



Supplementary Environmental Information

Materials Management Plan

Supplementary Information EX 7.7

June 2012

Revision: 0

Shadbolt Environmental

Materials Management Plan (MMP) Form

This form should be completed once the lines of evidence have been marshalled in relation to suitability for use, certainty of use and quantity required. The answers to the questions posed within this form together with the supporting information will constitute the MMP and must be provided to the Qualified Person.

A Qualified Person may comment on draft versions of this MMP, but will not complete the Declaration until all of the relevant documents, demonstrating lines of evidence have been provided for each site.

Each question must be answered. If the question is not applicable please state this and provide a brief explanation.

1. Specify the scenario to which this MMP relates, as described in the CoP (1, 2, 3 or 4):

1. ~~Reuse on the Site of Origin~~

2. Direct Transfer of clean naturally occurring soil and mineral materials

3. ~~Cluster Project~~

4. ~~Combination of any of the above~~

In the case of a combination of reuse scenarios, please describe it below (e.g. (i) Reuse on Site of Origin and Direct Transfer of clean naturally occurring unpolluted soils, (ii) Reuse on the Site of Origin with Direct Transfer of clean naturally occurring soil to x number of development sites etc:

Clean naturally occurring clays are to be excavated from the Humber Estuary as part of the development works associated with the Able Marine Energy Park. The excavated clays will be used to raise the site levels to meet the required flood levels on the adjacent foreshore and be used as fill material for the construction of the park.

2. Organisation and name of person preparing this MMP (full address and contact details)

Tim Shepherd
Shadbolt Environmental LLP
18 Bewick Road
Gateshead
NE8 4DP

[REDACTED]

Document Control

Date issued	14 June 2012 – Draft for Comment to Client
Revision date	20 June 2012 – Draft for Issue
Summary of revision 1	
Summary of revision 2	

Insert additional lines to the table above for any subsequent revisions.

Note - revisions to the MMP do not trigger an additional Declaration by a Qualified Person, unless an additional site is added to the project.

Revisions to the MMP must be recorded and summarised in the Document Control box above.

Site Details

3. Site / Project name(s)

Able marine Energy Park (AMEP) – The producer and the recipient of the material is the same site.

Landowners

4a. Name of Landowner(s) (full address and contact details) – Where excavated materials are arising from:

Able Humber Ports Limited, Able House, Billingham Reach Industrial Estate, Teesside TS23 1PX

4b. Name of Landowner(s) (full address and contact details) – Where materials are to be reused:

Able Humber Ports Limited, Able House, Billingham Reach Industrial Estate, Teesside TS23 1PX

Summary and objectives

5a. Provide a brief description of the planned project and how excavated materials are to be reused within it.

It is proposed to develop a large area of land on the banks of the Humber into a Marine Energy Park, comprising commercial and industrial properties. A new quay / berthing area is to be constructed which requires a large volume of sands, gravels and clays to be excavated to enable the construction of the quay wall. The sands and gravels are to be dredged and placed back into agreed locations within the Humber whilst the clays are to be placed on land to facilitate the construction of the Marine Energy Park. The Marine Energy Park levels need to be increased to enable the appropriate drainage levels to be constructed and enable an appropriate development platform to be constructed as a large proportion of the site is a marsh (Killingholme Marshes)

General Plans and Schematics

6. Attach a location plan for the site(s) and a plan of the site(s) which identifies where different materials are to be excavated from, stockpile locations (if applicable), where materials are to be treated (if applicable) and where materials are to be reused.

Plan References:

- a) AME – 08098 On Land Distribution of Berthing Pocket Dredge Arising
- b) AME – 02001 Development Consent Order Boundary

The above plans are held in Appendix A for ease of reference.

7. Attach a schematic of proposed materials movement. Where there is only one source area and one placement area briefly describe it below. For all other projects a schematic is required.

As shown on AME – 08098 On Land Distribution of Berthing Pocket Dredge Arising all excavated natural clays are to be excavated and placed onto the proposed Able Marine Energy Park land.

Parties Involved and Consultation – if more than one party please provide additional details for them and identify the location that they will be working e.g. where a site is zoned

8a. Main earthworks contractor(s) (full address and contact details) - Where materials are excavated materials are arising from:

The “earthworks” contractor is a dredging firm;

Westminster Dredging Company Limited, Westminster House, Crompton Way, Segensworth West, Fareham, Hants PO15 5SS Tel: 01489 885 933

8b. Main earthworks contractor(s) (full address and contact details) - Where materials are to be reused:

The main earthworks contractor has yet to be appointed. This MMP will be revised on planning approval and prior to commencement of the works.

9. Treatment contractor(s) (full address and contact details) – for treatment on site of origin, or at a Hub site within a Cluster Project

No treatment required – natural soils to be excavated and reused.

10. Where wastes and materials are to be transported between sites provide details of the transport contractor(s) (full address, contact details and waste carriers registration details (if applicable)):

All soils will be excavated from the dredging pocket and placed into stockpile at the receiver site. No soils will be transported onto the public highway and therefore no transport contractors will be required – site vehicles.

11. For each site where materials are excavated and where materials are to be reused provide Local Authority contact details (full address and named contacts):

The site is of national importance and whilst the planning authority is North Lincolnshire Council is the Marine Management Organisation that will govern the Deemed Marine Licence and the Secretary of State will make the approval decision.

Contact details are as follows;

Anna Gerring
Marine Management Organisation
Major Infrastructure Projects Team
PO Box 1275
Newcastle upon Tyne
NE99 5BN

Tel: [REDACTED]

North Lincolnshire Council
Civic Centre
Ashby Road
Scunthorpe
DN16 1AB

Tel: [REDACTED]

Please see attached correspondence from the MMO held within Appendix B.

12a. For each site where materials are to be reused and for Hub Site locations provide Environment Agency contact details (full address and named contacts):

Annette Hewitson
Principal Planning Officer
Environment Agency
Waterside House, Waterside North, Lincoln, LN2 5HA
Tel: [REDACTED]

Please see attached correspondence from the Environment Agency held within Appendix B.

For all Cluster Projects:

12b. Attach any relevant documentation from the EA relating to the excavation and reuse of the materials to demonstrate no objection to the proposals (see 3.37 of CoP)

EA references: Please see e-mail from the EA presented in Appendix B

If the EA has not been consulted please explain why (see paragraph 3.39 of the CoP).
Please see attached correspondence from the Environment Agency

EA references: Please see e-mail from the EA presented in Appendix B

Lines of Evidence

There is no one single factor that can be used to decide that a substance or object is waste, or when it is waste at what point it ceases to be waste. As complete picture as possible has to be created. The following sections require completion to ensure the correct decision is made.

If a requested item is not relevant it is important for you to clearly state why this is so (e.g. no planning permission required because permitted development status exists).

Suitable for use criteria

13. Please describe or provide copies of the required specification(s) for the materials to be reused on each site.

Reference: The Able Marine Energy Park development proposals have not yet been fully designed to incorporate a Ground Preparatory Strategy other than a Flood Risk Assessment and Drainage Strategy which has been developed with final levels proposed.

All clay soils dredged and reused on site will be required to meet the current Contaminated Land Exposure Assessment (CLEA) Soils Guidance Values (SGVs) and the Land Quality Management / Chartered Institute of Environmental Health Generic Assessment Criteria (GAC) for a **Commercial End Use**. All clays will be required to be placed to an appropriate earthworks method / end product specification.

The SGVs and GACs are presented in Appendix C.

Where contamination is suspected or known to be present –

N/A no contamination is suspected as the site is “green field” and has not been developed. However, for completeness we have attached correspondence from the MMO and EA and is presented in Appendix B for ease of reference.

14a. Please provide copies or relevant extracts from the risk assessment(s) that has been used to determine the specification for use on the site. **This must relate to the place where materials are to be used.** This must be in terms of (i) human health (ii) controlled waters and (iii) any other relevant receptors. If a risk assessment is not relevant for a particular receptor given the site setting please explain why below:

As above

14b. Please attach any relevant documentation from the LA relating to the excavation and reuse of the materials to demonstrate no objection (see 3.37 of the CoP)

As above

If the LA has not been consulted please explain why (see paragraph 3.39 of the CoP).

As above

14c. Please attach any relevant documentation from the EA relating to the excavation and reuse of the materials to demonstrate no objection (see 3.37 and Table 2 of the CoP).

EA references: Please see attached correspondence from the Environment Agency in Appendix B. As can be seen the EA have suggested that the works may fall under the Development Code of Practice and have no issues associated with the re-use of the soils subject to a Materials Management Plan being in place.

If the EA has not been consulted please explain why (see paragraph 3.39 of the CoP).

As above

14d. Please attach any relevant documentation from any other regulators (if relevant) relating to the excavation and reuse of the materials to demonstrate no objection (see 3.37 of the CoP)

Other references: As above

Where contamination is not suspected.

15a. Please attach copies or relevant extracts from the Desk Top Study that demonstrates that there is no suspicion of contamination.

The source site lies within the Humber Estuary and has not been developed.

15b. Please attach copies or relevant extracts from the site investigation/testing reports that adequately characterise the clean materials to be used (if appropriate).

Please find attached the chemical analysis associated with the clays that were investigated as part of the Fugro Engineering Services Ground Investigation Report and are included in Appendix C.

15c. Please attach copies of any other relevant information (if available) confirming that land contamination is not an issue.

Reference(s): Please see relevant Fugro Ground Investigation Extracts in Appendix C.

Certainty of use

Various lines of evidence need to be provided to demonstrate that the materials are certain to be used. This includes:

- The production of this MMP
- An appropriate planning permission (or conditions that link with the reuse of the said materials)
- An agreed Remediation Strategy(ies)
- An agreed Design Statement(s)
- Details of the contractual arrangements

Please identify in the following sections what lines of evidence relate to the site(s) **where the materials are to be used**.

16a. Planning Permission(s) relating to the site where materials are to be reused

Please provide a copy of the relevant planning permission

Reference: Please MMO correspondence regarding the Development Consent Order 2012 presented in Appendix B.

16b. Explain how the reuse of the excavated materials fits within the planning permission(s) for each site.

The proposed development levels plan, as presented in the Flood Risk Assessment in Appendix A is attached for information.

16c. If planning permission is not required for any one site please explain why below e.g. permitted development, clean up of a chemical spill, surrender of an Environmental Permit, re-contouring within the existing permission:

Planning Permission for the site is being considered by the Secretary of State through the planning Inspectorate. MMO are a consultee and will eventually govern the Deemed Marine Licence which is part of the Development Consent Order (planning Permission) – please see attached correspondence in Appendix B from the MMO.

Where contamination is suspected or is known to be present

17. Please provide a copy of any Remediation Strategy(ies) that have been agreed with relevant regulators.

Reference: No contamination is suspected.

Where contamination is not suspected

18. Please provide a copy of any Design Statement(s) that have been agreed (e.g. with the planning authority or in the case of permitted developments the client):

Reference: Please see correspondence presented in Appendix B from the MMO regarding the development of the site.

Quantity of use

19. Please provide a break down of the excavated materials for each site and how much will be placed at each site or sub area of each site.

It has been estimated that approximately 827,000m³ of excavated arisings (clay) may be available for re-use on the Marine Energy Park Development site.

Where this is not specific to a single readily identifiable source refer to an annotated plan, schematic or attach a tabulated summary.

Reference(s):

AME – 08098 On Land Distribution of Berthing Pocket Dredge Arising

This drawing effectively shows the “cut and fill” locations of the proposed dredging and earthworks.

20a. How has consolidation/compaction being considered in the above mass balance calculations?

5 to 10% bulking on compaction is anticipated.

20b. How has loss due to treatment being considered in the above mass balance calculations (if applicable)?

N/A – the soils are not contaminated.

20c. How has the addition of treatment materials being considered in the above mass balance calculations (if applicable)?

N/A

Note - An exact figure is not required but one that is reasonable in the circumstances and can be justified if challenged.

Contingency arrangements

Explain what is to happen in the following situations and identify the appropriate clauses in the contract(s) (Such clauses must be provided to the Qualified Person, preferably as a summary document): or

21a. What is to happen to, and who is to pay for out of specification materials?

Contract reference: Only suitable selected clays will be accepted onto the Able Marine Energy Park (AMEP) that meet the CLEA / CIEH criteria. No contaminated soils are anticipated but should they be encountered they will be disposed to a suitably licensed landfill facility.

21b. What is to happen to, and who is to pay for any excess materials?

Contract reference: As above – the client is to cover costs for unsuitable / contaminated materials.

21c. What happens if the project programme slips in relation to excavated materials or materials undergoing treatment?

Contract reference: As above – the client is to cover costs for unsuitable / contaminated materials.

21d. Other identified risk scenarios for the project (relating to excavated materials)?

Contract reference: Contaminated soils are outside the contract and are the clients responsibility.

The tracking system

22a. For all sites please describe the tracking system to be employed to monitor materials movements.

All soils to be accepted at Able Marine Energy Park (AMEP) must meet the requirements of the CLEA / CIEH SGVs and GACs for a commercial end use. It is proposed that as soils are excavated and placed into stockpile on the Marine Park that soils samples are collected and submitted for a typical suite of contaminants (arsenic, boron, cadmium, chromium, copper, lead, mercury, nickel, selenium, zinc, pH, sulphate, cyanide, PAH(s), and TPH. It is proposed that the clays are tested at a rate of 1 sample every 2,000m³.

State the procedures put in place to:

22b. Prevent contaminants not suitable for the treatment process being accepted.

No treatment is to be undertaken – Direct Transfer

22c. Prevent cross contamination of materials not in need of treatment, wastes awaiting treatment and treated materials.

No treatment is to be undertaken – Direct Transfer

22d. Demonstrate that materials that do not require treatment and successfully treated materials reach their specific destination.

All soils to be accepted at Able Marine Energy Park (AMEP) must meet the requirements of the CLEA / CIEH SGVs and GACs for a commercial end use. It is proposed that as soils are excavated and placed into stockpile on the Marine Park that soils samples are collected and submitted for a typical suite of contaminants (arsenic, boron, cadmium, chromium, copper, lead, mercury, nickel, selenium, zinc, pH, sulphate, cyanide, PAH(s), and TPH. It is proposed that the clays are tested at a rate of 1 sample every 2,000m³. A verification report with chemical analyses test results and “as-built” drawings”

A UKAS accredited laboratory will be employed to undertake soils analysis under the supervision of an Environmental Consultant. Chain of custody sheets shall be maintained by the Environmental Consultant. A validation report / statement would also be produced by the Environmental Consultant for placement of the clays. Any failures on the clays against the CLEA / CIEH criteria would be removed from site to a suitable landfill facility, however as the soils are anticipated to be clean naturally occurring clays this is highly unlikely.

23. Please attach a copy of the tracking forms / control sheets that are to be used to monitor materials movements. To include transfer of loads on site into stockpiles prior to treatment (if applicable), stockpiled after treatment (if applicable), stockpiled awaiting use (as appropriate) and final placement.

