit to do something that would contravene Section 15 of the Act, the consent authority must have regard to:

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

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

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

The discharge from the proposed site will consist of uneaten feed and fish faeces and urine, with the primary contaminants being nutrients. Some discharge of zinc will also occur as an additive in the uneaten feed, and of dislodged material from the in-situ cleaning of the marine farm structures.

The existing seabed environment is described in the assessment of seabed effects (**Appendix M**) and in section 9.5 of this report. In summary, sediments are predominantly coarse sands with varying amounts of shell hash, gravel and minor mud. These are well oxygenated, contain low organic content and support macrofaunal communities of naturally low abundance but moderate diversity. Biogenic habitats (bryozoan-sponge reefs, bushy-bryozoan thickets, low-relief bryozoan-sponges) are absent from the HAP site but occur nearby. These habitats support high biodiversity, including sensitive taxa such as frame-building bryozoans, sponges, tube worms, brachiopods and large bivalves.

By contrast the water column appears to be somewhat less sensitive, due to the dynamic and well-mixed conditions that exist in Te Ara a Kiwa, but sheltered areas close to the coast of Rakiura may be more vulnerable to increased levels of total nitrogen if the water column stratifies during periods of calm weather.

The applicant's reasons for choosing the proposed site are discussed in sections 9 and 11 of this report. The site has the positive attributes of high currents and a suitable depth to avoid excessive enrichment of the seabed, and is consistent with the aim of the New Zealand Aquaculture Development Plan 2025-2030 that offshore aquaculture will become a significant component of the aquaculture industry in New Zealand.

The nature of finfish marine farming means that there are no alternatives to the discharge of uneaten feed or fish faeces, although feed wastage can be avoided as much as possible by camera monitoring so that fish are fed just to satiation. Over time technology and fish breeding programmes (for example improving feed conversion ratios) may further reduce the amount of discharge that occurs.

## 13.7 Part 6, Section 107 of the RMA

Section 107 of the RMA states that a consent authority shall not grant a discharge permit for something that would contravene Section 15 of the RMA if, after reasonable mixing, it is likely to give rise to:

*(c) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;*

*(d) any conspicuous change in the colour or visual clarity*

*(e) any emission of objectionable odour*

*(f) the rendering of fresh water unsuitable for consumption by farm animals*

*(g) any significant adverse effects on aquatic life.*

Feed discharges will be monitored and managed to avoid waste feed (which would suspend for some period of time in the water column) as far as possible, and the other effects outlined in (c) above would not result from the discharge. No odour would be caused by the discharge, and matter (f) is not relevant to the HAP.

The assessment of effects outlined in section 10.2 of this report, and in the water column assessment (**Appendix K**) provides information relevant to matters (d) and (g). The implementation of staged development and adaptive management, and ensuring that the activity is undertaken to meet the water

quality compliance limits outlined in the proposed consent conditions would mean that the discharge would not give rise to the effects listed.

## 13.8 Part 6, Section 108 of the RMA

Section 108 of the RMA allows conditions to be imposed on a resource consent. Proposed resource consent conditions are contained in **Appendix CC**.

## 13.9 Parts 8-10 of the RMA

Parts 8 to 10 of the RMA are not relevant to the consideration of this application.

# 14 Aquaculture Decision

## 14.1 Introduction

The purpose of an aquaculture decision is to determine whether a proposed aquaculture activity would unduly affect commercial fishing, recreational fishing or customary fishing. The typical process for making an aquaculture decision is set out in Sections 186D, 186E, 186GB and 186H of the Fisheries Act 1996 and Sections 107F, 114(4) and 116A of the RMA, which in summary involves:

- When a consent authority receives an application for a coastal permit for aquaculture activities, it must forward a copy of the application, any further information requested, and any submissions received (if the application is notified) to the chief executive of MPI.
- If the decision is to grant an application for a coastal permit for aquaculture activities, the consent authority must send a copy of the decision to the chief executive of MPI and request that an aquaculture decision be made under the Fisheries Act 1996. The consent authority must also advise the applicant that the decision and the commencement of the consent is still subject to an aquaculture decision to be made by the chief executive of MPI under the Fisheries Act 1996.
- Within 20 working days of receiving a request for an aquaculture decision from a consent authority, MPI undertakes an assessment on recreational, customary and commercial fishing against the matters in Section 186(GB)(1) of the Fisheries Act (often referred to as the 'undue effects assessment'), and makes a determination or reservation (or one or more of them in relation to different parts of the area to which the request relates). A 'determination' means a decision by the chief executive that they are satisfied that the aquaculture activities authorised by the coastal permit will not have an undue adverse effect on fishing. A 'reservation' means a decision by the chief executive that they are not satisfied that the aquaculture activities authorised by the coastal permit will not have an undue adverse effect on fishing.
- MPI then notifies the consent authority of the aquaculture decision. If the decision is a determination, or a reservation in relation to part of the permit, the consent authority must amend the coastal permit to reflect the aquaculture decision. The permit is then able to be commenced.
- If the decision is a reservation for the entire permit, the consent authority must cancel the permit.

