

REPORT

Holyhead Waterfront Regeneration Scheme ES

Appendix 6.3: Cefas Sample Plan

Client: Conygar Holyhead Ltd.

Reference: PB8908-RHD-ZZ-ZZ-RP-Z-0034

Status: Final/P01.01

Date: 14 June 2021



MARINE AND COASTAL ACCESS ACT (2009) PART 4

**FORMAL REQUEST FOR PRE-APPLICATION SAMPLING ADVICE FOR CAPITAL DREDGE OF
HOLYHEAD WATERFRONT, NEWRY BEACH, HOLYHEAD BY ROYAL HASKONINGDHV
REF: SP2003**

From: Jemma Anne Lonsdale
Cefas, Lowestoft Laboratory
Date: 19th March 2020
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To: Jessica Ware - NRW (by e-mail)

1. With reference to your request for advice regarding pre-application sampling and analysis for the capital dredge of Holyhead Waterfront, Newry Beach Area by Royal HaskoningDHV (on behalf of Conygar Holyhead Limited), please find my advice below and a sample plan form attached.
2. Cefas provide advice to NRW on sampling plans for marine licence applications to ensure that there is sufficient evidence on sediment quality to undertake an assessment of potential impacts on the marine environment prior to issuing a Marine Licence. This may include characterisation of dredge areas or of areas where other activities are likely to lead to the mobilisation of sediments. To enable us to provide that advice, and to fulfil the UK's obligations under International Conventions in respect of disposal at sea, and the requirements of the Marine and Coastal Access Act where applicable, we require sediment samples to be provided for analysis.

Description of the project

3. This is an application to capital dredge up to 100,000m³ of material, down to 2.5m depth, from Holyhead Waterfront (Newry Beach Area). The material is to be disposed of at Holyhead North (IS043). The material is likely a composition of silt and clay.

Sampling required

4. In accordance with the recommendations of the OSPAR Guidelines for the Management of Dredged Material¹, samples should be taken to provide a good representation of the volume of material to be dredged. The distribution and depth of sampling should reflect the size and depth of the area to be dredged, the amount to be dredged and the expected variability in the horizontal and vertical distribution of contaminants. We also use the OSPAR guidelines to inform our advice on sampling requirements for other activities which are likely to lead to the mobilisation of sediments. Based on the information submitted (as described above), I am of the opinion that the following sampling and analysis is required.
5. The applicant has proposed four sample sites across the dredge area (VB-01; VB-03; VB-04 and VB-06); however I also recommend VB-10 is also subsampled for chemical analysis to ensure the

¹ <https://www.ospar.org/documents?d=34060>

samples are representative of the material to be dredged (see Figure 1). This is in keeping with the guidelines set by OSPAR, which recommend between 4 to 6 stations for dredges between 25,000 to 100,000m³.

