

Salcombe Harbour Board – 1 February 2010**CONSERVANCY DUTIES – MAINTENANCE DREDGING****Report by Head of Service Salcombe Harbour**

Statutory Powers: Pier and Harbour Order (Salcombe) Confirmation Act 1954

Financial Implications: The cost of maintenance dredging to the Harbour Authority is estimated to be up to £60,000, which would be funded from the Harbour General Reserve.

Purpose

To gain Harbour Board approval to proceed with a project to conduct maintenance dredging within Kingsbridge Basin, the access channel to Winters Boatyard at Lincombe and Batson during winter 2010/11.

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:**

- a. **Proceed with the pre dredge bathymetric surveys and the running of the sediment plume dispersion model required to facilitate maintenance dredging of the Kingsbridge basin, the access channel to Winters Boatyard Lincombe and Batson during the winter of 2010/11.**
- b. **set a budget of £16,000 for the Harbour Authority survey and sediment plume dispersion model costs.**
- c. **enter into an agreement with Winters Marine Ltd for their share of the costs associated with dredging the access channel to Lincombe Boatyard.**
- d. **Refer this report to the Executive with a RECOMMENDATION that the Executive authorise an exemption to Standing Orders Relating to Contracts for this project, on the basis that there is no purpose in tendering or obtaining competitive quotations for the proposed work as there is only one supplier in the market.**

Background

1. At the November 2009 Harbour Board meeting the Board resolved to plan to conduct maintenance dredging over the winter of 2010/11 SH 36/09.

2. Following the extremely successful dredging in 2009, utilising the Water Injection method, it is proposed to utilise this method again in any future maintenance dredging projects as it has proved to both environmentally sustainable and financially viable. Having invested heavily in the creation of a sediment plume dispersion model and environmental monitoring, it was hoped that any future maintenance dredging projects, utilising water injection/agitation, would not require such an extensive and expensive environmental monitoring package.
3. Initial meetings have been held with Natural England to ascertain the level of environmental monitoring they would accept within their assent to dredge within the Site of Special Scientific Interest (SSSI). Having gained confidence in the silt deposition model and the water injection/agitation method, Natural England have indicated that if the silt deposition model does not forecast any excessive silt deposition problems as a result of the dredging, they will not require any additional environmental monitoring of the dredging operations. However they have indicated that, the model as it currently exists was developed with very detailed data relating to the maintenance dredging of Batson Creek, ie data collected from the Blackstone at the harbour entrance north to Ox Point in the Bag. They would therefore like more refined data entering into the model to more accurately predict the silt deposition from dredging at the head of the estuary. There will be an additional cost to collect and enter this data, but overall the cost to the Harbour Authority of the pre and post dredge surveys, sediment sampling for contaminants, particle size analysis and the preparation of a dredging impact assessment can be contained within a budget of £16,000.
4. The cost of the actual dredging is at this stage unknown, it being dependent on the quantities of silt that require dredging. These quantities will remain unknown until a pre-dredge survey is completed and a decision is made, using the survey, to define the limit extent and depth of dredging that the Harbour Authority need and wish to undertake. The dredger will be contracted on a fixed price for mobilisation and demobilisation with an additional tidal rate for each tide the dredger operates. This way the overall cost of the dredging can be contained by limiting the number of tides it is contracted to operate. Because the dredger will be operating in tidally constrained waters, the length of time it will be able to operate will be limited, but it is estimated that it should be able to remove approximately 350 m³ on each tide. At this stage an outline budget of £44,000 is proposed for the dredging required by the Harbour Authority.

Way Ahead

5. The maintenance dredging project was broken down into four distinct phases in the report presented on 2 November 2009:
 - Phase 1 - Viability and Planning
 - Phase 2 – Preparation for Maintenance Dredging
 - Phase 3 – Maintenance Dredging
 - Phase 4 – Post Dredge Recovery
6. **Phase 1 - Viability and Planning**

	Task	Progress	Completed
1/01	– Identification of a suitable contractor	Contract Exemption from Standing Orders has been raised for Van Oord and Ecospan	24 Dec 09
1/02	– Liaison with Natural England to: <ul style="list-style-type: none"> ○ Gain Assent for maintenance dredging ○ Agree environmental monitoring requirements 	– Initial Meetings held, Assent will be dependant on the outcome off the running of the sediment plume dispersion model – Environmental monitoring requirements will be discussed once model has been run	12 Dec 09
1/03	– Liaison with berth holders to identify period when berths will be removed	– Current proposal would be February 2010	
1/04	– Board approval of Maintenance Dredging Budget	– This report is requesting release of £16k to progress to next stage	
1/05	– Form an agreement with Winters Marine Ltd	– Agreement reached in principal. – Formal agreement to be drawn up.	
1/06	– Award of Environmental Monitoring Contract		

7. Phase 2 – Preparation for Maintenance Dredging

	Task	Progress	Completed
2/01	– Bathymetric Surveys: <ul style="list-style-type: none"> ○ Kingsbridge ○ Lincombe ○ Batson – Identify dredge limits and quantities		
2/02	– Silt Sampling and analysis		
2/03	– Modelling of silt deposition		
2/04	– Discussions with Natural England, once silt deposition model results available to agree level of environmental monitoring required and issue of Assent from Natural England to proceed with dredging.		

