



Report No: **77/2008** Public Agenda Item: **Yes**

Title: **Tor Bay Wave Buoy Proposal**

Wards Affected: **All wards in Torbay**

To: **Harbour Committee** On: **25 March 2008**

Key Decision: **No**

Change to Budget: **No** Change to Policy Framework: **No**

Contact Officer: **Paul Labistour**
Telephone: **01803 853321**
E-mail: **Paul.Labistour@torbay.gov.uk**

1. What we are trying to achieve and the impact on our customers

- 1.1 We are trying to achieve and assist with improvements in the Environment Agencies (EA) Paignton Major Incident Plan which provides information for the EA flood warning system. This would be achieved through the deployment of a wave monitoring buoy in Tor Bay.
- 1.2 The wave rider buoy would be located half a mile to the East of the Black Rock East Cardinal Mark off Paignton harbour in position 50° 26' N. 003° 32' W.
- 1.3 A wave buoy in this position would assist with flood warning procedures for the Paignton area thereby assisting with the early implementation of mitigation measures to hopefully avoid any possible damage to life and property. The wave buoy would also provide fully accessible online real time wave information (wave height, period, direction, sea temperature) for use by the Harbour Authority.

2. Recommendation(s) for decision

- 2.1 **That the deployment of an Environment Agency wave rider buoy for the purpose of recording wave data in Tor Bay, be approved.**

3. Key points and reasons for recommendations

- 3.1 The flood warning area from Start Point to Dawlish includes the Paignton Major Incident Plan (MIP) and consists of 665 properties in what is known as Flood Zone two. The susceptibility of the area to flooding relates to a set of meteorological conditions different to the rest of Devon in that it is vulnerable to wave action generated by wind with an Easterly component.

- 3.2 Criteria needs to be identified to enable the paignton MIP to be further developed in order to plan for timely public evacuations and the co-ordination of professional partners.
- 3.3 Data from such a wave buoy could also be used to develop a flood warning service for other locations along the Start Point to Dawlish flood warning area which is also vulnerable to wave action generated by winds with an Easterly component.
- 3.4 There are potential risks to the environment and to the safety of navigation. Therefore, in addition to obtaining the consent of the Harbour Authority, the Environment Agency are required to apply to the Marine and Fisheries Agency for other statutory consents under the Food & Environment Protection Act 1985 and the Coast Protection Act 1948. Both of these other consents involve consultation with relevant bodies and the public.
- 3.5 This proposal does not have any major impacts on the Community Plan other than the Council's strategy to recognise climate change and the need for a strategy to protect and enhance our coastal areas. It is linked to our Corporate Plan through our aims to continue working with partners to deliver better quality services for Torbay.

For more detailed information on this proposal please refer to the supporting information attached.

**Kevin Mowat
Director of Marine Services**

Supporting information to Report 77/2008

A1. Introduction and history

- A1.1 The project to place a wave monitoring buoy in Tor Bay is part of the strategic regional Coastal Monitoring Programme for the South West of England to provide freely available data of a consistently high quality to inform coastal management and future strategy.
- A1.2 The Maritime Local Authorities, Coastal Groups of the Southwest of England and the South West Environment Agency are working together with a collective vision, to develop a long-term, region wide coastal process monitoring and analysis programme.
- A1.3 An integrated survey programme has been developed to cover approximately 1000km of open coastline and estuaries between Portland Bill and Sand Point, Somerset, with a projected overall cost in the region of £7m funded through Defra.
- A1.4 Large quantities of data will be made freely available from the survey and analysis programme. This information will be useful to local authorities within the region, as well as the Environment Agency, consultants in coastal defence, conservation management and for educational purposes.
- A1.5 Wave buoy data collected in Tor Bay can be used to compare actual waves with forecast wave conditions. The buoy in Tor Bay will be used to calibrate forecasting models for the site and provide a means of comparing the predicted waves at Portland Bill (used for the Torbay Floodwatch Criteria and Paignton MIP) with the actual waves recorded. This will help to refine flood warning procedures and provide confidence in decision making when providing an appropriate response to flooding.
- A1.6 Funding for the project will be provided by the Environment Agency and Teignbridge District Council. The necessary instrumentation will be installed and maintained by the Channel Coastal Observatory and Emu Ltd. The Channel Coastal Observatory will house the data which will be freely accessible through the Channel Coastal Observatory website.

A2. Risk assessment of preferred option

A2.1 Outline of significant key risks

A2.1.1 None

A2.2 Remaining risks

A2.2.1 There is a possible risk to navigation.

A3. Other Options

- A3.1 Take no action. This option would mean that significant wave data would not be recorded and therefore unavailable to key partners in their endeavours to improve the Paignton MIP and better inform flood warning procedures for the

coastal areas of Torbay.

A4. Summary of resource implications

A4.1 None

A5. What impact will there be on equalities, environmental sustainability and crime and disorder?

A5.1 Installing a wave monitoring buoy within Tor Bay will directly support environmental sustainability of our coastal community and in the long term assist with the promotion of community safety. Freely available data from the buoy will promote good community relations.

A6. Consultation and Customer Focus

A6.1 Marine Services have consulted with key stakeholders that make up the Harbour Liaison Forums for Tor Bay Harbour.

A6.2 Further formal consultation will be undertaken as part of the Environment Agency's application to the Marine and Fisheries Agency for the statutory consents outlined in 3.4 above.

A7. Are there any implications for other Business Units?

A7.1 None

Appendices

Appendix 1 Plan of Tor Bay Harbour

Background Papers:

The following documents/files were used to compile this report:

Environment Agency, Tor Bay Wave Buoy proposal flood incident management summary
09/11/07