

CARING FOR SAND DUNES IN KĀPITI

How we can help our dunes and
how the dunes help us



Why our dunes matter

The sand dunes of Kāpiti provide a picturesque backdrop to our beaches that create a sense of place. They are unique features of our natural and cultural heritage, of special significance to iwi.

But they also play a vital protective role by creating strong natural barriers between where we live and where we play along our coastline.

What keeps dunes healthy?

Native plants are the key to healthy dunes. Sand-binding species such as spinifex and pingao build dunes that are the best natural defence against coastal erosion. Spinifex and pingao have evolved so they trap sand and build resilient, shock-absorbing dunes that can recover from storm damage.

Unfortunately the range of native plants and animals in the dunes is a fraction of what it should be because of historical damage and ongoing threats. This biodiversity loss is why sand dunes are a national priority for protection and restoration.

What threatens sand dunes?

These tough buffers against the damaging force of the sea are easily harmed by people. Most damage is unintentional, caused by people enjoying the beach over summer.



We can all enjoy healthy dunes in Kāpiti by taking care and supporting restoration projects – south of Waimeha Estuary at Waikanāe Beach.

We can all protect the health of our natural defenders simply by staying on formed and signed tracks when we're heading to or from the beach.

What can go wrong



A classic 'blowout' caused by informal use of the dunes for beach access.

The native plants that build dunes are destroyed by trampling and vehicles, leaving gaps vulnerable to erosion.

That's why it's best to stay off the dunes except to access the beach on public tracks marked with blue posts. Doing this instead of using informal tracks minimises trampling and reduces the number of gaps in the dune along the beachfront.

Each gap is a weak point in the dunes' defensive wall against the sea. Strong onshore winds erode and enlarge unmanaged gaps into 'blow outs'. During storms big waves crash through, causing more erosion.

Kāpiti also has sensitive coastal places such as estuaries and the naturally rare stony beach ridges at Te Horo where damage or disturbance can affect whole communities of native plants and animals.

How the right plants help

Spinifex dunes recover better from storm erosion than dunes formed by introduced marram grass.

Marram roots are killed by salt water, but spinifex has hardy roots that trail over eroding dunes, binding sand that washes or blows back in after storms. Spinifex also builds long low dunes instead of the tall turrets built by marram. Tall marram dunes are more susceptible to erosion and cannot recover where marram roots are killed by the sea.

As well as being the key to resilient dunes, amazing native plants such as spinifex and pingao create habitat for a host of native insect, lizard and bird species.

With climate change forecast to cause sea level rise and greater storm frequency and intensity,

resilience becomes even more important, therefore restoring the right plants is vital.



Spinifex roots trailing over eroded/damaged dune before restoration.

What can be done about pest plants in our dunes?

- Control weeds like marram, lupin, iceplant, agapanthus, pampas and boxthorn
- Replace weeds with local native plants such as pohuehue, wiwi and harakeke
- Replace weeds in gardens near the dunes with local native plants
- Avoid spreading weeds by disposing of garden waste responsibly.



Sand dune protection

As well as staying on marked tracks, the following helps protect dunes:



Keep vehicles off – driving on dunes kills native plants and animals.



Encourage kids to learn about and respect the dunes instead of playing on them, causing damage.

- **Dispose of garden waste responsibly** – garden waste dumping is how weeds spread at the expense of plants we need to flourish.
- **Resist the urge to ‘garden’ or landscape the dunes** - instead help restore them by joining a care group or collaborating with Council in a restoration project. (Council plans and prioritises weeding and planting along our coast and works with community and local government partners to achieve sustainable outcomes.)
- **Control weeds** at your place that could spread into the dunes.
- **Control pest animals** like stoats, rabbits, rodents and possums.

Council’s role

Weather and sea damage to dunes is a natural process that will always occur. But the restorative action of native sand-binding plants can heal and rebuild them.

Council supports that natural process by restoring and protecting native plants and encouraging responsible use of the dunes by locals and visitors.

- Council collaborates with community groups, private landowners, Greater Wellington Regional Council and the Department of Conservation
- Each year the Council coordinates the planting of thousands of native plants in our sand dunes
- We partner Greater Wellington’s Key Native Ecosystem Programme, which selects priority sites for protective management, including five along our coastline
- Council employs two full time Environmental Restoration Officers working across the district alongside community groups.

We have a responsibility under the Resource Management Act (RMA) 1991 to identify and protect areas of significant native vegetation and habitats of threatened native species.

