



Memorandum

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| Date: | 01 June 2023 |
| Director: | Jon Kingsbury Head of Transport |
| Paper author: | Nat Garcia Project Manager – Tupua Horo Nuku |
| Subject: | RESILIENCE CONSIDERATIONS FOR TUPUA HORO NUKU |

Purpose (Executive Summary)

1. The Independent Hearing Panel for the intensification district plan change has made enquiries about
 - (a) the Tupua Horo Nuku project and how it mitigates sea level rise, and
 - (b) the council’s position on future-proofing Marine Drive

This memo outlines the design parameters and principles for Tupua Horo Nuku in relation to sea level rise and future-proofing Marine Drive.

Background/Discussion

2. Marine Drive is a low-lying road that serves as the main access for the Eastern Bays communities. Current sea defences are aging and lack a cohesive approach to protecting the road and surrounding houses from sea water incursion.

3. Between 2030 and 2040 there is a predicted sea level rise of around 16cm. Storm events are also predicted to increase in intensity leading to greater instances of road closures and damage to both infrastructure and private property.
4. The current community of Eastern Bays is around 5,000 individuals, all of whom would be impacted by the compromise of Marine Drive.

Tupua Horo Nuku improvements

5. The aim of the project is to develop a safe and integrated walking and cycling facility extending along a distance of 4.4 km on Marine Drive, a coastal road, between Point Howard and the northern end of Days Bay, and the southern end of Days Bay (Ma Koromiko/Windy Point) to Eastbourne (Muritai Road / Marine Parade intersection).
6. The Project will also:
 - a. Include replacement seawalls to provide protection from storm events for Marine Drive and other infrastructure contained within the Marine Drive Road corridor. This will result in improved resilience of Marine Drive from storm and sea surges.
 - b. Seeks to manage and mitigate any environmental effects and to enhance the environment where possible.
 - c. Provides a basis for future opportunities for protecting the resilience of the road and underground services by upgrading the supporting seawalls.
7. Lowry Bay has been identified as an area of vulnerability for Eastern Bays. Current sea defences are sub-standard and are prone to damage and there are numerous instances of overtopping and traffic disruption due to road closure annually. The Project has made additional resilience provisions within the designs for Lowry Bay to include a 0.75m sea wall, which if approved by Council in the future, will provide additional overtopping protection for Lowry Bay section of Marine Drive.
8. The new seawalls across the project length will incorporate recurves which reduces overtopping compared to the existing vertical or sloped seawalls along much of the length. While the seawalls cannot be raised above the land behind at present without becoming a barrier to stormwater flows escaping, they have been future-proofed so that if future coastal adaptation includes raising of the land and road, the seawalls have been designed to be able to also be raised

9. The design of the seawalls allows for adaptive pathways to address sea level rise, and protection to be added on top of the wall in future as required. This provision will address the patchwork of aging sea defences that currently exist in these areas, replacing them with a consistent seawall profile throughout the corridor.

Hutt City Council position on future-proofing Marine Drive

10. Marine Drive is a key piece of infrastructure serving the communities of the Eastern Bays. Hutt City is committed to ensuring that it remains fit for purpose.

Attachments

11. There is/are attachment(s) to this paper:

Attachment 1: Landscape and Urban Design Plan (LUDP)