

## Summary of evidence for the Eastern Bays Shared Path – Shelley McMurtrie

As per my **evidence in chief** dated 30 November 2020, I was commissioned by the Hutt City Council to determine the potential effects of the proposed Eastern Bays Shared Path and beach nourishment on intertidal and subtidal ecology. My evidence excludes seagrass which is covered in the evidence of **Dr Fleur Matheson**.

My assessments were covered in two technical reports, and have been summarised in my evidence in chief under two sections – Part A: the effects of the Shared Path on intertidal ecology, and Part B: the effects of beach nourishment on intertidal and subtidal ecology.

In relation to the effects of the Shared Path on intertidal ecology –

- The existing environment is already highly modified, with seawalls currently along the majority of the shoreline (87% of the Project length) that support low species diversity and richness. The community composition was similar to rocky shore communities found elsewhere in the Harbour, and no species of conservation concern were found.
- Potential seawall construction effects relate to sedimentation, release of contaminants, habitat disturbance from machinery working in the foreshore, and some encroachment into the subtidal area for the construction works site in a few places. Potential seawall operational effects relate to changes in habitat type and encroachment into the existing intertidal area.
- A range of measures will be implemented during construction to reduce effects, including minimising the construction footprint, controlling the release of contaminants, undertaking the works in a staged approach, and replacing existing larger rocky material colonised by biota. By choosing seawall options with a smaller footprint where possible, the chosen design limits the level encroachment into the intertidal area to 5.9%, and the addition of textures on the curved seawalls and rockpool habitats within the new seawalls and revetments will improve the habitat value of the proposed seawalls over the old seawalls that currently exist. These measures have been included in the consent conditions as appended to the evidence of **Caroline van Halderen**.
- I am therefore satisfied that any potential effects to benthic ecology have been adequately dealt with and will limit the overall effects to a 'less than minor' level.

In relation to the effects of beach nourishment on intertidal and subtidal ecology –

- The infauna community of the surveyed beach sediments were considered to be healthy, with the dominant species indicating little nutrient enrichment, chemical contamination, or presence of finer sediments (i.e., mud). The infauna community of three bays proposed for beach nourishment (Point Howard, Lowry Bay, York Bay) were similar to other bays in the Project area and no species of conservation concern were recorded.
- Potential effects of beach nourishment relate to the disturbance and possible compaction of habitat from machinery use on the beach during initial nourishment, potential smothering of biota when the beach material is added and during subsequent movement by the tides of the material beyond the introduction sites, as well as increased suspended sediment during these times.

- Measures to be implemented to limit the effects of beach nourishment include using similar beach substrate with no fines, placing material during low tide and calm conditions, adding material in smaller volumes, avoiding the emergent rocky areas in Southern Lowry Bay, and replacing woody debris in the beach wrack line.
- I am therefore satisfied that any potential effects to benthic ecology will be short-lived and limited to a 'minor' or 'less than minor' level of effect. However, as sediment migration can vary based on site-specific conditions, I have recommended that repeat sampling of the benthic intertidal and subtidal beach fauna be undertaken at least 12 months after completion of the proposed works. This monitoring has been included in the consent conditions as appended to the evidence of **Ms van Halderen**.

Of the 200 submissions, only seven refer to intertidal or subtidal benthic ecology (excluding seagrass) and four refer to offshore structures. These submissions do not focus on intertidal or subtidal ecology, but I have responded to any mention of such matters in Paragraphs 103 to 110 of my evidence in chief.

Both the section 42A Report, and the associated expert review comments by **Dr Megan Oliver**, are in agreement that the overall effects pertaining to these matters will be appropriately managed to an acceptable level or will be no more than minor, on the basis that the recommended consent conditions are implemented. The section 42A Report did include some suggested amendments to the proposed conditions (namely five new conditions and amended wording to an existing condition) as appended to the evidence of **Ms van Halderen**, which I discuss in Paragraphs 111 to 118 of my evidence in chief. In short, my opinion is that:

- one of these conditions is covered in the proposed consent conditions appended to Ms van Halderen's evidence (cf Paragraph 113 of my evidence in chief);
- one is covered in the proposed consent conditions appended to Ms van Halderen's evidence, but the wording is obtuse and thus I have recommended clearer wording (cf Paragraph 114 of my evidence in chief);
- one has been superseded by the requirement to limit beach nourishment to the winter months to minimise disturbance to avifauna, which I am in agreement with (cf Paragraph 115 of my evidence in chief);
- one is an existing condition that I agree should be reworded as suggested by the section 42A Report with some alteration (cf Paragraph 116 of my evidence in chief);
- one is an additional monitoring requirement during construction that I don't believe is relevant (cf Paragraph 117 of my evidence in chief); and
- one provides a sediment load limit for discharges during the construction phase of the seawalls that I agree with (cf Paragraph 118 of my evidence in chief).