**Coastal Erosion Prediction Distance Lines**

In general, the approach used to define the CEHDs, which were renamed coastal erosion prediction distance (CEPD) lines in the 2012 report, follows what has been best practice for determining coastal setback lines in terms of the individual components that should be considered (*viz*. Gibb, 1983; Healy and Dean, 2000; Ramsay *et al.*, 2012).

Lack of probabilistic assessment

However, this methodology does not consider the probabilities associated with the components, and hence does not provide a probabilistic assessment of risk, which is a requirement of risk management coastal planning frameworks (Ranasinghe *et al*., 2012).

Comparison between predicted shoreline trends using standard methodology and the observed shoreline trends indicates that the standard methodology is not appropriate (*viz*. List et al, 1997; Cooper & Pilkey, 2004; FitzGerald *et al*., 2008), and assumed trajectories of forcing processes do not agree with observed trajectories (de Lange and Carter, 2013). It has also been recognised that better methods are required that do incorporate a probabilistic estimate of coastal response to sea level (*viz*. Ranasinghe *et al*, 2012). Therefore, an alternative approach should be used.

Planning Interpretations vs Science

Further,Shand (2008a) modified the methodology used to determine the individual components contributing to setback lines, and made assumptions that appear to reflect planning interpretations and not objective science, that in combination indicate that the results are unfit for their intended purpose.

Scope of this Report

This report considers the Holocene evolution of the Kapiti Coast and resulting beach characteristics, evaluates the Coastal Systems Limited methodology and assumptions, and suggests an alternative approach to assessing the risk of coastal erosion.