The FTAA provides a process for an aquaculture decision to be made by the panel deciding on a substantive application for a coastal permit for aquaculture activities. After seeking a recommendation from MPI, the panel must make an aquaculture decision in accordance with clause 20 of Schedule 5.

Clause 20(3) of Schedule 5 states that:

1) *In making an aquaculture decision, the panel must—*
    a) *take into account, giving the greatest weight to subparagraph (i),—*
        i) *the purpose of this Act; and*
        ii) *sections 8 to 10 and 186GB(1) and (2) of the Fisheries Act 1996; and*
    b) *have regard to the recommendation of the relevant chief executive made under clause 15.*

## 14.2 Purpose of the FTAA

Section 5 of this report sets out the reasons why the HAP is consistent with the purpose of the FTAA and has clear regional and national benefits.

## 14.3 Sections 8 to 10 of the Fisheries Act

Sections 8 to 10 of the Fisheries Act 1996 are set out as follows:

***8 Purpose***

1) *The purpose of this Act is to provide for the utilisation of fisheries resources while ensuring sustainability.*
2) *In this Act,—*

   ***ensuring sustainability** means—*

   a) *maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations; and*
   b) *avoiding, remedying, or mitigating any adverse effects of fishing on the aquatic environment*

   ***utilisation** means conserving, using, enhancing, and developing fisheries resources to enable people to provide for their social, economic, and cultural well-being.*

***9 Environmental principles***

*All persons exercising or performing functions, duties, or powers under this Act, in relation to the utilisation of fisheries resources or ensuring sustainability, shall take into account the following environmental principles:*

a) *associated or dependent species should be maintained above a level that ensures their long-term viability:*
b) *biological diversity of the aquatic environment should be maintained:*
c) *habitat of particular significance for fisheries management should be protected.*

***10 Information principles***

*All persons exercising or performing functions, duties, or powers under this Act, in relation to the utilisation of fisheries resources or ensuring sustainability, shall take into account the following information principles:*

a) *decisions should be based on the best available information:*
b) *decision makers should consider any uncertainty in the information available in any case:*
c) *decision makers should be cautious when information is uncertain, unreliable, or inadequate:*
d) *the absence of, or any uncertainty in, any information should not be used as a reason for postponing or failing to take any measure to achieve the purpose of this Act.*

Based on the following subsections, making an aquaculture decision ‘determination’ would not frustrate the purpose and principles of the Fisheries Act 1996.

## 14.4 Section 186GB(1) and (2) of the Fisheries Act

Section 186GB(1) and (2) of the Fisheries Act 1996 is set out in full below. It is often referred to as the ‘Undue Effects Assessment’ (UAE).

1) *In making an aquaculture decision, the chief executive must have regard only to the following matters:*
    a) *the location of the area that the coastal permit relates to in relation to areas in which fishing is carried out:*
    b) *the likely effect of the aquaculture activities in the area that the coastal permit relates to on fishing of any fishery, including the proportion of any fishery likely to become affected:*
    c) *the degree to which the aquaculture activities in the area that the coastal permit relates to will lead to the exclusion of fishing:*
    d) *the extent to which fishing for a species in the area that the coastal permit relates to can be carried out in other areas:*
    e) *the extent to which the occupation of the coastal marine area authorised by the coastal permit will increase the cost of fishing:*
    f) *the cumulative effect on fishing of any authorised aquaculture activities, including any structures authorised before the introduction of any relevant stock to the quota management system.*
2) *If a pre-request aquaculture agreement has been registered under section 186ZH in relation to the area that the coastal permit relates to, the chief executive must not have regard to the undue adverse effects on commercial fishing in respect of any stocks covered by the pre-request aquaculture agreement when having regard to the matters specified in subsection (1).*

The matters above are largely addressed in sections 9.7, 10.7 and 10.8 of this report and in the assessment of effects on commercial fishing (**Appendix S**). No pre-request aquaculture agreement has been entered into for the HAP.

