

EAST COAST FLOODS



THE RESTLESS SEA

The people of the east coast of England have fought a constant battle against the sea. Since early times large areas of the coastal marshlands of Humberside and Lincolnshire have been reclaimed from the sea. Sometimes, however, the sea strikes back and attempts to swamp the land again as it did in the January of 1953.

In 1953 an intense low pressure entered the North Sea and combined with a high tide to cause a storm surge which raised the sea level by up to 3 metres. This was higher than the coastal defences along much of the east coast of England and low lying areas were flooded. The strong winds also caused large waves which did a great deal of damage.

Since 1953 the coastal defences have been improved; sea walls have been strengthened and raised to protect coastal towns and cities such as London and Hull have been given barriers that can be lowered if a very high tide or storm surge is forecast. Despite this high tides and strong winds have caused great damage and loss of life as recently as 1978 when the north end of Cleethorpes was flooded and damage ran into millions of pounds.

The problem may become more serious in the future since computer models predict that Global Warming could raise the earth's temperature by over 1 degree in the next 50 - 100 years. This could cause sea level rises of 50 cm or more due to the warming and expansion of the sea surface and to the melting of ice caps. It is likely that global warming would also cause more storms and hurricanes and this would destroy defences.

WHY THE FLOODS HAPPENED ?

A depression which had crossed the British Isles moved into the North Sea. The sea underneath it rose above its normal level. This hump of water started to move east across the North Sea.

As the depression moved east towards Europe, storm force northerly winds forced the water upwards into a ridge which moved south. It became a SURGE of water

