27.07.2021

Ross Roberts

Geotechnical & Geological Practice Lead

Auckland Council

Dear Ross,

Thanks again for your visit to meet with representatives from the Mahurangi East Residents and Ratepayers Association Committee and the Scotts Landing community. We appreciated the opportunity to discuss the "Predicting Auckland's Exposure to Coastal Instability and Erosion" Technical Report 2020/021 (ASCIE report) and undertook to:

1. Provide our rationale and propose wording with which to amend the caveat that currently accompanies the ASCIE mapping on Auckland Council's GeoMaps
2. Discuss and provide a link to the Bay of Plenty Regional Councils' guidelines for foreshore protection in the Tauranga Harbour (see below)

1) **Caveat Wording:**

We appreciate your willingness to receive proposed amendments and note your advice that the mapping would remain on-line.

As we discussed our community is extremely concerned by emerging evidence that this map is being misunderstood and misrepresented in the public domain. This has already caused **very significant alarm** among our residents including concern for **personal safety** by residents living 'outside the lines', the **future insurability** of homes and impacts on their home's **value and saleability**.

This is totally understandable given published examples like this:

- https://www.newshub.co.nz/home/new-zealand/2021/05/auckland-council-releases-map-showing-areas-susceptible-to-coastal-erosion.html (Para two reads: "*Tens of thousands of coastal Kiwi homes could be deemed uninsurable over the next few decades thanks to a rapid increase in coastal erosion.")*
- https://m.localmatters.co.nz/news/43870-clifftop-properties-identified-at-risk-from-coastal-erosion.html . One section states: "*At Scotts Landing, the map shows erosion lines severing the peninsula into an island and the Leigh Harbour walkway is depicted as susceptible to eroding away completely"*
- (accompanying the above…)

The Insurance Council's letter to property owners' wording is typically equivocal (eg: *"In most cases this (*report*) does not have an immediate effect*"). It does little to allay residents' concern. (https://www.knowledgeauckland.org.nz/publications/information-for-property-owners-insurance-council-of-new-zealand-icnz/)

As we indicated we have **no criticism of the ASCIE report itself** which, if read thoroughly, is totally clear about its limitations and its restricted purpose. However obviously such provisos are not evident to many who are using and making assumptions from the map.

Quite definitively Ian Smallburn (Council's General Manager) is on the record stressing: *"that the (ASCIE) report is a regional scale study and… that the … modelling results apply to broad areas. He says he wouldn't expect the report to be used as a reference in relation to specific sites (such as individual properties) without a more detailed assessment." (https://ourauckland.aucklandcouncil.govt.nz/news/2021/02/prediction-and-planning-coastal-erosion-in-tamaki-makaurau/)*

Elsewhere Council states: "*Because the current study was undertaken at a regional scale, it cannot be used to confirm if a site is 'likely to be subject to one or more natural hazards' at the level of detail required for a building consent."* (MERRA would add by implication… 'or insurance or valuation purposes.')

However as it stands we believe the Caveat accompanying the map does not offer the same clear and direct message where it is most needed. We propose an up-front and similarly definitive statement on both the GeoMaps and ARCGIS portals that reflects the report's own qualifiers along the lines of the following:

"This ASCIE mapping should not be used for the assessment of the erosion susceptibility of individual properties. As a 'first-pass' assessment it may include significant inaccuracies at localised levels. Assessment of individual properties (particularly for consenting, valuation and insurance purposes) should be based on a site-specific (Level C) geotechnical assessment prepared by a suitably qualified practitioner."

Note: Appendix 1 (below) contains some further suggestions for the remaining text in the current caveat should that be retained.

2) The Bay of Plenty Regional Council (BOPRC): Erosion Protection Works Guidelines for Tauranga Harbour

At our meeting we discussed MERRA's view that Auckland Council needs to offer more information and support for landowners wishing to reduce erosion on their foreshores particularly in non-rural settings where stock fencing and/or planting may not be appropriate. We also discussed the problem of uncontrolled stormwater run-off from Auckland Transport-maintained roads; much of which was directed onto private property.

