

Alkborough Managed Realignment

Existing Site work is now under way on site at Alkborough with improvements being made to the existing access tracks as well as demolition of the dangerous structures at Flatts Farm. Volker Stevin who are currently working

on the flood defences at Barton have been appointed to carry out the works.

The Environment Agency has submitted a planning application for the main works at Alkborough. These include formation of the breach in

the current flood bank, construction of water distribution channels and a new defence for buildings and land adjacent to the lowest points of the site. We hope to start work in May 2005, and to complete the scheme and open it to the tide in autumn 2006.



Existing Site



An impression of what the site will look like after the existing bank is breached.

Paull Holme Strays – one year on



The Paull Holme Strays site has now been breached for over a year. We've been monitoring the site's development and have found that it's been changing more rapidly than we expected, largely because there has been a greater build-up of sediment than was predicted. As a result the invertebrate communities have established faster than expected while saltmarsh colonisation has also been good with about 15 species recorded.

Bird usage has been excellent, perhaps helped by the rapid rate of habitat development. Over 15,000 golden plover and 5,000 lapwings were noted in February 2004, and there have been good numbers of redshank, black tailed godwits and avocets during



Paull Holme Strays, February 2005

the year, as well as species such as knot that are not common visitors this far up the estuary. This is the first completed managed realignment site on the Humber so it is very encouraging that the results have been so good.

Helen Richardson
PHS Project Manager

Links with other plans

The Environment Agency agrees with Defra about the importance of taking a broad, long-term view when assessing future flood risk and is therefore developing flood management plans for the major river catchments in England and Wales. We are making sure that the plans covering rivers discharging to the Humber are properly co-ordinated. Further information about them can be obtained by e-mail from:-

- **River Hull**
andrew.barron@environment-agency.gov.uk
- **River Ancholme**
liz.coulling@environment-agency.gov.uk
- **River Trent**
loreta.adams@environment-agency.gov.uk
- **River Ouse**
phil.walker@environment-agency.gov.uk
- **River Don**
malcolm.muscroft@environment-agency.gov.uk
- **River Aire**
malcolm.muscroft@environment-agency.gov.uk

Alternatively you can write to Philip Winn at the address given on the back page.

Restoring Wetlands in the United States

In September last year, I was invited to attend a conference in Seattle run by Restore America's Estuaries, a non-profit organisation set up to co-ordinate the American National Strategy to Restore Coastal and Estuarine Habitat. The primary goal of the strategy is to restore one million acres of estuarine habitat by 2010 as set out in an Act passed in 2000. As usual, the Americans are thinking big!

In the US, estuary projects are under way on the Pacific Northwest coastline, in California, the Gulf of Mexico, and on the Northeast and Southeast Atlantic. The most worrying specific problem areas are in Florida, and on the Louisiana coast at the mouth of the Mississippi, but loss of wetland is taking place in many parts of the country. Drainage projects, mineral and gas extraction, and the coastward migration of people are just a few of the reasons. Interestingly, the current pressures and causes for loss are more than sufficient for considerable anxiety:

sea level rise and climate change present future threats, but are not yet central to the call for action. The approaches they are adopting for achieving restoration look quite similar in many cases to the work being done in the UK, and 'enhancing flood control' is one of the major objectives for the work. Flood risk management is not the same dominant driver as it is here however. The Americans were very interested in the work being done in the UK, and especially on the Humber. We will stay in contact with estuary work being done in the US, and in Mainland Europe: there is much to be gained from exchanging experiences.

Philip Winn
Humber Strategies Manager



New habitat site near Seattle opened 2001

What happens next?

The Humber Estuary Flood Defence Strategy is due to be published for consultation in the summer of 2005. A summary will be sent to all those who have asked to be kept informed of progress and a copy of the full document will be placed on the Environment Agency's web-site. Two months will be allowed for people to respond. Once any amendments arising out of the consultation have been made the Strategy, including details of the works to be carried out in the first five years, will be submitted to Defra and then (because of its size) to Treasury for approval. We expect to begin work on the ground in 2007/08.

If you would like the web-site details sent to you when they are available please e-mail your request to:- Humber@environment-agency.gov.uk If you would like a copy of the summary please complete the following form and send it to Philip Winn at the address given below.

HUMBER ESTUARY FLOOD DEFENCE STRATEGY

If you would like a summary of the Strategy when it is available, please fill out this form and send it to Philip Winn at the address below.

Name:-

Address:-

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Please tick this box if you wish to receive any other info from the Environment Agency.



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Further information about the Humber Estuary Flood Defence Strategy and related issues can be obtained from:-

Philip Winn, Humber Strategies Manager, 1 Viking Close, Great Gutter Lane East, Willerby, Kingston Upon Hull, HU10 6DZ. Tel 01709 312962, E-mail: philip.winn@environment-agency.gov.uk



ENVIRONMENT AGENCY

TidesNews

HUMBER

Delivering the Humber Strategy

It is now four years since we published our Humber Estuary Shoreline Management Plan, setting out how we propose to manage the estuary's flood defences over the next 50 years. Our aim is to meet the challenge of rising sea levels by protecting the 300,000 people living and working in the estuary's floodplain, while also protecting 75,000 ha of agricultural land and commercial

and industrial property worth many billions of pounds, together with its outstanding wildlife and historic features, and its use for navigation and recreation.