8. Phase 3 – Maintenance Dredging

	Task	Progress	Completed
3/01	– Award of Maintenance Dredging Contract		
3/02	– Removal of all moorings and mooring back chains		
3/03	– Maintenance Dredging		

9. Phase 4 – Post Dredge Recovery

	Task	Progress	Completed
4/01	– Post Dredge Bathymetric Surveys: <ul style="list-style-type: none">○ Kingsbridge○ Lincombe○ Batson		
4/02	– Relay mooring chains		

10. To date, meetings have been held with a potential dredging contractor, and environmental monitoring and hydrological survey contractor, Natural England, Winters Marine and the AONB Estuaries Officer. The consensus seems to be that the maintenance dredging project is physically possible and environmentally acceptable, with some caveats at this stage.
11. A Contract Exemption from Standing Orders has been raised to enable the dredging contract to be awarded to Van Oord and the environmental monitoring contract to be awarded to Ecosopan. This will ensure that the knowledge gained during the dredging of Batson Creek can be capitalised upon. Furthermore, Van Oord is the only company that offer water injection dredging where low pressure high volume water is used. The fact that Natural England have confidence in both companies, having worked closely and successfully with them earlier in 2009 should not be underestimated.
12. The next step would be to undertake the sediment sampling to ascertain if the sediment is contaminated or not and therefore if dredging can be undertaken.
13. If the sediment is not contaminated, the subsequent step will be to commission the bathymetric survey, which can then be used to more accurately estimate the quantities to be dredged and therefore the cost of the dredging and provide the additional data required for the silt deposition model to more accurately predict if there is likely to be any excessive silt deposition in any part of the estuary that could adversely affect the flora and fauna or other navigation channels.
14. This report seeks Board approval to proceed up to but not including Phase 3.

Financial Implications

15. Winters Marine Ltd has agreed in principal to contribute to the survey, monitoring and dredging costs, a formal agreement will be required. Winters have agreed to pay for:
- the bathymetric survey of the harbour in the vicinity of the access to Lincombe Boatyard, extending from the Saltstone south to Tosnos Point
 - half of the cost of running the sediment plume dispersion model
 - half the cost of taking analysing and incorporating the new particle size data into the plume dispersion model
 - The cost of taking and analysing the required sediment samples for contamination from the access channel to Lincombe Boatyard
 - Half the cost of preparing the dredging impact assessment
 - One third of the mobilisation and de-mobilisation costs for the dredging contractor.
 - The cost of all dredging operations associated with dredging the access channel to Lincombe Boatyard.
16. The Harbour Authority will fund:
- the bathymetric survey of the harbour in the Kingsbridge Basin and Batson Creek
 - half of the cost of running the sediment plume dispersion model
 - half the cost of taking analysing and incorporating the new particle size data into the plume dispersion model
 - The cost of taking and analysing the required sediment samples for contamination from the Kingsbridge Basin and Batson Creek
 - The additional cost of incorporating additional bathymetric and current flow data to improve the confidence of the model in the Kingsbridge Basin.
 - Half the cost of preparing the dredging impact assessment
 - Two thirds of the mobilisation and de-mobilisation costs for the dredging contractor.
17. Based on the experience gained during the Batson Channel maintenance dredging project and the initial discussions, the outline budget planning cost is £60,000. The detailed costs will not be known until the bathymetric survey has been completed, the model run and discussions with Natural England, the Dredging Contractor, the environmental monitoring contractor have been taken to the next stage.
18. It is proposed to finance this project from the Harbour's General Reserve, which would be reduced to approximately £30,000 at the end of the financial year 2010/11.

Risk Assessment

Risk / Opportunity	Issues / Obstacles	Benefits
Kingsbridge Basin silts.	Vessels will run aground and access to Kingsbridge is reduced, being more and more tidally constrained.	Regular maintenance dredging will maintain the channel charted depth.

<p>The Harbour Authority has a duty to conserve the harbour so that it is 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.</p>	<p>To fulfil the conservancy duties there are specific requirements to:</p> <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. 	<p>Regular bathymetric surveys are required to identify any dredging requirement.</p>
<p>Proceeding with the pre dredge surveys and running the sediment plume dispersion model.</p>	<p>Should the model predict unexpected deposition, the project viability will have to be reviewed.</p>	<p>If the results are as expected there will be no requirement for any further environmental monitoring.</p>

Conclusion

19. Initial discussions with Natural England and the prospective dredging contractor have been extremely positive. To progress this project the Board need to agree to expend funds to conduct the surveys required to inform the next stage of the dredging planning.

Ian Gibson
Harbour Master

Salcombe Harbour Board
1 February 2010

Background Documents:
None