

**Note**

Shetland Islands Council  
**Toft Ferry Terminal Capital  
Dredging**  
Best Practicable Environmental Option  
Assessment for Toft Dredge Material

Project No.: UKNO0398  
Document No.: 1229389051  
Version 1  
Revision 1

Prepared by **Reda**  
Verified by **Reda**  
Approved by **Red**

## 1 Introduction

This note presents an assessment of the Best Practicable Environmental Option (BPEO) for the disposal of dredge material arising from the proposed quay extension and associated capital dredging of Toft Harbour on Shetland.

Shetland Islands Council is seeking a Marine Licence for capital dredging within Toft ferry terminal area to support the expansion of the fishing landing quay at this location.

The estimated dredging volume is 11,800wt and dredging will not exceed 2m in depth.

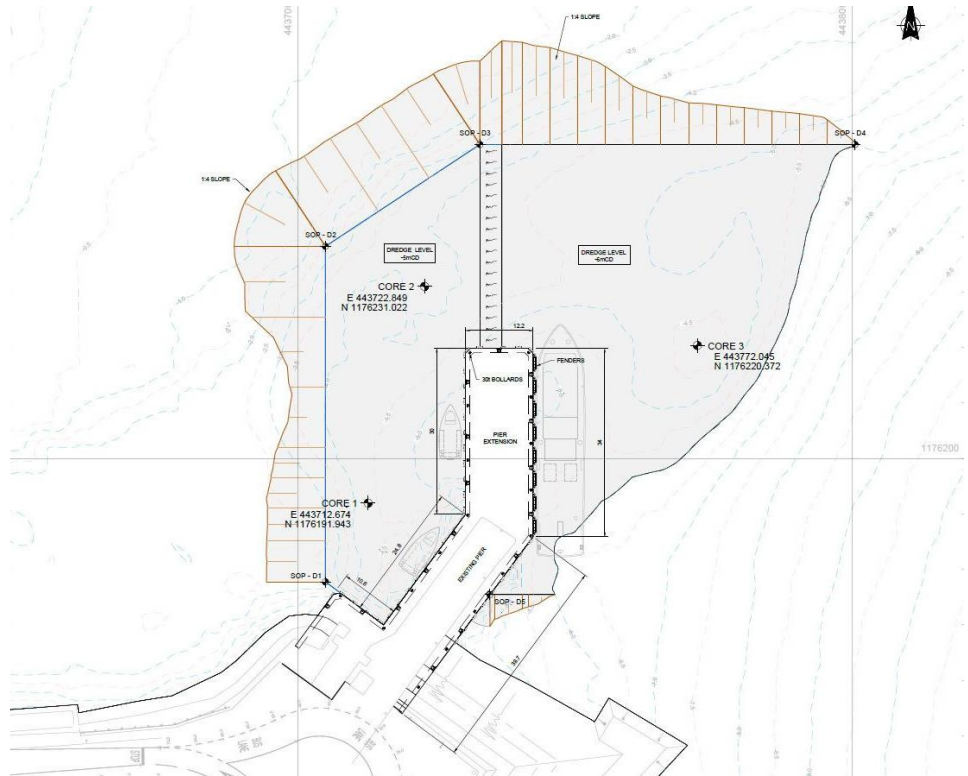
This BPEO is submitted together with an application for disposal at sea to Marine Scotland Licensing and Operations Team, as required by the Marine (Scotland) 2010 Act.

The dredge area is shown in Appendix 1.

## 2 Material to be disposed

The proposed dredging is within the inner harbour (to be dredged to 5m below CD) and outer harbour (to be dredged to 6m below CD).

Core samples were taken from three locations within the proposed dredge zone. The number of sample locations were agreed in advance with Marine Scotland.



All analysis was completed by a laboratory accredited to the ISO17025 standard for marine sediment analysis, and also engages in inter-comparison analysis exercises such as QUASIMEME. The LOD and sensitivity requirements were met as per those set out in the CSEMP Green Book. No exceedances of Cefas Action Level 1 were recorded. Full sample results are provided in support of the Marine Licence application.

The material is comprised of sand with some gravel and limited silt.

Dredging will be undertaken using a backhoe dredger, which is limited to the size of Toft harbour and the dredge area.

### 3 Options for disposal of dredged material

The Toft ferry terminal is located on the north eastern side of Shetland's main island and is a key location in the inter-island ferry transport network. The work proposed at the Toft terminal will be to expand and enhance the attached fishing jetty to allow the safe access for local fishing vessels, which is not currently provided by the existing quay.

There are currently two potential options for disposal of the dredge arising from the Toft Ferry Terminal capital dredge works.

Option 1 – Removal to land disposal site

The current onshore disposal option is for the dredged to be transported from the dredge area and placed ashore where mobile plant would be used to move the

material to the site compound and stockpiled for 1 to 2 days to allow water to drain out prior to being reloaded into 20t lorries for depositing at a local licenced land fill close to Scatsta airport (approximately seven miles away).

