



Immingham Green Energy Terminal

TR030008

Volume 7

7.10 Sampling Plan

Planning Act 2008

Regulation 5(2)(q)

Infrastructure Planning (Applications: Prescribed
Forms and Procedure) Regulations 2009 (as
amended)

Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Immingham Green Energy Terminal

Development Consent Order 2023

7.10 Sampling Plan

Regulation Reference	APFP Regulation 5(2)(q)
Planning Inspectorate Case Reference	TR030008
Application Document Reference	TR030008/APP/7.10
Author	Associated British Ports Air Products BR

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Revision 1	21 September 2023	DCO Application



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Case reference: SAM/2022/00110

6th February 2023

Dear [REDACTED]

Thank you for your request for a sample plan. Please see the attached documents for our full response.

Your feedback

We are committed to providing excellent customer service and continually improving our standards and we would be delighted to know what you thought of the service you have received from us. Please help us by taking a few minutes to complete the following short survey (<https://www.surveymonkey.com/r/MMOMLcustomer>).

Yours sincerely,

[REDACTED]



Marine
Management
Organisation

...ambitious for our
seas and coasts





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Our reference

[Redacted]

By email only

06 February 2023

Dear [Redacted]

SAMPLE PLAN ADVICE FOR SAM/2022/00110 – IMMINGHAM GREEN ENERGY TERMINAL

Thank you for your request to the Marine Management Organisation (MMO) for a sample plan to inform a future capital dredge application. Please see our response below and any attachments, which has been compiled following consultation with our technical advisors The Centre for Environment, Fisheries and Aquaculture Science (Cefas).

Your feedback

We are committed to providing excellent customer service and continually improving our standards and we would be delighted to know what you thought of the service you have received from us. Please help us by taking a few minutes to complete the following short survey (<https://www.surveymonkey.com/r/MMOMLcustomer>).

If you require any further information, please do not hesitate to contact me using the details provided below.

Yours Sincerely,

[Redacted Signature]

Marine Licensing Case Officer

D
E

[Redacted Contact Details]

Appendix 1 – MMO Sampling Plan

Copies to - Emma Mungo at [Redacted]@abpmer.co.uk





Marine Management Organisation

1. Description of the project

- 1.1. This advice relates to sampling to support the submission of a licence application for the construction a new green energy terminal within and adjacent to the Port of Immingham, known as Immingham Green Energy Terminal (IGET). This document contains sampling advice herein for the for the capital dredge of material from Western Berth, Immingham Green Energy Terminal (IGET), River Humber, by Associated British Ports.
- 1.2. Capital dredging will take place at the Western Berth and is expected to raise 100,000 cubic metres (m³). The berthing area with appropriate side slopes would be dredged to a maximum of 16m below Chart Datum (CD) with the proposed dredge method to be via a combination of Trailer Suction Hopper Dredging (TSHD) and backhoe dredging.
- 1.3. Dredge material would be disposed to HU060 (Humber 3A) and/or HU056 (Holme Channel Deep) licenced disposal sites.

2. Sampling required

- 2.1. In accordance with the recommendations of the OSPAR Guidelines for the Management of Dredged Material, 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. The MMO also uses 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), the following sampling and analysis is required.
- 2.2. In consideration of the volume details of the proposed dredge, the MMO advises that **7 sample sites** will be required from across the dredge area to provide adequate spatial coverage. This is in line with the minimum guidelines set by OSPAR, which recommends between 7 and 15 sample

station locations for volumes between 100,000 cubic metres (m³) and 500,000m³.

- 2.3. Samples should be taken at the surface (0 metres depth) and at 1 metre (m) depth intervals to a maximum of 4m, as indicated on the sample plan form attached in Appendix 1.
- 2.4. The MMO notes that the applicant has provided information from sediment sampling results of recent sampling undertaken within the vicinity of the dredge area. The sampling was carried out in October 2021 and that these results indicate unexpectedly elevated levels of contamination at the 4m depth, additional samples may be requested from greater depths.
- 2.5. Sample locations should be evenly spaced across the proposed areas to be dredged and samples must be representative of the material to be dredged (see attached sample plan in Appendix 1).
- 2.6. 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.
- 2.7. 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** 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.
- 2.8. Samples should be kept until the licence determination has been made in case further testing is required.

