



BIDEFORD Tidal Defences Works to Bideford Quay

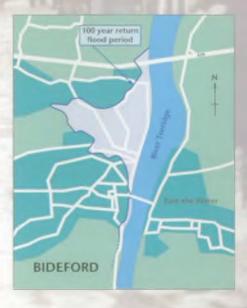
What is the risk of flooding?

Bideford has been subjected to tidal flooding at regular intervals for many years. In recent years the most severe event occurred on 23 November 1984 when a combination of a high spring tide, a strong southerly wind and flood flow in the river Torridge caused flooding on both sides of the river. On the west bank 63 commercial properties were flooded in the area of The Quay, King Street, Cooper Street, Queen Street, Bridgeland Street, Rope Walk and Pill Road together with four residential properties on The Strand.

Flooding of The Quay takes place, on average, 2 or 3 times a year generally without affecting property.

The highest tide levels experienced to date have a relatively short return period of between five and ten years and the area of flooding has been restricted as the ground rises within a short distance of the river. If, however, the tide level exceeds 5.8mAOD the area of flooding and the number of properties affected would increase dramatically. Tides above this level will overtop the higher ground towards Victoria Park and cause flooding to the low lying area to the west.





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What about the predicted rise in sea level?

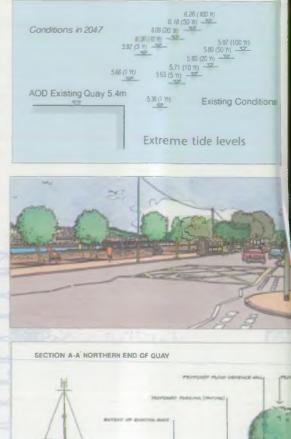
A drawing showing the tide level/return period relationship for Bideford is shown at right. This is based upon an analysis of the gauged tide levels for Yelland with a correction factor applied for Bideford. The influence of fluvial flows in the Torridge is insignificant at high water and the tide is the predominant factor causing flooding.

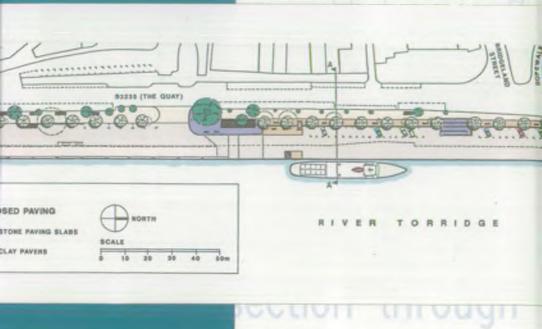
In the event that the predicted rise in sea level does occur, the situation in respect of flooding at the Quay and the lower lying areas behind would be very much worse. The frequency of flooding would increase and, in extreme events, both the flooding depth and the number of properties affected would increase.

By way of illustration the drawing showing extreme tide levels includes an allowance for sea level rise over the next 50 years. The levels indicated therefore represent the conditions that are predicted to occur in the year 2047. The assessment includes for a sea level rise of 5mm per year up to the year 2030 and 7.5mm per year thereafter.

It can be seen from the diagram that the level of the Quay will be exceeded by a significant amount every year.

The height of the proposed defence includes an allowance for the predicted sea level rise in order to ensure that it would not be compromised by such conditions during its design life.





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Information

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Area Office

For general enquiries please call your local Environment Agency office. If you are unsure who to contact, or which is your local office, please call our general enquiry line.

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ENVIRONMENT AGENCY GENERAL ENQUIRY LINE

0645 333 111

The 24-hour emergency hotline number for reporting all environmental incidents relating to air, land and water.