NORTH SEA

100
MILES

SCALE

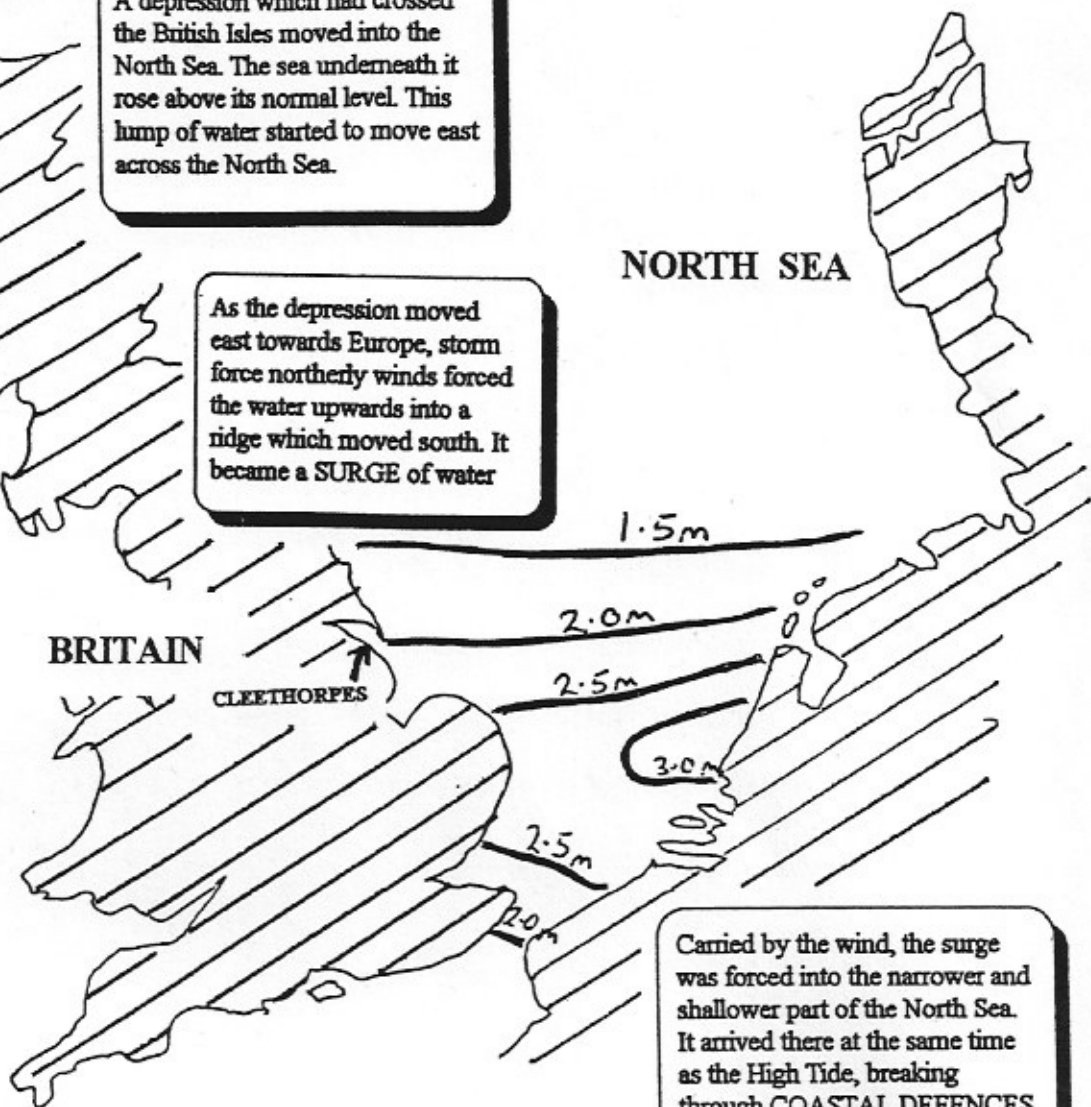
BRITAIN

CLEETHORPES

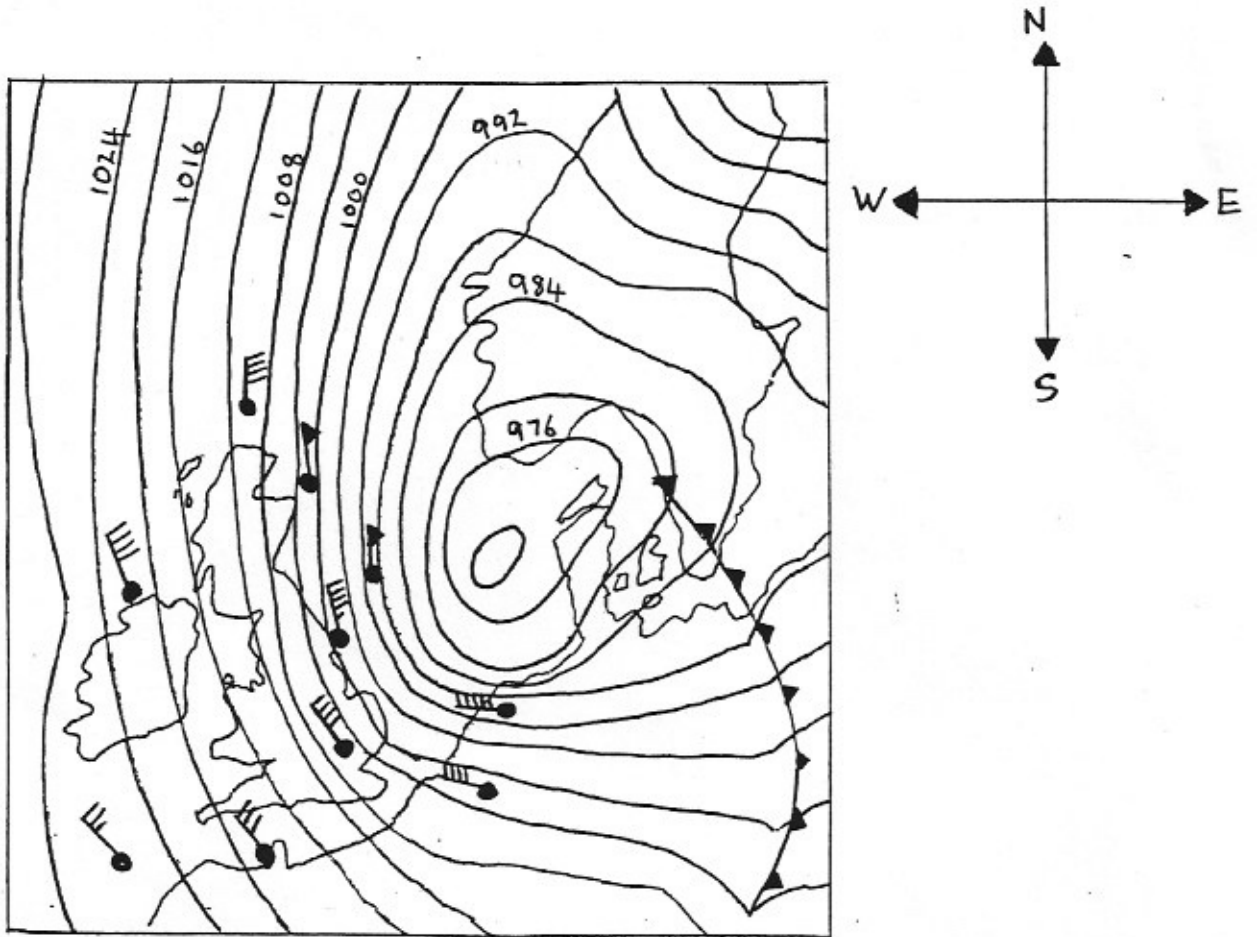
Rise in sea surface above
the normal high tide level

2.5m


Carried by the wind, the surge was forced into the narrower and shallower part of the North Sea. It arrived there at the same time as the High Tide, breaking through COASTAL DEFENCES and causing widespread flooding along the east coast of England and the coast of Europe.




WEATHER MAP JANUARY 1953



WIND ARROWS FLOW WITH THE WIND

 NORTHERLY WIND

EACH FEATHER INDICATES 10 KNOTS OF WIND SPEED


20 KNOTS


30 KNOTS


50 KNOTS

FLOOD ALERT ! : EAST COAST

Flooding caused by severe weather conditions has a very dramatic effect on the coastline, and on people who live nearby. Coastal flooding is a serious threat to some parts of Britain, such as East Anglia. The worst episode in Britain's history of flooding took place in 1953.

Many towns now have flood barriers. The best known is the Thames Barrier which protects London from North Sea flooding.