3. Analysis Required

- 3.1. Sample analysis was conducted previously in October 2021 (SAM/2021/00053) and ten sample sites, at depths of 0m and 1m depth intervals to a maximum depth ranging from 2.7 – 4.8m, were analysed for trace metals, organotins, PAHs, THC, PCBs, PBDEs and particle size distribution.
- 3.2. Trace metals, PAHs, THCs and PCBs showed levels exceeding AL1 during analysis in 2021. No exceedances of AL1 were observed for organotins or PBDEs, with the majority of results for these determinants being below the limits of detection.

3.3. In light of the information provided and knowledge of the past industrial land usage of this site analysis is, on this occasion, required for:

- Trace Metals (including arsenic)
- Polycyclic Aromatic Hydrocarbons (PAHs),
- Polychlorinated Biphenyls (PCBs)
- Organochlorine pesticides (OCs)
- Particle size analysis (PSA).

3.4. Further details can be found on the attached sample plan form in Appendix 1.

3.5. To ensure consistency between laboratories it is expected that all analysis required will be undertaken from the same sample container.

4. Laboratories

4.1. You have now obtained an approved sample plan from the MMO. Should you now require sample analysis for chemical, physical and biological determinands in support of a regulatory approval such as marine licence condition compliance, you have a choice between using a provider of your choice listed at the link below:

<https://www.gov.uk/guidance/marine-licensing-sediment-analysis-and-sample-plans>

This list indicates the laboratories which have been validated to undertake sediment analysis, as well as the specific determinands which they are validated to analyse. The MMO will not accept results from laboratories which have not been validated.

4.2. Irrespective of which validated laboratory is used to undertake sediment analysis, results accompanying a marine licence application or provided as a marine licence condition return must be submitted to the MMO on the correct results template (approved templates are available via the link in 4.1 above).

4.3. If the analysis is to be undertaken by a laboratory other than those validated by the MMO, that laboratory must meet the qualifying criteria as set out in the MMO guidance and become a validated laboratory (<https://www.gov.uk/guidance/marine-licensing-sediment-analysis-and-sample-plans>).

4.4. It is your responsibility to ensure that appropriate analysis is commissioned and supplied in support of a regulatory approval. However, if you have any queries about the process or would like clarity on this, please do not hesitate to contact the MMO by emailing:
marineconsents@marinemanagement.org.uk

4.5. Due to the coronavirus pandemic, some laboratories are experiencing delays in analysing certain chemicals for sediment samples. Please be mindful of

this when considering project requirements and engage with your chosen validated laboratory in order to have a clear understanding of predicted timeframes.

5. Conclusion

- 5.1. This advice is based solely on the information provided in the sample plan 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. The MMO will take a pragmatic approach to the requirement of repeat samples in relation to projects where works have not commenced. Samples taken at depth will remain a valid consideration for decision-making from the time they are taken. 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 surface sediments to be re-sampled and analysed if the project has not commenced within two years of the time of sampling.
- 5.2. Where long term licences for maintenance dredging will be applied for, additional sampling and analysis will need to be undertaken throughout the duration of the proposed longer licence term in order to comply with the OSPAR guidelines.
- 5.3. The MMO 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 or return must clearly state this pre-application reference number.

APPENDIX 1

Sample Plan

Sample	Station	Metals	Organotin	THC	PAHs	PCBs	PDBEs	OCs	PSA
1	Site A - 0m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Site A - 1m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Site A - 2m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	Site A - 3m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	Site A - 4m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6	Site B - 0m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7	Site B - 1m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8	Site B - 2m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9	Site B - 3m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10	Site B - 4m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
11	Site C - 0m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
12	Site C - 1m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
13	Site C - 2m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
14	Site C - 3m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
15	Site C - 4m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
16	Site D - 0m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
17	Site D - 1m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
18	Site D - 2m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
19	Site D - 3m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	Site D - 4m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
21	Site E - 0m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
22	Site E - 1m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
23	Site E - 2m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
24	Site E - 3m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
25	Site E - 4m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
26	Site F - 0m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
27	Site F - 1m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
28	Site F - 2m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
29	Site F - 3m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
30	Site F - 4m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
31	Site G - 0m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
32	Site G - 1m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
33	Site G - 2m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
34	Site G - 3m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
35	Site G - 4m	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Comments:

Stations should be evenly distributed across the dredge area