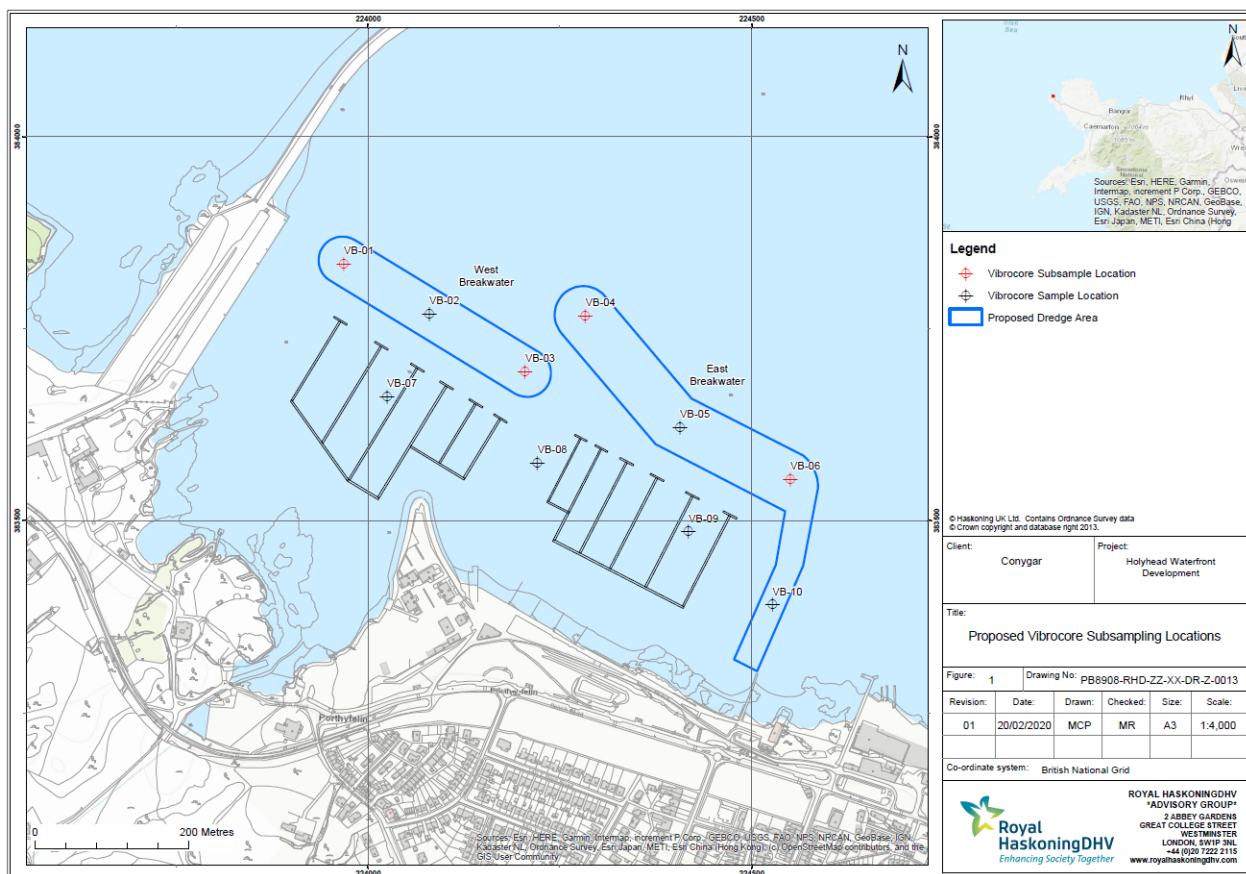


Figure 1. Map depicting proposed sample locations and dredge area

6. Samples must be taken at the surface (0 metres depth) in the locations shown on the sample map attached and at 1 metre depth intervals to a maximum dredge depth of 2.5 metres (or the maximum depth where this is below 2.5m) indicated on the sample plan form attached.
7. The following information must be included with any samples (irrespective of the laboratory to be used for analysis):
 - Clearly labelled samples;
 - Completed sample position sheet, including the latitude and longitude (decimal degrees and the projection i.e. WGS84) of each location and if core samples are required the depth at which each sample is taken;
 - Details of the method of sampling;
 - A map/chart detailing the sample locations.
8. Surface samples should be taken from the upper layer of in-situ sediment using a non-metallic / stainless steel scoop. To maintain the integrity of the samples please ensure that they are FROZEN



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and remain in the freezer until they can be dispatched. Please ensure the samples are dispatched in a cool box - the cool box should not be placed in any other packaging.

9. Samples should be kept until the licences have been issued in case any further testing is required.

Analysis Required

10. As far as I am able to determine there has been no analysis undertaken of marine sediment in the vicinity of the proposed dredge area and therefore, I would advise that the following analyses are undertaken to support any application for dredging:

- Trace metals (Cd, Cr, Cu, Hg, Ni, PB, Zn) + arsenic (As)
- Organotins
- Total Hydrocarbons (THC)
- Polycyclic Aromatic Hydrocarbons (PAHs),
- Polychlorinated Biphenyls (PCBs)
- Particle Size Analysis (PSA)

11. From a cursory view of the dredge area on Google Earth, there does not appear to be a source of Brominated flame retardants (PBDEs) or Organochlorine pesticides (OCs) therefore I have not recommended these. If, however, NRW are aware of any contamination concerns related to these chemicals or sources, please do let me know and I'll be happy to review the sample plan.

