

1953

EAST COAST FLOODS 50th ANNIVERSARY

2003

Lincolnshire



The battle to protect our coastal communities



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January 31st 1953 - The Great Surge

On 31st January 1953 three elements were linked in a fateful combination. It was the night of a spring tide, a deep atmospheric low pressure over the North Sea had been raising water levels, and northerly gales were driving a wall of water down the coast. As it funnelled into the narrower areas of the North Sea between England and Holland, this wall of water grew higher. At its peak the surge was 2½ metres above the high spring tide level. This was more than the defences could stand and spelled disaster.

In all over 300 people died, 24,500 houses were damaged and over 30,000 people were evacuated. Outside the towns and villages, thousands of animals were drowned and great tracts of farmland were made infertile by the salt water. This was one of the worst peace-time disasters ever to strike Britain, comparable with some of the heaviest nights of the Blitz.

A total of 43 people lost their lives on the Lincolnshire coast as a result of the floods.



The Progressive Tide

Grimsby and Cleethorpes

6pm – the start of the night of horror. The weather was cold and rough but when a Cleethorpes resident called the police to report "the sea is in my back kitchen" they thought at first that she was mad. A railway embankment collapsed and 1000 people were made homeless.

Mablethorpe and Sutton on Sea

Mountainous waves broke through concrete defences and embankments. One breach at Sutton was a third of a mile long. The torrent flowing down Mablethorpe High Street was so powerful that it created a bow-wave where it struck the corners of buildings. Residents took refuge upstairs and watched as the water reached nearly to their landings. 43 people were drowned on the Lincolnshire coast.

Skegness

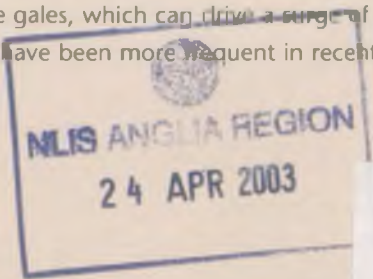
The first warning was from a seafront hotelier who called the fire brigade to pump out his flooded cellar. The officer who went to investigate met a wall of water coming down the promenade.



The Never-Ending Challenge

Containing the massive destructive power of the sea is an expensive and never-ending business. The situation is constantly changing, so there will never be a time when we can relax and declare the job complete. Why is this?

- The sea erodes sea walls and banks.
- The sea also shifts millions of tonnes of sand and gravel along the coast, altering the shoreline and often reducing the protection given by beaches and dunes.
- Britain is tilting, with the East Coast slowly sinking into the North Sea at a rate of 150 mm a century.
- Global Warming may increase the sea level by a further 650mm, making a total of 800 mm in a hundred years.
- Severe gales, which can drive a surge of water before them have been more frequent in recent times.



Will 1953 Happen Again?

The real question is **When** will this happen again? Surges of about 1m sweep the coast three or four times a year, but they rarely coincide with high tides and bad weather as they did in 1953. We work to ensure people are fully aware of the risk of flooding, are prepared for it, and receive warnings of flood events. In this way, when nature does deliver this combination of conditions, there is less risk of people losing their lives to the sea.

Flood Management Methods

There are many methods of flood protection, but there is no one answer, no 'quick fix' and certainly no cheap solution. Some methods include:

- Sea walls
- Flood banks
- Beach recharge
- Groynes and other structures to hold beaches in place
- Tidal barriers, which can cost millions of pounds.

These are traditional, well-tried solutions, but as we become increasingly threatened by sea level rise we see a need to work with nature, rather than against it. Thanks to an improvement in understanding of natural coastal processes and the much more detailed information we have about defences and the coast, we can help predict

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how man-made structures and beach management will affect natural processes. This helps us plan long-term, sustainable solutions which are cost-effective and reduce impact on the environment.

Managed realignment is also an important way of providing flood defence. Here we consider the most sustainable first line of defence, and if that is further inland, we can create valuable habitats like saltmarsh and mudflats. These in turn play a role in providing natural flood defences, as they break down wave energy and reduce attack at the base of sea walls.

Through a hierarchy of plans such as Shoreline Management Plans and Coastal and Estuary Strategies, natural processes, environmental and economic impacts are considered. At each stage a public consultation aims to ensure the views of those affected by coastal management are included. If flood defence schemes are considered necessary, these are then developed and implemented, often in partnership with other organisations.

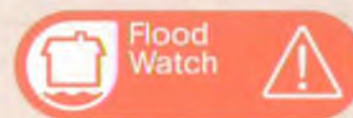
Major Improvements Since 1953

The Lincshire Project

The Lincshire project covers the coastline from Donna Nook in the north to Gibraltar Point in the south, and concentrates on the Mablethorpe and Skegness area. Rebuilding the beaches began in 1994 in two phases and was completed by September 1998 at a total cost of £37m. The third phase of the project is renourishment of the beaches to replace lost sand. The renourishment is decided annually based on analysis of up to date information from coastal surveys.

Flood Warning

The Agency operates a flood warning system. Flood defence staff constantly monitor weather conditions and tidal and river levels to determine where floods may occur, the severity of the flood and the extent of areas that may be affected. Information is collated using data from the Meteorological Office weather radar stations, the Storm Tide Forecasting Service and other sources. The Agency issues the following warnings to the Emergency Services, local authorities and the public:



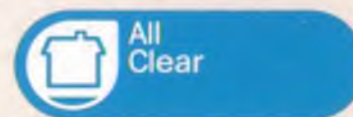
Flooding Possible. Be aware! Be prepared! Watch out!



Flooding expected, affecting many homes, businesses and main roads. Act now!



Severe flooding expected. Imminent danger to life and property. Act now!



All clear. There are no Flood Watches or Warnings in force. Water levels receding. Check all is safe to return. Seek advice.

24 hour information available through

Floodline
0845 988 1188
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Flood warnings are posted on the internet and are updated every 15 minutes, log onto

www.environment-agency.gov.uk/flood

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