In summary in relation to s186GB(1), the level of spatial displacement of commercial fishing at the proposed site will be minor for all species and fishing methods. Spatial displacement of commercial fishing effort will not have any impacts at a fishery-wide level, although it may have some adverse effects on individual fishers who regularly fish at the site. Effects on individual fishers are anticipated to be no more than minor. The effect on recreational fishing is likely to be neutral or positive, given the current low level of effort in the area. The UAE matters, including effects on customary fishing, are anticipated to be fully addressed in the recommendation that will be made by MPI.

## 14.5 Recommendation from chief executive of MPI

In accordance with Section 48 it is anticipated that the EPA will seek a recommendation on the aquaculture decision to be made from the chief executive of MPI.

# 15 Wildlife Act Approval

## 15.1 Introduction

The FTAA provides a process whereby NTS can apply for a wildlife approval as part of its substantive application. A wildlife approval is defined under clause 1 of Schedule 7 to mean a lawful authority for an act or omission that would otherwise be an offence under any of Sections 58(1), 63(1), 63A, 64, 65(1)(f), 70G(1), 70P, and 70T(2) of the Wildlife Act 1953. The capture, holding, handling, releasing, disturbing and killing of shark species listed in Schedule 7A of the Wildlife Act and seabirds without lawful authority is an offence under Section 63 of the Wildlife Act. The shark species listed in Schedule 7A that have been recorded in Te Ara a Kiwa are great white shark and basking shark.

Pursuant to Section 42(4)(h) of the FTAA, NTS is seeking a wildlife approval under the Wildlife Act for the capture, holding, handling, releasing, disturbing and killing of white sharks, basking sharks and seabirds which may result from entanglement and entrapment in the proposed marine farming structures. While all best practice management approaches will be implemented to reduce the risk of incidental entanglement and entrapment, the risk of this occurring during the development and operation of the marine farms remains. The proposed management of entangled and entrapped white sharks, basking sharks and seabirds is set out in the SBMP in **Appendix X** and the SMP in **Appendix Y**. Other shark species are not anticipated to occur at the site.

### 15.1.1 Pre-lodgement requirements

Pursuant to Section 11 of the FTAA, NTS has consulted with ES, the relevant iwi authorities, hapū, and Treaty settlement entities, and DOC as the relevant administrating agency of the Wildlife Act in relation to the need for a wildlife approval.

A summary of this consultation is provided in section 4 and **Appendix F** of this report.

Specific to the wildlife approval, NTS has engaged with DOC who has reviewed the draft SMP and SBMP and provided input into the proposed wildlife approval conditions.

## 15.2 Information required under clause 2 of Schedule 7

Clause 2 of Schedule 7 of the FTAA prescribes the information requirements that are required in an application for a wildlife approval. The following sections provide the information that is required under clause 2 of Schedule 7.

### 15.2.1 Purpose of the proposed activity (clause 2(1)(a))

A description of the project and its purpose is provided in section 6 of this report.

The purpose of the wildlife approval is for the capture, holding, handling, releasing, disturbing and incidental killing of wildlife which may result from their entanglement and/or entrapment in the proposed marine farming structures. These activities cannot be done without authorisation under the Wildlife Act.

The shark effects assessment (**Appendix P**) and seabird effects assessment (**Appendix O**) find the risk of entanglement of white sharks, basking sharks and seabirds to be low to moderate depending on the

species. In the event of entanglement or entrapment, best practice management approaches are proposed to safely handle and release wildlife to prevent injury or death. There remains a residual risk that white sharks, basking sharks and seabirds may die during or following entanglement or entrapment, and management approaches are also proposed to handle and dispose of dead wildlife. The management procedures are outlined in the draft SMP (**Appendix Y**) and SBMP (**Appendix X**).

### 15.2.2 Actions the applicant wishes to carry out involving protected wildlife and where they will be carried out (clause 2(1)(b))

The processes that are proposed to be implemented through the management plans include:

For white sharks and basking sharks:

- Disentanglement from net.
- Euthanising of sharks in the event that all reasonable actions have been attempted to remove the shark, or the condition of the shark deteriorates rapidly, or the shark begins to display more aggressive behaviour that makes it impractical and a health and safety risk to disentangle and release the shark.
- Handling, storing/possessing and disposing of dead sharks.

