

## RIVER DEFENCE TRIALS AND PROJECTS

### 1. WALL REPAIR PROJECTS

Through the Alde & Ore Futures project, the Landowners Group worked directly with the local Internal Drainage Board and the following two pilot schemes were carried out to test future ways of working.

1. **The Orford Chantry wall Project** – a project designed by Hawes Associates, and managed by the East Suffolk Internal Drainage Board in partnership with the Environment Agency who funded it. The project uses new ways of protecting the back of the flood defences and securing the raised crest. This area of flood defence is also a well used footpath so Suffolk County Council Rights of Way were also involved. The project was completed on time and in budget. The Right of Way was diverted for a further few months whilst the grass established prior to use. A new product was used on the Right of Way top of the defence which should not only help maintain the strength of the defence but also protect the defence from long term foot fall damage. This project is an excellent example of funding being available through the EA and works being carried out by the local IDB.

**COST: £54,594.66** Financed by Public money in the EA budget for Trial projects

2. **Butley Wall Refurbishment** – This work was instigated by the East Suffolk IDB and was funded by the landowners. It involved the improvement to the structure of the defence and raising the defence to make it resilient to a 1 in 200yr event. This work was carried out in 2011 and the Environment Agency was fully consulted throughout the whole project. This is an example of work being fully carried out and managed by the local IDB and funded privately due to it being in an area deemed unsuitable for funding from the EA.

**COST: £45,406.48** Landowner Funded which has been apportioned to the beneficiaries according to Drainage Rateable Values as follows:

Boyton Hall Farms:	£12,516.48 (28%)
Capel St Andrews Farms:	£18,320.54 (40%)
Greenwell Farms:	£14,569.46 (32%)

As the fourth landowner in the flood cell, RSPB would have paid £8,395.06 (18%) had they supported the project, which would have reduced costs proportionately. All costs are subject to Vat at 20%.

### 2. SALTINGS REGENERATION PROJECTS

The development of trials to test different approaches to saltings protection and restoration began with a private initiative before the AOEP was formed. Since then AOEP have installed a number of trials. The Saltings, plants that tolerate sea water and grow at the toe of the wall, help to dissipate wave action and therefore lessen the erosion at the base of the wall so helping to preserve the defence. The following trials have been implemented:

1. **Ferry Point Saltings Regeneration Trial** – At a site just off Ferry Point, opposite Slaughden Quay, there has been a dramatic loss of saltings that are the front line protection to reducing the effect of wave action on any soft flood defence. This was a small project of a length of 100m where a plasticated mesh (uv resistant) was placed in front of the existing salting to act as a breaker to reduce long term salting damage and to hopefully encourage salting recreation due to the reduction in water flow. This project was fully funded by the Sustainable Development Fund and was completed within budget last August. This project required authorisation to be carried out by the Environment Agency and Natural England and the project was wholly managed by the landowner. This project is small but nevertheless shows that smaller bite size pieces can be carried out by landowners before major damage has occurred.

**COST: £2,185.12** Financed by a Sustainable Development Grant.

2. Three further saltmarsh projects of varying scale and situation have been carried out by the AOEP during 2013. The locations are:
  - i. **Iona.** an 80m stretch linked to the Iona boat remains near the Slaughden bend of the river at a point which bears the full force of southerly winds. The defence uses a double section of hazel wood faggots supported by chestnut stakes with gaps to allow movement of the various creatures during the ebb and flow of the tide.
  - ii. **Brick Dock.** A 340 metre stretch flanking the river wall at Brick Dock which gets the full force of westerly winds but being in a curve of the river is fairly shallow. The project is using various forms of defence from double faggot construction to faggot plus Tensar fencing to parts where using only tensar supported by oak stakes.
  - iii. **near Orford quay.** Depleted saltings just north of Orford where a 75m line of similar construction to the Iona site has been used.

These are designed to demonstrate the best designs using Tensar mesh and hazel faggots in a number of locations to test reaction to a variety of wave actions and situations. When laying the faggots there are gaps left to enable fish to escape as the tide drops.

**COST: £17,000** Financed by SCC, SCDC, Jackson Trust, Councillor Richard Smith

3. In autumn 2015, along the north bank of the Alde near West Row Point (Stanny buoy), the AOEP Saltmarsh team installed trial defences at 7 small areas, five bays of approximately 5 metres long and two 12 metre stretches along a steep saltmarsh edge. These were chosen to give more information on small areas where wave action and tidal inflows may be damaging and whether can they be easily repaired. The defences consist of oak posts with the Tensar mesh applied, and behind that a layer of hazel faggots held by chestnut stakes with about 30cm gap to allow the build-up of sediment. Cost £2.2K match funding from Sustainable Development Grant and AOEP funds.

Since the earlier projects a team of volunteers now cuts and makes the hazel faggots in Butley Wood so making a cost saving on this item.

### **MONITORING**

All these new saltings projects, together with the one at Ferry Point, are being monitored quarterly by trained volunteers. Annual reports will be made to the AOEP.