Reference: See Attached Typical Control Sheets presented in Appendix D

For Hub Sites within Cluster Projects & where materials need treatment before reuse

24. Please attach a copy of the Environmental Permit covering the treatment process. Or alternatively if the treatment is covered by a Mobile Plant Permit and associated Deployment Form, attach a copy of the EA agreement to the Deployment Form.

Permit reference / EA letter reference: N/A – no treatment required – Direct Transfer Scenario

Records

25. Where, and in what form, are records to be kept? All records are to be kept by the Contractor both electronically and in hard copy. The records will also be included with the Verification Report.

Note – records e.g. transfer notes, delivery tickets, Desk Top Study, Site Investigation, Risk Assessment(s), Verification Report(s) need to be kept for at least 2 years after the completion of the works and production of the Verification Report.

Verification Plan

26. Provide or explain the Verification Plan which sets out how you will record the placement of materials and prove that excavated materials have been reused in the correct location and in the correct quantities within the development works.

Reference: A Verification report will be produced by the Environmental Consultant that will detail the earthworks undertaken, assess the chemical analysis of the dredged soils and provide “as-built” drawings of the where materials have been placed.

Environmental Benefits - Optional

To ensure that the Definition of Waste: Development Industry Code of Practice continues to have the support of regulators it is important that CL:AIRE collates the environmental benefits that accrue from the use of the CoP. To this end can you please provide the following information and submit just this information to CL:AIRE (Not the MMP or Declaration).

i) Name of the person completing this questionnaire : **Tim Shepherd**

ii) Contact details

E-mail.....
Tel.....

iii) Project name – **Able Marine Energy Park (AMEP)**

iv) Volume of material intended to be reused / was used (cubic metres)

827,000m³

v) What was/is the distance to alternative treatment or disposal site that would otherwise have been used (miles)? **132 miles**

vi) What was/is the total distance that vehicles would otherwise have travelled (miles)?

10.9 million miles (10m3 at 132 miles x 82,700 wagon movements).

vii) What is/was the distance to the facility where alternative (non-waste materials) would have been sourced (miles)?

unknown

viii) What is/are the total distance that vehicles would have travelled for the purpose of bringing 'clean' material onto site (miles)?

unknown

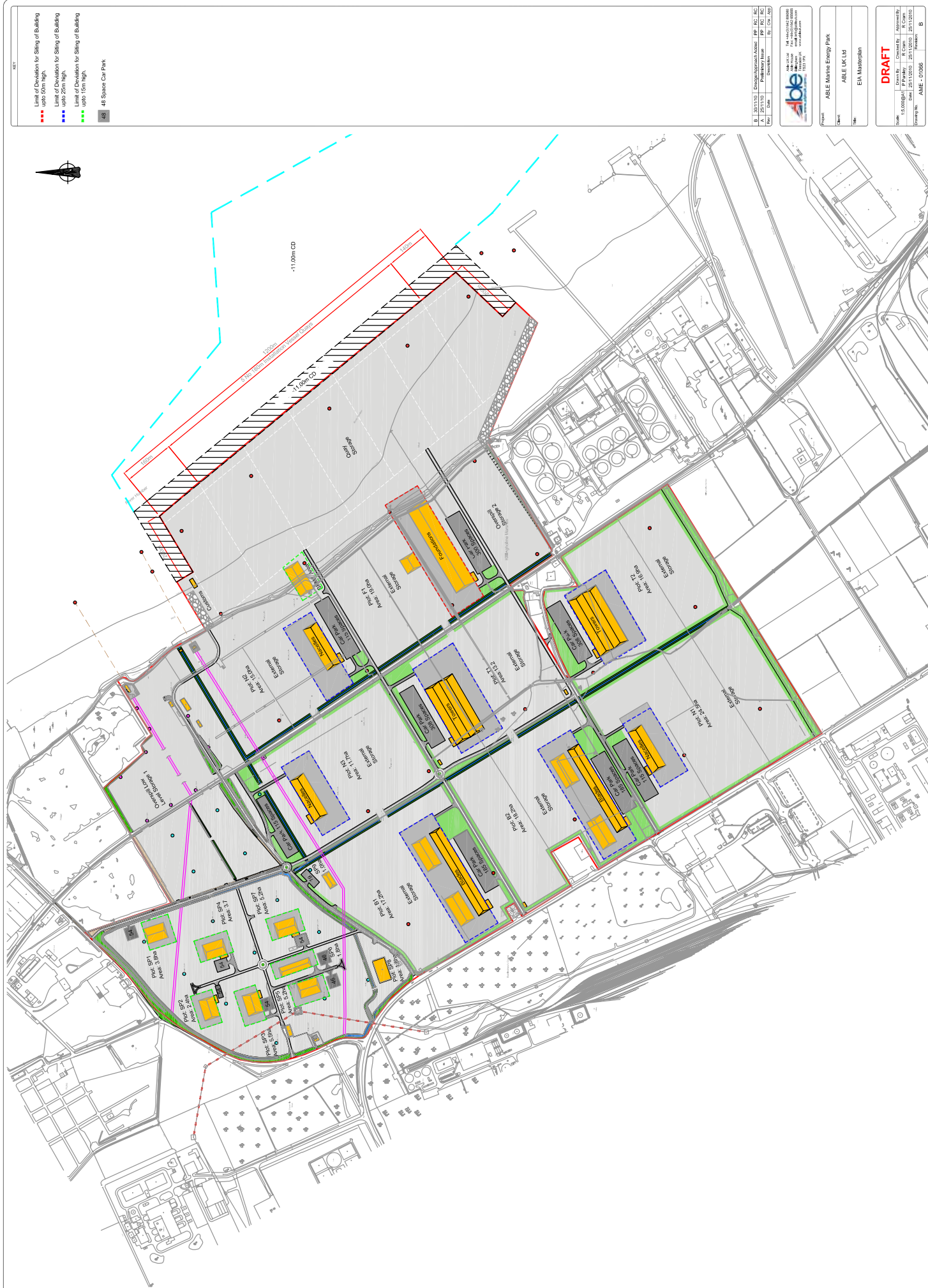
Please send to:

CL:AIRE
CoP Environmental Benefits
7th Floor
1 Great Cumberland Place
London
W1H 7AL

Codeofpractice@claire.co.uk

APPENDIX A

PLANS

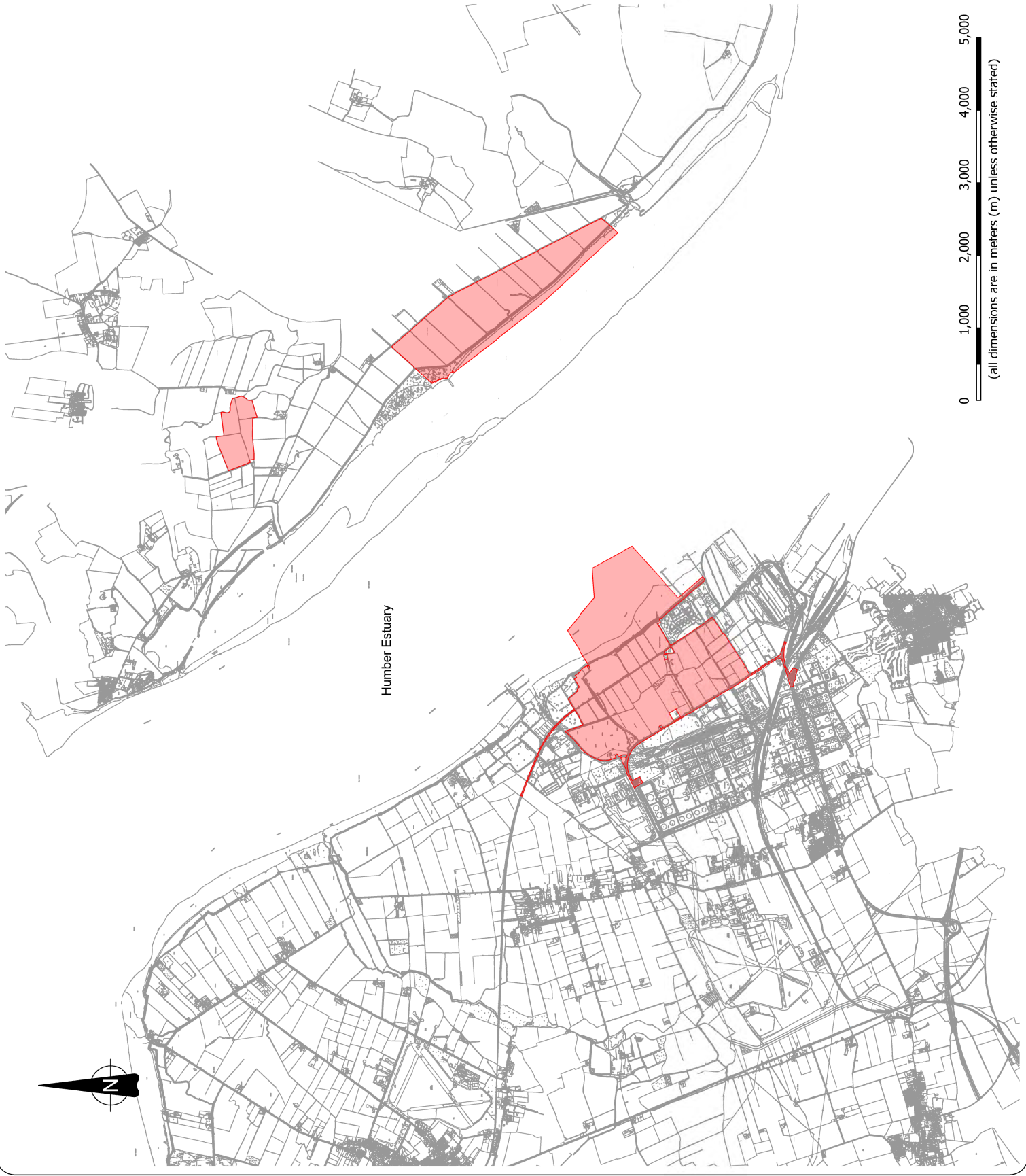


B	30/11/10	Dredge/Approach Added	PP	RC	RC
A	25/11/10	Preliminary Issue	PP	RC	RC
ov	Date	Description	Ev	OK	Ass



Client:	ABLE Marine Energy Park
Asset:	ABLE UK Ltd
Site:	E10 Mactoonbo

Code:	1:5,000 @A1	Drawn By	Checked By	Approved By
		P Parsley	R Cream	R Cream
Drawing No.	Date:	25/11/2010	25/11/2010	25/11/2010



Humber Estuary



KEY



Development Consent Order Boundary

Rev	Date	Preliminary Issue	Comments	Drw	Chk	App
A	12/12/11					

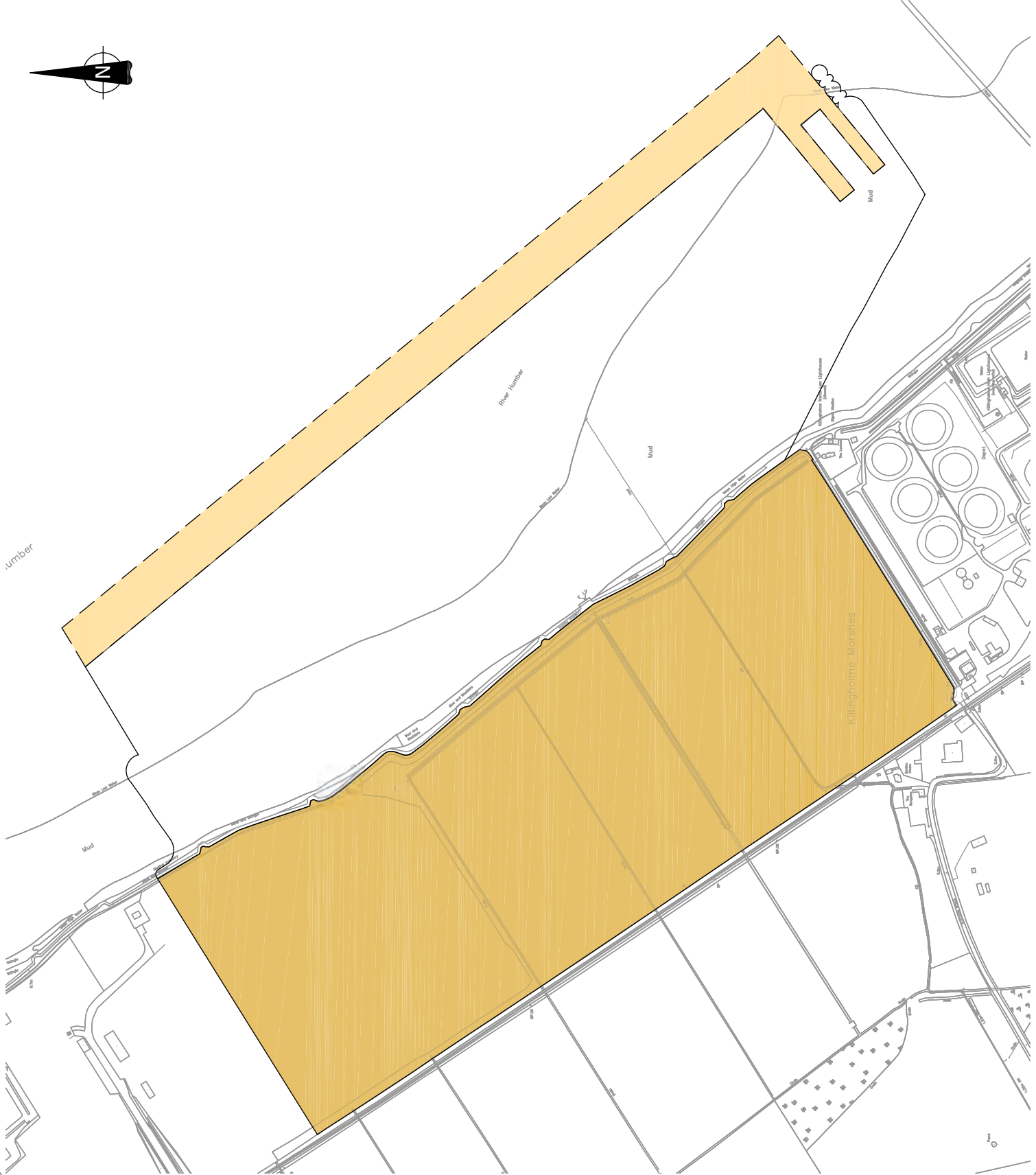


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Project:	ABLE Marine Energy Park
Client:	ABLE UK Ltd
Title:	Development Consent Order Boundary

PRELIMINARY

Scale:	1:50,000@A3	Drawn	Checked	Approved
Date	12/12/2011	R Keir	R Cram	R Cram
Drawing No.	AME - 02001	Revision:		A



KEY

- Berth ng Pocket (Cut)
- On Land D str but on (F)

Rev	Date	Comments	Drw	Chk	App
A	07/06/12	Preliminary Issue	JH	JD	



Able UK Ltd
44/01/12/22 800880
Birmingham
info@ableuk.com
www.ableuk.com
United Kingdom

Project	Ab e Mar ne Energy Park
Client	Ab e UK Ltd
Title	On Land D str but on of Berth ng Pocket Dredge Ar s ng

PRELIMINARY

Scale	1 5,000@A3	Drawn	J Harris	Checked	J Dawes	Approved
Date	07/06/2012	Date	07/06/2012	Revision	A	

APPENDIX B

ENVIRONMENT AGENCY, PLANNING / MMO CORRESPONDENCE



marine
management
organisation

Major Infrastructure Projects Team
PO Box 1275
Newcastle Upon Tyne
NE99 5BN

Tel:

Email:

2 April 2012

Your ref: TR030001

Our ref: DC9172

The Planning Inspectorate
Temple Quay House
Temple Quay
Bristol
BS1 6PN

Dear Sir

PLANNING ACT 2008

THE ABLE MARINE ENERGY PARK DEVELOPMENT CONSENT ORDER 2012

RELEVANT REPRESENTATION

Please find enclosed the Marine Management Organisation's relevant representation in respect of the above application.

