

Coastal Schemes with Multiple Funders and Objectives FD2635

Case Study Report 7 Kilnsea Flood Defence Scheme



Image courtesy of the Environment Agency 2010

This case study is one of 14 documents supporting the research project Coastal Schemes with Multiple Objectives and Funders - Case Studies FD2635, available from <http://tinyurl.com/6dzyusy>. This research was conducted in 2010/2011 by Maslen Environmental on behalf of Defra and the Environment Agency's Research and Development programme.

Research Contacts:

Defra: Daniel Johns daniel.johns@defra.gsi.gov.uk

Environment Agency: Martin Smalls martin.smalls@environment-agency.gov.uk

Maslen Environmental: Steve Maslen s.maslen@maslen-environmental.com

1 Case Study: Kilnsea Flood Defence Scheme

1.1 Introduction

1.1.1 Description

Kilnsea is a hamlet located in the East Riding of Yorkshire; it is home to a small coastal community, situated in a low-lying area, at risk from flooding and erosion. The existing flood defence embankment installed and owned by the Environment Agency was being eroded at the toe and at risk of being lost to the sea over the next few years. Therefore a new flood bank was required to be implemented behind this existing line of defence to protect the community in the short term. Kilnsea scored low against national priorities thus requiring funds to be secured from sources other than Defra's FDGiA. To address the funding shortfall 'The Kilnsea and Spurn Flood Defence Group' was established in 2005 to secure funding for the scheme (see timeline in Figure 1).

The scheme was completed in 2006 at a cost of £200,000 (see timeline in Figure 1). 4-5 different design options were put forward; the chosen one was a simple low cost scheme. This involved the Environment Agency building a new line of defence landward of the existing line, to provide continued protection to a small number of houses (about twelve properties including a caravan park) for the next 20-30 years. The scheme does not currently provide protection against large flood events.

The defence was built on Yorkshire Wildlife Trust (YWT) land and this involved the creation of borrow pits to source the clay. As the scheme ties in with higher ground the flood bank increases protection to the main road to Spurn Head, access to the Royal National Lifeboat (RNLI) site and the 'Humber Pilot Station', however, due to the drainage systems there is vulnerability to flooding.

The success of this project was due to the positive, 'can do' attitude of both the Environment Agency, the Environment Agency project management team and the Kilnsea and Spurn Flood Defence Group which chose to focus on practical solutions for the area. The defence was completed in autumn 2006 and has bought the community time to plan for their futures.

The Humber Flood Management Strategy¹ states there is no opportunity for further investment from central government for the next 100 years. This is the end of the Environment Agency's involvement in funding in the area and the Environment Agency will not maintain the banks over the longer term. A legal agreement between the Environment Agency and the Kilnsea and Spurn Flood Defence Group is now in place to ensure ownership has been devolved (see Appendix 1). The agreement suggests that the Environment Agency will not invest in maintenance or improvement, however it does not assign responsibility to any other party. Although the agreement is in place, its validity will be tested if there are future flood events. There is no mechanism in place for the community to recover the costs of any emergency works that are needed.

¹ www.environment-agency.gov.uk/humberstrategy
Case Study 7 Kilnsea Flood Defence Scheme FD2635.doc

