

To Christin Atchinson, Waikato Regional Council

From Dr Hilke Giles, Pisces Consulting

Date 7 May 2024

Subject Review of 2024 benthic survey supporting application by North Western Mussels Limited for a mussel spat/nursery marine farm off the Waikato Region West Coast and advice whether my assessment and conclusions in respect to the benthic environment (section 4 of my memo dated 16 August 2023) have changed upon receipt of the further information

WRC Reference APP145770

You asked me to review the benthic survey report prepared by Carina Sim-Smith (2024)¹ in support of an application by North Western Mussels Limited for a mussel spat/nursery marine farm off the Waikato Region West Coast and advice whether my assessment and conclusions in respect to the benthic environment (section 4 of my memo dated 16 August 2023) have changed upon receipt of the further information.

The initial (2017) benthic baseline survey only partially covers the area applied for in the consent application. The new (2024) benthic survey was conducted to cover the remainder of proposed marine farming blocks (**Figure 1**).

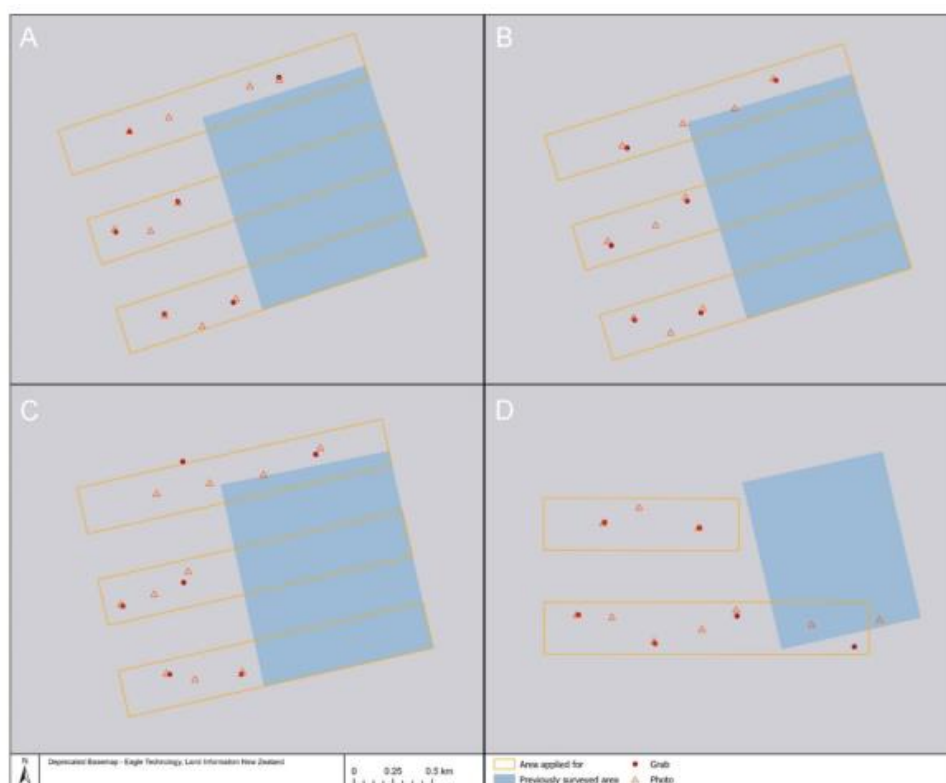


Figure 1. Location of grab samples and drop camera photos of the new benthic survey report.

¹ Sim-Smith, C (2024) Northwestern Mussels Ltd additional benthic survey of west Waikato mussel nursery. Prepared by Coast and Catchment for Northwestern Mussels Ltd.

The new survey was designed to complement the initial survey and involved grab sampling and underwater photography. A total of 24 sediment grab samples were collected (at six random stations per block) and analysed for macrofaunal community characteristics, grain size, and total organic carbon (TOC) analysis. Ten drop camera photos were taken in each block to detect if any biogenic habitat or large, emergent epibiota were present. Underwater video tows were also trialled, but the poor water clarity, depth and exposed sea conditions prevented the collection of usable footage.

Sim-Smith (2024) describes that the results from the 2024 survey of the previously unsurveyed areas within Blocks A–D concur with those of the initial survey and describes the results as follows:²

- “The substrate throughout the blocks was predominantly sand, with a minor proportion of mud. Visible sand ripples on the seabed indicate that the seabed is subjected to strong wave/current action and thus, is likely to be mobile.
- Concentrations of TOC were very low in all blocks, though they were slightly higher in Block D.
- No large emergent epifauna, biogenic habitat or rocky reef were observed in the benthic survey.
- The benthic macrofaunal community was diverse, but most species were present at very low abundances, which is typical of exposed sandy, subtidal habitats. No marine invertebrates are specified to be nationally threatened or regionally uncommon for the Waikato Region.”

I agree with Sim-Smith (2024) that the results of the two surveys are comparable. I also agree with the effects assessment provided by Sim-Smith (2024), which concluded that “overall, given macrofaunal and epibenthic community present, and the physical conditions at the site, the benthic impacts of the proposed mussel nursery are assessed as being less than minor”³.

Based on the outcome of my review of Sim-Smith (2024) I can confirm that the assessment and conclusions in respect to the benthic environment (section 4 of my memo dated 16 August 2023) are still valid and do not require any changes.

² At p.15.

³ At p.16.