Yours sincerely,

Anna Gerring
Marine Management Organisation

Enc – DC9721 – relevant representation

Copies to – Able UK
Environment Agency
Natural England



Major Infrastructure Projects Team
PO Box 1275
Newcastle upon Tyne
NE99 5BN

Email: infrastructure@marinemanagement.org.uk

PLANNING ACT 2008

THE ABLE MARINE ENERGY PARK DEVELOPMENT CONSENT ORDER 2012

RELEVANT REPRESENTATION

MMO REF: DC9172

IPC REF: TR030001

Contents

1. The Able Marine Energy Park.....	2
2. Scope of these representations	2
3. Pre-application consultation	3
4. Licensing requirements under Part 4 of the 2009 Act.....	4
5. Draft Development Consent Order	6
6. Environmental Statement: General comments.....	16
7. Environmental Statement: Volume 1 Able Marine Energy Park.....	17
Chapter 2 EIA process	17
Chapter 7 Geology, hydrology and ground conditions	17
Chapter 8 Hydrodynamic and sedimentary regime	21
Chapter 10 Aquatic Ecology.....	23
Chapter 14 Navigation.....	24
8. Environmental Statement: Volume 2 Compensation site	24
Chapter 27 Planning policy and context.....	24
Chapter 28 Description of Development.....	25
Chapter 32 Hydrodynamic and sedimentary regime	25
Chapter 33 Water quality and sediment quality	26
Chapter 34 Aquatic ecology and nature conservation.....	28
Chapter 36 Drainage and flood risk.....	28
Chapter 40 Historic environment.....	29
9. Habitats Regulations Assessment.....	29
10. Contact details	29

The Able Marine Energy Park

- 1.1. On 23 February 2012, the Marine Management Organisation (the “MMO”) received notice under section 56 of the Planning Act 2008 (the “2008 Act”) that the Infrastructure Planning Commission (the “IPC”) had, on 12 January 2012, accepted an application made by Able Humber Ports Limited (the “Applicant”) for an order granting development consent (the “DCO Application”) (MMO ref: DC9172; IPC ref: TR030001).
- 1.2. The MMO was established by the Marine and Coastal Access Act 2009 (the “2009 Act”) to make a contribution to the achievement of sustainable development in the marine area and to promote clean, healthy, safe, productive and biologically diverse oceans and seas. The UK Government’s Marine Policy Statement forms the framework for the MMO’s management of the marine area.
- 1.3. Under section 102 of the 2008 Act, the MMO is an interested party for the examination of Development Consent Order (“DCO”) applications in the marine area.
- 1.4. The DCO Application seeks authorisation for the Able Marine Energy Park (AMEP), which involves a quay of solid construction on the south bank of the river Humber together with an ecological compensation scheme comprising both temporary and permanent habitat creation on the north bank. Associated development includes dredging and land reclamation, onshore facilities for the manufacture, assembly and storage of marine energy installation components. Ancillary matters include compulsory purchase of land, harbour regulation and the diversion of two footpaths (the “Project”).
- 1.5. The Project would comprise a range of terrestrial and marine developments. Several work items have the potential to impact on the marine area. These representations reflect the MMO’s marine management functions and the MMOs understanding of the legislative regime for the proposed works.

2. Scope of these representations

- 2.1. This document comprises the MMO’s initial comments in respect of the DCO Application in the form of a relevant representation. This is without prejudice to any future representation the MMO may make about the DCO Application throughout the examination process. This is also without prejudice to any decision the MMO may make on any associated application for consent, permission, approval or any other type of authorisation submitted to the MMO either for the works in the marine area or for anything else.
- 2.2. These representations comprise:
 - the MMO’s comments on the pre-application engagement process for the Project – **section 3**
 - the MMO’s initial comments on the licensing requirements of the marine works under the 2009 Act. – **section 4**

- the MMO's initial comments on the draft DCO – **section 5**
- the MMO's initial comments on the Environmental Statement – **sections 6, 7 and 8**
- the MMO's initial comments on the information to support a Habitats Regulations Assessment – **section 9**
- contact details for officials within the MMO – **section 10**

2.3. Due to the volume of material presented in the DCO Application, it may be that the Applicant has presented information dealing with issues raised in these representations that the MMO has not yet come across following its initial assessment of the DCO Application. The MMO will continue to consider the DCO Application and reserves the right to add to, amend or withdraw, from time to time, part or all of these representations.

3. Pre-application consultation

- 3.1. The MMO has been consulted by the Applicant during the pre-application stage of the DCO Application process by way of one formal consultation under section 42 of the 2008 Act.
- 3.2. The Applicant has provided the MMO with additional material, undertaken a number of non-statutory consultations and held a number of meetings with the MMO throughout the pre-application process. Throughout this process, the MMO have provided written and verbal feedback on a number of documents as detailed in Annex 1. The MMO has also worked closely with Natural England (NE) and the Environment Agency (EA) to provide coordinated advice where appropriate.
- 3.3. The MMO considers that the pre-application engagement process has not been timely or appropriate given the piecemeal submission of documents for review, some absence of evidence, various technical shortcomings and the time constraints imposed. A tri-partite briefing letter from the MMO, NE and the EA was submitted to the Applicant, and copied to the IPC, on 30 June 2011 detailing the issues each of the agencies had identified at the time, provided at Annex 2.
- 3.4. It is disappointing that many of the issues raised by the MMO in respect of the Environmental Statement (ES), Habitats Regulations Assessment (HRA) and supporting documents during the pre-application consultation have not been resolved in the final submission to the IPC (see sections 6, 7 and 8 of these representations). In some instances, where comments had previously been made, the sentence or paragraph they relate to have simply been removed from the final ES (for example, see paragraphs 8.27 and 8.30).
- 3.5. The MMO has provided comments throughout the pre-application engagement process to the Applicant on the drafting of Schedule 8 to the DCO "Schedule 8 the deemed marine licence under Part 4 (Marine Licensing) of the Marine and Coastal Access Act 2009" (the "deemed marine licence").

- 3.6. The MMO has advised the Applicant of the MMO's role in monitoring, variation and enforcement of the deemed marine licence post-consent, the importance of identifying all licensable marine works and undertaking a robust environmental impact assessment of those works on the marine environment, and of the importance of consultation on the drafting of the deemed marine licence.
- 3.7. The MMO has repeatedly advised the Applicant that the pre-submission drafts of the deemed marine licence would not be fit for purpose post-consent. Despite this, a significant number of issues remain outstanding (see paragraphs 5.11 to 5.51) and the draft as submitted to the IPC would not allow the MMO to fulfil its statutory obligations post-consent.
- 3.8. Following the IPC's acceptance of the DCO Application, the MMO has continued to work closely with the Applicant to improve the drafting of the deemed marine licence and a scheduled programme of joint meetings over the next three months with NE, the EA and the Applicant to develop Statements of Common Ground on the ES and HRA have been arranged.

4. Licensing requirements under Part 4 of the 2009 Act

- 4.1. Any marine activity described under Part 4, s.66 of the 2009 Act requires a licence unless a relevant exemption applies. This includes the construction, alteration or improvement of any works in over or under the seabed, below the level of mean high water springs and any works which involve the deposit or removal of substances or objects below the level of mean high water springs within the UK marine area (amongst other activities).
- 4.2. For Nationally Significant Infrastructure Projects ("NSIPs"), the 2008 Act enables DCOs for projects which affect the marine environment to include provisions which deem marine licences. Alternatively, applicants may seek consent for a marine licence directly from the MMO rather than having it deemed in a DCO.
- 4.3. For post-consent monitoring and enforcement purposes it needs to be clear in the deemed marine licence what activities have been licensed and the conditions imposed on that licence in respect of each of the licensed activities.
- 4.4. The Applicant has identified the following activities as licensable under the 2009 Act and included them in the deemed marine licence:
- construction of the quay
 - construction of the pumping station
 - capital dredging
 - maintenance dredging
 - deposit of dredged arisings.
- 4.5. No detailed descriptions of these works are provided.

4.6. The MMO has assessed the entirety of the information provided. Although not all licensable activities are presented together in a coherent manner, the MMO has identified the following activities as licensable under the 2009 Act:

- construction of the quay, to include:
 - piling (perimeter, sheet metal and anchor)
 - rock armour protection
 - land reclamation
 - construction and removal of temporary dolphins
- backfilling of a berthing pocket with stone aggregate
- construction of a new outfall structure
- works to the pumping station, to include:
 - temporary sheet pile cofferdam
 - excavation of the foreshore
 - six drainage pipes
 - stone mattressing of drainage channel
- construction of the compensation site, to include:
 - breaching of the sea wall
 - excavation of the foreshore
 - placement of excavated material in construction of new flood defence
 - erosion protection
- capital dredging of the following areas:
 - turning area
 - approach channel
 - berthing pocket
 - reclamation area for the construction of the quay
 - excavation of the foreshore at the pumping station
 - plough dredging around the E.ON and Centrica outfall structures
- disposal of capital dredged material at sea
- maintenance dredging of the following areas:
 - turning area
 - approach channel
 - berthing pocket
 - south bank channel
 - plough dredging around the E.ON and Centrica outfall structures
- disposal of maintenance dredged material at sea.

4.7. The MMO met with the Applicant on 27 March 2012 where it was agreed that these are the activities licensable under the 2009 Act as both parties understand it at this time. Other licensable activities may become apparent as the DCO Application progresses.

- 4.8. Some of these activities are mentioned in passing in various chapters of the ES, the HRA or Annexes without detailed descriptions. As such, the Application submitted does not sufficiently describe all of the activities which are licensable under the 2009 Act. It has therefore not been possible to assess whether an adequate impact assessment of the marine works has been undertaken through the environmental impact assessment (EIA) process (discussed further at in sections 6, 7 and 8).
- 4.9. In order for the activities to be included in the deemed marine licence, the Applicant needs to clearly demonstrate through the EIA process that the environmental impact of all licensable activities has been addressed and, where required, mitigated. The MMO do not believe that the ES and associated DCO Application documents currently achieves this in a clear manner.
- 4.10. Should the Applicant be able to demonstrate that a robust assessment of all activities has been undertaken as part of the EIA process, full details of the activities will need to be included within the deemed marine licence.
- 4.11. The MMO require that each activity is contained within its own discrete section with conditions to capture any mitigation required. The conditions should be developed in consultation with those bodies or persons with particular expertise in the marine aspects of the development.
- 4.12. A list of licensable activities must be developed and the Applicant must demonstrate that a full environmental impact assessment of the works has been undertaken before the deemed marine licence can be redrafted to incorporate such conditions.
- 4.13. Where relevant, the MMO has indicated where a condition on the deemed marine licence would be required. This is purely for indicative purposes and is not an exhaustive list of conditions.
- 4.14. To ensure that the deemed marine licence is fit for the MMO's purposes post-consent, the MMO would wish to be involved in the drafting of all conditions to be included on the deemed marine licence.
- 4.15. As currently drafted, the deemed marine licence would not allow the MMO to fulfil its statutory obligations post-consent but the MMO continues to work closely with the Applicant to develop this.

5. Draft Development Consent Order

Part 1, Interpretation, paragraph 2 and Schedule 10

- 5.1. The drafting here does not clearly define the jurisdiction of the harbour authority and there are no coordinates provided on the plan in Schedule 10. The MMO would advise that coordinates (in degree, decimal minutes to 3dp in WGS84) are used to define the area of jurisdiction, either here or on the plan in Schedule 10, to bring in line with current drafting practices under the Harbours Act 1964. Suggested wording is as follows:

“Area of jurisdiction” means the area below the level of mean high water spring tides bounded by a line drawn from point A (00 degrees 00.000’N, 0 degrees 00.000’W) through point B (00 degrees 00.000’N, 0 degrees 00.000’W) to point C (00 degrees 00.000’N, 0 degrees 00.000’W) and then point D (00 degrees 00.000’N, 0 degrees 00.000’W) (based on the WGS 84 datum), shown for identification only on the plan in Schedule 10; and in the following provisions of this Order, references to the limits of the harbour shall be construed as references to the limits so shown;

“the WGS 84 datum” means the World Geodetic System, revised in 1984 and further revised in 2004.

Part 2, paragraph 7, Jurisdiction of the Harbour Authority

- 5.2. This appears to be an overlap in jurisdiction created with an existing harbour authority which is not usually permissible under the Harbours Act 1964. It is of course for the Consenting Authority to determine the scope of the 2008 Act to authorise such matters with regards to the DCO Application.

Part 2, paragraph 9, Maintenance of authorised development

- 5.3. The MMO considers that this would not exempt the Applicant from the marine licensing provisions of Part 4 of the 2009 Act.

Part 2, paragraph 10, Provision of works

- 5.4. The MMO considers that this would not exempt the Applicant from the marine licensing provisions of Part 4 of the 2009 Act.

Part 2, paragraph 12, Consent to transfer benefit of Order

- 5.5. It is not clear what this provision is seeking to achieve. The transfer of part of a harbour authority is only permissible under certain circumstances under the Harbours Act 1964. It is of course for the Consenting Authority to determine the scope of the 2008 Act to authorise such matters with regards to the DCO Application but given that the transfer of part a harbour authority is a relatively uncommon event, the MMO would like some clarification as to how this would work in practice.

Part 4, paragraph 18, Discharge of water

- 5.6. The MMO considers that this would not exempt the Applicant from the marine licensing provisions of Part 4 of the 2009 Act, for example, for trial boreholes.

Part 4, paragraph 20, Authority to survey and investigate the land

- 5.7. The MMO considers that this would not exempt the Applicant from the marine licensing provisions of Part 4 of the 2009 Act, which includes the licensing of temporary works.

