NATURAL FLOOD MANAGEMENT CASE STUDY: THE FYLDE SAND DUNES PROJECT

BACKGROUND INFORMATION

The Fylde sand dunes are an important feature of the coastline, covering approximately 80 hectares between Starr Gate in the North and Lytham in the South. Unfortunately over the past 150 years, more than 80% of the Fylde sand dunes have been lost, this is mainly due to the urban expansion of coastal towns. However, while much depleted, the remaining dunes in Fylde make up more than 90% of Lancashire's sand dunes, and still form the most significant part of the Borough's coastal defence. It is therefore important to protect and conserve this valuable asset.

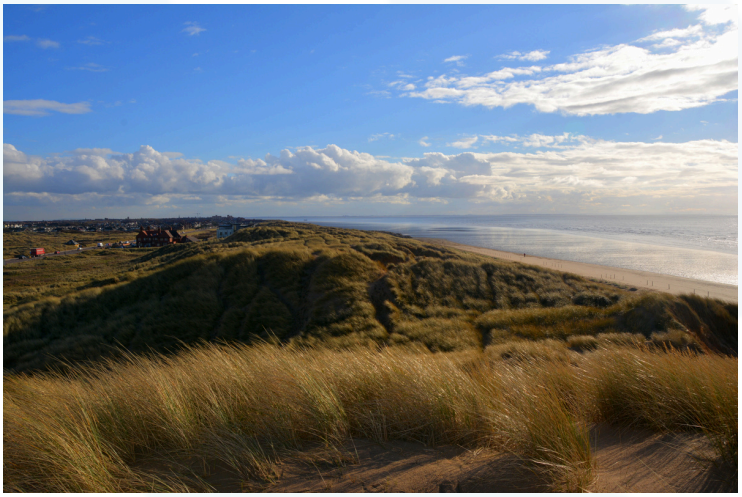

Image: Landscape. Fylde Sand Dunes Project (C) Amy Pennington

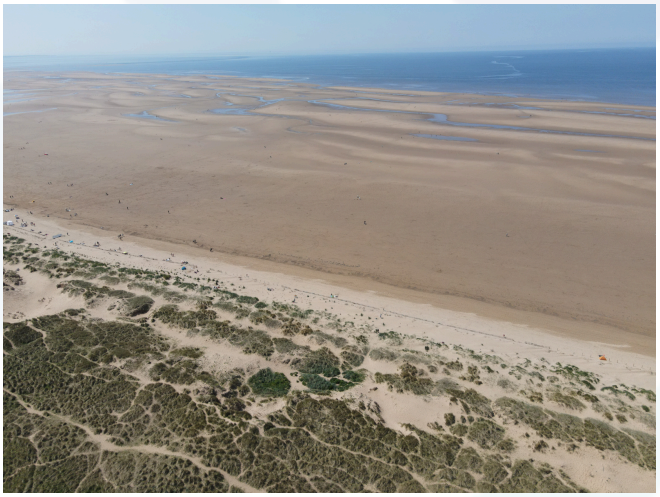

Image: Drone footage. Fylde Sand Dunes Project (C) Jack Bradshaw

Based on the Fylde coast, The Fylde Sand Dunes Project is a partnership between Fylde Council, Blackpool Council and The Wildlife Trust for Lancashire, Manchester and North Merseyside. The project is currently exclusively funded by The Environment Agency until 2022.

ABOUT THE PROJECT

The main aims for management of the Fylde sand dunes are to:

- Enhance the nature conservation interest of the coastal habitats
- Improve the efficiency of the dunes and saltmarsh as soft sea-defence
- Enhance public appreciation and enjoyment of the dunes

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HABITATS AND WILDLIFE

The range of conditions in a sand dune habitat supports a surprisingly rich variety of plants and wildlife that are well adapted to their environment.

