

New insights and lessons learnt

The UK element of the project aims to address a wide range of problems which currently hamper multifunctional coastal management, at present new and innovative techniques are needed to enhance existing approaches. There is also a great need for improved education and communication when working on coastal systems including:

- Testing new flood management techniques which will benefit all partners.

- Investigate intangible benefits of flood management schemes such as fisheries and nutrient recycling etc.
- Examine the methodology for economic analysis of coastal schemes to include transferral of economics benefits elsewhere within strategy boundaries.
- The wide spread communication and dissemination of information to assist future consultations processes with regulators, stakeholders and the public.



All ComCoast pilots

1. Rømø (DK)
2. Nessmersiel (D)
3. Polder Breebaart (NL)
4. Hondsbosse Zeewering (NL)
5. Ellewoutsdijk (NL)
6. Perkpolder (NL)
7. Kruikebe - Bazel - Rupelmonde (BE)
8. Hamme Lippenbroek (BE)
9. Abbotts Hall (UK)
10. Horsey Island (UK)

Project milestones

planning and consents granted for the Horsey Foreshore recharge scheme to proceed	prepare the plans for the Horsey Island work	PhD Students begin their research and monitoring work	Essex Wildlife Trust commission surveys and architectural drawings for the proposed Education centre	Horsey Fencing Work commences to create 11 polders	Horsey 1st Recharge takes place in compartments A+B	Horsey 2nd Recharge takes place in compartment A+B	early 07 Natural England carry out bird and habitat surveys	present, installed the Wallasea interactive Web cam
March 2004	April 2004	September 2004	Summer 2005	Oct-Nov 2005	Nov-Dec 2005	Jan-Feb 2006	April 2006	Summer 2006

The project partners

The following public, voluntary and private parties have all contributed towards developing and achieving the ComCoast goals within the UK:

- Environment Agency
- University of East Anglia
- Essex Wildlife Trust
- Natural England (formerly known as English nature)
- Harwich Haven Authority
- Assoc. of British Ports MER
- Queen Mary University of London



Colophon

By order of: ComCoast, mr. F.C. Hamer

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UK Project management

Information on ComCoast Abbotts Hall and Horsey Island can be obtained through the Environment Agency in The UK, project manager Ian Bliss, phone: +44 1473 706037, email: ian.bliss@environment-agency.gov.uk

Further information on Abbotts Hall can be obtained through the Essex Wildlife Trust, phone 01621 862960, email: admin@essexwt.org.uk

Further information on the monitoring work and the Phd's research can be obtained through the Environment Agency in The UK, Guy Cooper, phone: +44 1473 706743, email: guy.cooper@environment-agency.gov.uk

Project communication

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Courtesy of the Essex Wildlife Trust, Jo Backhouse (Horsey Island) and the Environment Agency

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PROJECT WITH FINANCIAL SUPPORT OF THE EUROPEAN UNION

ComCoast

Projects Abbotts Hall Farm and Horsey Island (UK)

What is ComCoast

The countries bordering the North Sea wish to ensure that the coastal area remains safe and liveable, even if the climate changes and the sea level rises. Denmark, England, the Netherlands, Germany and Belgium are therefore pooling their resources in the fight against flooding. Within the ComCoast project, they are developing and demonstrating new methods for managing and developing the coastal zone. The goal is to make the coastal area a safer and more attractive place to live, to undertake new initiatives, and to enjoy recreational activities.

The countries named above intend to accomplish this by working together with local residents, entrepreneurs, government organizations and organized interest groups to find environmentally and economically durable solutions for flood safety which are also appropriate to the local social and cultural setting. Communication with residents and other interested parties is therefore an important element of ComCoast.

ComCoast is subsidized by the EU (programme Interreg IIIB North Sea).



Horsey Island Recharge scheme

Horsey Island is located in Hamford Water, an embayed estuary in north Essex. The inlet is bordered by sand and shingle spits, which provide protection to mainland flood defences against waves from the open sea. These spits have been dwindling and migrating landwards due to foreshore erosion.

