BEFORE THE GREATER WELLINGTON REGIONAL COUNCIL AND HUTT CITY COUNCIL
EASTERN BAYS SHARED PATH PROJECT

Under	the Resource Management Act 1991
In the matter	of applications for resource consents by Hutt City Council under section 88 of the Act, to carry out the Eastern Bays Shared Path Project

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SUMMARY STATEMENT OF EVIDENCE OF RICHARD ANTHONY REINEN-HAMILL (BEACH NOURISHMENT) ON BEHALF OF THE APPLICANT

15 December 2020

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1. My full name is **Richard Anthony Reinen-Hamill**. I provided evidence dated 30 November 2020 on behalf of Hutt City Council ("**HCC**") addressing the beach nourishment design for the proposed Eastern Bays Shared Path Project (the "**Project**"). The main points of my evidence can be summarized as follows.

2. The beaches in the Project area are small pocket beaches confined within rocky headlands along the undulating coastline. The beaches comprise a combination of both sands and gravels, with the proportion of sand increasing from York Bay to Point Howard Beach. Waves are typically wind generated and, due to the generally windy climate within Wellington Harbour, there are frequent small wind generated waves acting on the beaches.

3. The main purposes of the beach nourishment at Point Howard Beach, Lowry Bay and York Bay are to mitigate the loss of beach area available for beach amenity, offset beach loss and restore ecosystems. The two key objectives that informed the beach nourishment design were

    (a) to replace only the beach area that was expected to be occupied by the Shared Path; and

    (b) to keep the nourishment within the existing beach areas to protect the sensitive ecological areas that were present seaward of the beach areas.

4. Therefore, the design objectives were to form steeper faced beaches than the existing beaches, with a similar size of dry beach area to the original beach areas, as well as to have minimal encroachment seaward of the existing beaches. The design involved calculating the required volume based on the area of occupation while considering compaction losses and the volume of the existing beach sediments that will be retained and selecting sediment gradings that will create a slightly steeper beach face.

5. The existing beach sediment will form a slightly over-steepened upper intertidal beach face within the existing footprint of the beach. This process is likely to be done by a hydraulic excavator operating along the crest of the existing wall, although once the bench is formed, it could be carried out with machinery working along the upper part of the beach adjacent to the existing seawall during the low part of the tide cycle. The imported material will then be placed along a central area of each beach and natural wave and tide processes will distribute the sediment along and across the beach profile.

6. Due to the shape of the bays, I do not anticipate that there will be any alongshore loss from the bay where the sediment is placed and there is no need for additional control structures, such as groynes or offshore reefs to confine the placed sediment.

7. Potential adverse effects of the Project have been minimised by careful design to:

   (a) limit the imported volume;

   (b) increase the grain size of the imported sediment to create slightly steeper beach face slopes;

   (c) limit the proportion of fines;

   (d) avoid encroachment onto the seagrass beds and minimise encroachment over stormwater outfalls through the chosen placement approach; and

   (e) avoid times of more vigorous sea grass growth by carrying out placement in winter months.

8. With these proposed actions the Project's potential effects on the beaches and the adjacent seabed areas are low, and the placed sediment will behave similarly to the existing beaches with the same wind, wave, and tide regime.

9. The Beach Nourishment Plan provided under conditions EM.13 to EM.14 of the proposed conditions will address the detailed design requirements and construction matters, together with conditions EM.15 to EM.18 which deal with beach monitoring, management and nourishment.

10. I have reviewed the GWRC section 42A report and the appendices from Dr Iain Dawe and Sharon Westlake. I support the findings that beach nourishment is an appropriate form of mitigation for the loss of useable high-tide beach and the effects are no more than minor.

My evidence is given on behalf of Hutt City Council ("HCC") Coastal Engineering at Tonkin + Taylor.
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