There are over 280 vascular plant species recorded on the Fylde sand dunes, including several internationally rare plants which are endemic to sand dunes in the UK, including the interestingly named Isle of Man cabbage.

Insects are numerous and varied in the dunes, with over 150 species of butterflies and moths recorded. The Fylde dunes are also home to breeding birds including stonechats, skylarks and reed buntings.

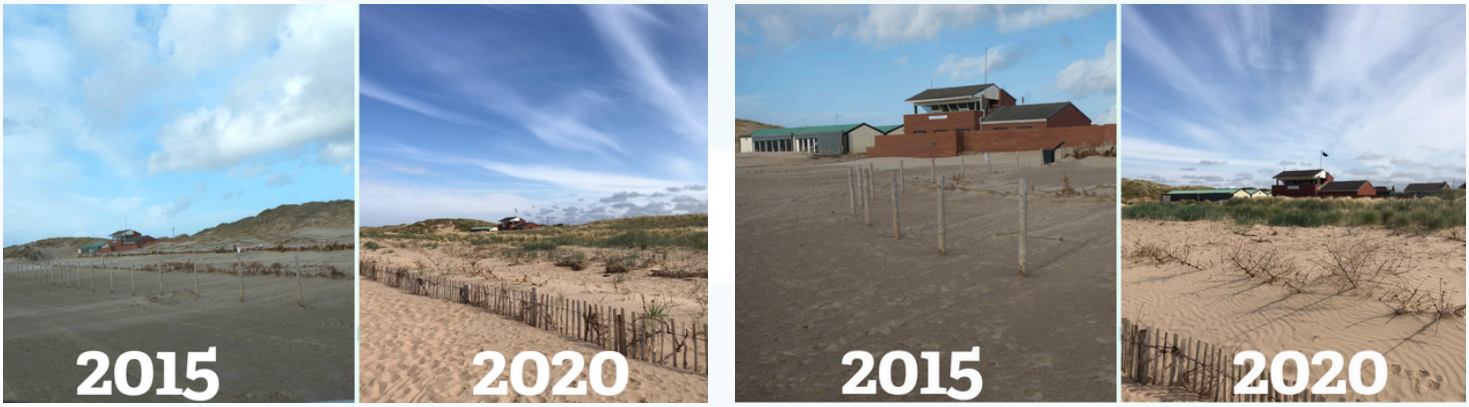
FLOOD DEFENCE

The dunes are not only important for wildlife and recreation, they are also crucial for their flood defence properties. The dunes act as a natural barrier to the sea at high tide, and release sand during storm conditions to reduce wave action. The aims of the Fylde Sand Dunes Project feed in to the Environment Agency's Shoreline Management Plan (SMP2); a non-statutory, high level policy document for coastal flooding and erosion risk management planning.

CONSERVATION METHODS

The project carries out regular practical conservation methods on the dunes which includes:

- Controlling invasive non-native species
- Repairing the dunes by thatching and filling blow-outs to reduce sand loss from the system
- Developing pathways to create recognisable access points and reduce dune erosion
- Creating dune slacks to encourage a greater diversity of wildlife
- Planting dune grasses and using chestnut paling and other natural materials to trap wind-blown sand and create new dunes on the foreshore



Images: North Beach Comparison 2015 - 2020. Flyde Sand Dunes Project

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COMMUNITY ENGAGEMENT AND EDUCATION

Lancashire Wildlife Trust believe that community engagement plays an important role in encouraging both visitors and residents to feel a sense of ownership for their local coastline.

