

The Importance of Dune Protection

Coastal dunes in Hawke's Bay and in the rest of New Zealand are under pressure from a wide variety of human activities.

Hawke's Bay Coastline

From Mahanga at Mahia to Porangahau, Hawke's Bay has a series of coastal dune ecosystems. These dune ecosystems are remnants of larger areas and they need protection.

Pressure on our dunes comes from coastal development, increased recreational use and farming. With this pressure comes the threat of greater ecological impact and degradation. However there is an opportunity to safeguard and enhance the natural values of our dunes.

Why protect dunes?

Sand dunes in their natural state provide effective protection to the land, people and housing from storms, cyclones and tsunamis.

Dunes covered with native dune plants are a distinctive part of our coastline and, as they frequently screen housing from view from the beach, they help create a sense of being in a natural place, which is special for many New Zealanders and visitors.

Sand dunes are the natural habitats of a range of insects, lizards and birds, as well as many very specialised plants that help to maintain the dunes in the best protective condition.

Dunes often contain important archaeological and cultural sites from both early Maori and European settlements.

Storm erosion and recovery

Dunes are an integral part of the beach system which can extend offshore a long way and to a depth of some metres. The beach system is very mobile so an individual gain of sand can move around all parts of the system over time.

Frontal dunes are formed when dry sand that is blown landward from the beach is trapped by vegetation. The

dune forms a reservoir of sand, which the beach can then draw on. In this way, dunes are like a savings account for the beach. During storms, sand is moved offshore into the surf zone and forms a bar, which helps to dissipate the increased wave energy.

Over decades, the seaward face of a dune can vary by 15-30 metres associated with storm erosion and recovery. Larger changes can occur near estuary and river entrances. Therefore maintaining a good dune width is ideal to accommodate these natural changes, and provide more protection for the land and homes behind it.



Papamoa East (Bay of Plenty) June 1997



The same dune - March 2004. Inexpensive planting of native dune species has re-created an accreting front dune. This photo was taken the day after the impact of 10 meter waves from cyclone Ivy.

How you can help protect sand dunes

- Use formal access ways such as board walks, steps and marked tracks where provided
- Encourage friends and children to respect the dunes and not play on them – especially on the critically important seaward face of the dune
- Do not let livestock on dunes
- Do not light fires on dunes
- Do not dump personal household and garden refuse as it can spread weeds
- Keep dogs under control in order to protect nesting birds and other animals
- Do not drive motorcycles or 4WD's on dunes
- Start or get involved in some dune protection works at your local beach. For more information about this contact Hawke's Bay Regional Council.

For further information

For information on dune protection ask for other titles in this series, or contact Land Management staff at Hawke's Bay Regional Council.

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We would like to acknowledge Environment Waikato and Environment Bay of Plenty with their support in preparing this Environment Topic.