



SANDY BAY

A PLANTING GUIDE

Hurunui District Council

January 2023

1 Introduction

Sandy Bay is currently experiencing coastal erosion; the rate of erosion is anticipated to increase over the next few decades. There are properties located along the edge of the cliff above, approximately 80 metres from the current vegetation line. This document proposes a planting plan for the area.

Sandy Bay is located at the base of a steep slope. During high tide the sea currently reaches the base of the cliff and wave action is beginning to erode the base of the cliff. The steepest section of the slope is well covered with mature native shrubs, with other parts variously covered with invasive introduced weed species and low-growing native plants. It is this area that could be enhanced with more sturdy native species, in the hope that they will help slow the erosion rate.

Planting in this area may provide short-term protection helping to break the wave energy reducing the impact of the waves on the cliff itself. The plants will eventually die as a result of saltwater around their roots or the land they are growing on being eroded away.

2 What to plant

It is most useful to look at what is thriving and surviving in these challenging coastal conditions. It is most desirable to use plants grown from seeds from the same environment, (ecosourced) as these will have the necessary survival characteristics embedded in their genetic makeup. The concept of ecosourcing is very important in restoration projects. Ensuring that each area of the country retains the genetic integrity of the native vegetation, giving wildlife the plants they are adapted to, and maintaining the unique character of each part of the country.

The plant that is doing best closest to the sea is taupata, the shiny-leaved coprosma (*Coprosma repens*). Flaxes are also thriving in this zone, but they tend to fall away with great clumps of land when the soil around their roots gets eroded away.

The shrubs and trees most likely to grow well in the zone closest to the beach are:

- fivefinger (*Pseudopanax arboreus*)
- karamu (*Coprosma robusta*)
- ngaio (*Myoporum laetum*)
- taupata (*Coprosma repens*)

These are readily available as self-sown seedlings in the local environment and members of the community could collect these and grow them on for later planting. If nursery plants were to be planted, they would have to be ordered well in advance.

There is a range of low-growing native perennials that are present already or would do well in this coastal environment.

- NZ native spinach/kōkihi (*Tetragonia tetragonioides*)
- NZ iceplant/horokaka (*Disphyma australe*)
- shore bindweed (*Calystegia soldanella*)

These are plants that naturally occur in seaside environments and are all easy to grow from cuttings. They are small plants and are significant to the biodiversity of the area. These can be planted on any bare ground, and between larger plants, keeping the ground covered while shrubs get established.

Further up from the beach margins, it would be useful to get native trees and shrubs growing. The following four plants are already growing profusely and as mentioned previously are good plants to begin with to get a planting project started.

- fivefinger (*Pseudopanax arboreus*)
- karamu (*Coprosma robusta*)
- ngaio (*Myoporum laetum*)
- taupata (*Coprosma repens*)

Other species present could all be interplanted as plants become available.

- broadleaf/kāpuka, (*Griselinia littoralis*)
- cabbage trees/ti kouka (*Cordyline australis*)
- kawakawa (*Piper excelsium*)
- kōhūhū (black matipo (*Pittosporum tenuifolium*))
- mountain flax/wharariki (*Phormium cookianum*)
- toetoe (*Cortedaria richardii*)

3 Challenges

Planting in a coastal environment such as Sandy Bay will always be challenging as the plants are subject to the harsh coastal climate, salt, and are at risk of drought. Every care must be taken at planting to ensure each plant has the best chance of success.

Plants must be sturdy and well grown. Plants that are small, have spindly stems or haven't been hardened to the harsh conditions they are being planted into will have limited chances of success. A suitable sized hole needs to be dug, giving the plant a bit of a hollow in the ground so rain can be caught and held for the plant. Each plant will need mulch and a plant guard.

There is always the possibility of dry seasons after planting, and in such a case there will be losses, but planting must be continued in the hope for better future seasons.