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Our future in the sea - Toitu a tangaroa

Waikato West Coast Mussel Spat Nursery Critical Industry Infrastructure

Application for Fast-track Referral

North Western Mussels Limited

November 2025

Schedule D

Māui Dolphin Monitoring and Management

1.0 Introduction

North Western Mussels Limited (NWML) recognise that the area is habitat for the critically endangered Māui dolphin and have sought expert advice on potential effects. The marine mammal expert assessment and the marine mammal peer review (both provided in **Schedule C**) concur that effects will be no more than minor and can be managed through a staged and monitored development programme carried out in consultation with a marine mammal expert, as well as with implementation of the comprehensive Marine Wildlife Management Plan (MWMP) proposed by NWML. In that respect the application aligns with the New Zealand Coastal Policy Statement (NZCPS).

However, during pre-application engagement with Fisheries New Zealand (FNZ), NWML were directed to consider whether and how the proposal aligns with requirements under the United States Marine Mammal Protection Act (USMMPA). FNZ have indicated that the activity would need to align with the Hector's and Māui Dolphin Threat Management Plan (TMP) in that mechanisms need to be in place to provide proof that the activity will not cause any Māui dolphin mortalities. NWML are absolutely confident that this standard can be met, particularly considering there have been no reports of entangled Hector's dolphins in mussel farms in the 40 years they have coexisted in Banks Peninsula and the Top of the South.

To date NWML have undertaken an initial assessment of the proposal against the USMMPA, provided FNZ with detail on the research structures that Gulf Mussel Farms Limited (GMF) has been operating in the proposal area for the last ten years, obtained an industry report on acoustic monitoring of Hector's dolphins in mussel farms in Golden Bay, obtained a proposal from a marine mammal expert about a monitoring programme for the proposed 'pilot farm' (of up to 82 lines) and undertaken further engagement with FNZ. A summary of these activities is provided here.

2.0 USMMPA Alignment

FNZ provided NWML with an information sheet setting out the requirements of the USMMPA and its relationship with the TMP. The fact sheet noted that:

- *'New Zealand's mussel aquaculture is currently classified as an "exempt" fishery. The "criteria" for exempt fisheries is that it must be demonstrated that we have "prohibited the intentional mortality or serious injury of marine mammals in the course of commercial fishing operations".*
- *'On that basis we expect New Zealand's mussel aquaculture fishery should receive a comparability finding, noting that the current application does not include mussel aquaculture operations overlapping with Māui dolphins. The US may reconsider a comparability finding or may terminate a finding at any time if it determines that the fishery no longer meets the applicable conditions.*
- *'Although there is only a single criterion for exempt fisheries to meet, New Zealand's application for exempt fisheries requires additional information, such as the marine mammal species the fishery overlaps with, estimated bycatch injuries/mortality, what monitoring is in place, and research related to marine mammal bycatch in the fishery. The establishment of a farm that overlaps with Māui dolphins would need to be updated in our comparability documentation.'*

In that regard, provisions need to be in place to give sufficient assurance that no Māui dolphin mortalities will

arise from the spat nursery activity. Utilising the methodology undertaken in the TMP, encounters between animals and lethal threats are estimated as a function of their overlap in space, and the probability of death per encounter. While the application sites are within Māui dolphin habitat, there is currently insufficient evidence to verify the level of potential overlap. As set out below, NWML are confident that the probability of entanglement (and therefore potential death) is negligible.

3.0 Dolphin Research

Hector's dolphins have been cohabiting in harmony with mussel farms (which include spat nursery activities) in Banks Peninsula and Te Tau Ihu since commencement of the industry in those regions and absolutely no adverse interactions, including entanglements have been reported in that time. The NWML marine mammal expert report and peer review concur with this finding. However, FNZ have noted that definitive data is not yet available and uncertainty remains.

NWML have compiled two additional sources of information towards filling the information gaps and provided these to FNZ. These are as follows:

3.1 Gulf Mussel Farms Research Structures

Gulf Mussel Farms Limited (GMF) has been undertaking spat research on the west coast of the North Island for over ten years and confirmed that the proposed catching and nursery sites are in the best possible location for optimal spat supply. The programme has been carried out under research consents commencing at Muriwai in 2013 and covering areas in Northland, Auckland and the Waikato.