The scheme at Horsey has built on previous trials using dredged sediments from the adjacent port at Harwich. The material has been used beneficially to recreate intertidal habitat and contributes to reducing flood defence maintenance costs. The new beaches, mudflats and saltmarsh created from this approach act as natural flood defences reducing tidal currents and breaking up wave activity from the North Sea. The sediments would otherwise be taken out to sea and dumped. This technique is therefore important in helping to restore the natural estuary sediment balance given the increased erosion of intertidal areas as a result of climate change and sea level rise.

Previous schemes at the site have successfully recreated shingle ridges, mudflats and saltmarsh. Schemes began in the early 1990's and placement of Thames lighter barges shore parallel to break up wave energy was the first new. This was complimented by the placement of sands and shingles to form a new beach in line with the lighters. Behind this barrier, muds and silts were pumped ashore to form a new area of mudflat that was protected by the barrier of boats and shingle material. The scheme worked well in reducing wave activity at the defence and therefore significantly reduced maintenance costs

at an exposed defence frontage. Over time saltmarsh established on the mudflat and subsequent schemes topped up the saltmarsh with more mud.

The reduction of wave action at the wall has saved a significantly greater amount of money on traditional 'hard engineering' techniques, whilst also delivering much needed habitat locally. The defence of Horsey is important as it is a nationally important bird nesting and breeding area and is designated as EU Freshwater Special protection Area (SPA) which under EU Habitats regulations requires protection or replacement elsewhere if it is to be lost to the sea.

The pilot project was to place sediments on top of existing saltmarsh that is badly degraded. This has the support of natural England who has deemed the project necessary for the management of the wider estuary Special Area of Conservation (SAC) site under the EU Habitats Directive. The project has supplied the degraded marsh with approx. 200,000 m3 material from Harwich Haven ports. The existing saltmarsh has been raised through the recharge process to help it cope with increasing sea level rise. The new growth of marsh at the site will be monitored post-recharge.



Abbotts Hall Managed Realignment schemes

Abbotts Hall Farm Estate is situated on the Salcott Creek, a 6 km long tributary of the Blackwater Estuary in Essex. In 2000 the Essex Wildlife Trust (EWT) purchased the Abbotts Hall estate with funding from World Wildlife Fund-UK and the English Heritage Lottery Fund (EHLF). This 287ha arable farm is situated on the north bank of the Blackwater Estuary in Essex and has become the focus of a project to develop both traditional and innovative approaches to recreating and promoting wildlife habitats alongside economic farming practices.

The Abbotts hall site pre breach was protected by a 3.5km stretch of sea wall requiring constant costly maintenance. The land behind the wall was largely low-grade agricultural land and the economic justification for continuing to maintain such a wall was negligible

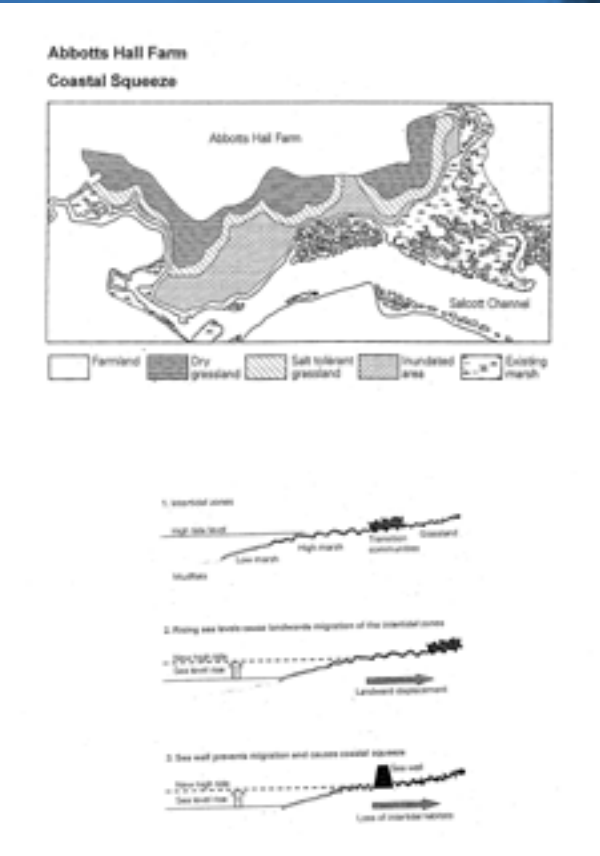
In addition to EWT, WWF-UK and the EHLF, the main partners involved in the project included Natural England and the Environment Agency (the Agency). Thus, the project brings together a wide variety of skills, resources and knowledge from these organisations.

