



Assessing the viability of sustaining, restoring, enhancing, or creating saltmarsh and mudflats through sediment management measures, including the reuse of maintenance dredge arisings, within the Hamble Estuary.

River Hamble Harbour Authority

Project Brief

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1 Background

The River Hamble Harbour Board has approved an investigation into whether there is a need or potential to undertake a project which would benefit the estuary's habitats and improve sediment management, ideally through the reuse of the Estuary's maintenance dredge arisings.

The project has the following drivers:

- i. Ensuring continued compliance by River Hamble Harbour Authority (RHHA) (and other regulating authorities) with the Habitat Regulations through ongoing evaluation of the River Hamble maintenance dredging 'Baseline Document'. The permitting of third party maintenance dredging must not adversely impact features of the designated sites, and should concurrently seek opportunities for beneficial reuse of dredge arisings. In addition, RHHA has legal obligations to take reasonable steps to conserve and enhance designated sites and protect water quality.
- ii. Concern expressed by local interest groups that maintenance dredging may be contributing to the retreat of the saltmarsh and mudflat areas.
- iii. Enquiries received from local landowners regarding their options and consent requirements for reducing or halting the retreat of their saltmarsh landholdings.
- iv. Enquiries from dredging operators regarding options for beneficial reuse of arisings.

2 Project Definition

2.1 Objective, Deliverable & Acceptance Criteria

The drivers set out in the background above lead to the following objective:

2.1.1 Objective

- I. **Ascertain whether it would be potentially viable to sustain, restore, enhance or create Hamble Estuary saltmarsh and mudflats through sediment management measures, including beneficial reuse of dredge arisings.**

This objective is to be assessed against the following elements:

- a) The extent to which Hamble's saltmarsh and mudflats are reducing (and may continue to reduce) in area and habitat quality, and the potential need for sustainment, restoration, enhancement or creation.
- b) Factors contributing to any reduction in area or quality of the Hamble's saltmarsh and mudflat habitats, and the extent to which this may or may not be related to dredging activities within and outside the Hamble.
- c) Type, sources, and relative quantities from each source of the sediment which deposits in the marinas.

- d) Whether dredging may contribute to sediment draw-down from the mudflats and saltmarshes, and if so to what degree.
- e) Whether the maintained dredge basins reduce the sediment supply onto Hamble Estuary saltmarsh and mudflats, and if so to what degree.
- f) The suitability of Hamble Estuary's maintenance dredge arisings for reuse, including in beneficial disposal and habitat management.
- g) The suitability of Hamble mudflats and saltmarshes for direct or indirect reception of maintenance dredge arisings for habitat sustainment, restoration, enhancement or creation.
- h) The suitability of Hamble mudflats and saltmarshes for sediment management techniques other than the reuse of dredged material.
- i) Potential environmental benefits of the disposal of maintenance dredge arisings and other sediment management techniques on the Hamble Estuary system and its margins.
- j) Potential adverse environmental impacts of the disposal of maintenance dredge arisings and other sediment management techniques on the Hamble Estuary system and its margins.
- k) Potential for disposal at one site to cause increased accretion at other locations (e.g. marinas, navigable channels or neighbouring habitats).
- l) Potential sources of funding for any subsequent programme of research and/or practical projects.

2.1.2 Deliverable

- i. Production of a report, based on the findings of a desk-top study, setting out conclusions regarding viability and recommendations.
- ii. Report to be delivered within agreed timescales and within budget.

2.1.3 Acceptance Criteria

- i. Report to be endorsed by the Project Steering Group and accepted by the Harbour Board.

2.2 Scope

2.2.1 Inclusions –

- i. A comprehensive literature and data review, including of relevant sediment management and beneficial reuse projects.
- ii. Collation and analysis of existing information which has specific relevance to the elements set out in 2.1 above.
- iii. Identification of potential areas of contra-indications in the conclusions of existing research findings.

- iv. A firm indication of the viability of a habitat management project reusing dredged material sourced either within or outside the Hamble.
- v. A firm indication of the viability of a habitat sustainment, restoration, enhancement or creation project through the use of sediment management techniques other than reuse of dredged material.
- vi. If either or both of points iv and v above are deemed practically viable, make recommendations to inform next steps (1b, 2, 3, and 4 in Paragraph 5 below) including indications of likely costs.
- vii. In the event that there is insufficient data available to justify a firm indication of viability, make specific recommendations for further research required to ascertain viability.

2.2.2 Exclusions

- i. No new field research to be undertaken at this stage.
- ii. No unsubstantiated assumptions.

2.3 Assumptions

- i. Access to relevant available information will be permitted by third parties and provided free of charge or within budgeted costs.

2.4 Proposed Project partners and stakeholders.

- Project Steering Group. Representatives of:
 - River Hamble Harbour Authority
 - Natural England
 - Dredging/industry specialists
 - University of Southampton
- Other stakeholders:
 - Environment Agency
 - Marine Management Organisation
 - Local Authorities
 - SCOPAC/Channel Coastal Observatory
 - Academics
 - Environmental Consultancies
 - Landowners (including HCC)
 - Marina and Boatyard Operators
 - Dredging Companies
 - Local Interest Groups

2.5 Known Risks

- Data and/or literature are not made available.
- Data or literature incurs an excessive fee.
- Appointed consultant fails to adequately answer the brief.

2.6 Approach

This project brief covers Stage 1 of a potentially larger project. Stage 1 relates to the identification of relevant sources of information, associated analysis and production of a report. Potential future stages, which are dependant of the findings of the viability report, are set out at 5 below.

3 Outline project plan

3.1 Provisional Timescales

Award of contract to consultant by August 2015

Six months to complete the desk-top study.

3.2 Provisional Resource requirements

- Consultant
- RHHA officer input
- Consultees' time
- Data and reports

3.3 Provisional Cost estimates

Quotes will be sought and the results will be provided at the next Harbour Board meeting.

4 Customer quality expectations

The output of this project is to be a formal technical report provided in 2 x hard copy and electronically. It must fully meet the project objectives and will be subject to quality assurance by the Project Steering Group. It is likely to be made available in the public domain in due course.

5 Next stage plan

The findings of the Stage 1 report will determine whether the project proceeds to later stages which are likely to be:

- (Stage 1b - Additional research if required to ascertain viability)
- Stage 2 - Scope and design a practical pilot project
- Stage 3 - Deliver pilot project (consents through to construction)
- Stage 4 – Monitoring and analysis of results
- Stage 5 - Consideration of a longer term approach to sediment and habitat management within the Hamble Estuary.

Status of Project Brief

Approved by the Harbour Board.