ENVIRONMENT AGENCY EMERGENCY HOTLINE

ENVIRONMENT AGENCY

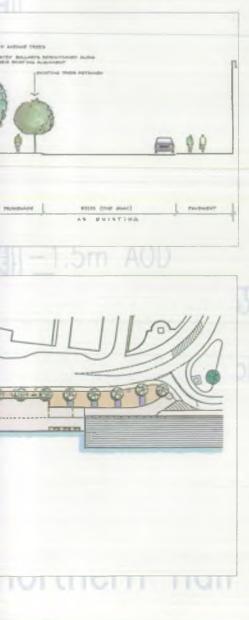
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The proposals

The Quay will be extended 5m into the river with the southern half of the Quay raised to 5.8m, as in the original NRA scheme. The northern half is to be constructed at a lower level of 5.4mAOD, with a further low level landing stage. The defence level of 6.4mAOD is achieved by a wall at the back of the Quay joined to a dwarf wall at the front of the southern half by a ramp. Access arrangements for the southern half remain unchanged whilst for the northern half entrance onto the quay is at the Kingsley Statue junction and exit at the centre of the Quay.

The use of natural stone facing with timber fenders would mean that the new quay wall would appear largely unchanged.

The flood defence wall would be constructed in local stone, in keeping with the character of the Conservation Area. In addition to the flood defence



works general improvements to the quayside and the adjoining promenade are proposed. These measures include the planting of new trees along the eastern edge of the promenade to establish a single species avenue. Along the northern end of the Quay, a new pedestrian area between the flood defence wall and promenade would comprise new paving with seating. The listed cast iron bollards would be repositioned along their existing alignment, providing an attractive feature. Parking and associated signage would also be rationalised to improve access to the quayside.

Pedestrian access to the northern end of the Quay would be maintained either end of the flood defence wall. In addition, there would be access across the wall, via steps positioned opposite the MS Oldenburg berth, and a ramp for disabled access, located centrally.

How has the scheme changed since the Public Inquiry?

The Public Inquiry on the original National Rivers Authority (NRA) scheme was held in Bideford in September 1993. The Inspector recommended that the scheme should be approved subject to a modification to provide a lower level landing stage to accomodate the requirements of the MV Oldenburg and the fishing trawlers, plus a number of minor planning conditions.

The Secretary of State for the Environment rejected this recommendation, taking the view that the proposed modifications represented a significant change in the original application, and should therefore be the subject of a further planning application.

The NRA, now the Environment Agency, commissioned further studies of options for a flood defence scheme for the Quay. Following consultation with the Landmark Trust and the trawlermen, the favoured scheme is based on the original NRA scheme with modifications to the northern end of the Quay to meet their requirements.

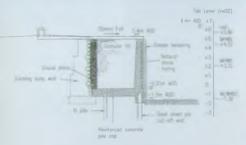
The proposed scheme satisfies the conditions recommended by the Public Inquiry Inspector, and will be the subject of a forthcoming planning application as required by the Secretary of State.

Who has been consulted about the scheme?

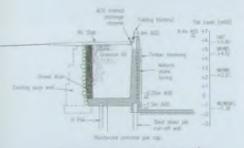
The importance and hence sensitivity of Bideford Quay as a focal point for leisure, tourism and commercial activities is well recognised and extensive consultations on the proposals have been undertaken. Direct consultation has been undertaken with:

- Torridge District Council
- Bideford Town Council
- Devon County Council
- English Heritage
- English Nature
- Landmark Trust
- Bideford Trawlermen's Association
- Bideford Chamber of Commerce
- Torridge Group

If planning consent is granted, a full report on the scheme proposals will be submitted to MAFF who will review technical aspects of the scheme prior to approving for grant aid.



Cross section through northern half of Quay



Cross section through southern half of Quay

What will it cost and who will pay?

The estimated capital cost of the scheme is £2.6m. The estimated present value of the damages the scheme would prevent is £8.5m and accordingly the scheme is economically justified.

The scheme will be funded from three sources. A formal submission will be made to the Ministry of Agriculture Fisheries and Food (MAFF) for grant aid; the current grant aid for tidal works in this area is 45% of the scheme costs. The remaining 55% will be funded by the Environment Agency with a contribution from Torridge District Council in recognition of the betterment to the Quay.

When will it be built?

Site works will commence in the Spring of 1998, subject to receipt of planning consent and MAFF grant aid approval.

The work will be constructed in two sections, starting at the southern end of the Quay near the Longbridge and finishing at the rowing club steps to the north.

The main construction work is anticipated to take 12 months, to be followed by final reinstatement and tree planting.

Consulting Engineers Sir William Halcrow & Partners

Landscape Architects Cooper Partnership