The Fylde Sand Dunes Project offers an outreach programme delivering public engagement and education in the form of:

- Talks and presentations
- Helping students to achieve the conservation aspect of the John Muir Award
- Delivering a wide range of coastal events including: beached art competitions, mini-beast hunting, mud dipping, beach bonanzas, sand dune safari's and many more!
- Guided walks
- Beach School

KEY ACHIEVEMENTS

- Natural England have re-classified the Lytham St. Anne's SSSI as being in 'Unfavourable Recovering' condition as opposed to 'Unfavourable' due to the work of the Project.
- Over the last 3 years, the Sand Lizard (the UK's rarest lizard) has been successfully reintroduced back to the Fylde Sand Dunes after coastal protection works to extend and improve the sand dune habitat made such a release programme possible. Captive bred sand lizards have been released as part of a long-term project to restore the species status and historic range within the UK. This is now the most northerly site in England and a fantastic example of nature recovery in action and organisations working together and sharing expertise.
- In 2021, over 2500 Christmas trees donated and buried on the foreshore to encourage new dune growth. Roughly 11,000 Christmas trees have been buried in the dunes to date.
- Have achieved up to 60-90m cumulative dune growth in places since 2013 and we average about 10m/year with each line of trees/paling/thatching.
- Gained 6 hectares of new dune habitat since 2008
- Huge 40% reduction in Invasive Non-Native Species (INNS) - removing Sea Buckthorn, Japanese Knotweed, Japanese Rose and White Poplar to improve ecological condition of dunes.
- 20 new dune slacks created to increase biodiversity
- Over 6500 volunteers hours have been recorded by the local community who help the project
- Extensive education and community engagement programme complements the practical delivery with events, guided walks, Beach Schools, volunteer & corporate workparties, social media channels etc.
- Over 10,000 people have been engaged by the project through 220+ events
- Over 3000 students have taken part in Beach Schools or outdoor education on the beach and sand dunes.

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For more information on the Fylde Sand Dunes Project and how you can volunteer, click here: [The Fylde Sand Dunes Project | Living Seas North West (livingseasnw.org.uk)]

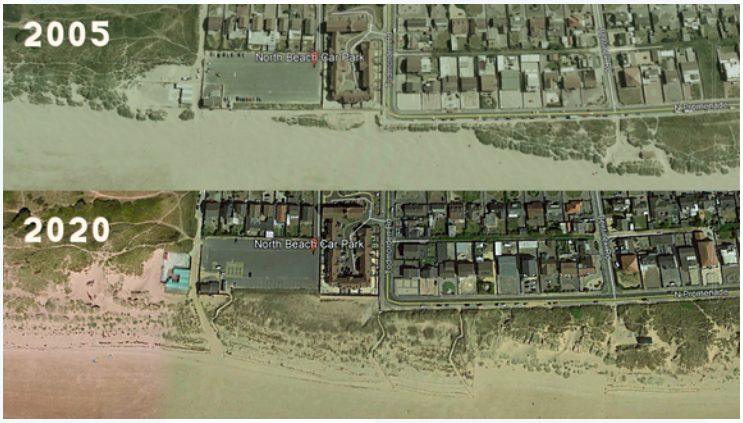


Image: North Beach comparison 2005 and 2020. Fylde Sand Dunes Project (C) Google Earth