For seabirds:

- Disentanglement from net.
- Identifying, photographing and checking for injuries.
- Temporary holding of birds, transport of birds to a treatment facility as required, treatment of injured birds and releasing birds.
- Euthanising of birds where a vet and/or the Director-General of DOC has determined that due to injuries, it will be inhumane to keep them alive, rehabilitation to the wild will not be practical and they should be euthanised.
- Handling, storing/possessing and disposing of dead birds.

These processes and protocols are detailed in the draft SMP (**Appendix Y**) and SBMP (**Appendix X**).

### 15.2.3 Assessment of the activity and its impacts against the purpose of the Wildlife Act (clause 2(1)(c))

The Wildlife Act protects animals classed as wildlife and manage game bird hunting in New Zealand. The Wildlife Act protects native and introduced species of terrestrial mammals, birds, reptiles, amphibians, and selected marine species (including some shark species) that are specified as ‘animals’ for the purpose of the Act, and regulates many human interactions with these species. It establishes a tiered system of protection for different species, with some species receiving absolute protection and others receiving partial protection.

An assessment of effects on white sharks, basking sharks and seabirds is provided in sections 10.3.2 and 10.3.3 of this report, and measures to manage those effects are described in section 12.5. With respect to the activities sought to be authorised under the wildlife approval, these are proposed with the purpose of protecting white sharks, basking sharks and seabirds from injury or death caused by entanglement and entrapment in the marine farm structures. In the very unlikely instances where white

sharks, basking sharks or seabirds may killed by entanglement or entrapment, protocols are proposed for the handling and disposing of the wildlife, and for adapting the management of effects into the future to further reduce or avoid the risk of it occurring again. The purpose of the Wildlife Act is therefore considered to be achieved.

### 15.2.4 Protected wildlife species known or predicted to be in the area and, where possible, the numbers of wildlife present and numbers likely to be impacted (clause 2(1)(d))

White sharks and basking sharks are the only protected shark species that have been identified in the shark effects assessment (**Appendix P**) to have been recorded in Te Ara a Kiwa, although nearly all contemporary basking shark records in New Zealand waters occur offshore in deep waters and basking sharks have never been reported to interact with marine farms (in New Zealand or globally). The research project undertaken by the National Institute of Water and Atmospheric Research (NIWA) and DOC between 2007 and 2015, discussed in section 2.3 of the shark effects assessment (**Appendix P**), identified about 180 white shark individuals around northern Rakiura. There is no contemporary data to show if that number has changed, or if that estimate is representative of the total shark population in the area.

All the birds identified in the seabird effects assessment (**Appendix O**) that are known or predicted to visit the HAP site are protected species under the Wildlife Act 1953, except black-backed gulls. Population estimates of most seabird species are provided in **Appendix O**, however, it is not possible to estimate numbers of seabird individuals that may be subject to the activities sought to be covered by this wildlife approval.

### 15.2.5 Impacts on threatened, data deficient, and at-risk wildlife species (clause 2(1)(e))

Table 9-2 identifies those species that visit the site that are threatened, data deficient or at-risk wildlife species. The impacts on them are assessed in section 10.3 of this report and the seabird effects assessment (**Appendix O**) and shark effects assessment (**Appendix P**).

For seabird species, which have a variety of at-risk or threatened status under the NZTCS, the potential adverse effects from entanglement are considered to be low to very low, the exception being a potential moderate level of effect on Foveaux shag and spotted shag, taking into account the recommended avoidance and mitigation measures. There is also a potential moderate effect on Whenua Hou diving petrel from artificial lighting, which could result in injury or death following collision with structures.

White sharks and basking sharks are identified as threatened under the NZTCS. The effect on white sharks from entanglement and entrapment, given the proposed avoidance and mitigation measures such as suitable net material and mesh size, and regular net inspections, is assessed as being low. For the same reasons, the effect on basking sharks would also be low, although the risk of entanglement or entrapment is lower than for white sharks given that basking sharks are very unlikely to interact with the HAP.

## 15.2.6 Methods proposed to be used to conduct the actions to ensure best practice standards are met (clause 2(1)(f))

The methods outlined in the management plans are considered to meet best practice standards for white sharks, basking sharks and seabirds. They have been informed by the seabird effects assessment (**Appendix O**) and shark effects assessment (**Appendix P**), advice received from DOC, and the framework provided by the Wildlife Act. Further, conditions are proposed so that the management plans are externally reviewed:

a. two years after the installation of the first net pens at the site, and no more than every five years thereafter; and
b. within 30 calendar days of the discovery of any protected shark species mortality or serious injury associated with or caused by the consent holder's activities.