The Agency's role comprises management of the creation of new intertidal mudflat and saltmarsh as well as transitional grassland, grazing marsh and new freshwater habitat over a total area of around 85ha.



The aim of this project was to create a more sustainable coastal defence. It is anticipated that the saltmarsh created at Abbotts Hall and the rising ground behind the saltmarsh zone will, together, provide a 'soft and flexible' defence better able to respond to future sea level rise than the existing fixed, hard structures.

The development of saltmarsh, in the area opened up to tidal inundation by the breaching of some 3km of hard sea defences which totalled 5 in total to realign the shoreline, has created nationally important habitat and provide a significant contribution to the national Biodiversity Action Plan (BAP) targets for saltmarsh creation. In addition, however, it has also provided a more sustainable approach to flood defence. By removing wave and tidal current energies saltmarsh can provide a natural flood defence. Moreover, managed realignment of the coastline can moderate tidal surges by allowing the surges to move sideways, thus alleviating pressure on flood defences elsewhere in the system.



Education Centre

Essex Wildlife Trust (EWT) will participate in the project in partnership with the Environment Agency to contribute towards the construction and future development of an Education Centre at Abbotts Hall.

The centre will be an interactive showcase highlighting coastal flooding issues and how they can be resolved in a multi partnership and multi functional way. EWT wish to convert the currently disused part of the existing farm buildings and old swimming pool into an education centre for visitors to this world renowned site. Suitable for people of all ages, but with an emphasis on students and the rural community, the centre, using the latest in technological interpretation will tell the story of the making of the Abbotts Hall landscape. Provision in the centre will also be made to provide visitor information, the sale of Trust goods and farm produce. The demand for such a centre is huge, as many thousands of people visiting the site need a focal point and area to educate before go out on site.

The Education centre will provide the Agency with a focal point for site visits and meetings relating to the ComCoast Project and help to raise awareness of the need for a more multifunctional approach to coastal defences. The Agency in return will also have the opportunity to illustrate the benefits of Managed Realignment and the opportunity to liase with landowners to get across difficult messages about diversification from crops to habitat creation. The Centre will also provide the means to engage with the public and partners to explain changes to flood management in the future and with conservationists to explain difficulties of habitat creation.

Contribution of ComCoast for Abbotts Hall and Horsey Island

The project fits in with the Environment Agency's development of a more strategic approach to Flood Risk and Shoreline Management Plans. The principal objective of the study is to examine and make recommendations on the economic valuation of innovative techniques involving the constructive use of coastal and estuarial wetlands using the EU Habitats and Water Framework Directive as the main legislative driver.

This project contributes towards the Agency's business targets under the following themes; 'Reduced flood risk', 'Limiting and adapting to climate change', 'Improved and protected inland and coastal waters' and 'Enhanced environment for wildlife'. The project links well with current estuarine and coastal strategies, build on current Research & Development, and links with other Interreg Projects currently running where the UK is a partner.

The UK elements of the project comprise the following components:

- A novel recharge scheme at Horsey Island in partnership with the Harwich Haven Port Authority using dredged silt to regenerate a badly damaged salt marsh.

- A monitoring package to evaluate ecosystems at the Horsey and Abbot's Hall sites in partnership with Natural England.
- Management of 3 PhD's to develop our knowledge of various issues relating to the intangible benefits associated with managed re-alignment and foreshore recharge schemes.
- Develop an education centre in partnership with the Essex Wildlife Trust.
- Production of guidance and lessons learnt relating to the development of multi functional flood defences.