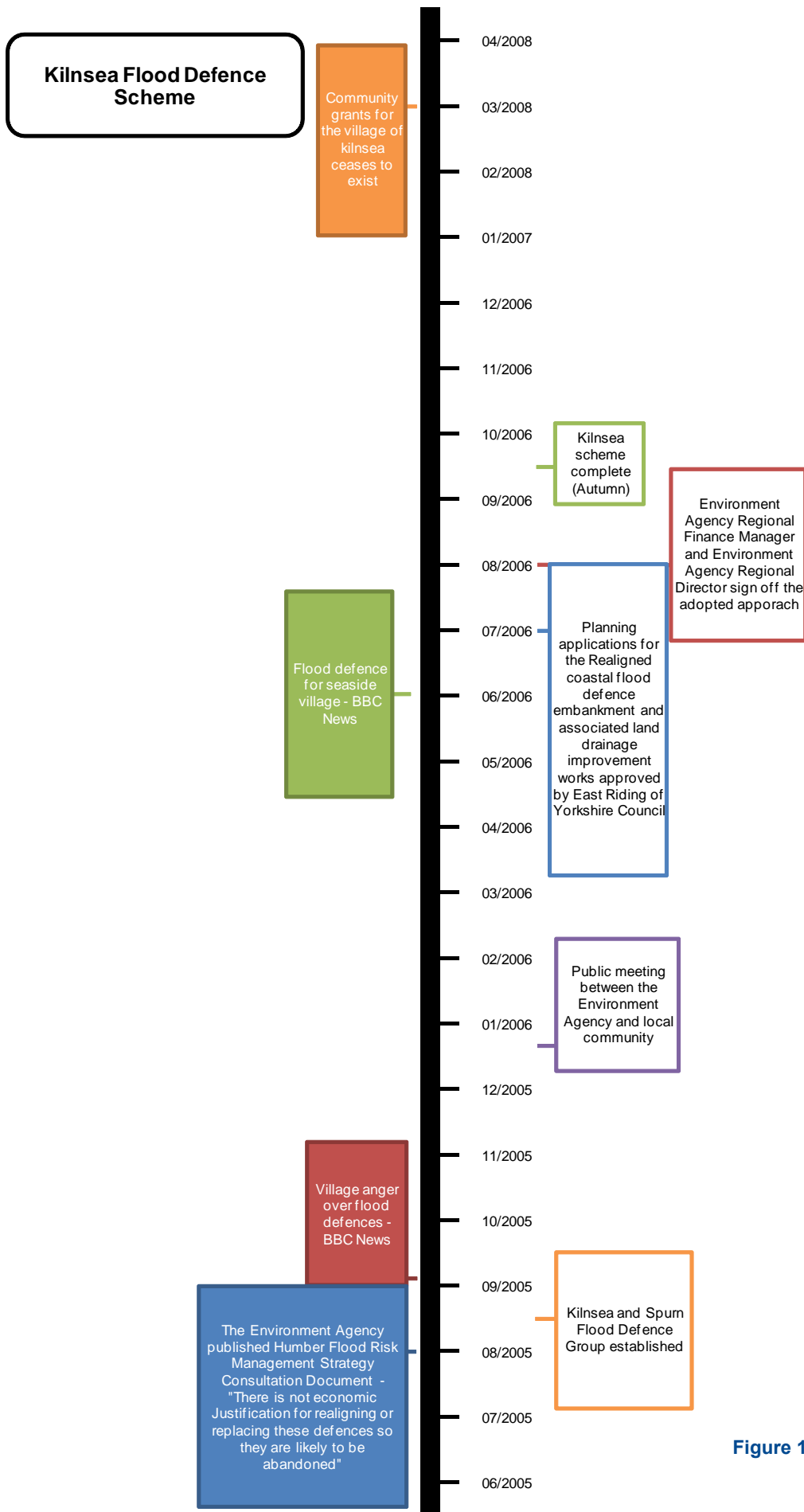


Figure 1. Timeline for Kilnsea Flood Defence Scheme



Figure 2. Kilnsea and Spurn Head

1.2 Objective Settings

1.2.1 Project Drivers

Kilnsea is a low-lying area affected by flooding and coastal erosion. The existing flood bank protects a small number of houses and the access road to the caravan park. The North Sea has been eroding this bank away at a rate of a couple of metres a year.

In 2005, the Environment Agency published the Consultation Document for the Humber Flood Risk Management Strategy. Easington Parish Council (of which Kilnsea is a part) and the local community of Kilnsea read in this document that:

“... the coastal defences near Kilnsea are being threatened by erosion, and could be breached within five to ten years, but possibly in as little as two years. There is no economic justification for realigning or replacing these defences so they are likely to be abandoned.”

This decision was based on detailed cost–benefit analysis calculations, a requirement for the allocation of FDGiA. Due to the small number of properties at Kilnsea’s isolated, rural location, the benefits gained against investment was low, compared to the costs of defence. The publication was one of the first instances the community had learned about being ‘abandoned’ and they were naturally upset, especially as they had not been informed prior to reading it in the local press.

The Kilnsea and Spurn Flood Defence Group was established in the first instance to fight the Environment Agency’s decision, but later this became a positive relationship when the local people came to accept that the Environment Agency was prepared to work to find a way forward.

