

# Memo

<b>To:</b>	<b>Michael O'Shea</b>	<b>Job No:</b>	<b>1001650</b>
<b>From:</b>	<b>Peter Quilter</b>	<b>Date:</b>	<b>3 September 2018</b>
<b>cc:</b>	<b>Paul Klinac (Paul.Klinac@aucklandcouncil.govt.nz)</b> <b>Richard Reinen-Hamill (RReinen-Hamill@tonkintaylor.co.nz)</b>		
<b>Subject:</b>	<b>Huia Bay - Kaipara sand suitability for import</b>		

This memo formalises our assessment of consented Kaipara beach sand as being suitable for imported beach nourishment to complete the proposed groyne and beach nourishment works at Huia Beach. We understand that up to approximately two thousand cubic metres of imported sand is required to raise areas of the beach presently above Mean High Water Springs (MHWS) level.

Placement of sand above MHWS in the works area at Huia Bay is a permitted activity. Further details relating to the permitted activity rule for beach nourishment is as follows:

*Table E36.4.1 (A14) – Beach nourishment as a permitted activity*

*Subject to the following PA standards:*

*E36.6.1.2. Beach nourishment*

*(1) Depositing must be for the purpose of:*

- (a) erosion management;*
- (b) beach (including dune system) replenishment or re-contouring;*
- (c) habitat enhancement; or*
- (d) depositing of material excavated during stream mouth and stormwater outfall clearance operations.*

*(2) Written advice must be given to the council at least 10 working days prior to the work starting.*

*(3) Placement of sediment must avoid existing areas of indigenous vegetation and any bird nesting area.*

*(4) The deposited material must have similar physical characteristics to the sediment at the location it will be deposited, and must generally be of slightly coarser grain size.*

*(5) The deposited sediment must not permanently prevent or hinder public access or prevent or hinder the operation of any existing infrastructure.*

*(6) There must be no release of contaminants from equipment being used for the activity.*

*(7) All equipment and materials must be removed from the foreshore and seabed on the completion of works or activities.*

With respect to E36.6.1.2, depositing of beach nourishment is for the purpose of erosion management and will be undertaken within the footprint of the separately consented beach nourishment works.

Physical characteristics of the material have been assessed based on visual appearance and particle size grading. As presented to you in our meeting 2 August, dry sand samples from Huia and the consented Kaipara source were judged to be reasonably consistent with one another in appearance (Figure 1).

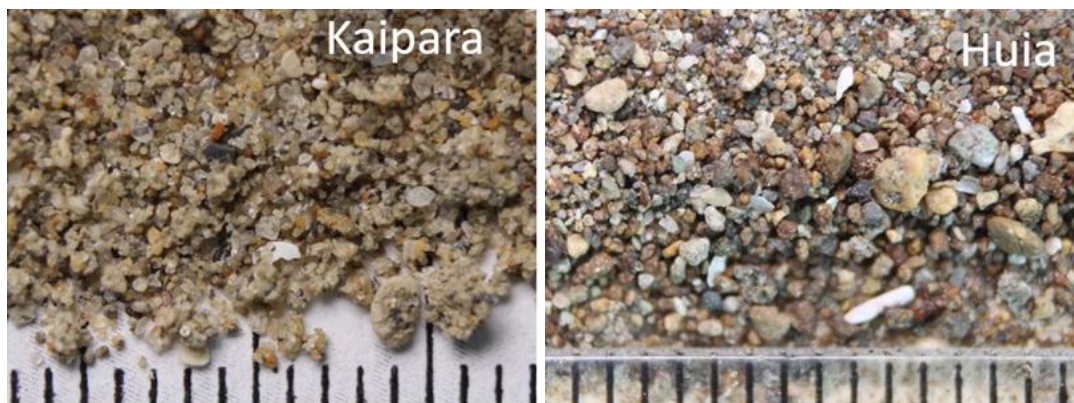


Figure 1 Dry sand samples from Kaipara and Huia

Comparison of grading envelopes show the Kaipara material to have a lower fraction of silt than typically found on Huia Beach and more uniformly graded from 0.2 mm to 0.6 mm (medium sand) rather than the wider graded Huia sand that also includes around 10% of gravels and larger particles.

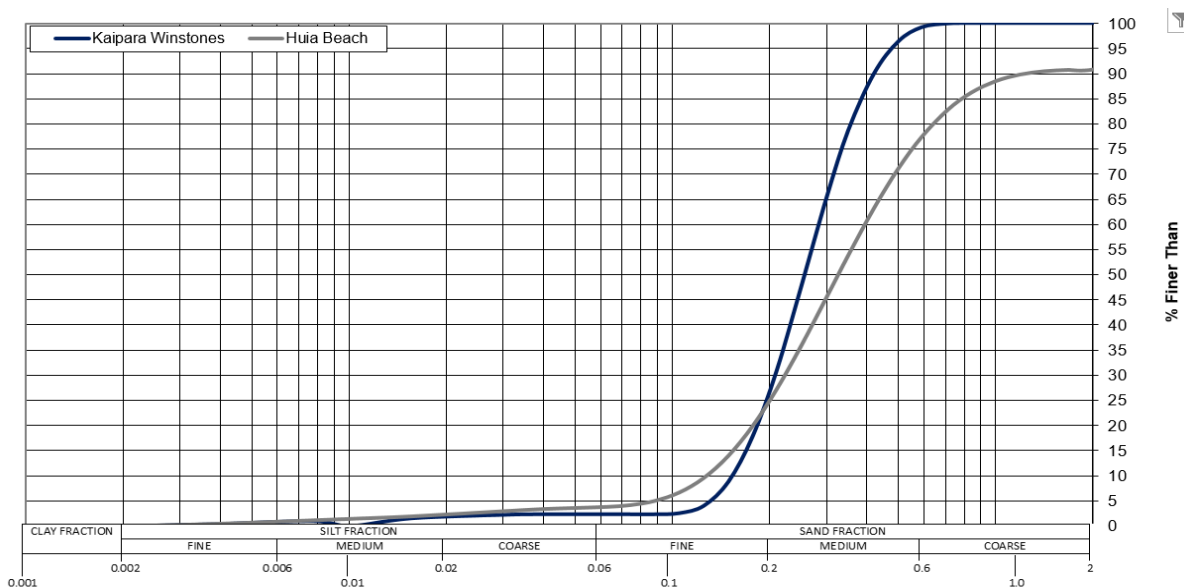


Figure 2 Grading curves from Huia (Average Borrow) and Kaipara material (Kaipara Winstones)

In summary on the basis of our assessment to date we consider the consented Kaipara sand as having ‘similar physical characteristics’ to existing material sampled on Huia beach. Separately, we understand that Auckland Council have consulted with local Iwi and they are agreeable with the proposed sand import.

4-Sep-18

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