

Salcombe Harbour Board – 28 September 2009**CONSERVANCY DUTIES – MAINTENANCE DREDGING****Report of Salcombe Harbour Master****Statutory Powers: Pier and Harbour Order (Salcombe) Confirmation Act 1954**

Financial Implications: None.

Purpose

To report the outcome of the maintenance dredging conducted in March 2009, including any environmental impact.

This report supports South Hams objectives of good jobs (CP2), retention of the district's character (CP3) and value for money (CP6).

Recommendations

That the Harbour Board RESOLVES to note the report.

Background

1. Batson Creek was dredged, using the Water Agitation Method, with the assent of Natural England, between 5 and 13 March 2009. Prior to giving their assent, Natural England insisted on a comprehensive environmental monitoring. The dredging was conducted by Van Oord and the environmental monitoring was completed by Ecospan Environmental Ltd at an overall cost of just under £70,000.

Outcome

2. The maintenance dredging was completed successfully with Batson Channel being restored to 1 meter below chart datum throughout its length and with a channel 2 metres below chart datum from the main fairway to the RNLI berth. From the pre to post dredge surveys it has been calculated that 3,538 M³ of sediment was removed.
3. Ecological monitoring surveys were carried out immediately prior to the dredging and one month after the project. The results of the diving surveys in the main channel showed no negative effects on the epifauna located there. No areas of sediment deposition or pooling were observed in any of the transects. Differences between the epifauna community assemblages at each location were apparent between the surveys, but these differences were all positive with an increased abundance and diversity of species being observed after the dredging had been completed. Although there was clearly no detrimental effect caused by the dredging, it is thought that the positive changes observed were a result of the onset of spring rather than any beneficial result of the dredging.

4. Similarly, the results from the ecological monitoring of the seagrass beds revealed a degree of change between the surveys. Again this was positive with highly significant increases in percentage cover and plant density being observed. The differences can be attributed to the onset of the growth phase of the seagrass beds at the start of spring.
5. The complete environmental monitoring report can be found at Appendix 1.

Risk Assessment

Risk / Opportunity	Issues / Obstacles	Benefits
Batson Creek silts and the maintained channel depth is not maintained.	Vessels will run aground and Salcombe's reputation will suffer.	Regular maintenance dredging will maintain the channel charted depth.
The Harbour Authority has a duty to conserve the harbour so that it is reasonably fit for use as a port, and a duty of reasonable care to see that the harbour is in a fit condition for a vessel to resort to it.	To fulfil the conservancy duties there are specific requirements to: <ul style="list-style-type: none"> • survey as regularly as necessary the navigable channels; • keep a watch for any changes in the sea bed that will affect the channel. 	Regular hydrographical surveys are required to ensure safe navigation to Batson is maintained, surveys will identify any dredging requirement.
In a worst case scenario it has been suggested that the dredge spoil, having been converted from mud and silt from the estuary bed will settle in the main estuary and cause problems for the fauna.	The process requires careful monitoring to ensure if the worst case scenario comes to fruition, that the process can be halted before any damage is done to the estuary fauna.	There is insufficient data to predict with any certainty where the dredged deposits will end up. However Water Injection Dredging has been well proven in many locations without any problems. Dredging on the ebb tide only should ensure that the spoil leaves the estuary.

Conclusion

6. It is concluded that the Water Agitation Dredging method employed during the Maintenance Dredging of Batson Creek in March 2009 performed very well within the estuary taking into account the sensitive environmental habitat of the SSSI and that there were no negative impact on the flora and fauna of the estuary.
7. Water Agitation Dredging represents a financially and environmentally sustainable method of dredging within the Salcombe and Kingsbridge Estuary for the future.

Ian Gibson
Salcombe Harbour Master

Salcombe Harbour Board
 28 September 2009

Background Documents: Dredging Contract Documentation.

Appendices:

1. Ecospan Environmental Monitoring Report