Standard calculations for funding defences is based on 100-year timescales, but given that there was an imminent risk of breaching of the defence, and the anticipated timing for the loss of the principal local assets, this was not appropriate in Kilnsea’s case (Coastal Futures, no date). Discussions between the Environment Agency and the Spurn Flood Defence Group led to a reassessment of risk, costs and benefits based on a 30-year timescale. The revised calculation showed that work could be carried out, but that as Kilnsea was so low down in the list of national priorities, funds would need to be secured from alternative sources to ensure the work was completed before irreversible damage was done. The finally adopted approach was signed off on the 3rd March 2006 by the Environment Agency North East Regional Finance Manager and Regional Director.

1.2.2 Partnership Objectives

An important Environment Agency objective was to allow the community time to plan for their future in this area.

The local residents wanted better flood defences for the village to protect their properties from flooding. Also the image of the village was ‘blackened’ by visions of abandonment, placed on it by the Environment Agency, hence the Kilnsea and Spurn Flood Defence Group wished to remove this negative image.

YWT are key landowners but did not drive the scheme forward and equally did not oppose the scheme. They were consultees rather than a partner in developing the scheme and were not involved in setting the objectives. They are an independent organisation with charitable status and aligned to the principles of the Royal Society Wildlife Trust focussing on sustainable wildlife and habitats and access for people to enjoy the habitats. The scheme was not exactly what YWT wanted, as they would have wished for a full realignment of the area and creation of a wetland and salt marsh grazing habitats, this involved the relocation of the public highway. However, after considering the time constraints, cost implications and planning approvals required the option was rejected in the early stages of the scheme development.

East Riding of Yorkshire Council was a funding partner and was responsible for planning application approvals.

The ABP, RNLI and Natural England were consultees and had broader interests in the issues, but were unable to justify contributing towards the costs for the scheme.

1.2.3 Project Objectives

The primary objective was to protect a small group of houses from immediate risk from flooding created due to coastal erosion. Another objective for the Environment Agency was to buy time for the community to adapt to the changing coast, raising awareness and understanding of flood and coastal risks.

1.3 Partnerships

1.3.1 Building the Partnership

In the initial stages there was a great deal of mistrust in the community towards the Environment Agency, the public felt they were not going to financially support the community and were going to walk away from the defences. The Kilnsea and Spurn Flood Defence Group originally formed against the Environment Agency. During a public meeting in January 2006, Philip Winn (Environment Agency, Humber Strategies Manager) announced that the Environment Agency was prepared to contribute £100,000 from the Local Levy Fund administered by the Regional Flood Defence Committee (RFDC) towards the cost of realigning the floodbank. The Kilnsea and Spurn Flood Defence Group decided that they would work with the Environment Agency to find a solution.

On reflection, the Environment Agency felt that large-scale public meetings were not an ideal way to discuss options with the community and they really needed to be operating at a much smaller scale i.e. one-to-one with the people at risk. The Environment Agency adopted the 'Building Trust with Communities' approach and believes it is an essential way forward for working with communities in areas where there are important and difficult schemes that need to be delivered. The chair of the Kilnsea and Spurn Flood Defence Group now supports and has invested time and effort into the Coastal Future Project² and the wider partnership working along the coast.

1.3.2 Partnership Working the Governance

The main project partners included the Environment Agency, and the local community. The partnership was set-up quickly in an ad hoc manner. There were two main groups:

- Kilnsea and Spurn Flood Defence Group (committee)
- Environment Agency (Project Board and Project Appraisal Board)

Community meetings started in the caravan site. The community group formed and met in a local cafe (Blue Bells Café). The Environment Agency were invited to attend these meetings to keep the community up to speed with project progress, particularly communications between YWT, East Riding of Yorkshire Council (engineering and highways) and other parties (such as ABP, RNLA and Natural England). The Kilnsea and Spurn Flood Defence Group worked closely with the Environment Agency and communicated via regular phone calls and emails.

Although the scheme is complete, the Kilnsea and Spurn Flood Defence Group still meet about once a year.