Part 4, paragraph 21, Right to dredge

- 5.8. The MMO considers that this would not exempt the Applicant from the marine licensing provisions of Part 4 of the 2009 Act as DCOs are not included in the s.75 exemptions for certain dredging activities under the 2009 Act.
- 5.9. In 21(1), the wording “*as adjoin or are near to the work*” does not provide enough clarity of the geographic extent of this provision. This should be drafted in line with recent best practice under the Harbours Act 1964 and detail coordinates and depths. The London Gateway Port Harbour Empowerment Order 2008 (s13 & Schedule 3) provides a good example of this and it is noted this is used as a reference for other provisions within this DCO.

Schedule 1 Authorised development

- 5.10. Schedule 1 is referred to in the deemed marine licence at Schedule 8 for descriptions of works. However, this does not include details of all licensable activities and the description does not provide sufficient detail for the purposes of the deemed marine licence (see paragraphs 4.1 to 4.15). If it is intended that this should be a reference point for the deemed marine licence it would need to include all licensable activities items with a corresponding work number and works plan to include sufficient coordinates (see paragraphs 5.15 to 5.20). Alternatively, these details could be provided for in the deemed marine licence and any reference to Schedule 1 dropped.

Schedule 8 Deemed marine licence

General comments

- 5.11. As the body responsible for monitoring, enforcement and variation of the deemed marine licence deemed should development consent be granted, the MMO must be satisfied that the deemed marine licence would allow the MMO to fulfil its statutory obligations post-consent.
- 5.12. Where applicants choose to have licensable activities under the 2009 Act deemed within the DCO the MMO would prefer that all licensable activities should be included in the deemed consent, unless there is a justifiable reason for them to be excluded.
- 5.13. As discussed in paragraphs 4.1 to 4.15, not all activities licensable under the 2009 Act have been included in the deemed marine licence. An adequate impact assessment of all of the marine works does not appear to have been undertaken in the EIA process and appropriate consultation has not been undertaken on the contents of the deemed marine licence. The deemed marine licence therefore lacks conditions required for mitigation, monitoring, and enforcement purposes and as such it is not sufficient as currently drafted to enable the MMO to fulfil its responsibilities should consent be granted.
- 5.14. The comments provided here detail the information that will be required within the deemed marine licence should the Applicant be able to demonstrate that an adequate impact assessment of the licensable activities has been undertaken. Any mitigation or monitoring arising from that impact assessment will need to be

captured in the deemed marine licence for post-consent monitoring and enforcement purposes.

- 5.15. In order for contractors and MMO enforcement officers to be clear about the works which have been licensed in the deemed marine licence, the MMO expects that each work item is described in full in its own section and include:
- description of works, including location in coordinates in degree, decimal minutes to 3dp in WGS84;
 - methodology to be used;
 - specific conditions relating to that aspect of the works which have been informed from the EIA and HRA process and any relevant consultation responses. Conditions must be drafted in consultation with the MMO.
- 5.16. In considering applications for marine licences, the MMO regularly consults with bodies including, but not limited, to:
- the Environment Agency
 - the relevant statutory nature conservation bodies, i.e. Natural England, the Countryside Council for Wales and/or the Joint Nature Conservation Committee
 - the Maritime and Coastguard Agency
 - English Heritage
 - local planning authorities
 - local harbour authorities
 - local inshore fisheries and conservation authorities
 - the Royal Yachting Association
 - the Royal Society for the Protection of Birds
 - the Corporation of the Trinity House of Deptford Strond.
- 5.17. In determining applications for marine licences, the MMO has regard to any representations made by the above listed bodies and any other person making comment during the public notification period. The MMO may then decide to grant the marine licences, to grant the marine licences subject to conditions or to refuse the marine licences.
- 5.18. Should the Consenting Authority determine that amendments to the deemed marine licence at Schedule 8 to the DCO are required, the MMO would be grateful to receive notice of the proposed amendments and be given the opportunity to provide further comment to ensure that the deemed marine licence would allow the MMO to fulfil its statutory obligations post-consent, if granted.
- 5.19. The MMO have commented on previous versions of the draft deemed marine licence and on the current draft to the Applicant prior to submitting these relevant representations. As such, all of the representations made here have been brought to the Applicants attention previously.
- 5.20. The MMO has continued to have discussions with the Applicant following the acceptance of the DCO Application by the IPC. As a result, the Applicant has provided the MMO with a revised draft deemed marine licence which has addressed some, but not all, of the comments made below. The MMO continues to work

closely with the Applicant to agree a deemed marine licence which is fit for purpose for both parties.

Detailed comments

Schedule 8 Part 1, paragraph 1

- 5.21. Work No 1 refers to the construction of the quay. This does not provide sufficient detail to make clear the full extent of the works. A clear description of the activity is required (see paragraph 5.15).

Schedule 8 Part 1, paragraph 2

- 5.22. The MMO does not consider this provision is required.

Schedule 8 Part 1, paragraph 3

- 5.23. The MMO does not consider this provision is required.

Schedule 8 Part 1, paragraph 4

- 5.24. This does not contain sufficient information. A clear description of the activity is required (see paragraph 5.15).

Schedule 8 Part 1, paragraph 5

- 5.25. Work plans 8 and 9 refer to the construction of the quay. Neither the description nor the plans provide sufficient detail to make clear the full extent of the works. A description is required including coordinates to degree, decimal minutes to 3dp in WGS84 (see paragraph 5.15).

Schedule 8 Part 1, paragraph 6

- 5.26. The MMO recommend that this be re-drafted to make clear that any changes to the works schedule also need to be agreed in writing prior to works commencing by altering paragraph 6 and including an additional paragraph as follows:

“6. The works shall be carried out in accordance with a works schedule to be agreed in writing between the Company and the MMO prior to the commencement of works.

7. Any changes to the works schedule are also to be agreed in writing between the Company and the MMO prior to the commencement of works. Any changes to the works schedule may require a variation to this licence.”

Schedule 8 Part 1, paragraphs 7, 8, 9 and 10

- 5.27. As drafted, these conditions are not worded appropriately. The MMO requires that conditions for each work item are drafted in light of all relevant consultation responses and in consultation with the MMO to ensure their suitability for the MMO's responsibilities post-consent. See paragraphs 5.16 to 5.18 for further comment.

Schedule 8 Part 1, paragraph 8

- 5.28. Should it be determined that this condition is required, the MMO requires that this is re-drafted such that any lighting requirements must be agreed in writing with the MMO prior to commencement of works in consultation with relevant bodies, including Trinity House and the Maritime and Coastguard Agency, should they wish to comment.

Schedule 8 Part 2, paragraph 11

- 5.29. Neither the description nor the plans provide sufficient detail to make clear the full extent of the works. A clear description of the activity is required (see paragraph 5.15).

Schedule 8 Part 2, paragraphs 12 and 13

- 5.30. Paragraph 12 states 12 (a) but there is no (b). It is not clear what these paragraphs add. Paragraph 11 should have a full description, as described above in paragraph 5.15; these paragraphs would not then be required.

Schedule 8 Part 2, paragraph 14

- 5.31. This does not contain sufficient information for it to be clear what the works are or where they are to take place. A clear description of the activity is required (see paragraph 5.15). Also, states 14 (a) but there is no (b).

Schedule 8 Part 2, paragraph 15

- 5.32. The drawings referred to do not contain sufficient coordinates for enforcement purposes. A clear description of the activity is required (see paragraph 5.15).

Schedule 8 Part 2, paragraph 16

- 5.33. The MMO requires that this be re-drafted to make clear that any changes to the works schedule also need to be agreed in writing prior to works commencing by altering paragraph 16 and including an additional paragraph as follows:

“16. The works shall be carried out in accordance with a works schedule to be agreed in writing between the Company and the MMO prior to the commencement of works.

17. Any changes to the works schedule are also to be agreed in writing between the Company and the MMO prior to the commencement of works. Any changes to the works schedule may require a variation to the deemed marine licence.”

Schedule 8. Part 3, Part 4 and Part 5. Dredging and deposit of dredged arisings

- 5.34. Parts 3, 4 and 5 need to be altered as follows in order to bring them in line with the 2009 Act and OSPAR Convention 1992. A separate section for each dredge activity is required for capital dredging and maintenance dredging. Each section must detail:

- name and location of area to be dredged with coordinates (e.g. turning area, approach channel, reclamation area, pumping station, south bank, berthing pocket, E.ON and Centrica outfalls);
- type of material to be dredged (e.g. silt, sand, gravel, clay);
- quantity in wet tonnes to be dredged in total and each year, by type;
- maximum depth of dredged area;
- method of dredging to be used.

5.35. A separate section for both disposal of capital dredged material and disposal of maintenance dredged material is required. Each section must detail:

- name and location of area to be dredged with coordinates (e.g. turning area, approach channel, reclamation area, pumping station, south bank, berthing pocket, E.ON and Centrica outfalls);
- type of material to be dredged (e.g. silt, sand, gravel, clay);
- quantity in wet tonnes in total and each year;
- name and location (in coordinates) of disposal site;
- max amount of material in wet tonnes to be deposited in total and in each year from each dredge site, to each disposal site, by material type;
- method of dredging and disposal to be used.

5.36. The Applicant must notify the MMO 10 days prior to the dredge or disposal activities commencing.

5.37. All dredge and disposal sections of the deemed marine licence must be time limited to a maximum of 3 years from the date of the first activity to bring in line with current practice under the 2009 Act and to comply with OSPAR reporting requirements.

5.38. Sampling and physico-chemical analysis of sampled material will need to be undertaken within 3 years prior to commencement of dredge/disposal operations in order to be compliant with OSPAR guidance (including dredging for land reclamation or plough dredging).

5.39. The Applicant will be required to agree sampling and analysis requirements with the MMO prior to undertaking any sampling or analysis.

Schedule 8 Part 3, paragraph 17

5.40. Co-ordinates need to be provided for the capital dredged area in degree, decimal minutes (to 3dp) in WGS84 projection. See paragraphs 5.15 and 5.34 to 5.35.

Schedule 8 Part 3, paragraph 19

5.41. The MMO requires that this be re-drafted to make clear that any changes to the works schedule also need to be agreed in writing prior to works commencing by altering paragraph 19 and including an additional paragraph as follows:

“19. The works shall be carried out in accordance with a works schedule to be agreed in writing between the Company and the MMO prior to the commencement of works.

20. Any changes to the works schedule are also to be agreed in writing between the Company and the MMO prior to the commencement of works. Any changes to the works schedule may require a variation to the deemed marine licence.”

Schedule 8 Part 4, paragraph 20

- 5.42. Co-ordinates need to be provided for the maintenance dredged area in degree, decimal minutes (to 3dp) in WGS84 projection. See paragraphs 5.15 and 5.34 to 5.35.

Schedule 8 Part 4, paragraph 22

- 5.43. The MMO requires that this be re-drafted to make clear that any changes to the works schedule also need to be agreed in writing prior to works commencing by altering paragraph 22 and including an additional paragraph as follows:

“22. The works shall be carried out in accordance with a works schedule to be agreed in writing between the Company and the MMO prior to the commencement of works.

23. Any changes to the works schedule are also to be agreed in writing between the Company and the MMO prior to the commencement of works. Any changes to the works schedule may require a variation to the deemed marine licence.”

Schedule 8 Part 5, paragraph 23

- 5.44. Co-ordinates need to be provided for the dredge and disposal areas in degree, decimal minutes (to 3dp) in WGS84 projection. See paragraphs 5.15 and 5.34 to 5.35.
- 5.45. ABP’s applications for the Green Port Hull and Hull Riverside Bulk Terminal developments also seek to dispose of non-erodible material at HU081, HU082 and HU083.
- 5.46. The MMO has considered the requirements of all developments wishing to use these sites and has concluded that the Applicant will be permitted to dispose of the non erodible material to site HU082 only (see paragraphs 7.9 to 7.28). Erodible material will be permitted to be disposed of to HU080.

Schedule 8 Part 5, paragraph 25

- 5.47. The MMO requires that this be re-drafted to make clear that any changes to the works schedule also need to be agreed in writing prior to works commencing by altering paragraph 25 and including an additional paragraph as follows:

“25. The works shall be carried out in accordance with a works schedule to be agreed in writing between the Company and the MMO prior to the commencement of works.

26. Any changes to the works schedule are also to be agreed in writing between the Company and the MMO prior to the commencement of works. Any changes to the works schedule may require a variation to the deemed marine licence.”

Schedule 8 Part 6, paragraphs 34 to 37

- 5.48. An additional paragraph should be added, or the original paragraphs amended, to stipulate that the amended works cannot commence until the MMO has agreed the amendment or variation in writing and the Company has agreed to the terms and conditions of the amendment or variation in writing.

Schedule 8 Part 6, paragraph 38 Force majeure

- 5.49. This should be drafted to be consistent with licences issued under the 2009 Act and the wording at s.68 of the 2009 Act. As such the following should be re-drafted from:

“....and for the purposes of this paragraph force majeure shall be deemed to apply....”

to:

“....and for the purposes of this paragraph force majeure may be deemed to apply....”

Schedule 8 Part 6, paragraph 44

- 5.50. The MMO requires this is re-drafted to reflect licences issued under the 2009 Act as vehicles can also be used in dredging activities from:

“The Master or the Officer of the Watch of each of the vessels undertaking...”

to:

“The Master or the Officer of the Watch of each of the vessels and/or vehicles undertaking...”

Schedule 8 Part 6, paragraphs 47-54

- 5.51. As drafted, these conditions are not worded appropriately. The MMO requires that conditions for each work item are drafted in light of all relevant consultation responses and in consultation with the MMO to ensure their suitability for the MMO's responsibilities post-consent. See paragraphs 5.16 to 5.18.

Schedules 9 and 11. General comments

- 5.52. Schedules 9 and 11 of the draft DCO contain requirements proposed by the Applicant. Some of these requirements relate to works in the marine area (see, paragraphs 5.57, 5.59, 5.61, 5.62).

- 5.53. The MMO recognises there is some overlap between the geographical jurisdiction of the MMO and the local planning authorities (i.e. between mean high water springs and mean low water).
- 5.54. The MMO has considered this and is of the view that matters which fall within the scope of the marine licensing provisions of the 2009 Act (i.e. anything below mean high water springs) are generally best regulated by conditions on marine licences. The MMO's preferred approach would be for matters arising from the works in the marine area to be dealt with by way of conditions on the deemed marine licence at Schedule 8 of the DCO, if granted, rather than by way of requirements on the DCO or in Schedule 11 of the DCO. This should minimize the risk of inconsistency between different schemes of regulation, or of a duplication of controls.
- 5.55. As such, the MMO does not support requirements on the DCO which would or could otherwise be included as conditions on the deemed marine licence and does not suggest any requirements in these representations.
- 5.56. If the IPC disagrees in principle with this approach, the MMO would be grateful to receive notice as soon as possible.