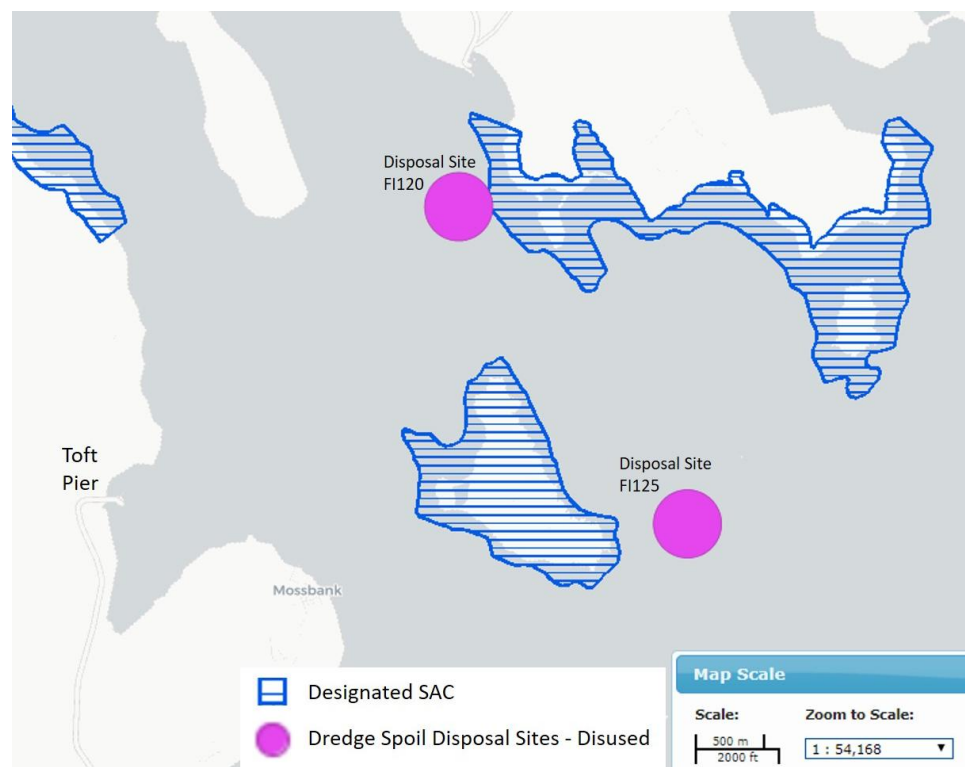
As it is located at a road head there very limited option for disposal ashore (potential land fill) via the ferry terminal road way will need to be used to transport the material to the onshore land disposal site. This will likely have an impact on the local road network during the period of the works and will require approximately 500 lorry loads to transport the approximately 5,000m<sup>3</sup> of dredge material.

#### Option 2 – Marine disposal option (preferred)

Disposal at sea is considered to be the most appropriate option for the capital dredge from Toft as it will have significantly less impact on the local community, transport network and will reduce the time to undertake the entire works process. The offshore disposal site (FI120) is shown in Figure 1. At the closest point, the disposal site is approximately 3km to the north west of the dredge area.

The site is currently classified as disused; however this classification is due to lack of use rather than environmental concerns or capacity constraints. Consultation with SNH is ongoing.

Figure 1 (Toft disposal site FI 120)



(Source: Marine Scotland National Marine Plan Interactive)

An underwater video survey using a Remotely Operated Vehicle (ROV) was undertaken in January to determine the bed material at the disposal site. This comprised of video survey along a transect running north to south in the upper half of the dredge disposal zone..

The ROV survey indicated the sea bed in this area is predominantly hard substrate, shell, with small pockets of coarse sediments located within depressions in the hard substrate. Some mobile sand waves were present in the norther section of the disposal zone ROV survey, indicating the presence of soft, mobile sediment in this area. This area is unlikely to support any marine priority species noted on the SNH guidance document and therefore should be suitable for this short term sea disposal option.

## 4 Environmental considerations

Both the dredge area and Toft disposal site are located outside of the Yell Sound Coast SAC and as noted within the Pre-application scoping report, no impacts have been identified from either the construction activities or dredging operations.

The dredging and disposal will be undertaken using a single vessel for a period of approximately one to two weeks and it is currently understood that the disposal zone is suitable for the identified dredge material and would not lead to any significant change in baseline conditions. As a result no adverse effects on the integrity of the Yell Sound Coast SAC are predicted from this work, if disposal option 2 was utilised by the project.

## 5 Conclusion

Both disposal options currently being considered for the potential disposal of the dredge material from Toft have no direct beneficial use and therefore the project would like to retain both options as potential pathways for disposal of the capital dredge arising as part of the dredge disposal licence application.



## 6 Appendix A