



# Coastal Wave Monitoring WaveNet

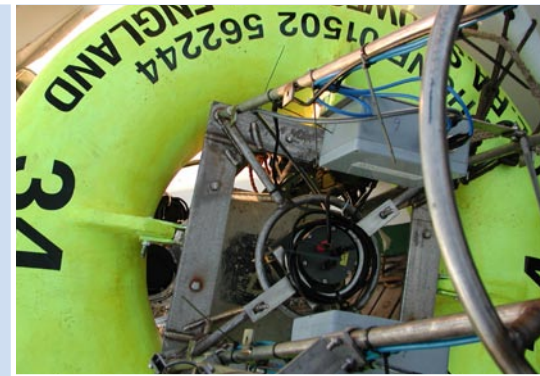
WaveNet is a strategic initiative funded by the UK's Department for Environment, Food and Rural Affairs to provide real-time coastal wave data for Flood, Coastal Managers and other stakeholders in England and Wales.

The Centre for Environment, Fisheries and Aquaculture Science (CEFAS) has been commissioned to design and implement a new network of 6 wave measuring buoys and an Internet based real time data dissemination and archive facility. The network is being closely integrated with Defra's water quality measurement network to provide a single source of freely accessible information on marine environmental parameters that are important to management of the coastal zone.

Consultants and other stakeholders with a responsibility for coastal defence. WaveNet has been designed to meet these needs through the provision of a real-time coastal wave measurement network and a long-term wave data archive for UK coastal waters. All data is publicly and freely available.

### The network

In addition to the new network of wave monitoring buoys operated



by CEFAS, WaveNet integrates existing data from a series of buoys and platforms around the UK coast operated by the Met Office, Shell, Irish Marine Institute and others, as shown below. The map shows the location of wave buoys, wave heights and direction (if available).

### WaveNet Objectives

WaveNet is intended to improve management of flood and coastal erosion risk by providing improved data for:

- Strategic flood and coastal defence management
- Large scale Shoreline Management Planning
- Flood forecasting operations
- Coastal erosion and flood defence design studies
- Climate change studies

Wave data is required by Flood Managers, Local Authorities,

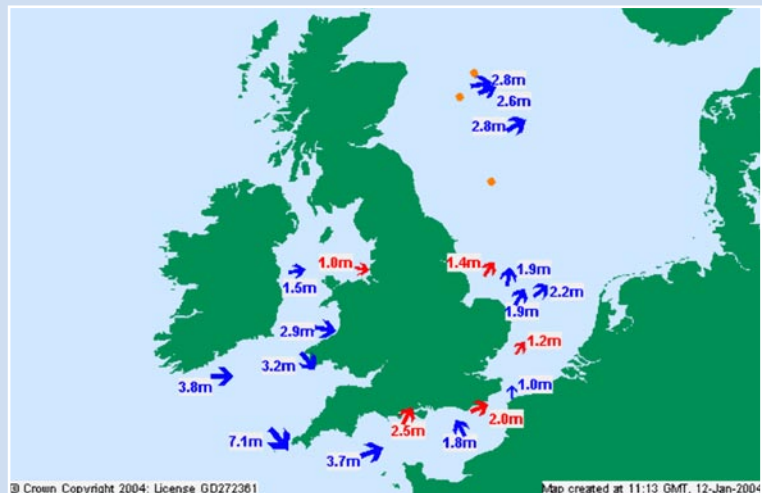


Figure 1. Example of WaveNet web-pages



The data can be accessed via our website [www.cefasc.co.uk/wavenet](http://www.cefasc.co.uk/wavenet) in two forms through either basic or advanced webpages. Data can be visualised in a variety of formats (text, graphs, polar plots) and also includes wave spectral data (Figure 2.)

In addition to a series of standard data products the advanced web pages (Figure 3) allow users to select locations, wave parameters and start/end dates, and to produce tailor made graphs. A download facility also allows registered users to download data from the database.

**For further information contact**

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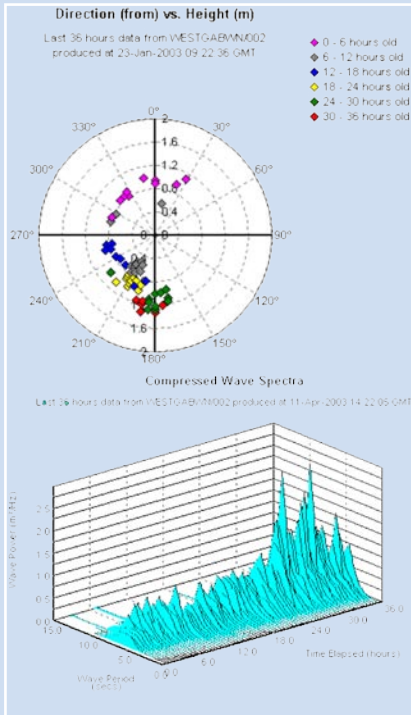


Figure 2. Spectral wave data

**WaveNet benefits**

- Strategic approach to coastal defence studies and flood forecasting
- Near real-time wave data for use in coastal flood forecasting and warning, and for wave forecasting models
- Historic wave data for use in coastal defence studies and validation of numerical wave models
- Historic wave data for use in climate change studies
- Free internet access to both near real-time and historic wave data for use in the port, leisure construction and access operations and by the public
- Underpinning of large scale strategy studies such as Shoreline Management Plans

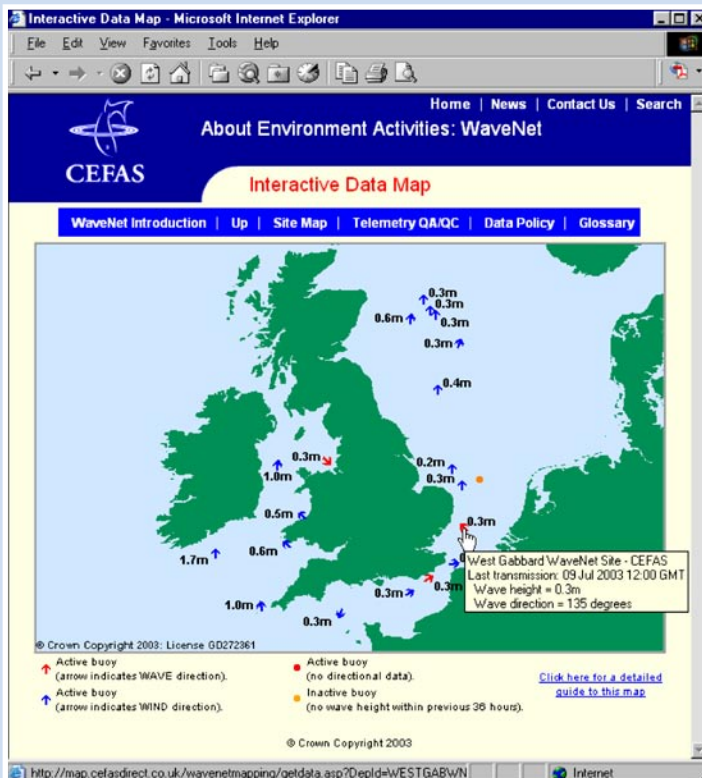


Figure 3. Advanced web page

Funded by Defra in association with the Met Office