Schedule 9 Part 1, For the protection of Natural England, paragraphs 2, 3, 4, 5

- 5.57. The MMO considers that marine related conditions are best regulated through the 2009 Act for monitoring and enforcement purposes (see paragraphs 5.53 to 5.56). If these provisions remain here, it is unclear who is responsible for post-consent monitoring, enforcement and variation. This requires clarification prior to the DCO Application being consented.

Schedule 9, Part 2, For the protection of the Humber Conservancy

- 5.58. The MMO considers that this would not exempt the Applicant from the marine licensing provisions of Part 4 of the 2009 Act. Any consent required from ABP will be supplementary to this.

Schedule 9, Part 3, For the protection of the Environment Agency, paragraphs 2,3,4,5

- 5.59. The MMO considers that marine related conditions are best regulated through the 2009 Act for monitoring and enforcement purposes (see paragraphs 5.53 to 5.56). If these provisions remain here, it is unclear who is responsible for post-consent monitoring, enforcement and variation. This requires clarification prior to the DCO Application being consented.

Schedule 10 Limits of harbour

- 5.60. See comments at paragraph 5.1.

Schedule 11 Requirements, paragraph 13, Archaeology

- 5.61. The MMO considers that marine related conditions are best regulated through the 2009 Act for monitoring and enforcement purposes (see paragraphs 5.53 to 5.56). If these provisions remain here, it is unclear who is responsible for post-consent

monitoring, enforcement and variation. This requires clarification prior to the DCO Application being consented.

Schedule 11. Requirements. Paragraph 14, Ecological mitigation

- 5.62. The MMO understands that Natural England are working with the Applicant and the Humber Industry and Nature Conservation Association (HINCA) to draft three Ecological Management and Monitoring Plans (EMMP) for terrestrial, marine and the compensation site.
- 5.63. The MMO considers that marine related conditions are best regulated through the 2009 Act for monitoring and enforcement purposes (see paragraphs 5.53 to 5.56). As such, the MMO requires that the marine EMMP and any marine elements of the compensation site EMMP are approved in writing by the MMO and any monitoring and mitigation requirements are captured on the deemed marine licence. If the marine aspects of these provisions remain here, it is unclear who is responsible for post-consent monitoring and enforcement and variation. This requires clarification prior to the DCO Application being consented.

6. Environmental Statement: General comments

- 6.1. The MMO has provided advice to the Applicant throughout the pre-application process on draft chapters and a number of Annexes of the ES that have implications for the marine area (discussed further in sections 6 and 7 and detailed in Annex 1).
- 6.2. It is disappointing that many of the comments raised during pre-application engagement have not been addressed in the final submission. As such, most of the comments detailed in this section have been communicated to the Applicant previously.
- 6.3. As discussed in paragraphs 4.1 to 4.15, a clear description of the marine works has not been provided in the DCO Application documentation together in a coherent manner and a number of licensable activities have not been included in the deemed marine licence.
- 6.4. It is the MMOs opinion that the activities licensable under the 2009 Act have not been assessed in a clear manner across the different chapters of the ES, the associated Annexes and DCO Application documents.
- 6.5. There does not appear to be an overall cumulative and in-combination assessment. While these are mentioned in each of the various chapters, there is only reference to other ongoing projects / activities, with little quantification of their combined effects.
- 6.6. It would be useful to have an overall section on cumulative and in-combination effects, where each of the other projects could be assessed as a whole against this DCO Application, as currently it appears piecemeal and it is not difficult to assess whether a proper cumulative and in-combination assessment has been carried out.

- 6.7. The MMO has undertaken a technical review of Volume 2 of the ES on the construction of the compensation site. The MMO provide no view on the conclusions of the Habitats Regulations Assessment.
- 6.8. The MMO requests that the Consenting Authority consider the requirement for further work to address these shortcomings as part of the examination process.

7. Environmental Statement: Volume 1 Able Marine Energy Park

Chapter 2 EIA process

- 7.1. Paragraph 2.3.5: The definition of 'wider effects' needs to be reconsidered. If the effect is individually significant at a regional level, it is likely to also be significant at the local level.

Chapter 3 Planning policy and context

- 7.2. In determining the DCO Application, the IPC is required to have regard to the Marine Policy Statement and any relevant marine plan.
- 7.3. The MMO is the marine plan authority for the English inshore and offshore regions. The Project falls within the East Inshore area, which is one of the first areas in England to be selected for marine planning. Formal consultation on the draft marine plans is due to commence in winter 2012/2013. As such, the draft marine plan is likely to become a relevant consideration in determining the DCO Application.

Chapter 7 Geology, hydrology and ground conditions

- 7.4. The dredging of the reclamation area, anchorage trench, berthing pocket, approach channel and turning area have been considered in Chapter 7. Dredging requirements for the excavation works at the pumping station, the south back channel, of Stone Creek (mentioned in previous draft chapters of the ES but not the current one) and of plough dredging have not been included. In addition, it is not clear if the over-dredge of the berthing pocket has been accounted for in the values provided.
- 7.5. These additional dredging and disposal operations are licensable activities under the 2009 Act. The MMO would prefer for these activities to be deemed within the DCO alongside the other marine licences in order for the project to be considered as a whole. However, the Applicant will need to undertake an impact assessment of these activities to do so.
- 7.6. The MMO requests that the Applicant provides details of the location and quantity of material to be capital and maintenance dredged and disposed of the sea from these additional locations. The impact assessment in Chapter 7 and the Dredging Strategy at Annex 7.6 need to be updated to include this information.
- 7.7. Once this information has been provided, the MMO will advise whether any additional sampling and analysis requirements for these activities.

- 7.8. The comments made below in paragraphs 7.9 to 7.28 are the MMO's comments on the information provided. These comments will obviously need to be updated once the additional information has been provided.

Capital dredging and disposal of capital dredged material

- 7.9. Disposal of dredged material is controlled under the London Convention 1972, the OSPAR Convention 1992 and the EU Waste Framework Directive. The 2009 Act provides the necessary statutory means to meet the UK's obligations under both the OSPAR and London Conventions which address the prevention of marine pollution from dumping at sea. Dredged material is classed as a waste material under the aforementioned Conventions. Once a material has entered the waste stream it is strictly controlled. The OSPAR Convention requires Contracting Parties to ensure that authorisation or regulation is in accordance with the relevant applicable criteria, guidelines and procedures adopted by the Commission, which includes requirements to ensure the material is suitable for disposal to sea and maintaining records of material which is disposed of to sea.
- 7.10. In line with OSPAR guidelines, and as conducted for disposal applications made under the 2009 Act, samples were requested for this DCO Application during the pre-application stage. In consultation with the MMO, 45 samples were collected at 23 sites at depths of surface, 1m, 2m and 3m. The samples were analysed in line with practices used for dredge and disposal licence applications the MMO receive under the 2009 Act.
- 7.11. The analysis showed that the material is acceptable for disposal to sea and this was confirmed to the Applicant in a letter to them dated 23 November 2011 and included at Annex 7.6 of the DCO Application.
- 7.12. The capital dredge material is proposed to be disposed of at disposal sites within the Humber estuary at HU080, HU081, HU082 and HU083. A total of 954,350m³ of non erodible material is proposed to be deposited across disposal sites HU081, HU082 and HU083 (sunk dredge channel sites B, A and C respectively). The remaining 981,150m³ of erodible material is proposed to be deposited at HU080 (Humber 1A).

Cumulative and in combination assessment

- 7.13. There are a number of dredging operations within the Humber some which are licensed and some at the application stage, which also utilise the disposal sites mentioned in paragraph 7.12. The dredging strategy submitted with this DCO Application does take these operations into consideration however some of the quantities used in their assessment are not accurate. Whilst the Environmental Statement references Green Port Hull, it does not include the dredging aspects of the project.
- 7.14. The Applicant has provided further information to the MMO on this in the form of a Green Port Hull Cumulative Impacts Screening Assessment. However, this assessment has been made presuming that Green Port Hull is the same as Quay 2005. Whilst the Green Port Hull project does use the existing licences granted for Quay 2005, there is additional work including infilling of part of Queen Alexandra Dock and additional dredging. Therefore the cumulative assessment screening

needs to be updated allowing for this work, particularly as most cumulative impacts surround the dredging and changes to suspended sediment and coastal processes.

- 7.15. Grimsby RO-RO will also dispose of material to HU080. This has not been included in the calculations in the Environmental Statement. The correct amounts of material from other applications are as per Table 1 below; these quantities are taken from ABPs cumulative impact assessment submitted with the Green Port Hull application to the MMO. Whilst these disposal quantities are higher than referenced in this Application, the MMO is content that the disposal sites do have the capacity to take the material described in the ES. The MMO will provide further advice on this once the details of the additional dredging requirements have been provided.

Table 1: The proposed disposal quantities of known projects disposing to disposal sites HU080, HU081, HU082 and HU083

Application	HU081, 82 & 83; Sunk dredge channel A,B & C (m³)	HU080; Humber 1A Middle shoal (m³)
Able Marine Energy Park	954,350	981,150
Green Port Hull	135,850	
Hull Riverside Bulk Terminal	548,000	
Immingham Oil Terminal Approach Channel	375,000	1,597,000
Grimsby Ro-Ro	45,000	115,000
TOTAL	2,058,200	2,693,150

- 7.16. The sunk dredge channel sites were opened with the purpose of filling the existing pits located across the disposal sites. Therefore, material deposited at these sites, must be placed in the depressions of the sites. This can only be undertaken using bathymetry to ascertain the location of these depressions. As the construction of Green Port Hull and AMEP may now take place at the same time it is important to ensure that the material is not placed in a way that would lead to mounds being created on the seabed as this could have an effect on navigational safety. As such, the MMO stipulates that the Applicant be permitted to dispose of the non erodible material to site HU082 only.
- 7.17. To conclude, based on the figures presented in the ES, 954,350m³ of non-erodible capital material is suitable for disposal to HU082 and 981,150m³ of erodible capital material is suitable for disposal to HU080. The deemed marine licence at Schedule 8 must be updated to reflect this latest advice.
- 7.18. However, these comments must be viewed as preliminary and the MMO will provide further advice on this once the details of the additional dredging requirements have been provided.

Maintenance dredging and disposal of maintenance dredged material

- 7.19. The deemed marine licence includes maintenance dredging and disposal of maintenance dredged material. Additional information on this activity is required on the deemed marine licence as discussed at paragraphs 5.15 and 5.34 to 5.39. The

licence does not state the amounts, as is required, but it appears from the ES and annexes, it is understood that a maximum of 1,328,000m³ of maintenance dredge material is proposed be deposited to HU080. This information will need to be included in the deemed marine licence.

- 7.20. As with the capital dredged material, not all of the maintenance dredging and disposal to be undertaken as part of this project is included in the current assessment.
- 7.21. The impact assessment in Chapter 7, the Dredging Strategy at Annex 7.6 and the deemed marine licence need to be updated to reflect the additional dredging requirements from the south bank channel, Stone Creek (if to be undertaken) and the plough dredging around the E.ON and Centrica outfalls.
- 7.22. HU080 has taken large quantities of material in the past and, given the dispersive nature of the Humber, the MMO considers that the disposal site has capacity to take the material as currently described in the DCO Application. However, the site will need to be monitored to ensure the material is dispersing as predicted and the MMO will require this to be a condition on the deemed marine licence with the Applicant required to agree the scope of the monitoring with the MMO prior to commencement.
- 7.23. The MMO reserves the right to amend these comments once the additional information requested at paragraphs 7.4 to 7.8 is provided.
- 7.24. The MMO requires that the Humber Baseline Document be updated to incorporate the dredging and disposal of dredged material being consented for this project. The MMO requests that this is provided to the MMO within 12 months of this consent being granted. This must be conditioned within the deemed marine licence.

Annex 7.6 Dredging Strategy

- 7.25. The dredging plan produced by Westminster Dredging has not been amended to reflect the correct disposal sites mentioned in the rest of the document and in the DCO Application.
- 7.26. The MMO requires that this Dredging Strategy be updated to reflect previous changes and the comments in these written representations.
- 7.27. The Dredging Strategy must also be updated to include all dredging and disposal activities to be undertaken as part of this project including the turning area, approach channel, berthing pocket, south bank channel, plough dredging, dredging for land reclamation, excavation at the pumping station and maintenance of Stone Creek, as well as any other dredge or disposal activities to take place which have not been mentioned in the DCO Application documents.
- 7.28. The Dredging Strategy must be updated and be approved in writing by the MMO prior to any dredging operations commencing. This must be conditioned in the deemed marine licence.

Chapter 8 Hydrodynamic and sedimentary regime

Modelling studies

- 7.29. Modelling studies have included hydrodynamic, sediment transport, sediment plume and near-shore wave transformation modelling. Both cohesive and non-cohesive sediment transport models have been used and evidence is presented of model calibration and validation.
- 7.30. However, the modelling has not been undertaken on the final proposed scheme for all component processes. This includes the final quay design and the full extent of dredge and disposal activities (see paragraphs 7.4 to 7.28 for discussion on dredge and disposal activities). The impact of these changes on the interpretation of the modelling needs explanation. The Applicant must be able to demonstrate that the results of the modelling as presented adequately assess the impact of the Project as applied for. The MMO requests that the Applicant clearly demonstrate that the modelling results which have been presented are still relevant in relation to the revised project. Otherwise the Applicant may be required to undertake additional work to be able to demonstrate that an adequate impact assessment of the Project to be consented has been undertaken.
- 7.31. In addition, impacts to Immingham Outer Harbour have not been considered and drag effects of jetties around Immingham and Humber Sea Terminal have not been included in the modelling studies. The MMO considers that the modelling should have included these omissions.
- 7.32. Annex 8.1, paragraph 5.68: It has been proposed that the design will include an allowance to “*top up*” the front 28 m of quay by 200 mm if needed, as a response to climate change. Appendix E, E.27 states that “*additional work conducted by Hydraulics Research, Wallingford*” will be undertaken to detail how this would be undertaken/enforced/assessed or the requirement monitored over time. The MMO requests that this report be provided to the MMO for further comment.
- 7.33. Annex 8.2: The response of the intertidal areas adjacent to the proposed development are largely assessed using the bed shear stress (skin friction) results presented in Chapter 8, and setting these changes in the context of the wider estuarine natural variability. Wave modelling, including investigation of wave reflection from the quay, is used, but the results do not appear to be included in the calculations of bed shear stress, which is particularly relevant in intertidal areas where wave motion is important to erosion. If this is not considered important, it should be stated and backed up with evidence. Otherwise the assessment of erosion/accretion due to the development should include wave (natural and reflected) induced shear stress. The additional impact of the reflected waves off the proposed structure on the intertidal area should also be assessed.
- 7.34. Annex 8.2, paragraphs 3.14 and 3.15 mention important data/evidence. For ease of understanding, quantification and to visualise spatial aspects, these data should also be given in graphical form, for example, a time-series of erosion/accretion maps. Additional discussion on where the accretionary area is located, how large it

is, what the rates of change are, what the spatial variability in bed level changes mentioned are and whether all of the changes are within the 0.5 – 1 m range.