We recounted the experience of some locals keen to fund their own projects who were given messages like 'erosion is a natural process' and 'Council does not support foreshore protection works'. Residents have also watched with dismay the exorbitant costs (eg: Algies Bay seawall) and council vs council legal wrangles associated with protection works. (eg: Orewa see https://www.stuff.co.nz/auckland/local-news/rodney-times/102637829/seawall-costs-increase-as-auckland-council-takes-itself-to-court-over-its-application?rm=a) MERRA's sense is that residents

feel put off, even intimidated, by these messages. Opportunities for quality Council-guided and supported, resident-funded erosion protection works are going begging as a result.

By contrast we note that BOPRC has published guidelines that we believe represent a more informative and enabling approach. It offers a harbour-wide consistent approach to erosion protection, with potential to streamline and standardise consents (where applicable) and reduce inappropriate or ad hoc measures being taken.

We strongly urge that you and the Coastal Team consider this document and the possibility that Council could improve on it for the harbours of Tamaki Makarau Auckland.

The document is available here:

https://www.boprc.govt.nz/media/29549/Guideline-0202-Erosionprotectiontaurangaharbour.pdf

In similar vein we have met with Waveney Warth (Mahurangi East Land Restoration Engagement Manager) and her associate Adam Schellhammer. MERRA is collaborating with them on their Healthy Waters project which may include the area of Scott Point's unsealed road as a trial project for erosion control. We also continue with Beth Houlbrooke's (Local Board) help on our three year quest to get the coastal road slip that we viewed with you suitably stabilised.

We look forward to your reply regarding both matters and on-going collaboration for the benefit of our waterways.

Warmest regards,

Peter Seers (MERRA Chair)

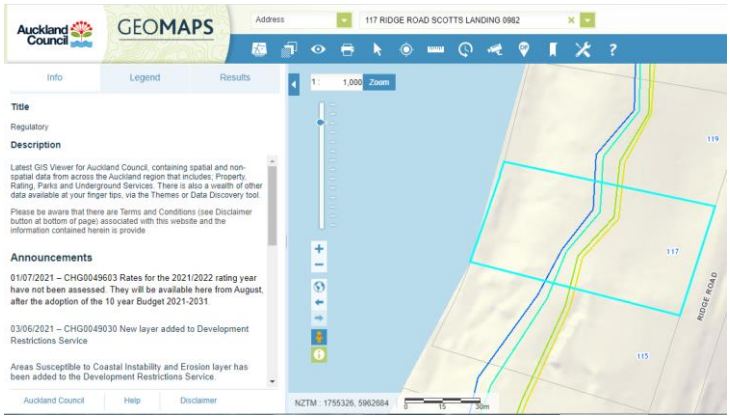
Dr Colin Harvey (MERRA Committee project lead)

Stuart Windross (MERRA Committee)

Dr. Merv Wilson (Community Rep)

Dr. Mark Topping (Community Rep)

Appendix 1: Some suggested amendments (in bold) to the text that might follow our suggested wording (boxed above). We note that while the wording below appears in the border of ARCGIS it does not appear in GeoMaps when the Development Restrictions – Coastal Erosion layer is selected (see screenshot below).



Note: We propose putting the caveat statement (boxed above) first before the summary perhaps combined with the 'Important Note' (Para 2 below).

Summary

Auckland Council is required to understand and manage the long-term effects of natural hazards (including coastal hazards). Some of Council's key obligations are defined in policy documents including the Resource Management Act 1991 (RMA), the New Zealand Coastal Policy Statement 2010 (NZCPS), and the Ministry for the Environment's 'Coastal Hazards and Climate Change Guidance' (2017). This dataset provides coastal erosion and instability data to inform decisions around land use and asset management that can comply with these obligations.

