



CSL Ref: 2013-14LREP
15 November, 2013

The CEO
Kapiti Coast District Council
175 Rimu Road
PARAPARAUMU

Attention Mr Matt Aitchison

Erosion hazard assessment for the Mangone Inlet using managed scenarios

As part of the Kapiti Coast District Council District Plan Review process, Coastal Systems Ltd have been instructed to carry out a potential erosion analysis for hazard zoning purposes under a managed scenario for 50 and 100 year assessment periods. The previous CSL assessments had only considered unmanaged scenarios as no evidence of management had been evident. However, Ms Sharon Westlake and Mr Graham Winterburn (Greater Wellington Regional Council) have now provided information as to the extent of management and on this basis the following managed 50 and 100 yr scenarios are assessed. In addition, the more recent (2010 and 2013) aerial photos are also incorporated and the 2010 sample depicts an earth bund used to realign what was a strongly offset (northward) channel to a more direct seaward orientation.

Mr Winterburn provided information that the Mangaone has been realigned 10 times since 2000 and Ms Westlake said that mouth realignment has occurred since formation of the regional council in the 1889, and its possible such management predated this under the Manawatu Catchment Board era. The assessment was thus based on inlet shorelines from 1993 to the present with consideration being also given for the period 1980 to the present.

The analysis output for 1993 to 2013 shoreline data is depicted in Figure 1. As can be seen, no dwellings are affected using these data under the 50 yr assessment period, while output for the 100 yr period affects one dwelling and a small part of two others. Using 1980 to 2013 data gives the same result as the inlet migration curve remains unchanged in the vicinity of these particular dwellings.



Figure 1 Mangaone erosion assessment analysis for managed inlet 50 and 100 yr scenarios. The black areas depict the shoreline envelop for 1993 to 2013 samples out to the GWRC trigger lines (marked by black lines) used to initiate a mouth cut (realignment). The racked black lines define the inlet migration curves, while the thin and thick red lines define the 50 and 100 yr erosion hazard prediction lines respectively.

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Dr Roger Shand
Senior Coastal Scientist