- 7.35. It would appear that the drainage channels of the currently terrestrial side of the compensation site are not represented in the model. Please comment on the significance of this.
- 7.36. Notwithstanding the comments made in paragraphs 7.30 to 7.35, based on the results as presented, the description of the environment and impacts appears accurate as far as is practical. There are inherent uncertainties in sediment transport modelling and this is acknowledged in the ES.
- 7.37. Of concern is the predicted increase in the annual maintenance dredging requirement and potential interactions with the Centrica and E.ON power stations intakes and outfalls.
- 7.38. The proposed development will result in some changes to the flow speeds in some locations. It is considered that the greatest impact of these changes may be a build up of material around part of the AMEP structures. A monitoring and mitigation strategy to assess, and where required mitigate, these changes must be agreed in writing with the MMO prior to any works commencing. The MMO requires a condition to this effect on the deemed marine licence (see paragraphs 5.16 to 5.18 for further discussion on conditions for the deemed marine licence).
- 7.39. The increase in suspended material at the intake valves of the E.ON and Centrica power stations is also of some concern. Real-time monitoring of suspended sediment concentration is proposed near the power station intakes by the Applicant. A monitoring and mitigation strategy to assess, and where required mitigate, these changes must be agreed in writing with the MMO prior to any works commencing. The MMO requires a condition to this effect on the deemed marine licence (see paragraphs 5.16 to 5.18 for further discussion on conditions for the deemed marine licence). Consultation with the power station operators (Centrica and E.ON) will be required in designing an effective monitoring programme with suitable management trigger thresholds.
- 7.40. Construction of a new outfall structure is discussed as potential mitigation for the potential increase in suspended material at the intake valves of the power stations. The Applicant will require a licence under the 2009 Act for construction of a new outfall. The MMO would prefer for this to be deemed within the DCO alongside the other marine licences in order for the project to be considered as a whole. However, the MMO has not found any assessment of this activity in the ES which would be required for the licence to be deemed within the DCO.
- 7.41. The DCO Application recognises that monitoring and maintenance of the flood embankment around Cherry Cobb Sands will be required to ensure there are no significant impacts to coastal processes. Similarly, a monitoring plan for the impacts of the Cherry Cobb Sands site on land drainage through Stone Creek is also proposed.
- 7.42. The Applicant acknowledges the inherent uncertainties in sediment modelling and their management of this uncertainty centres on a strategy of monitoring and dredging. The monitoring plans have not yet been produced or consulted upon, but

the Applicant states that they will produce detailed monitoring plans for the Centrica and E.ON outfall and intakes structures and the flood embankment around Cherry Cobb Sands and the drainage through Stone Creek. The monitoring plans will also need to address ABPs concern regarding the extra siltation and mitigation measures should be proposed.

- 7.43. Any monitoring and mitigation plans must be agreed in writing with the MMO prior to any works commencing. The MMO requires a condition to this effect on the deemed marine licence (see paragraphs 5.16 to 5.18 for further discussion on conditions for the deemed marine licence). These plans would need to be developed in agreement with other relevant bodies, for example the Environment Agency, Natural England, E.ON and Centrica.

Chapter 10 Aquatic Ecology

- 7.44. With regards to table 10.13, the distance at which injuries, including Temporary Threshold Shift, could occur is more useful than the 'accumulation of energy' distance. Potentially, a marine mammal may only have to be within a certain distance of the piling once to have some auditory damage such as a Temporary Threshold Shift in their hearing.
- 7.45. Paragraph 10.6.46 states that "*in a worst case scenario, harbour porpoises may display behavioural responses within a distance of 1.7km from the piling due to the maximum rms noise during a pulse*". It then goes on to say that "*they would only suffer potential auditory damage if they regularly approach within approximately 25.0 to 38.6km of the piling*". Previous drafts of the ES stated "*in a worst case scenario, harbour porpoises may display behavioural responses over a wide area (40.4 km from the piling)*". The Applicant should clarify the position and ensure that the impact has been correctly assessed citing relevant studies where appropriate.
- 7.46. The impact of piling on migratory fish populations, including Atlantic salmon and lamprey species, during the construction period is of some concern. The impacts of piling on these species will need to be mitigated. As such, the MMO requests that the Applicant submits a piling mitigation strategy. This must be developed in consultation with other relevant bodies, in particular the Environment Agency, and be agreed in writing with the MMO prior to works commencing. The mitigation must be detailed within the deemed marine licence for monitoring and enforcement purposes.
- 7.47. The construction of the Project could cause a barrier to the migration of lamprey species along the intertidal zone as the area is reclaimed. The impact has been mentioned in Table 10.10 and in paragraphs 10.6.59 and 10.6.62, stating that the lamprey could move through other parts of the estuary. However, the MMO does not consider that this is sufficient justification for the conclusion of no significant effect.
- 7.48. Paragraph 10.8.6 states that "*a significant impact to local resident fish populations beyond those that would succumb to the loss of subtidal habitat is possible*". The only point at which any impact is mentioned is in paragraph 10.6.56. However other than to state there may be a locally significant effect, the impact is never described or quantified. Whilst the paragraph goes on to state that the conservation designations of the Humber Estuary SAC may not be affected, this is not to say the

fish populations would not be affected either. A full description of the potential impact on resident fish populations should be provided.

- 7.49. In general, many statements of impact are made but are not evidenced or backed up by appropriate references (for example, paragraphs 10.6.44, 10.6.47, 10.6.49 and 10.6.56). While there are references within paragraph 10.6 as a whole, all statements of impact need to be evidenced. Worked examples of how significance was calculated would assist interpretation.
- 7.50. An auditable methodology of significance assessment is not provided in this Chapter; there are only statements as to whether an impact is significant, in many cases, not backed up by any references. The Applicant needs to provide these methodologies for consideration. Impact tables or matrices of significance, as provided in Chapter 12, would also aid interpretation.

Chapter 14 Navigation

- 7.51. Once the final construction plan is developed and an accurate vessel movement plan is available, a more detailed navigational risk assessment of the construction phase should be undertaken. This should be consulted upon with relevant parties, for example the local Harbour Authority and the Maritime and Coastguard Agency, and agreed in writing with the MMO prior to works commencing. This needs to be included as a condition on the deemed marine licence.
- 7.52. Any temporary moorings required for construction of the quay must not extend any further out from the shore than the footprint of an operational vessel berthed at the completed quay.
- 7.53. Temporary pilings or mooring dolphins associated with construction of the Project must be fully extracted once the construction phase is complete.
- 7.54. The Applicant will require a licence under the 2009 Act for the construction, deposit and/or removal of any permanent or temporary pilings or mooring dolphins. The MMO would prefer for this to be deemed within the DCO in order for the project to be considered as a whole. However, the MMO has not found any environmental impact assessment of this activity in the Environmental Statement which would be required for the licence to be deemed within the DCO as discussed at paragraphs 4.9 to 4.11.

8. Environmental Statement: Volume 2 Compensation site

Chapter 27 Planning policy and context

- 8.1. In determining the DCO Application, the Consenting Authority is required to have regard to the Marine Policy Statement and any relevant marine plan.
- 8.2. The MMO is the marine plan authority for the English inshore and offshore regions. The Project falls within the East Inshore area, which is one of the first areas in England to be selected for marine planning. Formal consultation on the draft marine

plans is due to commence in winter 2012/2013. As such, the draft marine plan is likely to become a relevant consideration in determining the DCO Application.

Chapter 28 Description of Development

- 8.3. Erosion protection may be required, for example concrete blocks or rockfill. The Applicant may require a licence under the 2009 Act for this activity if the activity is taking place below mean high water springs. The MMO would prefer for this to be deemed within the DCO alongside the other marine licences in order for the project to be considered as a whole. However, the MMO has not found any environmental impact assessment of this activity in the Environmental Statement which would be required for the licence to be deemed within the DCO.
- 8.4. It is not clear whether the final resulting areas of expected salt marsh, mud flat and subtidal habitat will compensate for lost habitat at the main site in a “like for like” fashion. This needs to be clarified by the Applicant.
- 8.5. The anticipated areas of mud flat and salt marsh (after five years) alongside the areas of mud flat and salt marsh lost as a result of the development have not been provided. This is required to assess the effectiveness of the proposed Compensation Site (CS).
- 8.6. The MMO welcome that the Applicant has committed to producing a monitoring and mitigation strategy and programme. This needs to be conditioned within the deemed marine licence to reflect that works cannot commence until the strategy has been agreed in writing by the MMO.

Chapter 32 Hydrodynamic and sedimentary regime

- 8.7. Annex 32.2, paragraph 3.1: The model performance could be tested using the adjacent coastal realignment (i.e. Paull Holme Strays). As the forcing conditions are the same, such a test would give an indication of the reliability of the model as compared to the current situation in which there are no calibration data for the area of interest.
- 8.8. Annex 32.2, paragraph 3.3.6: The suggestion that the large differences between the two models is due to model resolution (and a more uneven surface in the higher resolution model) appears speculative. Evidence for this suggestion and reasoning as to why field measurements were not taken to validate the model (in Cherry Cobb Creek, for example) should be provided.
- 8.9. Annex 32.2, paragraph 3.3.7: A potential issue with the wetting and drying of surfaces in the model is cited for spikes at points 1 and 2. However, if this were the case one might reasonably expect to observe the same behaviour at all intertidal sites. However, this is not the case. Further discussion and justification is required to identify the likely causes and whether or not the model performance is acceptable.
- 8.10. Annex 32.2, paragraph 3.3.10: The model results/performance should be compared statistically using an objective approach. On a number of the plots in Figure 7, the velocity, magnitude and phase are incorrect. For example, sites 2, 5 and 7 show significant magnitude or phase deviations between the two models.

- 8.11. Annex 32.3, paragraph 3.4.5 and 3.4.11: The CS is predicted to give an increase in the maximum average current of 44% from 0.67 m/s to 0.97 m/s between the outlet and Stone Creek. It is stated that there will be increased erosion in this area, but no formal assessment is made to show whether this is correct and, if erosion is to occur, to what levels. As significant deepening is a highly likely impact of the proposed compensation site, it should be quantified in the assessment.
- 8.12. The MMO understands that further modelling work is being undertaken by the Applicant to predict the development of the realignment site for the first 10 years. The MMO would wish to see the results of this modelling and would need to have sight of any new design for the compensation site, along with a detailed method statement which would need to be agreed prior to works commencing.
- 8.13. Annex 32.4: It has been stated that there are no data available for calibration and validation of the model. The Applicant should consider what evidence there is that this model has correctly predicted the effects of a coastal realignment, or how this may be assessed if no evidence readily exists. Although the CS under consideration here does not presently exist, there are other sites in and near the Humber estuary where similar activities have occurred. These sites would make an ideal blind-test of the model – that is the model could be run without calibration/validation and compared afterwards with field data from an established re-alignment site. This would give confidence in the model results. It would be useful to know if the model was used previously with any of the Humber sites and, if so, how well it performed.
- 8.14. Annex 32.4, paragraph 3.5.7: At point 16 there is a considerable change in flow speed. This is likely to scour a deeper channel and result in a slower speed. This model does not assess changes in bed level, which is a limitation. However, one could make predictions of the scour in the channel and use this information to model an anticipated ‘equilibrium’ channel configuration. At present the model only investigates the initial conditions rather than the hydrodynamic conditions that are likely to persist.
- 8.15. Annex 32.4, paragraph 4.3: This paragraph is important, but it is only briefly documented and reported. The time-series of bed shear stress, plotted along with the critical deposition and erosion values, would be informative and should be included. Likewise, an explanation of why the increased velocities at point 19 (Figure 14b) result in a reduction (rather than the expected increase) in the annual erosion estimate (Table 12) would also be useful.
- 8.16. Annex 32.4, paragraphs 5.1.2 and 5.1.3: The qualitatively forecast “*high erosion levels*” in the Cherry Cob Sands Creek should be quantified (i.e. erosion/accretion estimates) as for other parts of the study area. This should be done upstream and downstream of the breach where accretion and erosion (respectively) are expected.

Chapter 33 Water quality and sediment quality

- 8.17. The land that will be flooded to create the compensation site is agricultural land. The flooding is likely to cause some material to wash into the Humber and as such the Applicant must ensure that this does not present a contamination or pollution risk to the marine environment.

- 8.18. Ground investigations were undertaken for a variety of analysis. From a marine perspective, the material was tested for metals and hydrocarbons; however the methods used are not comparable to the methodologies used by the MMO's scientific advisors at Cefas to assess contamination of the marine environment.
- 8.19. The results from locations TH11 and TH12 are higher than Cefas Action Level 2 for copper, mercury, lead and zinc; however it is unclear whether the methods are comparable to those used to determine the Cefas Action Levels. The MMO requests that details of the analytical methodologies used are provided in order to assess the comparability of this data. If it is not possible to compare the results with MMO criteria, the MMO may require re-sampling and testing using Cefas methods to ensure the direct comparison of TH11 and 12.
- 8.20. TH11 and TH12 also showed higher levels of pyrene and flouranthene than background levels in the Humber. The methods for these analyses also need to be provided to the MMO to determine the suitability of the data for a direct comparison to Cefas Action Levels.
- 8.21. Some sites were also tested for dichlorodiphenyldichloroethylene (DDE) and dieldrin however the limits of detection are several orders of magnitude above Cefas Action Level 1 (0.2 PPM and 0.001 PPM respectively). DDE and dieldrin concentrations have not, therefore, been adequately assessed for risk assessment purposes and will require further sampling and analysis.
- 8.22. The MMO understands that the Applicant is intending to undertake additional site investigation works. The MMO strongly recommend that the MMO are consulted on the scope of these works and the methodologies to be used to ensure that the results can adequately describe the contamination and pollution risk for the marine environment.
- 8.23. The MMO would require that works are not allowed to commence at the compensation site until the information requested in paragraphs 8.17 to 8.22 is provided to the MMO and the MMO has agreed in writing that the works should commence. Should the methodologies used be insufficient to be able to assess the risk of pollution to the marine environment, the MMO would require additional sampling and analysis of sediments to be undertaken place prior to works commencing. The MMO would require that this is made a condition of the deemed marine licence.
- 8.24. Paragraph 33.6.3 states "*the sensitivity of the receiving estuarine waters to contaminants is considered to be medium and the magnitude of effect to be medium, resulting in a moderate negative significant effect*". Evidence of this statement has not been provided. Where possible, appropriate mitigation should be proposed and be detailed in the deemed marine licence.
- 8.25. Paragraph 33.6.7 mentions that a soke dyke will need to be relocated. It is unclear whether this is below mean high water springs, but there is mention that the waters are saline, which implies that it is. Depending on its current and proposed location, this may require a licence under the 2009 Act. Details of the current and proposed location of the soke dyke should be provided to the MMO, as well as a brief intended method statement in order to clarify this point. Should this activity require a licence under the 2009 Act, the MMO would prefer for this to be deemed within the

DCO in order for the project to be considered as a whole. However, the MMO has not found any assessment of this activity in the ES which would be required for the licence to be deemed within the DCO.