Find out more

On our website at:

www.kapiticoast.govt.nz/Our-District/Biodiversity

And through the following links:

www.coastalrestorationtrust.org.nz/resources/links/

www.gw.govt.nz/kne/

www.doc.govt.nz/get-involved/run-a-project/restoration-advice/dune-restoration/

Do something to help

- Keep to the public access ways.
- Spread the word, teach your kids and tell your visitors.
- Join a local care or restoration group.



#kapitiwalkswithrob

Learn more and take a dune walk online with biodiversity guide Rob Cross...



SUCCESSFUL DUNE RESTORATION IN KĀPITI

This photo series of Paraparaumu Beach shows restoration planting that's helped damaged dunes move 10 metres closer to the sea over eight years.



2010



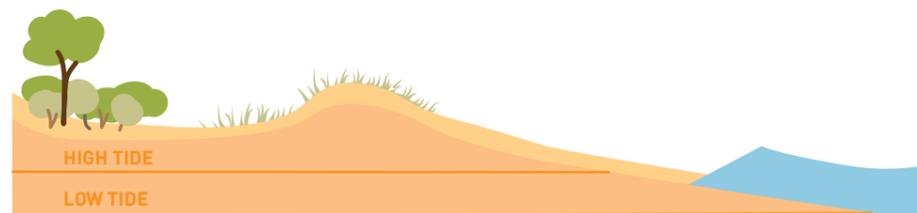
2013



2018

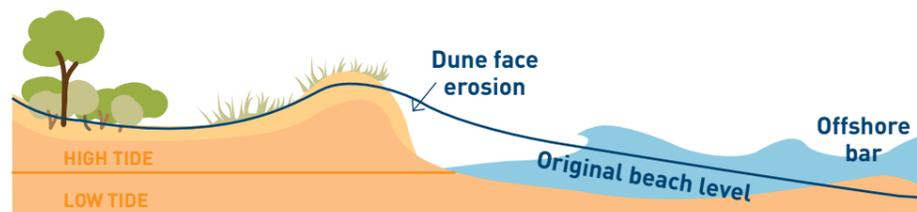
THE SAND DUNE LIFECYCLE

- Dunes protect and support the environment where we live, work and play.
- It's important they continue to stand strong between us and the sea.
- We can help by **staying off the dunes** and only using the marked public tracks with blue posts.



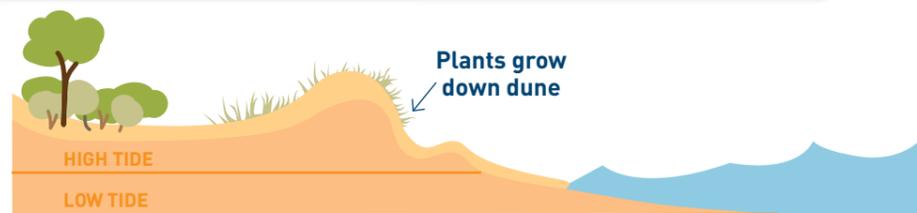
SETTLED WEATHER

Sand builds up on the beach and dunes.



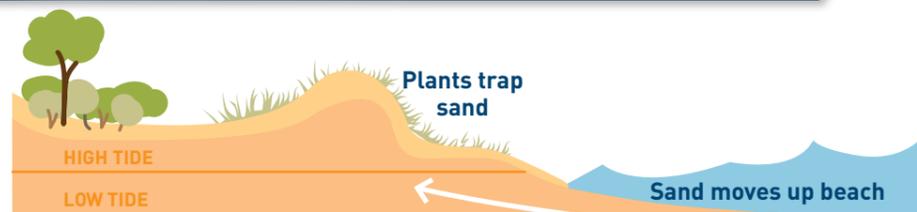
STORM EROSION

Waves erode the beach and dune, eroded sand forms an offshore bar.



POST-STORM BEACH RECOVERY

Sand moves onshore and rebuilds the beach. Dune plants grow seaward down the eroded dune face.



POST-STORM DUNE RECOVERY

Dune plants trap sand, gradually rebuilding the dune.

LOCAL NATIVE DUNE PLANTS

Taupata (*Coprosma repens*)

Harakeke (flax)

Wiwi (*Ficinia nodosa*)

Kanuka (*Kunzia ericoides*)

Pohuehue (*Muehlenbeckia complexa*, wire vine)

Tauhinu (*Ozthamnus leptophylla*, cottonwood)

Spinifex (*Spinifex sericeus*)

Pingao (*Desmoschoenus spiralis*)

Ngaio (*Myoporum laetum*)

Mahoe

Nihinihi (*Calystegia soldanella*, shore bindweed)

BACK DUNE	MID DUNE	FRONT DUNE
Ngaio	Taupata	Spinifex
Mahoe	Harakeke	Pingao
Kanuka	Pohuehue	Nihinihi
	Tauhinu	
	Wiwi	