1.4 Approvals, Planning Context and Legislation

The approvals for the scheme were lead by the Environment Agency (e.g. the archaeological survey). The Environment Agency gained approval for the scheme via the Project Appraisal Board (PAB) and the Regional PAB. This was described as a relatively simple process as external funds were involved.

As this is a Natura 2000 Site and SSSI, Natural England consent was required.

Planning consent and highway sign off was obtained from East Riding of Yorkshire Council.

Approval by YWT was required as the principle landowner.

² Coastal Futures Humber Community Project was developed in partnership by the RSPB, Environment Agency and Natural England and was funded by Defra, through HM Treasury's 'Invest to save' budget. The premise behind the project was that time and effort invested to support communities dealing with coastal change and sea level rise, in the early stages of strategy or project development, will save time and effort later and allow for the delivery of additional benefits (see www.coastalfutures.org.uk for details). It used the Humber Estuary as a pilot to engage communities affected by proposals for managed realignment sites.

1.5 Funding Arrangements

The total cost of the scheme was £200,000. YWT allowed the use of their land to let the scheme progress quickly and easily. A contribution of £100,000 made by the Yorkshire RFDC (via the Local Levy) for works and project management. The decision to fund from this source had local democratic accountability through the RFDC. £50,000 was contributed from East Riding of Yorkshire Council Highways Department to protect the local infrastructure at risk.

£50,000 was secured by the Kilnsea and Spurn Flood Defence Group (local community group) through two local funding streams:

- Easington Parish Enhancement Fund - This fund is administered by the Rural Policy & Partnership Service (part of East Rising of Yorkshire Council) and is available to support the development of projects and community groups within the Parish of Easington; and
- Langed Rural Development Fund - Available due to the location of the gas pipeline. This fund has been provided by the Langed Project, which is made up of a consortium of companies bringing gas from fields off the Norwegian Coast across the North Sea to Easington. The funds administered by East Riding of Yorkshire Council.

The existence of the funds is well known in the area, and that they are available for the public good. The Environment Agency's Community Worker assisted the Kilnsea and Spurn Flood Defence Group with the applications to access these funds.

Local farmers covered the cost for local drainage ditches to be cleared to find out which way the direction the floodwater travelled. Kilnsea and Spurn Flood Defence Group raised money locally through social events to reimburse the farmers for their contribution.

The Environment Agency also contributed officer time at no cost.

1.6 Summary of Key Issues

- The existing flood defence embankment at Kilnsea was at risk of being lost to the sea;
- The Environment Agency announced, "There is no economic justification for realigning or replacing these defences so they are likely to be abandoned" (Environment Agency, 2005). The decision was based on a cost-benefit analysis calculation required by Defra for the Environment Agency to fund flood defences;
- The Kilnsea and Spurn Flood Defence Group formed against the Environment Agency but very fortunately those people decided they would work with the Environment Agency to find a solution and secure additional funding;
- The Environment Agency acknowledged the need to review the short term management strategy along that part of the frontage where protection against flooding is required;
- The Environment Agency wished to buy time for the community to plan for their future in the area;
- The scheme involved the building of a new line of defence landward of the existing to provide continued protection for the next 20-30 years;
- YWT were cooperative and allowed the use of their land to allow the scheme to progress quickly and easily;
- The partnership between the Environment Agency and Kilnsea and Spurn Flood Defence Group was set-up quickly in an ad hoc manner;
- The scheme cost a total of £200,000, with the largest sum obtained from the Yorkshire RFDC;
- The Kilnsea and Spurn Flood Defence Group felt they have done as much as they could do to protect the individual householders. It was felt that "its now up to them" to plan personal flood protection over the longer term (Wells, 2010); and
- Both YWT and a representative of the Kilnsea and Spurn Flood Defence Group suggest there is little evidence that those people at risk from flooding in the longer term have implemented resistance and resilience measures to personally reduce their risk. Most have however signed up to floodline.