Since the Shoreline Management Plan was published we have been developing its broad approach by identifying and delivering the works plan needed to manage flood risk. We have concluded that we need to create new inter-tidal habitat to comply with Government

policy and meet legal obligations, and manage water levels by providing flood storage. We also looked at the existing defences and what they protect to work out what will need to be done over the next 100 years.

Since the last TidesNews was published we have looked more closely at the works needed in the next five years. At the same time the national approach to flood risk management has been developing, with the publication of the Foresight report on 'Future Flooding' in the spring of last year and Defra's consultation paper 'Making Space for Water' in the autumn. These developments have thrown new light on the issues and have therefore led to some refinement of the strategy.

We are now nearing the end of this process and will shortly be reporting on the outcome. This newsletter gives a preview of what will emerge; covering both the strategy and the first works to be delivered. It also describes how you can find out more about the proposals and let us know what you think of them.

Changes at the Environment Agency



In this sixth issue of TidesNews we say farewell to Tony Edwards, who retired from

the Environment Agency in November 2004. Tony has been the Humber Strategies Manager since 1998, responsible for handling all the Environment Agency's interests across the estuary. In doing this he forged strong links with the local community, chaired the group that produced the Humber Management Scheme and contributed to the Regional Assembly's deliberations, particularly on flood management and climate change.

Tony spent over 30 years working in the environmental and water business in Yorkshire. He was heavily involved in the Humber Flood Defence Strategy, concentrating on making sure that local people understand what we are

trying to achieve and, in turn, that we understand the local view. This prompted him to draw up the 'Vision for the Humber', which sets out our aim to protect and enhance the estuary and the communities that live and work beside it. Fortunately his knowledge won't be lost as he is taking a part-time post with the Humber Industry Nature Conservation Association.

I now take over as Humber Strategies Manager, having managed the team that produced the Shoreline Management Plan and that has been developing the Flood Defence Strategy since work began in 1997. I will continue to do this as well as co-ordinating the Environment Agency's approach to managing the estuary and strengthening its links with the community. John Pygott has taken on my other previous responsibilities and will continue to manage the Alkborough project as well.

Philip Winn
Humber Strategies Manager



Environment Agency Board members at Paull Holme Strays, July 2004



ENVIRONMENT AGENCY

Managing flood risk beside the estuary

Acknowledgement to D Middlemiss, Department of Geography, University of Hull.



Extremely high water levels at the Hull Tidal Defence Barrier, 13 January 2005

In April 2004 the Government's Office of Science and Technology published the Foresight Report 'Future Flooding', which looks at how the extent and nature of flooding and coastal erosion might grow over the next 100 years and at ways we might deal with this. The report emphasises that the future is uncertain, so we must develop approaches that are flexible and can deal with a range of possible outcomes.

Defra has responded by publishing a consultation paper that describes how the existing arrangements might be changed to provide the greater focus and flexibility that will be needed. A crucial message is the importance of moving from the management of flood defences to the management of flood risk. This doesn't mean the existing defences are no longer to be managed but rather that other ways of reducing the nation's overall exposure to loss and damage due to flooding, such as putting in flood warning systems or limiting development on the floodplain, should also be considered.

This shift in emphasis doesn't affect the main features of the Humber Strategy – we are committed to keeping a line of defences around the estuary and managed realignment to replace any lost habitats caused by the development of the defences. This replacement work is essential to ensure that improvement works to defences continue to be permitted. It does highlight, however, the need to recognise that funding for flood defence is limited and must be directed towards people and property rather than land.

As a result it is difficult to justify improving the defences at places where the number of people or the value of the property at risk is small. In these places we may have to accept that we cannot afford to raise the defences as sea levels rise and will need to examine other ways of managing the increased risk, such as:-

- building secondary defences to protect villages and other property clusters;
- flood-proofing isolated properties;
- improving flood warning and evacuation procedures.

In these circumstances options that help manage flood levels along a significant length of the estuary become increasingly attractive. Our studies confirm that creating extra flood storage will do this inland of the Humber Bridge. Two approaches are being considered:-

- building controlled washland areas;
- and
- selectively raising the defences in front of housing and infrastructure but not in front of open fields, so any flooding won't affect property.

Alkborough is an example of a controlled washland. Two other sites; one near Flixborough on the Trent and opposite Goole on the Ouse, are also being examined for suitability. Opportunities for creating washlands at other upper estuary sites in the longer-term will be identified as the detailed studies for each frontage are carried out. These and the already identified sites would only operate very infrequently during the most extreme flood events.

