



Title: **Brixham Harbour Electricity Recharging System**

Public Agenda Item: **Yes**

Wards Affected: **Berry Head with Furzeham and other wards in Torbay**

To: **Harbour Committee** On: **5 December 2011**

Key Decision: **No**

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

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

- 1.1 Tor Bay Harbour Authority needs to reduce its energy costs at Brixham harbour and this can be achieved by introducing an easy to use recharging system to the main power outlets around the fishing vessel basin.
- 1.2 By reducing our overall energy consumption we will also reduce the port's carbon footprint.
- 1.3 A user pays system should ensure that energy costs are recharged in a fair and equitable manner to those that actually use the facility.
- 1.4 There will be an impact on some of our customers who currently enjoy free use of electricity will in future pay for the power they consume.

## **2. Recommendation(s) for decision**

- 2.1 **That, the Harbour Committee supports the procurement of an appropriate and cost effective recharging system to include the installation of equipment and software compatible with the Brixham harbour office Building Management System (BMS).**

- 2.2 That, the Executive Head of Tor Bay Harbour Authority, in consultation with the Chairman of the Harbour Committee, be asked to use his delegated authority to fund the electricity recharging system outlined within this report by using earmarked reserves.**
- 2.3 That, the Executive Head of Tor Bay Harbour Authority, be authorised to submit funding bids to the European Fisheries Fund (EFF) and/or the EU INTERREG Programme to help offset the cost of the new electricity recharging system.**

**3. Key points and reasons for recommendations**

- 3.1** Tor Bay Harbour Authority provides numerous electricity supply outlets to harbour users throughout the Brixham harbour estate. Many of these “plug-in” outlets are already served by simple card meters but some are not, including those that provide three phase electricity.
- 3.2** The harbour authority has been aware for some time that electricity costs in the fish market area have been on the increase and this has continued since the completion of the new development.
- 3.3** The increase in costs are due to a number of reasons :-
- i. Refurbishment of all the power supply and delivery boxes around the fishing vessel basin has resulted in electricity outlets being more widely available to the fishing industry.
  - ii. Increases in electricity unit costs from the relevant service provider.
  - iii. The development of the new fish market and office infrastructure which requires utility recharging to a range of tenants by way of a new Building Management System (BMS).
- 3.4** Brixham harbour’s annual electricity bill has risen from £55,412 in 2009/10 to £75,658 in 2010/11 (36.5%) and this cost has to be contained. Investigations have identified that one of the main sources of electricity consumption is fishing vessels plugged into the refurbished power supply boxes.
- 3.5** The introduction of a new recharging system to include the installation of equipment and software compatible with the Brixham harbour office BMS should encourage an overall reduction in electricity consumption. Such a system will also ensure that those who use the supply are charged accordingly and this new income will offset some of the rise in energy costs to the harbour authority.

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

**Kevin Mowat  
Executive Head of Tor Bay Harbour Authority  
Tor Bay Harbour Master**

**Paul Labistour  
Tor Bay Harbour Master**

## Supporting Information

### A1. Introduction and history

- A1.1 Tor Bay Harbour Authority currently supply the Brixham fishing fleet and visiting fishing vessels with water and electricity when they are alongside the Brixham fish Market facility.
- A1.2 Fishing vessels require power alongside for a number of reasons. Namely to provide lighting and power to onboard equipment which range from winches to freezers and navigation instruments. Vessel owners also rely on shore power for contractors to carry out important maintenance and refit programmes for their vessels
- A1.3 When the vessels are at sea an on board power supply is provided through the use of generators and whilst they are alongside in Brixham they normally shut down the generator and hook up to the power supply pillars installed and maintained by the harbour authority.
- A1.4 Most of the fishing vessels currently operating from Brixham harbour do not pay for the supply of electricity and water which over recent years has resulted in inappropriate consumption of electricity. Tor Bay Harbour Authority is committed to ensuring that all harbour users pay for services where possible and we have been working for a number of years on achieving that aim by systematically installing power supply facilities which enable recharging. At the same time the harbour authority has introduced a system of monitoring various supplies to tenants, via the new BMS, and then recharging.
- A1.5 Harbour staff have been working with the Building Management Systems Engineer at the Torbay Development Agency to identify modification options to the current electricity supply system within the fishing vessel basin. Investigations have indicated that it is possible to install a system for monitoring and recharging the supplies being taken by the vessels from the power pillars. The works would be carried out by specialist contractors and the new system would be made up of the following elements :-
- A series of stainless steel mounted enclosures on top of the ten existing electrical supply outlets situated around the basin. Within these enclosures would be located various elements of the control system which would include card readers, with both three phase and single phase power meters, which would enable the electrical supplies to be monitored by the Harbour office.
  - A fibre optic system will be installed through existing ducts on the quayside which will provide the link to software installed on a computer in the Harbour office.
  - A further element of the installation will include swipe readers and the associated swipe cards which will interface with the existing meters.

- A1.6 The installed system would allow the customer to use electricity at any time through this smart system and they can be invoiced later by Harbour office staff.
- A1.7 Preliminary quotes for this specialist system have indicated an approximate cost of £60,000 and the harbour authority would expect the installation to have paid for itself within 5 years.
- A1.8 A number of the tenants at Brixham harbour also receive their power via the harbour authority because they do not have a direct supply from one of the main electricity providers. These tenants are already sub-metered and then recharged through the Harbour office Building Management System. This arrangement also helps to explain the overall increase in the harbour's annual electricity bill.

## **A2. Risk assessment of preferred option**

### **A2.1 Outline of significant key risks**

A2.1.1 There are no significant key risks if the system functions as expected and remains operational. This risk is mitigated by using the expert advice of the Torbay Development Agency's Building Management Systems Engineer during the research, procurement and commissioning phases.

A2.1.2 The purchase costs may be considered too high and the return on investment maybe slower than expected. This risk could be mitigated by the possibility of EFF or INTERREG 4 grant funding.

### **A2.2 Remaining risks**

A2.2.1 The implementation of an electricity recharge system may alienate some fishermen, trawler owners and/or refit contractors. This risk is mitigated by the support received from Brixham Trawler Agents and the impact can be eased by a good communication exercise prior to commissioning.

A2.2.2 Some fishing vessels might revert to using their onboard generators which could prove to be a noise issue. This risk can be controlled by the Harbour Master and if the problem was significant it would be a matter for the Environmental Health officers.

## **A3. Other Options**

A3.1 Do nothing and continue to face rising costs and energy waste.

## **A4. Summary of resource implications**

A4.1 A fully functioning system for recharging electricity and one that is accepted and used properly by the harbour users will have a major resource implication by significantly reducing the harbour authority's energy costs. Consequently this will benefit all harbour users.

A4.2 Preliminary quotes for this specialist system have indicated an approximate cost of £60,000 and the harbour authority would expect the installation to have paid for itself within 5 years.

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

A5.1 The recommendations in this report will impact on environmental sustainability because the new system for recharging for a plug in power supply will encourage harbour users to reduce energy consumption and lower the port's carbon footprint.

A5.2 It is not expected that the recommendations and subsequent installation will have any impact on equalities, crime or disorder.

**A6. Consultation and Customer Focus**

A6.1 This proposal has been discussed at the Brixham Harbour Liaison Forum on many occasions but most recently on the 23<sup>rd</sup> November 2011.

**A7. Are there any implications for other Business Units?**

A7.1 No.

**Appendices**

None.

**Documents available in members' rooms**

None.

**Background Papers:**

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

As built drawings for the MFV Basin refurbishment.

As built drawings for the Brixham Harbour Building Management System