Chapter 34 Aquatic ecology and nature conservation

- 8.26. Paragraph 34.6.2 states that while there will be damage to the salt marsh due to construction vehicles, but it will recover quickly. There is no evidence or references for this statement and further clarification is required.
- 8.27. Previous drafts of this chapter have mentioned that the removal of salt marsh and placement of any protective matting for vehicles tracking across salt marsh will be required during construction. There is no reference to this in the final ES; however, the applicant has agreed that there will be some excavation of the foreshore during construction. Clarification is sought from the Applicant on whether this will form part of the construction methodology. If these activities are due to occur an impact assessment should be made of them in this DCO Application for the project to be considered as a whole.
- 8.28. The removal of salt marsh and placement of protective matting below mean high water springs are licensable activities under the 2009 Act. Should they be taking place, the MMO would prefer for this to be deemed within the DCO alongside the other marine licences in order for the project to be considered as a whole. However, the MMO has not found any assessment of this activity in the ES which would be required for the licence to be deemed within the DCO (as discussed in paragraphs 4.9 to 4.11). This would need to include describe the maximum envisaged extent of matting and the impact of the matting on the marine environment. This should also be included in the in-combination and cumulative impacts assessment for salt marsh habitat.
- 8.29. Paragraph 34.8.1 states that a monitoring programme will be set up. The monitoring programme should also be designed to monitor the “like for like” and have a mitigation programme in place in case of any unforeseen issues arising. The monitoring and mitigation plan should be agreed in writing with the MMO prior to any works commencing at this site. This will also need to be conditioned in the deemed marine licence for compliance and monitoring purposes.

Chapter 36 Drainage and flood risk

- 8.30. Previous drafts of this chapter mentioned possible dredging of Stone Creek if siltation levels rise. Any specific reference to dredging has been removed but there is now mention of a monitoring and maintenance plan which will identify mitigation works (see paragraph 7.41).
- 8.31. The MMO requests that the Applicant clarifies whether additional dredging is likely to be required. If there is potential for additional dredging, the environmental impacts of this should be assessed in this DCO Application for the project to be considered as a whole.
- 8.32. Any dredging or disposal would require a licence under the 2009 Act. The MMO would prefer for all licences under the 2009 Act to be deemed within the DCO

alongside the other marine licences in order for the project to be considered as a whole. However, the MMO has not found any environmental impact assessment of this activity in the ES which would be required for the licence to be deemed within the DCO.

Chapter 40 Historic environment

- 8.33. Annex 2.2 notes that English Heritage is the body responsible for agreeing mitigation below low water mark. Any mitigation may need to be captured in the deemed marine licence for compliance and monitoring purposes.
- 8.34. Paragraph 40.7.1 states that detailed mitigation measures are set out in a Written Scheme of Investigation for marine and intertidal archaeology. Once agreed with English Heritage and any other relevant bodies, a copy should be provided to the MMO for agreement. Any mitigation or conditions relating to the marine environment would need to be captured in the deemed marine licence for compliance and monitoring purposes.

9. Habitats Regulations Assessment

- 9.1. A likely significant effect was determined due to the effects of the project on estuarine habitats and on birds. A table detailing why other features were screened out is given in Annex D, however, it lacks detailed reasoning. Additional justifications for why features were screened out should be given, or links to relevant chapters where this is detailed should be provided within the table.

10. Contact details

- 10.1. The MMO would prefer electronic communication.

- 10.2. First contact:

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Marine Management Organisation

02 April 2012

ANNEX 1 - Pre-application consultation and engagement between the MMO and the Applicant

Document	Date received	Date MMO response provided
Environmental Scoping Report	20/09/2010	15/10/2010
Preliminary Environmental Information Report	01/02/2011	24/03/2011
Dredge Method Statement and Programme / Sampling	14/02/2011	At dredge workshop 09/03/11
Dredge Strategy	19/04/2011	n/a - for info only
Thermal Plume Modelling Assessment	21/04/2011	26/05/2011
Likely Significant Effect Report	26/04/2011	26/05/2011
Humber Modelling Report (Annex 8.1 of draft ES)	28/04/2011	03/06/2011
Cherry Cobb Sands Compensation Site (Annex 8.1 and 8.2 of draft ES)	28/04/2011	03/06/2011
Chapters 1 - 6 of Draft ES	28/04/2011	03/06/2011
Aquatic Ecology Report (Chapter 10 of Draft ES)	03/05/2011	03/06/2011
Commercial Fisheries Report (Chapter 12 of Draft ES)	05/05/2011	03/06/2011
Water and Sediment Quality Report (Chapter 9 of Draft ES)	09/05/2011	03/06/2011
Geomorphology Report	13/05/2011	17/06/2011
Water Framework Directive Assessment	07/06/2011	
Draft ES	28/06/2011	27/07/2011
Habitats Regulations Report	05/07/2011	8/07/2011 and 27/07/2011
Navigation Risk Assessment	19/07/2011	n/a - for info only
Navigation Risk Assessment	14/04/2011	03/05/2011
Revised Dredge Strategy (Revision D)	25/10/2011	23/11/2011
Draft DCO and DML	01/12/1011	05/12/2011

Presented is an overview of the documents the MMO has commented on throughout the pre-application process for this DCO Application. Alongside this, the MMO has met the Applicant on numerous occasions to discuss comments provided.

ANNEX 2 - Tri-partite letter to the Applicant from the MMO, NE and the EA

6 July 2011

Richard Cram – Technical Director
Able UK
Able House
Billingham
Teesside
TS23 1PX

Dear Richard,

**ABLE UK MARINE ENERGY PARK: IPC PRE-APPLICATION
CONSULTATION**

Natural England, the Marine Management Organisation and the Environment Agency have been in recent discussions regarding the above consultation process. We are all in agreement that this is a timely point at which to provide our joint view on the process thus far and the way ahead.

All three agencies are of the view that the early part of this consultation process was both timely and positive. However, over the past two months we have all been required to comment upon individual chapters of the Environmental Statement to very short deadlines. Furthermore, some of the assertions made in these chapters have been supported by evidence presented in chapters that we have not yet received or have not been supported by evidence at all. In light of this, we have thus far been unable to provide a definitive view on this material as these chapters are to varying degrees interrelated. We are collectively of the view that this method of consultation does not meet the IPC Guidance regarding the appropriate methods of pre-application consultation.

It must also be noted that the technical scope of some of the chapters received thus far is such that it falls short of providing a robust evidence base to address the environmental issues identified in relation to the proposal. We trust that the revised chapters will have addressed our comments. To this end we will continue to work with you and your consultants to provide relevant and timely comments and feedback in order to assist in addressing any outstanding matters.

We have been advised that the IPC expect that comments of this nature regarding the effectiveness of consultation will be submitted to them as part of the Applicant's Consultation Report. To that end can you please ensure that this letter is included in the relevant section in your finalised submission to the IPC.

For the future and in order to provide you with the best service we can, we

Natural England
Head Office
1 East Parade
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collectively maintain that we will need adequate opportunity to consider the Environmental Statement (including the information you intend to supply to inform the Habitats Regulations Assessment), in their final completed form in order to provide the most robust statutory comments for submission to the IPC.

We understand that the period given for the section 42 consultation has now closed. However we note that during the period given for that consultation, the information provided to and representations made by us were largely confined to the scoping of your assessments. A great deal of more detailed information as to likely effects has subsequently been, continues to be and is expected to be provided. Substantive representations on this material cannot therefore have been or be provided during the period of the section 42 consultation.

We understand that it is Able UK's view that the current consultation on individual chapters does not form part of a formal statutory consultation. We appreciate that the IPC's guidance note 10 was not published until after the expiry of the period given for the section 42 consultation and cannot therefore have informed the way in which that consultation was carried out. However it would seem appropriate and in the best interests of all parties to take advantage of our continuing dialogue to meet the expectations of the IPC, as set out in that note. We particularly draw your attention to that part of the guidance that advises "the developer to use the pre-application process to seek assurances from the relevant statutory agencies that all potential impacts have been properly addressed in sufficient detail before the application is submitted." Given the piecemeal submission of ES chapters, some absence of evidence, various technical shortcomings and the time constraints imposed on us it is difficult to see how such assurances can be provided. For example we have recently been given 17 days to provide comments on a "draft environmental statement". This does not provide us with sufficient time to give an informed view given the volume and scope of the material which we are being asked to consider. Whilst we understand that the section 42 consultation has now closed it does we feel provide a more realistic timetable of the time required for consideration of these substantial matters (i.e. not less than 28 days as specified in Section 45). A suitable timetable for continued consultation is essential, particularly given the substance of what we now understand the IPC would like us to have considered at the pre-application stage.

A further matter for consideration is that any relevant conditions to be applied in respect of a development should also be considered in full before an application is made to the IPC. This will include having discussions with the appropriate statutory agencies to whose remit they pertain. We would therefore suggest that you build a suitable time window into your submission timetable in order to address the needs of this process. The precise wording and scope of conditions should be drafted by yourselves and will need to be agreed and transposed directly into your submission as an annex signed off by Able UK. To assist you in this matter we have agreed the following broad remit areas in order to clarify the matters upon which we will submit our formal comments:

Environment Agency

- Air Quality (issues connected with EA permitting regime only);
- Flood Risk;
- Flood Defence;
- Aquifer Issues;
- Migratory Fish;
- Geomorphology (shared jointly due to Flood Risk issues);
- Historic Landfill Issues (NE supporting);
- Managed Realignment – Delivered jointly – EA, expertise on design and engineering;
- WFD – Cross cutting issue – Some involvement will be required from local authorities;
- Dredging Issues (to be delivered jointly)

Natural England

- Protected Species e.g. water vole;
- Impacts upon Humber Estuary Designated Sites;
- Geomorphology (to be joint due to links with ecological issues relating to sedimentation and lamprey)
- Managed Realignment (delivered jointly; NE expertise on ecological functioning)
- Thermal plume issues re. saline lagoons;
- Sedimentation re. saline lagoons
- Dredging Issues (to be delivered jointly)
- Landscape and Access

Marine Management Organisation

- All potential impacts on marine environment (direct and indirect), including those listed above;
- Marine navigation;
- Protected species;
- Marine plans and marine policy statement;
- Intended use of development;
- Assessment of project as a whole, including land based elements;
- Harbour order provisions;
- Deemed marine licence and associated conditions;

- Post-consent monitoring and enforcement of deemed marine licence.

All three agencies continue to bring considerable resource and expertise in the interests of ensuring your application will meet the requirements set by the IPC and with respect to our statutory remits. We have all fielded many meetings, enquiries and consultations to that end and will continue to work energetically with you for the remainder of the pre-application period. Furthermore, as fellow Defra agencies, and in order to provide the best service to our customers, we endeavour to adhere to the principle of "One Voice" in providing a fully integrated view on projects we share in common. To that end we have agreed to have regular inter-agency teleconferences and communications to ensure we deliver a truly joint approach to the Marine Energy Park proposal.

If we can be of any further assistance on this matter please do not hesitate to contact us.

Yours sincerely,

Andrew Hearle – Principal Adviser – Land Use - Natural England



Andrew Mozley

Planning & Corporate Services Manager



Environment
Agency

Head, Major Infrastructure Projects & Development



Mike Taylor

From: Hewitson, Annette [REDACTED]
Sent: 01 May 2012 15:57
To: Richard Cram [REDACTED]
Cc: Manson, Susan; Anna Gerring; Hawthorne, Emma (NE); Mike Quigley; Andrew Hearle; Wilson, Susan (NE)
Subject: ABLE MEP - EA response to various queries/questions received at meetings and via email

Dear Richard,

Further to our recent meetings and correspondence, I can now provide the following information in respect of some of your queries:

MOD outfall/abstraction pipe

I can confirm that the Environment Agency has no record of any permits at this location. If the discharge consists solely of uncontaminated surface water, then this would not require a water quality permit. Any abstraction that would be used for fire fighting purposes is exempt from the permitting regime. If the pipe is used for these purposes then its use will be legal.

Chapter 12 – Commercial Fisheries

I have now read through the Commercial Fisheries chapter in the Environmental Statement. I would advise you that, due to our recreational angling duties under the Salmon and Freshwater Fisheries Act 1975 and Fisheries Byelaws we would like to be an interested party in this Chapter for SoCG purposes. I also agree with your suggestion that this should be included under Table 35 as a separate issue to “Commercial fishing operations”. I request that the following text is added to the *impacts* section: It is agreed that there will be impacts from piling noise and vibration and habitat loss and disturbance during construction works that may impact on fish stocks. The significance of these impacts and potential mitigation measures are assessed in Chapter 10 Aquatic Ecology, and discussed further in Section X of this SoCG.

Chapter 16 – interest in noise methodology

I can confirm that the Environment Agency does not have an interest in Chapter 16, Noise and Vibration, as the assessment and methodology for underwater noise impacts is all contained in Chapter 10 and its associated annexes.

Dredge deposit/Waste advice

I have looked at the Dredging Strategy Chapter of the Environmental Statement and think that you are proposing to dredge to a depth of -11.5m in the berthing pocket, which equates to 827,000m³ of spoil. I am unsure as to how much of this will be clay and what tonnage that would represent. Therefore, there appears to be three different possibilities for dealing with your proposed activity, depending upon quantities and suitability of the clay.

The first is that the activity could be done under a Permit Exemption. Exemption “U1 Use of waste in construction”, would permit you to deposit up to 1000 tonnes of dredging spoil and 5000 tonnes of soil/clays. Further information on this is available at

<http://www.environment-agency.gov.uk/business/topics/permitting/116299.aspx>.

However, I would assume that these quantities will not be sufficient?

The second is that the project may fall within the scope of the CL:AIRE (Contaminated Land: Applications in Real Environments) provisions. I know that Able are active in the field of waste management and therefore you, or someone in your organisation, may already be aware of this scheme. This is an industry-led voluntary scheme where the development must decide that they are going to use the CL:AIRE Code of

Practice (CoP) before work commences. The developer must use a Qualified Person (I would assume that Able will already have such a person in its waste management side of the business) to audit and confirm the evidence, and make a declaration to us. To use this scheme you would have to demonstrate that the dredged clay is suitable for the use you are proposing and that you can meet all the requirements of the CoP. There is a possibility what you are proposing may meet the Direct Transfer Scenario, subject to the materials meeting the requirements of Appendix 2 of the CoP. Further information is available at the

CL:AIRE website address:

http://www.claire.co.uk/index.php?option=com_content&view=article&id=210&Itemid=82

Our position statement on the issue can be found at:

<http://www.environment-agency.gov.uk/static/documents/Leisure/PS006.pdf>

Finally, if you do not think that you meet the CoP or the clay requires treatment before it can be re-used, then it is likely that you will need an Environmental Payment from us. I would recommend that you contact our National Permitting Support Team on 0370 50650 to discuss the proposed operation and Permit requirements.