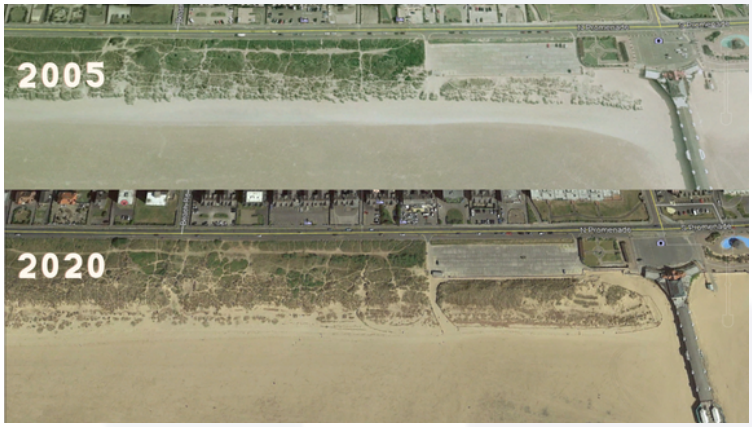
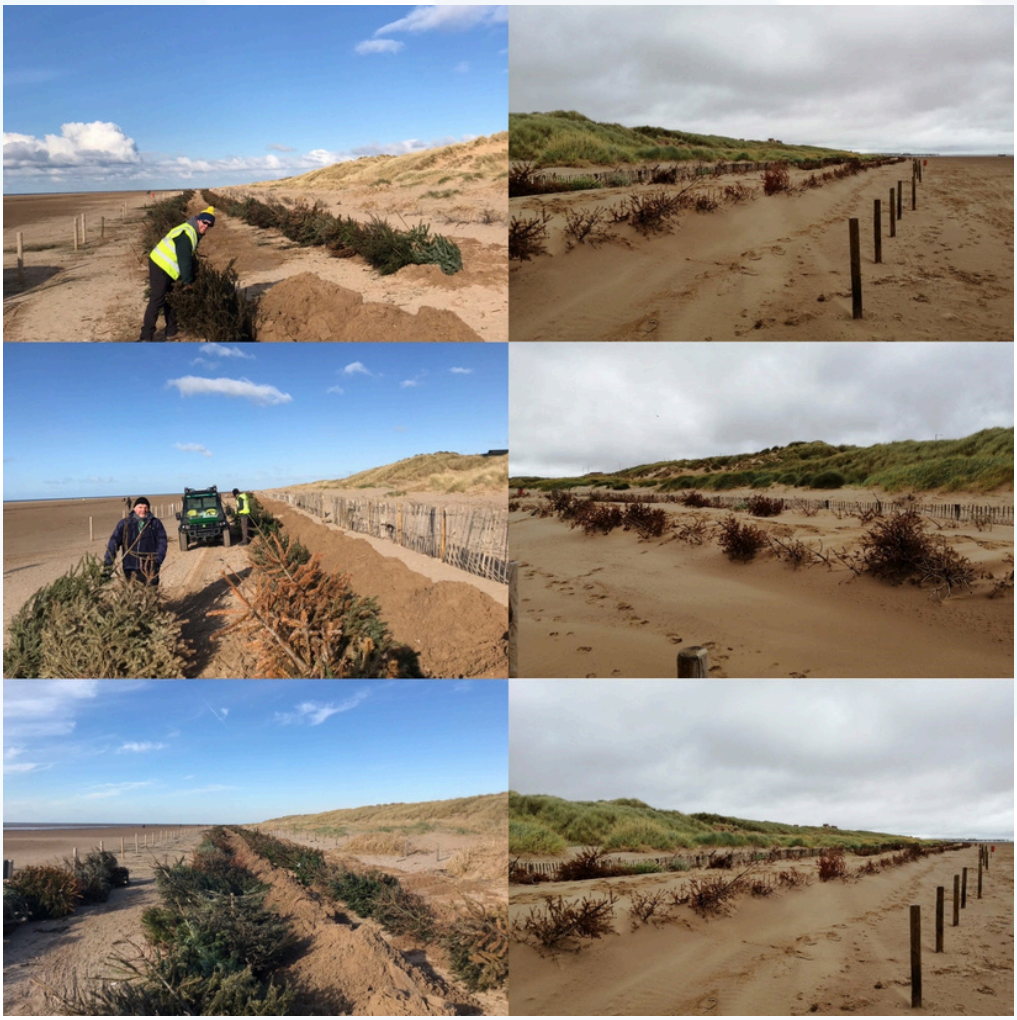


Image: North Promenade comparison 2005 and 2020. Fylde Sand Dunes Project (C) Google Earth



Images: Fylde Sand Dunes Project

The images on the left were taken in February 2021 when the Christmas trees were being planted. The images to the right, taken in August 2021, show how the trees are accumulating sand, which is up to 4ft in some areas.

The trees are widening the dunes, creating habitat and a stronger sea defence.

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