12. Further details can be found in Annex 1 (sample plan form).

13. I recommend that the analysis is carried out following established specific dredge material testing methods. A list of laboratories which are approved for the suggested determinands is available at <https://naturalresources.wales/permits-and-permissions/marine-licensing/sediment-sampling-and-analysis/?lang=en>. I consider that any results following these methods would be acceptable to support a marine licence application to NRW.

14. To ensure consistency between laboratories it is expected that all analysis required will be undertaken from the same sample container. It is the applicant's responsibility to ensure that sufficient sample is collected, in a single container, for all the analysis required. Where Cefas are analysing the samples, appropriate containers will be provided.

Conclusion

15. This advice is based solely on the information provided in the pre-application request, and the sampling and analysis described will be adequate to inform a licence application that mirrors the information in this pre-application request, providing that no further issues come to light and an application is submitted in a suitable time-frame. Cefas will take a pragmatic approach to the requirement of repeat samples in relation to projects where works have not commenced however due to the dynamic nature of the marine environment and the potential for changes in the quantity and quality of sediments, there may be a need for some sediments to be re-sampled and analysed if the project has not commenced within two years of the time of sampling.

16. Where long term licences for maintenance dredging will be applied for, additional sampling and analysis may be required throughout the duration of the proposed licence term in order to comply with the OSPAR guidelines. Required sampling will be stipulated in any granted licence.



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17. Cefas reserves the right to request further sampling/analysis should any submitted Marine Licence application differ from that information submitted in this pre-application request. Any future application must clearly state this pre-application reference number.

18. A quote for Cefas to complete the required sampling is provided below.

Jemma-Anne Lonsdale
Senior Advisor (Sustainable Marine Management)

<i>Quality Check</i>	<i>Date</i>
Charlotte Clarke	19/03/2020



Annex 1

Sample plan

Sample	Station	Metals	Organotins	THC	PAHs	PCBs	PDBEs	OCs	PSA
1	VB-01, 0m	☒	☒	☒	☒	☒	☐	☐	☒
2	VB-01, 1m	☒	☒	☒	☒	☒	☐	☐	☒
3	VB-01, 2m	☒	☒	☒	☒	☒	☐	☐	☒
4	VB-01, 2.5m	☒	☒	☒	☒	☒	☐	☐	☒
5	VB-03, 0m	☒	☒	☒	☒	☒	☐	☐	☒
6	VB-03, 1m	☒	☒	☒	☒	☒	☐	☐	☒
7	VB-03, 2m	☒	☒	☒	☒	☒	☐	☐	☒
8	VB-03, 2.5m	☒	☒	☒	☒	☒	☐	☐	☒
9	VB-05, 0m	☒	☒	☒	☒	☒	☐	☐	☒
10	VB-05, 1m	☒	☒	☒	☒	☒	☐	☐	☒
11	VB-05, 2m	☒	☒	☒	☒	☒	☐	☐	☒
12	VB-05, 2.5m	☒	☒	☒	☒	☒	☐	☐	☒
13	VB-06, 0m	☒	☒	☒	☒	☒	☐	☐	☒
14	VB-06, 1m	☒	☒	☒	☒	☒	☐	☐	☒
15	VB-06, 2m	☒	☒	☒	☒	☒	☐	☐	☒
16	VB-06, 2.5m	☒	☒	☒	☒	☒	☐	☐	☒
17	VB-10, 0m	☒	☒	☒	☒	☒	☐	☐	☒
18	VB-10, 1m	☒	☒	☒	☒	☒	☐	☐	☒
19	VB-10, 2m	☒	☒	☒	☒	☒	☐	☐	☒
20	VB-10, 2.5m	☒	☒	☒	☒	☒	☐	☐	☒

Comments:

Stations should be evenly distributed across the dredge area