The review process will allow for any unforeseen issues to be addressed and so that any updated best practice standards can be adopted in the future.

## 15.2.7 Methods to be used to safely, efficiently, and humanely catch, hold or kill the animals and relevant animal ethics processes (clause 2(1)(g))

Marine farm staff will be trained in accordance with the SMP (**Appendix Y**) and SBMP (**Appendix X**) to ensure that the capture and handling of white sharks, basking sharks and seabird species are conducted safely and humanely, minimising stress to the animals and reducing the risk of injury.

## 15.2.8 Location or locations in which the activity will be carried out (clause 2(1)(h))

A description of the site at which the activity will be carried out is provided in sections 6.1 and 9 of this report.

## 15.2.9 Authorisation to temporarily hold or relocate wildlife (clause 2(1)(i))

An authorisation to temporarily hold or relocate wildlife is sought as part of this application.

Any entangled seabird will be temporarily held for at least an hour before being released, to identify and photograph them and to check for injuries. Stressed and injured seabirds may be held for longer in accordance with the SBMP (**Appendix X**). Unless a seabird needs to be euthanised, they will be released at least 100 m from the pens in accordance with the release protocols in section 6.2.4 of the SBMP (**Appendix X**).

Depending on the nature of the entanglement or entrapment, sharks may need to be temporarily held in order to disentangle the shark in accordance with the SMP (**Appendix Y**). Sharks will be released in the immediate vicinity of where they were entangled or entrapped in accordance with the SMP (**Appendix Y**).

## 15.2.10 Actual and potential wildlife effects (adverse or positive) of the proposed activity, including effects on the target species, other indigenous species, and the ecosystems at the site (clause 2(1)(j))

Section 10.3 of this report contains a detailed description of the actual and potential effects of the project on white sharks, basking sharks and seabirds (and their habitats). This is based on the information contained in the seabird effects assessment (**Appendix O**) and the shark effects assessment (**Appendix P**), as well as the assessment of seabed effects (**Appendix M**) in relation to ecosystem effects.

## 15.2.11 Methods to avoid and minimise adverse effects, including any offsetting or compensation to address unmitigated adverse effects (clause 2(1)(k))

Section 12.5 of this report, as well as the proposed wildlife approval conditions contained in **Appendix DD** and the proposed management plans in **Appendix X** and **Appendix Y**, detail how NTS is proposing to manage the actual and potential effects of the project on white sharks, basking sharks and seabirds. There are no unmitigated adverse effects.

## 15.2.12 Convictions for any offence under the Wildlife Act (clause 2(1)(l))

No company director, trustee, partner, or anyone else involved with the application has been convicted of any offence under the Wildlife Act.

## 15.2.13 Current criminal charges under the Wildlife Act (clause 2(1)(m))

The applicant (including the company director, trustees, partners, or anyone else involved with the application) does not have any current criminal charges pending under the Wildlife Act.

## 15.2.14 Consultation on the application specific to wildlife impacts, including with hapū or iwi (clause 2(1)(n))

Section 4 and **Appendix F** of this report contains details of the consultation undertaken associated with the HAP. Engagement with DOC, MPI, ES and the MWG have related to wildlife impacts.

## 15.2.15 Additional written expert views, advice, or opinions obtained concerning the proposal (clause 2(1)(o))

NTS has sought expert advice from NIWA (**Appendix P** and **Appendix Y**) and BlueGreen Ecology Limited (**Appendix O** and **Appendix X**) in relation to the ecological effects on white sharks, basking sharks and seabirds and of the HAP more broadly. DOC has also reviewed and provided feedback on the assessments and management plans.

# 15.3 Decisions on wildlife approval - Section 81 of the FTAA

Clause 5 of Schedule 7 provides that when considering an application for a wildlife approval, including conditions under clause 6, the Panel must take into account, giving the greatest weight to paragraph (a):

*(a) the purpose of the FTAA;*

*(b) the purpose of the Wildlife Act and the effects of the project on the protected wildlife that is to be covered by the approval;*

*(c) information and requirements relating to the protected wildlife that is to be covered by the approval (including, as the case may be, in the New Zealand Threat Classification System or any relevant international conservation agreement).*

These matters are discussed in the following sections.

## 15.3.1 Purpose of the FTAA

Section 5 of this report sets out the reasons why the HAP is consistent with the purpose of the FTAA and has clear regional and national benefits.