The research was originally undertaken on 'cray line type structures' but in 2018 the Waikato Regional Council granted consent for (AUTH139018.01.01) for deployment of six 150 metre longline structures within the Waikato west coast.

The longline structures are similar to mussel spat catching longlines, with anchors at each end of the 150 metre length, except that vertical droppers and spat frames can be deployed.

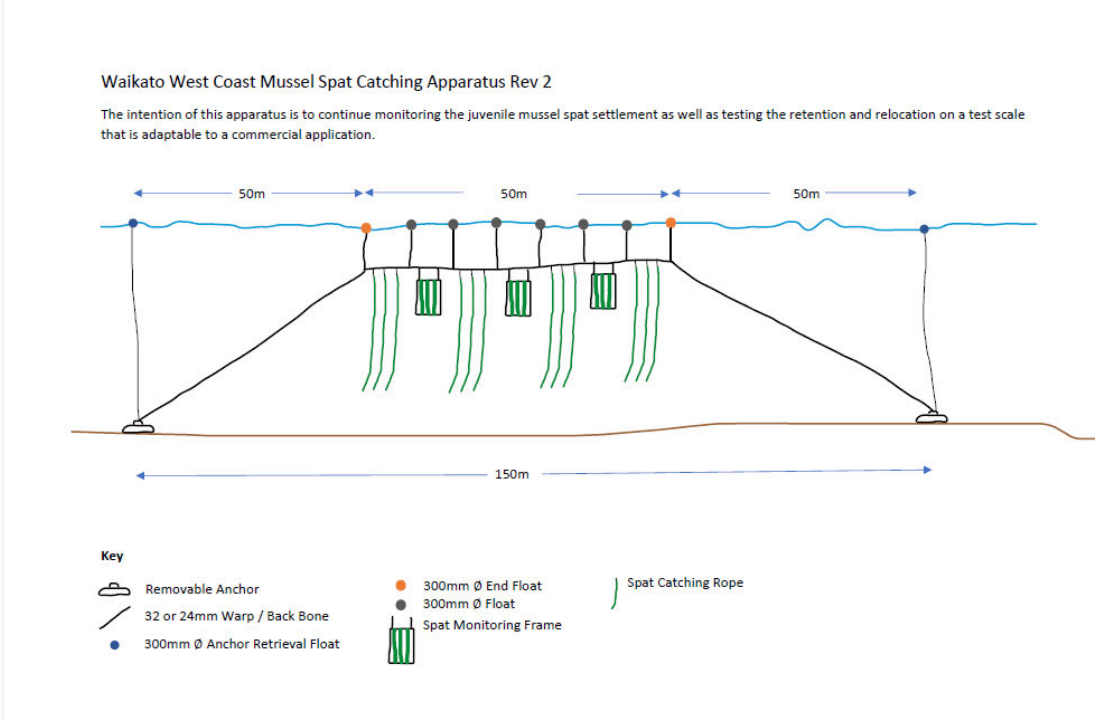


Figure 1 GMF spat research longlines (6 units)

In the last ten years the Waikato sites have demonstrated consistent and significant spat catch and retention. In addition, the research programme has enabled better understanding of the feasibility of open ocean structures, improved design and specialised weather forecasting.

The research has also confirmed that practical and economic access to open ocean sites using both small boats and larger aquaculture vessels is essential. For the NWML application sites, Manu Bay Raglan, Raglan Harbour, Port Taranaki and Port Manukau are all in the near vicinity so farm logistics, safety and viability are optimised.

The research has included a 'Dolphin Safe Waikato Tasman Sea Mussel Spat Catching Long Line Trial' co-funded under the Fisheries Inshore New Zealand Gear Innovation Pathway programme. The final report in 2021 recorded successful development of the self-tensioning longline system proposed in their current application. GMF have also been continuously maintaining a marine mammal sightings log since 2013 and notably never encountered a Māui dolphin in the vicinity of the lines.

In summary, ten years of research has confirmed that the proposed catching and nursery sites are unparalleled for spat catching and spat retention, including for nursery of hatchery spat. They also optimise accessibility and farming logistics to provide a step change in productivity for the Zealand mussel industry. The lines have been operating in Māui dolphin habitat since 2018, and no interactions have been reported.