Priority works emerging from the strategy



Storm waves at Spurn

Our study of the existing defences divided the estuary into eleven sections, or 'Management Units' (MUs), and looked at the condition and current standard of protection in each one. We also looked at the use being made of the land and derived a suitable standard of protection for each MU based on Defra guidance. As a result we were able to draw up a long-term programme for the works needed to provide this standard and keep the estuary's defences in reasonable condition as sea levels rise over the next 50 years.

The total cost of these works was estimated to be about £500M and we assumed that the same amount will be needed over the following 50 years, on the basis that sea levels will continue to rise at 6mm/yr and most defences need repair about every 50 years. This figure is probably conservative as we ignored any savings that might be made by realigning the defences (except where proposed to create new habitat) and included a generous allowance to deal with any local details not picked up in our broad-brush approach.

Although this estimate gives us the overall picture of future flood defence needs in the estuary, it doesn't provide sufficient information to allow individual items of work to be approved and

started. We have therefore looked more closely at the works needed in the first 15 years, identifying key issues and reviewing the order of priority established for the programme. To help do this we have sub-divided the eleven MUs into 28 flood compartments, 16 of which contain frontages where works are planned during this period.

So that we can start work on the ground as quickly as possible, we will be submitting a package for approval that sets out the refined strategy together with the works to be carried out in the first five years detailed below.

Works going ahead immediately

Alkborough

Work on the managed realignment/habitat creation scheme at Alkborough is well advanced and is described separately on the back page. This site is a major component of the overall strategy.

Goole Slip

A short section of the riverbank at Goole has become unstable and, if not repaired, could threaten the town's defences. Stabilising works have recently begun.

Boskey Dyke

The defences at this site on the River Trent have been the cause for concern for some time, and further

damage took place in January. Repairs are to be put in hand immediately.

Works likely to be undertaken in the first 5 years

Paul Village

Parts of the defence are old and somewhat too low, so that wave activity could cause large volumes of water to come over the crest when the sea level is high, affecting the whole village but nearby houses in particular.

Brough

The defences along part of the frontage have recently been raised. Works will be carried out to the remainder to provide the village and airfield with a consistent standard of protection. The defences protecting Welton Ings are likely to be repaired but not raised, subject to reaching agreement with local interests.

Old Goole

A length of the defences between Old Goole and the Humber Road (where it crosses the Dutch River) need raising.

Swinefleet & Reedness

The defences in front of Swinefleet would be vulnerable during very large flood events and the situation is being worsened by erosion at the toe of the banks, while the defences at Reedness are low. Houses close to the defences mean the works are likely to be difficult and may cause some disturbance to the local community.

Stallingborough

The foreshore is being eroded and this is placing at greater risk defences protecting a large area containing major industrial facilities. The main shipping channel appears to be moving toward the shore and it is likely that major works will be needed to stabilise the line.

Detailed assessment of managed realignment options

Skeffling

This site would provide about 150ha of new inter-tidal habitat. The existing defences are not in good condition but protect only a few properties so there is little justification for improving them. Discussions with landowners are in progress.

Donna Nook

Although the existing defences are in reasonable condition there is an earlier line of defences that would provide about 140ha of new habitat and make the realignment relatively simple to carry out. Discussions with landowners are in progress.

Other managed realignment sites

The Environment Agency will set out its intentions and the likely timings for the other managed realignment sites in the consultation document to be published in the summer. We will also write to all affected landowners.

Detailed assessment to resolve complex issues

Easington

The land between Easington and Spurn Head, including the village at Kilnsea, is threatened by the relatively poor condition of some of the defences along the estuary and by erosion undermining the defences by the coast. This erosion is also threatening the coastal lagoons just



Boothferry defences

south of Easington, which are protected under the Habitats Directive. The small number of properties at risk means that as sea levels rise, it will be difficult to justify the cost of raising defences to maintain the current standard of protection.

Hull West

There are a number of frontages west of the Hull Barrier where development is planned or has recently taken place but where the standard of protection is relatively low. There is a need to examine the timing and funding of works to improve the standard.

Winteringham

There is a continuing threat of erosion undermining the defences at Winteringham, just west of South Ferriby. Failure would cut the A1077 and threaten the local cement works as well as low-lying land beside the River Ancholme, but the number of properties at risk is small so the very expensive works needed to maintain the present alignment is difficult to justify.

Halton Marshes

The defences give a good standard of protection but are being undermined by foreshore erosion. The land is used for agriculture, although it has been

allocated for estuary development since the 1980s. This hasn't taken place and as no properties are at risk it is difficult to justify the costly works needed to keep the defences in good condition.

Grimsby

The docks, which are owned by ABP, effectively protect Grimsby from flooding caused by high water levels and waves in the estuary. The risk of flooding is relatively low at present but could increase in the future and ways of dealing with this need to be discussed and agreed.

Inspection and maintenance arrangements

There are some differences between the inspection and maintenance undertaken by the three Environment Agency Regions that border the estuary. These are being reviewed within the strategy and a consistent approach, including estuary-wide data management arrangements, will be established.

Flood warning arrangements

The three Regions also have different flood warning arrangements. These will be reviewed for consistency as part of the ongoing development of the estuary strategy.



Hull Barrier