Important note

The lines shown on these maps do not show the future position of the coast. Rather, they show the area that might become unstable as a result of a smaller area of coastal erosion. See below for more details.

Description

The Auckland region has a high exposure to coastal hazards including coastal instability and erosion. These hazards can present a safety risk, adversely affect property and infrastructure, and damage or destroy cultural and environmental sites. A programme of research has been undertaken to identify, at a regional level, the Area Susceptible to Coastal Instability and/or Erosion (ASCIE). ASCIE is the area landward of the current coastline that is at risk because of coastal erosion or instability caused by coastal erosion. The study forecasts the areas of Auckland's coastline that could be affected by coastal erosion and instability under a range of climate change (sea-level rise) scenarios and timeframes.

Coastal erosion occurs when soil and rock at the coastline is removed, leading to loss of land. It is a complex process that can be caused by a number of factors including wave energy, high rainfall, changes to sediment availability and land use, or sea-level rise. Coastal erosion occurs differently for beaches and cliffs, and can occur rapidly due to storm events or more gradually over time. This is often a permanent loss, although beaches can re-establish if conditions are appropriate. The effects last for a long time or may be permanent.

Coastal instability is the movement of land (typically as a landslide) resulting from the loss of support caused by coastal erosion. The effects last for a long time or may be permanent.

Coastal inundation, also called coastal flooding, occurs when low-lying coastal areas are flooded by the sea. This is caused by a number of processes including high astronomical tides, low atmospheric pressure (storm surge) and wind direction and strength (which determines wave height). While tides have the largest effect on sea-level, coastal inundation is most likely to occur when high tides and storm surge coincide causing the water level to rise. Climate change induced sea-level rise will exacerbate this process over time. Coastal inundation is a temporary effect that rapidly dissipates.

The results presented in this map show the combined effect of coastal erosion and the slope instability that is caused by coastal erosion (i.e. the Area Susceptible to Coastal Instability and Erosion). The lines shown on these maps do not show the future position of the coast. Rather, they show the area that might become unstable as a result of a smaller area of coastal erosion. This map

does not present any information about other coastal hazards, such as coastal inundation or Tsunami, which are already presented on Auckland Council GeoMaps.

This data is mapped at a 0.5 km to 5.0 km scale and is not intended for site-specific use other than to determine whether more detailed study is warranted. Due to the large scale of the assessment (i.e., 0.5-5 km resolution) errors are inherently present due to the variance within a coastal cell. To identify areas that could potentially be susceptible to coastal instability and/or erosion, typical upper bound values have been adopted for each coastal cell. This means that in some areas the ASCIE may be overpredicted (i.e., shown further landward). However, this also means that an ASCIE may be underpredicted in areas where values are larger than the typical upper bound value (i.e., the largest or maximum values). Therefore, this assessment is recommended to be used as a preliminary tool. The regional-scale ASCIE can be refined by undertaking an assessment on a more detailed scale.

The regional-scale assessment of ASCIE is based on available data and tools and understanding of coastal processes. **However it excludes localised or site-specific data (much held on Council file) such as:**

- **existing geotechnical reports for individual properties. Such reports include localised stability analyses and document factors such as soil and rock profiles, water tables, bedding planes, etc that may vary significantly within each 0.5-5km cell.**
- **details of site-specific consented engineering works such as retaining, or barrier pile walls.**
- **localised factors such as (re-)vegetation, stormwater flows (eg off roads).**

Uncertainty may be introduced to the assessment by:

- An incomplete understanding of the parameters influencing the areas susceptible to coastal instability and/or erosion.
- An imprecise description of the natural processes affecting, and the subsequent quantification of each individual parameter.
- Errors introduced in the collection and processing of data.
- Scale of assessment and variance in the processes occurring within individual coastal cells.
- Other hazards such as land based geotechnical instability, or planning and landscape impacts etc. that are not accounted for within the ASCIE.
- Adopted methodologies…