



Report No: **6/2010** Public Agenda Item: **No**

Title: **Repairs to the Victoria Breakwater at Brixham harbour**

Wards Affected: **All Wards in Torbay**

To: **Harbour Committee** On: **11 January 2010**

Key Decision: **No**

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

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1. What we are trying to achieve

- 1.1 This report outlines the structural problems that have been identified with the Victoria Breakwater at Brixham harbour.
- 1.2 The Breakwater at Brixham is a key piece of infrastructure and a significant community asset. It serves, not only to protect the harbour, but to safeguard the town itself from coastal flooding and storm damage.
- 1.3 Failure to implement these repair works will result in the ongoing structural deterioration of the Victoria Breakwater. Eventually it will need to be closed to the public and ultimate failure of the structure would leave the harbour area exposed to storm damage and coastal flooding.

2. Recommendations for decision

- 2.1 **That the Harbour Committee note the serious structural condition of the Victoria Breakwater and the level of investment required to address the issues identified in the Report.**
- 2.2 **That, in light of this project having been identified within the Council's most recently approved Capital Plan, the Harbour Committee approve the allocation of capital funding from the Brixham Harbour Reserve to fund the repair work.**

3. Key points and reasons for recommendations

- 3.1 This report provides Members with information on repairs needed to Victoria Breakwater, Brixham which were identified in a routine maintenance inspection in September 2008.
- 3.2 The Council's most recent Capital Plan identifies this project within the Reserve List – Band 1. Approval for the scheme has therefore been granted by Council subject to the funding being found from within the Brixham harbour reserve fund.
- 3.3 It is appropriate that the Harbour Committee gives full consideration to all the issues relating to this capital repair scheme before determining whether to release funding from the harbour reserve.

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

**Capt. Paul Labistour
Tor Bay Harbour Master**

Supporting information to Report

A1. Introduction and history

- A1.1 The Harbour Masters arrange for routine inspections to be carried out on the entire infrastructure and fabric of Tor Bay Harbour and the enclosed harbours of Brixham, Torquay and Paignton. Most parts of the harbour can be inspected by boat or on foot but in other areas the inspections must be conducted underwater using diving teams.
- A1.2 In 2001 an in depth survey was carried out on the Victoria Breakwater using specialist divers and land surveyors. As a result of these surveys a detailed knowledge of the structural state of the breakwater was obtained. The information at the time was amalgamated into digital records and paper drawings.
- A1.3 As a result of these surveys a major maintenance project was successfully carried out to repair significant voids on the exposed seaward side and voids in the bull nose end. These repairs were carried out using specialist diving teams and utilising a significant volume of rock armour recovered from Slapton Sands, South Devon. Repair costs at the time were in the region of £250,000.
- A1.4 In September 2008 a routine inspection programme was carried out within Tor Bay Harbour which identified that further repairs were needed to a number of small but significant voids on the seaward side of the Victoria Breakwater, Brixham harbour.
- A1.5 The inspection also identified that the 'bull-nose' end needed significant repairs to voids that had appeared since the last repairs in 2001. Unfortunately, the 'bull-nose' end of the Victoria Breakwater is particularly susceptible to heavy seas generated from winds with an easterly component and this has the effect of undermining the rock armour and creating potentially serious problems for the integrity of the structure.
- A1.6 A specialist company needs to be appointed to carrying out the necessary repairs on behalf of the Harbour Authority. It is expected that the contract value could be in the region of £150,000 and the work is therefore being treated as a capital project.
- A1.7 This project has been identified within the Council's most recent Capital Plan (Reserve List – Band 1) and the scheme has therefore been approved by Council subject to the funding being found from within the Brixham harbour reserve fund. A recent report to the Harbour Committee, which presented the Tor Bay Harbour budget for 2010/11, also identified this scheme as a potential capital project
- A1.8 The purpose of this report is to seek approval from the Harbour Committee for the allocation of the necessary funding from the Brixham harbour reserve.

A2 Risk assessment of preferred option

A2.1 Outline of significant key risks

A2.1.1 The significant risks associated with the works identified are that they are not carried out in a timely fashion. Delays to the repair works would result in the continued deterioration of the structure, hence increasing costs for any future repair works.

A2.1.2 Failure to carry out the repair works to the Victoria Breakwater could result in sections of the structure being fenced off and eventually being closed permanently to the public. There is an extreme risk that any long term delay in the repairs, could result in the deterioration of the structure, to such an extent that repair works become uneconomic and the structure may have to be demolished. Providing the repair works are undertaken promptly the risk of severe deterioration to the structure has been assessed as low.