3.2 Golden Bay Marine Mammal Monitoring

The consent holders in subzones (l), (m), (n) and (o) in Aquaculture Management Area 2 (AMA 2) in Golden Bay/Mohua were granted resource consents in 2019 to develop mussel farms totalling 200 hectares in Stage 1 and 1,000 hectares at full development (Stage 2). Golden Bay/Mohua is subject to numerous marine mammal stranding events and the decisions identified that further information was warranted on how farm development might affect marine mammals, particularly in the context of these strandings.

As part of their consent conditions, the consent holders were required to undertake a 5-year marine mammal monitoring programme while Stage 1 was developed.

The criteria of the monitoring were to understand marine mammal stranding and entanglement rates within Golden Bay and observe any interactions with the structures as the farms developed. This involved visual monitoring undertaken by the vessels operating the farms over a period of three years and one year of passive underwater acoustic monitoring. The acoustic monitoring comprised two devices placed at the outer edges of the farm. The acoustic monitoring was carried out between February 2024 and February 2025 when Stage 1 was fully developed and in a stable state.

The programme was carried out by Cawthron, and the Stage 1 marine mammal monitoring summary report has recently been finalised. NWML have obtained a copy of this report and shared it with FNZ.

Findings of note are as follows:

- *'For the purposes of the project, detection events were classified as either very high-frequency species (e.g. Hector's / Māui dolphins), high-frequency species (e.g. bottlenose, common or dusky dolphins, pilot whales), or mid- to high-frequency species (e.g. orca).*
- *The most common species detected near the farms throughout Stage 1 were New Zealand fur seals and Hector's dolphins.*
- *Sightings of both fur seals and Hector's dolphins increased through Stage 1a development and their presence continued through Stage 1b. While fur seals were the one species reported regularly interacting*

(physically touching, rubbing, etc.) with farm structures or lines, Hector's dolphins were observed travelling between farm lines and swimming around structures

- Hector's dolphins initially seemed attracted to the farm vessels themselves, but as the farms developed, more sightings were in proximity to the farm structures.*
- The continuous detection capability of acoustic method also revealed that both Hector's dolphins and orca / maki visited farm blocks more frequently overnight than during the day across most seasons.*
- Regardless of the reason, it appears Hector's dolphins are not excluded by the farm blocks, as they were observed travelling through and within the developed farms. However, there were no reports of this species physically interacting (rubbing or touching) the farm structures or lines, at least as seen from the surface.*
- As well as fulfilling the objectives of the consent conditions, monitoring results demonstrate how visual and acoustic findings can be used to inform expectations around further farm development.*
- Positive outcomes from this programme have included proof of the effectiveness of underwater acoustic technology for monitoring marine mammals near marine mussel farms in Golden Bay'.*

In summary, Hector's dolphins were observed both visually and acoustically to travel within the farms without any detected adverse interactions. While this report is on a different subspecies and in a different location, and the acoustic monitoring devices were at the outer edges of the farm, NWML consider the study provides some indication of potential behaviour at the application site. Importantly there is potential to undertake a similar (though specifically designed for the purpose and sites) monitoring programme of the NWML farm structures during the pilot to then inform future stages.

The Cawthron report is appended to this Schedule as **Schedule D1**.

4.0 Marine Mammal Monitoring Proposal

During discussions with FNZ it was identified that if monitoring showed no presence of dolphins in the vicinity of the sites, then the 'overlap' component of risk would be significantly lower. This can only be determined by undertaking monitoring with some farm infrastructure in place as proposed in the pilot.

NWML have commenced discussions with a recognised marine mammal expert to design a marine mammal monitoring programme for the pilot stage structures, focussing on ensuring that any presence and/or interactions of Māui dolphin within the farm sites is well understood and development can be adapted appropriately in response to monitoring results.

5.0 Summary

The NWML marine mammal expert assessment and peer reviews found that the effects on Māui dolphin, including risk of entanglement would be no more than minor, and therefore in alignment with the NZCPS. However, the Hector's and Māui Dolphin Threat Management Plan (TMP) requires that mechanisms are in place to provide proof that the activity will not cause any Māui dolphin mortalities. NWML propose to undertake a pilot stage (Stage One) with an expert-led programme of monitoring of marine mammal interactions with the structures prior to progressing to further development. NWML consider that the risk of the tensioned and weighted spat lines causing entanglement is negligible and that monitoring data obtained during the pilot can then be used to undertake a review of any residual risks to inform any further stages.