

# COASTAL NFM: MANAGED REALIGNMENT

Natural Flood Management (NFM) in coastal areas is used to manage flood risk and erosion through using natural methods and measures. This can be done by improving the number of natural buffers which help to absorb tidal and wave energy. The NFM measures can be placed on the coast, in intertidal areas or both. Examples of NFM measures include dune regeneration, managed realignment and beach nourishment.

The methods used to manage the effects of coastal erosion and flood risk have typically involved building defences which deflect the power of waves and high tides. Hard engineered coastal protection may seem like the best option to protect seaside towns, cities and popular tourist destinations, but...

- they are constantly subjected to impacts from the sea and are costly to install and monitor.
- they may be antiquated and require costly maintenance.
- they protect land which is now of little value.

Rising sea levels, along with the high cost of maintaining sea defences, call for more cost effective and sustainable methods of coastal protection.

Managed realignment is the planned breach or relocation of sea defences further inland which creates sustainable, environmentally beneficial intertidal habitat in the form of mud flats and salt marshes. These coastal marshes help to dissipate wave energy and protect against erosion. Managed realignment is also a long term option to building higher sea walls or larger defences as sea levels rise in the future.

## Tollesbury Salt Realignment

The village of Tollesbury in Essex contained areas of intertidal salt marsh which was reclaimed and used as farmland in the late 1700's.

An embankment was constructed inland of the existing defences and in 1995, the earth bank which held back the sea was deliberately breached to allow approximately 21 hectares of land to flood once again, allowing mud flats and salt marsh to form naturally.



Managed Retreat near Tollesbury  
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## Hesketh Out Marsh East Realignment Scheme



Image: Hesketh Out Marsh West in the Ribble Estuary during the construction phase -The Environment Agency

In August 2017 the Environment Agency and the RSPB saw the completion of the Hesketh Out Marsh East Managed Realignment Scheme become the largest scheme of its kind in the UK.

The project is located on the shore of the Ribble estuary near Preston. It involved restoring 160 hectares of land, that was reclaimed from the estuary for growing crops in the 1980's, back to marshland by reinstating man made embankments in shore. Sections of earlier flood embankments were then removed, allowing tides in to flood and drain the land. Not only does the scheme help to protect 140 properties and nearby infrastructure by dissipating tidal energy, but it also provides an environment in which fish, migrating birds and marine life can now thrive.