A2.1.3 The control measures identified to mitigate the risk of further damage to the Victoria Breakwater are to instigate a repair project to carry out the necessary work to the identified voids and other damage, as soon as possible.

A2.1.4 Although a detailed dive survey has been undertaken on the Victoria Breakwater to identify the repair works required there is a risk with works of this nature that whilst repairs are being carried out further deterioration of the structure may be encountered. This may be as a result of further scour to the rock armour below sea level. Similarly, additional voids may be located within the structure, which would result in additional works having to be undertaken. The estimated cost of this capital project has been prepared following detailed discussions with the Council's Engineers and the specialist diving contractor. In addition a 15% contingency has been included within the estimate to cover the risk of additional works being required due to hidden defects.

A2.2 Remaining risks

A2.2.1 The level of the Brixham harbour reserve fund is expected to be £413,000 at 31st March 2010. The recommended minimum level for this fund at year-end 2009/10 is £450,000 based on 20% of turnover together with a cash figure of £250k. Obviously a capital spend of £150,000 will reduce the level of the reserve fund even further to £263,000. The remaining risk is that the capital costs identified will reduce the harbour reserve fund to an unacceptably low level.

A2.2.2 Following completion of the works the breakwater will have an extended life expectancy. However, there will always be a risk of damage to the breakwater due to severe storm events together with the risk of accidental damage as a result of impact from shipping. The risk of storm damage following the repair works is initially minimal however these risks will increase over time. The risk of damage due to impact from vessels is again minimal however should this occur emergency repair works would have to be carried out and the cost for these repairs would be recoverable from the vessels insurance.

A3. Other Options

A3.1.1 Do nothing now and wait for a further three years and see what the next full

survey of the breakwater reveals in terms of additional damage and consequently further repairs that will be needed.

A4 Summary of resource implications

- A4.1 The cost of this capital project will need to be met by the Brixham harbour reserve fund. The level of this fund is expected to be £413,000 at 31st March 2010. The current recommended minimum level for the fund is £450,000 based on 20% of turnover together with a cash figure of £250k.
- A4.2 The cost of these repairs will reduce the level of the reserve fund to £263,000. Consequently the Brixham harbour reserve fund will be £187,000 below the recommended minimum level
- A4.3 The poor condition of some of Torbay's key infrastructure assets has been highlighted in recent Reports to Members on the Council's Asset Management Plan, Corporate Capital Strategy and Backlog Repairs & Maintenance.
- A4.4 Recent reports to the Cabinet on the Capital Budget highlights that resources available for new schemes will be very limited until capital receipts from the current Asset Rationalisation Project can safely be predicted. Therefore, in the absence of further Prudential Borrowing the harbour reserve fund provides the only available source of funding.

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

- A5.1 The Victoria Breakwater is a key element of the harbour infrastructure at Brixham and it therefore has an obvious connection with Torbay's tourism product, with particularly strong links to the Community Plan themes of Pride in the Bay (valuing our environment and developing Torbay's culture). By providing protection for the fishing industry there are links to The New Economy (improving Torbay's economy – towards a prosperous Torbay). In addition within the Community Plans top ten for Torbay is identified a Wonderful Waterfront – Improvements to our harbours and waterfront.
- A5.2 The breakwater is well used by both residents and visitors. However, failure to carry out the repair works could result in sections of the structure being fenced off and eventually being closed permanently to the public.
- A5.3 Failure to implement these repair works could result in the eventual failure of the structure, which may result in coastal flooding of properties in the vicinity of the harbour together with the closure of the marina and a significant impact on the viability of Brixham as a principal fishing harbour. The loss of this amenity would result in an environmental and economic disaster for Brixham and Torbay.

A6 Consultation and Customer Focus

- A6.1 The Harbour Masters have consulted with various stakeholders through its Harbour Liaison Forums.
- A6.2 Following approval for the repair works to proceed and the appointment of a

contractor, a method statement will be determined and consultation will be carried out with all harbour users that will be affected by the works.

A7 Are there any implications for other Business Units?

A7.1 The only business unit affected by these recommendations are Harbour and Marine Services who are responsible for the structure.

Background Papers:

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

Brixham Harbour Survey – September 2008 (report prepared by Millennium Marine Contractors)