1.7 Lessons Learnt

- No matter how rural or isolated, face to face communication and one-to-one contact is vital to establish and develop relationships;
- Go the 'extra mile' to look for solutions that suit all parties. It may take time but it pays back in the end;
- The success of this project was due to the positive, 'can do' attitude of both the Environment Agency and the Kilnsea and Spurn Flood Defence Group who chose to focus on what could be done, rather than on what could not;
- The Kilnsea and Spurn Flood Defence Group formed against the Environment Agency. The early stages of the project were "quite unpleasant, but this got everybody going in the right direction. Sometimes you need a catalyst to get the scheme going" (Wells, 2010);
- The Kilnsea and Spurn Flood Defence Group formed against the Environment Agency but very fortunately, those people decided that the only way through this was actually to convert it round in to a small group that represented local people but that would work with the Environment Agency to find a solution;
- The Environment Agency adopted the 'Building Trust with Communities' approach to meeting and talking with people and were 'open-minded and willing to work with the community to solve the issues. Likewise, the Kilnsea and Spurn Flood Defence Group described how they learnt a lot about building good relationships with responsible authorities. These relationships still exist. The Environment Agency have since talked with the Kilnsea and Spurn Flood Defence Group about effective methods of working with other communities in the Humber estuary;
- YWT felt the scheme was successful due to Philip Winn's "frankness, bluntness, approachability and ability to talk with the people during meetings. Also due to his continued involvement" (Gibson, 2010);
- The timescales to complete the scheme was described as a constraint. The local funding streams would have been unobtainable the following year. This meant that the scheme had to be developed very quickly or the window of opportunity would be lost. A lot of different elements had to drop into place and all partners were cooperative in this respect;
- This was not the most sustainable of all the design options but was affordable and implementable within the timeframe allowed;
- YWT felt that on reflection they would have liked to have been more involved as partners to express their views on the options. But recognise that the bank failure was imminent and time was a constraint;
- All the partners were described as "pulling in the same direction" (Wells, 2010). YWT allowed their land to be used (which led to reduced single farm payments), a lot of things fell into place, money was available to access and all these factors led to the successful scheme;
- Consider the resources needed for communications as part of project planning and work closely with communications staff to ensure language in public documents is not confrontational, vague or misleading;
- To invest in the coastline puts demand on resources;
- Even when people have direct personal experience, coastal processes are difficult for communities to understand. Over the longer term the Kilnsea and Spurn Flood Defence Group felt that the area will be lost to the sea and that the scheme is as sustainable as it can be in the short term; and
- "People need to accept that the coastline at Spurn point is changing, the whole area is changing. We need to allow wash over and sea invasion to reduce flood risk" (Gibson, 2010). Questions are raised about the sustainability of the scheme over the longer term. People are still buying properties in the area at risk and this heightens the need for the community to adapt locally to the changing coast.

1.8 References

Coastal Futures. (No date). Humber Community Project. Lessons learned and best practice in community engagement on changing coasts. [Online] http://www.coastalfutures.org.uk/pdfs/community_engagement_report.pdf (Accessed 17 August 2010).

Environment Agency. (2005) Humber Flood Risk Management Strategy Consultation Document. Environment Agency.

Gibson, A. (2010). Kilnsea Flood Defence Scheme. [Telephone]. Personal Communication with Harvatt, J. (30 September 2010).

Todd, H. (2010). Kilnsea Flood Defence Scheme. [Telephone]. Personal Communication with Harvatt, J. (28 April 2010).

Wells, A. (2010). Kilnsea Flood Defence Scheme. [Telephone]. Personal Communication with Harvatt, J. (18 October 2010).

Winn, P. and Wells, A. (No date). Kilnsea Beach - Humberside. [Video]. Humber Strategies Manager, Environment Agency.

Winn, P (2010). Coastal Schemes with Multiple Objectives and Funders Workshop. Facilitated by Maslen Environmental. Hosted by Scarborough Borough Council, The Spa, Scarborough. 16th September 2010.

A Legal agreement between the Environment Agency and the Kilnsea and Spurn Flood Defence Group

DATED 8 January 2007

ENVIRONMENT AGENCY (1)

and

EAST RIDING OF YORKSHIRE COUNCIL (2)

and

KILNSEA AND SPURN FLOOD DEFENCE GROUP (3)

CONTRIBUTION AGREEMENT

in relation to the flood defence
and coast protection works
at

Kilnsea in the East Riding of Yorkshire

Catherine B. Ruane
Regional Solicitor
Environment Agency
Rivers House
21 Park Square South
Leeds LS1 2QG
Ref: MJF/2483

