

Realign flood defences to increase coastal and intertidal habitat

Project Summary

Title: Hesketh Out Marsh

Location: Southport, Merseyside, England

Technique: Managed realignment

Cost of technique: £££££

Overall cost of scheme: £££££

Benefits: £££££

Dates: 2006-2009

Mitigation Measure(s)

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How it was delivered

Delivered by: Environment Agency

Partners: RSPB; Lancaster City Council, Natural England, Lancashire Rural Recovery Action Plan, Biffa Award



Background / Issues

The site at Hesketh Out Marsh forms part of the Ribble estuary, the most important single estuary for birds in the U.K.

While the estuary supports significant bird, shellfish, shrimp and mussel populations, extensive construction of flood embankments and drainage ditches has resulted in Hesketh Out Marsh being disconnected from the rest of the estuary. Following modifications, this area was converted to agricultural land and used for grazing by sheep.

A scheme aimed at creating additional intertidal habitat resulted in the purchase of approximately 236 ha of land in Hesketh Out Marsh, allowing for the implementation of a flood defence realignment scheme which included the creation of new saltmarsh habitat in the Ribble estuary as well as a new RSPB reserve on the site.



Aerial view of Hesketh Out Marsh project

Step-by-step

Works on the site have resulted in the implementation of the country's largest flood defence managed realignment. The scheme included:

- Repairing the secondary flood defence embankment to act as the primary line of defence upon conclusion of the project.
- Raising embankments with material won on site.
- Creation of four 100 m wide breaches in the existing embankment.
- Excavation of creeks and drainage ditches to a typical maximum of 2.75 m OD to act as extensions of existing creeks located in the intertidal area prior to scheme.
- Excavation of 8 saline lagoons to a typical maximum of 2.75 m OD (approximately 1 ha each).
- Construction of associated facilities for the RSPB reserve.



Creation of breaches in existing embankment

Benefits

- Creation of intertidal habitat to be used by wintering and breeding waterfowl.
- Improved adaptation to threat of sea level rise associated with climate change.
- Provided an offset for intertidal habitat lost elsewhere in the estuary.
- Contributed to the EA's high level target of creation of 150ha of BAP habitat.



Saltmarsh adjacent to Hesketh Out Marsh West

Lessons Learnt

- Responses to climate change and sea level rising has created a multi-beneficial approach to plan for the future in creating stronger sea defences and creation of saltmarsh habitat lost elsewhere.
- The scheme is one of the largest of its kind in the UK and represents a successful collaborative working arrangement that can be imitated across a large number of alternative sites.
- Due to its success, further funding has been attracted through the Biffa Award.

Project contact: The Royal Society for the Protection of Birds, Lancashire, North West Region