## 15.3.2 The purpose of the Wildlife Act 1953 and the effects of the Project on the protected wildlife that is to be covered by the approval

The Wildlife Act protects animals classed as wildlife and manage game bird hunting in New Zealand. The Wildlife Act protects native and introduced species of terrestrial mammals, birds, reptiles, amphibians, and specific marine species identified as ‘animals’, and regulates many human interactions with these species. It establishes a tiered system of protection for different species, with some species receiving absolute protection and others receiving partial protection.

An assessment of effects on white sharks, basking sharks and seabirds is provided in sections 10.3.2 and 10.3.3 of this report, and measures to manage those effects are described in section 12.5. With respect to the activities sought to be authorised under the wildlife approval, these are proposed with the purpose of protecting great white sharks and seabirds from injury or death caused by entanglement and entrapment in the marine farm structures. In the very unlikely instances where white sharks, basking sharks or seabirds may be killed by entanglement or entrapment, protocols are proposed for the handling and disposing of the wildlife, and for adapting the management of effects into the future to further reduce or avoid the risk of it occurring again. The purpose of the Wildlife Act is therefore considered to be achieved.

## 15.3.3 Information and requirements relating to the protected wildlife that is to be covered by the approval

Information on white sharks, basking sharks and seabirds is contained in the technical assessments (**Appendix P** and **Appendix O**) and in sections 9 and 10 of this report.

The proposed management requirements for white sharks, basking sharks and seabirds that are entangled or entrapped in the marine farm structures is outlined in the draft SMP (**Appendix Y**) and

SBMP (**Appendix X**). The management procedures are consistent with best practice and are informed by advice from DOC, MPI, ES and the MWG.

### 15.3.4 Proposed conditions

With respect to the setting of conditions, clause 6 of Schedule 7 provides that a Panel may set any conditions on a wildlife approval that the panel considers necessary to manage the effects of the activity on protected wildlife. In setting any condition under subclause (1), the Panel must:

*(a) consider whether the condition would avoid, minimise, or remedy any impacts on protected wildlife that is to be covered by the approval; and*

*(b) where more than minor residual impacts on protected wildlife cannot be avoided, or remedied, ensure that they are offset or compensated for where possible and appropriate; and*

*(c) take into account, as the case may be, the New Zealand Threat Classification System or any relevant international conservation agreement that may apply in respect of the protected wildlife that is to be covered by the approval.*

Conditions are proposed which are considered to be sufficient to appropriately avoid, minimise or remedy any adverse effects on white sharks, basking sharks and seabirds. The conditions and the draft SMP and SMBP are informed by advice from DOC and the framework provided by the Wildlife Act.

Conditions proposed for the wildlife approval are contained in **Appendix DD**.

# Part 6 Conclusion

NTS is seeking the following approvals under the FTAA to authorise marine farming in Te Ara a Kiwa/Foveaux Strait, off the northern coast of Rakiura/Stewart Island with a full production potential of 14,400 tonnes of fish per annum:

- Resource consents that would otherwise be applied for under the RMA
- An aquaculture decision that would otherwise be made under the Fisheries Act
- A wildlife approval that would otherwise be applied for under the Wildlife Act

NTS has engaged comprehensively with manawhenua and a range of stakeholders in developing the HAP, including DOC, MPI, ES, Maritime New Zealand, South Port Ltd and fishing industry groups.

The information and analysis contained in this report has demonstrated that the HAP will deliver a development project with significant regional and national benefits. The purpose of the FTAA is therefore achieved.

The HAP provides for the continuing ancestral relationship of Ngāi Tahu with Te Ara a Kiwa. It is consistent with, and builds on, the principles and outcomes of Settlements being the Ngāi Tahu Claims Settlement Act 1998, the Māori Commercial Aquaculture Claims Settlement Act 2004, and the 1992 Fisheries Settlement.

A comprehensive assessment of effects on the environment has been prepared, supported by multiple technical reports. That assessment has concluded that there will be no significant adverse effects on the environment as a result of the proposed activity, provided that the development is staged and an adaptive management approach is adopted. Where effects are anticipated to be more than minor, they will be carefully managed through the progressive development of the site in accordance with the proposed conditions to attach to the approvals.

There are no adverse effects that are sufficiently significant to be out of proportion to the HAP's regional and national benefits and on that basis, the application satisfies the relevant tests under the FTAA and accords with the purpose of the FTAA.

NTKM has assessed the proposed activities within the context of their relationship with the physical and metaphysical environment at, and the significance of, the site. Informed by NTKM's whakapapa to the site, they have concluded that the proposed activities are appropriate at the proposed site.

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