

# Dune Regeneration

Sand dunes are natural barriers which can protect our coastal towns and villages from high tides and flooding.

Dunes form above the level of high tide when the plants that live in these salty, damp conditions trap wind-blown sand, which over time accumulates and increases the height and width of the dunes. As the dunes increase in size, more habitat is created in which more plants and ecosystems can live.

Dunes are dynamic and constantly change due to varying wind speed and direction, rising sea levels, or storm surges that cause waves to reach higher up the beach and erode the dunes. The recreational activity of visitors to the dunes can also disturb the natural process of their formation.

To slow the erosion of these natural coastal flood defences, there are techniques which can help to stabilise the areas where there has been dune loss.



**Dune fencing**

Built seaward of the dunes, fencing inhibits trampling from recreational beach users, allowing sand to settle and increase dune size.

This can be used in combination with dune planting to encourage seaward dune growth.



**Dune planting**

Plants such as Lyme or Marram Grass help to stabilise the dunes by trapping sand as their root systems are extensive and mat together.

Established plants also reduce wind speed over the dunes, slowing erosion. Plants may be self sustaining after the initial period of establishment.



**Dune thatching**

Covering the face of dunes with bundles of straw, branches and even waste Christmas trees in some areas, increases sand accretion and protects dune vegetation.

A benefit of this technique is that there is no establishment time required.

## Fylde Sand Dunes

On the Fylde coast there are approximately 80 hectares of sand dunes. This reflects an 80% loss of these natural flood defences in the last 150 years as the coastal resort developed from the 19th century onwards.

In 2008 Fylde Borough Council and The Wildlife Trust commissioned a sand dunes management programme to look at how the dunes could be improved and enhanced. Working with natural processes, dune fencing was constructed to encourage sand accretion and also keep visitors out.

Waste Trees were planted to speed up the process of accretion and Marram Grass was then planted to stabilise the sand when the plants became established.