Rosper Road – Land for Compulsory Purchase

We are currently awaiting return of the deeds for this land from our deed store. We are also liaising with the Internal Drainage Board in respect of the operational need for the land and land drainage in the area. I will provide further information on this as soon as I know more.

Deltares Work

Deltares are nearing completion of the work we requested from them and the early indications show that there will be a need for further compensation for indirect loss of the intertidal area. We do not yet have any definite figures to share with you and I understand Sue has ask for clarification in terms of the size of the CCS site from you to feed into this. We will hopefully have more information next week. I wonder if we could add this to the Agenda for our meeting on the 9th May?

Water Framework Direct assessment

We are currently liaising with our National advisors on this issue and again, we would like to add this to the Agenda for the 9th.

I am aware that I still have an outstanding action to respond to you in respect of the list of our licensable activities (using the description of works for the DML).

Kind regards,

Annette

Annette Hewitson

Principal Planning Officer

Environment Agency

✉ Waterside House, Waterside North, Lincoln, LN2 5HA

☎ 0 [REDACTED]

☎ [REDACTED]

📠 [REDACTED]



Awarded to the Planning and Corporate Services Department, Anglian Region, Northern Area

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Application for Development Consent for Nationally
Significant Infrastructure under the Planning Act 2008

* required information

Application Form

Please read this form's guidance note before completing the form

Do you have an IPC reference number?

☒ Yes ☐ No

IPC reference number

1. Applicant



Organisation

Address

Building number or name

Street

City or town

County or administrative area

Postcode

Country

Name of contact

Telephone number

Fax number

Email

2. Agent



Are you an agent acting on behalf of the applicant?

☒ Yes ☐ No

Organisation

Continued from previous page...

Address

Building number or name	<input type="text" value="50"/>
Street	<input type="text" value="Broadway"/>
City or town	<input type="text" value="London"/>
County or administrative area	<input type="text"/>
Postcode	<input type="text" value="SW1H 0BL"/>
Country	<input type="text" value="United Kingdom"/>
Name of contact	<input type="text" value="Angus Walker"/>
Telephone number	<input type="text" value=""/>
Fax number	<input type="text" value=""/>
Email	<input type="text" value=""/>

3. Fee



State the arrangement for the application fee payment:

☒ BACS ☐ CHAPS ☐ Cheque

* Please provide payment reference details

4. Confirming why the Commission should receive the application



Brief statement to explain why this application falls within the remit of the Infrastructure Planning Commission

The application is for a quay that will be capable of handling more than 5m tonnes of cargo per annum, and is therefore a nationally significant infrastructure project by virtue of ss14 and 24 of the Planning Act 2008. Evidence to support this is provided by the project engineers, Hochtief, as document TR030001/APP/23c

5. Non-technical description of the Development Proposal



Brief non-technical description of the development proposal

The nationally significant infrastructure project is a quay of solid construction on the south bank of the River Humber together with an ecological compensation scheme comprising both temporary and permanent habitat creation on the opposite bank. Associated development includes dredging and land reclamation, onshore facilities for the manufacture, assembly and storage of marine energy installation components. Ancillary matters include compulsory purchase of land, harbour regulation and the diversion of two footpaths.

6. Location or Route of the Development Proposal



Description of location of application site(s), or route of development (reference to appropriate plans)

The application site is on the south bank of the River Humber, 2km north of Immingham, together with a temporary and permanent compensatory environmental habitat on the opposite bank.

Continued from previous page...

Is the site a single site or a linear site?

☒ Single site

☐ Linear site

Grid reference

Easting

Northing

* Document reference

Add another reference

7. Associated development

?

Associated development is included within this application:

☒ Yes

☐ No

* Document reference

Add another reference

8. a) Consultation report

?

* Document reference

Add another reference

8. b) Copies of newspaper notices

?

* Document reference

Add another reference

9. Draft Order

?

* Document reference

Add another reference

10. Explanatory Memorandum

?

* Document reference

Add another reference

11. Land Plan

?

* Document reference

Add another reference

Continued from previous page...

12. Works Plan



* Document reference TR030001/APP/12

Add another reference

13. Compulsory acquisition of land or an interest in land or right over land



Issues are relevant for this application:

☒ Yes ☐ No

Statement of reasons document reference TR030001/APP/13a

Add another reference

Funding statement document reference TR030001/APP/13b

Add another reference

Book of Reference document reference TR030001/APP/13c

Add another reference

14. a) Environmental Impact Assessment (EIA)



Environmental Statement (ES) required:

☒ Yes ☐ No

ES Document Reference TR030001/APP/14a

Add another reference

14. b) Screening Opinion/Direction and Scoping Opinion/Direction



Screening opinion sought, or direction received:

☐ Yes ☒ No

Scoping opinion sought:

☒ Yes ☐ No

Document reference TR030001/APP/14b

Add another reference

14. c) Publicity required under Regulation 11 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009



Continued from previous page...

In addition to publishing the notice, a copy of the notice was sent to:-

the consultation bodies

☒ Yes

* the persons notified to the applicant in accordance with regulation 9(1)(c) of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009:

☐ Yes ☒ No, not applicable

15. European sites (to which Regulation 48 of the Conservation (Natural Habitats, & c.) Regulations 1994 applies) or a Ramsar site

?

Report required for this application:

☒ Yes ☐ No

* Document reference

Add another reference

16. A plan, with accompanying information, identifying any statutory or non statutory sites or features of nature conservation, geological or landscape importance; habitats of protected species, important habitats or other diversity features; and water bodies in a river basin management Plan - together with an assessment of any effects likely to be caused by the development.

?

Issues are relevant for this application:

☒ Yes ☐ No

* Document reference

Add another reference

17. A plan, with accompanying information, identifying any statutory or non statutory sites or features of the historic environment such as scheduled monuments, World Heritage sites, listed buildings and other historic structures, archaeological sites and registered battlefields, together with an assessment of any effects likely to be caused by the proposed development

?

Issues are relevant for this application:

☒ Yes ☐ No

* Document reference

Add another reference

18. Flood Risk Assessment

?

Flood risk assessment required:

☒ Yes ☐ No

* Document reference

Continued from previous page...

Add another reference

19. Matters set out in section 79 (1) (statutory nuisances etc) of the Environmental Protection Act 1990

?

Statement required for this application:

☒ Yes ☐ No

* Document reference TR030001/APP/19

Add another reference

20. A plan with any accompanying information identifying any Crown land

?

Issues are relevant for this application:

☒ Yes ☐ No

* Document reference TR030001/APP/20

Add another reference

21. A plan identifying new or altered means of access, stopping up of streets or any diversions, extinguishments or creation or rights of way or public rights of navigation

?

Issues are relevant for this application:

☒ Yes ☐ No

* Document reference TR030001/APP/21

Add another reference

22. Additional information for specific types of infrastructure

?

* Additional information is required to be submitted in accordance with regulation 6 of The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009:

☒ Yes ☐ No

Provide a brief description

The application is for the construction of harbour facilities, and so by virtue of regulation 6(3) it is accompanied by a statement of the desirability of the making of the order in harbour terms.

* Document reference TR030001/APP/22

Add another reference

Continued from previous page...

Regulation 6 of the Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009 requires additional information to be submitted with the following types of development.

Please check any of the following boxes that apply:

- ☐ Construction or extension of an offshore generating station (Reg. 6 (1a))
- ☐ Construction or extension of a non offshore generating station (Reg. 6 (1b))
- ☐ Highway related development (Reg. 6 (2) (part 1))
- ☐ Construction or alteration of a railway (Reg. 6 (2) (part 2))
- ☒ Construction or alteration of harbour facilities (Reg. 6 (3))
- ☐ Construction of a pipeline (Reg. 6 (4))
- ☐ Construction or alteration of a hazardous waste facility (Reg. 6 (5))
- ☐ Construction of a dam or reservoir (Reg. 6 (6))

Construction or alteration of harbour facilities (Reg. 6 (3))

* Provide a statement setting out why the making of the order is desirable in the interests of securing the improvement, maintenance or management of the harbour in an efficient and economical manner

Not applicable

* Provide a statement setting out why the making of the order is desirable in the interests of facilitating the efficient and economic transport of goods or passengers by sea or in the interests of the recreational use of sea-going ships

Statement given in document TR030001/APP/22

23. Any other plans, drawings and sections necessary to describe the proposal for which development consent is sought, and any other documents, reports or information to support the application

?

Provide a brief description of any other plans, drawings and sections that are being submitted with this application

Planning application drawings: TR030001/APP/23a
Construction drawings: TR030001/APP/23b

Document reference

TR030001/APP/23a

Document reference

TR030001/APP/23b

Remove this reference

Add another reference

Provide a brief description of any other documents considered necessary to support the application

Continued from previous page...

Evidence that capacity is above the NSIP threshold: TR030001/APP/23c

Document reference TR030001/APP/23c

Add another reference

Provide a brief description of any other information provided that is in support of the application, but which has not been explicitly required

None

Document reference

Add another reference

24. Other consents/licences required under other legislation ?

Other consents/licences are required:

☒ Yes ☐ No

Provide a list of consents/licences

Consents set out in TR030001/APP/24 (which also lists consents disapplied)

You must cite the document references as appropriate

* Document reference TR030001/APP/24

Add another reference

25. Declaration ?

I declare to the best of my knowledge that the information given in this form and enclosed maps, plans and other documents are true.

Please note that the Infrastructure Planning Commission requires a handwritten signature on one copy of the submitted application.

Signature

(For and on behalf of the Applicant)

* Name RICHARD CRAM

(In block letters)

Continued from previous page...

Evidence that capacity is above the NSIP threshold: TR030001/APP/23c

Document reference

TR030001/APP/23c

Add another reference

Provide a brief description of any other information provided that is in support of the application, but which has not been explicitly required

None

Document reference

Add another reference

24. Other consents/licences required under other legislation



* Other consents/licences are required:

☒ Yes ☐ No

* Provide a list of consents/licences

Consents set out in TR030001/APP/24 (which also lists consents disappled)

You must cite the document references as appropriate

* Document reference

TR030001/APP/24

Add another reference

25. Declaration



I declare to the best of my knowledge that the information given in this form and enclosed maps, plans and other documents are true.

Please note that the Infrastructure Planning Commission requires a handwritten signature on one copy of the submitted application.

Signature

(For and on behalf of the Applicant)

* Name

RICHARD CRAM

(In block letters)

Continued from previous page...

Date	<div>16</div> <div>12</div> <div>2011</div>
	ddmmyyyy
Organisation	Able Humber Ports Ltd
* Position within the organisation	Design Manager

APPENDIIX C

SGVs / GACs

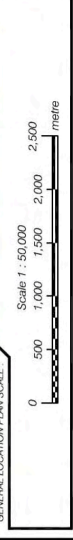
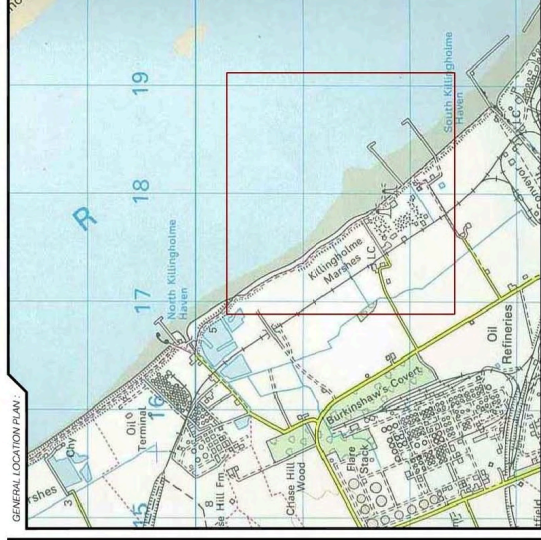
SOIL - TIER ONE HUMAN HEALTH SCREENING VALUES						
		Status		Issue No	Date	
		Issue		Version 3	28/04/2011	
Shadbol Environmental Human Health Soil Screening Values						
Determinand	Units	Residential	Allotments	Commercial	Parks, Playing Fields and Open Spaces	Derivation Tool
pH		<5, >9	<5, >9	<5, >9	<5, >9	Neutral Conditions
Asbestos	%	<0.01%	<0.01%	<0.01%	<0.01%	Lab Screening
HEAVY METALS/METALLOIDS						
Arsenic	mg/kg	32	43	640	41.4	Science Report SCO50021 / Arsenic SGV
Beryllium	mg/kg	51	55	420	277	CLEA Model based on LQM / CIEH Research
Boron	mg/kg	291	45	192000		CLEA Model based on LQM / CIEH Research
Cadmium	mg/kg	3	0.53	348		CLEA Model based on LQM / CIEH Research
Chromium (III)	mg/kg	3000	34600	30400		CLEA Model based on LQM / CIEH Research
Chromium (VI)	mg/kg	4.3	2.1	35	184	CLEA Model based on LQM / CIEH Research
Copper	mg/kg	2330	524	71700	12200	CLEA Model based on LQM / CIEH Research
Lead	mg/kg	450	450	750	279	CLEA SGV
Mercury (Elemental)	mg/kg	1	26	26	25.8	Science Report SCO50021 / Mercury SGV
Mercury (Inorganic)	mg/kg	170	80	3600	303	Science Report SCO50021 / Mercury SGV
Mercury (Methyl)	mg/kg	11	8	410	20.1	Science Report SCO50021 / Mercury SGV
Nickel	mg/kg	130	230	1800	922	Science Report SCO50021 / Nickel SGV
Selenium	mg/kg	350	120	13000	696	Science Report SCO50021 / Selenium SGV
Vanadium	mg/kg	75	18	3160		CLEA Model based on LQM / CIEH Research
Zinc	mg/kg	3750	618	665000	54800	CLEA Model based on LQM / CIEH Research
GENERAL INORGANICS						
Easily L beratable Cyanide (free)	mg/kg	36	36	36	36	Acute effects infant 1 dose 3g soil
US EPA PRIORITY PAHs						
Acenaphthene	mg/kg	1000	200	100000	5810	CLEA Model based on LQM / CIEH Research
Acenaphthylene	mg/kg	850	160	100000		CLEA Model based on LQM / CIEH Research
Anthracene	mg/kg	9200	2200	540000	29400	CLEA Model based on LQM / CIEH Research
Benzo(a)Anthracene	mg/kg	5.9	10	97	12.2	CLEA Model based on LQM / CIEH Research
Benzo(a)pyrene	mg/kg	1.0	2.1	14	1.34	CLEA Model based on LQM / CIEH Research
Benzo(b)fluoranthene	mg/kg	7	13	100	13	CLEA Model based on LQM / CIEH Research
Benzo(k)luoranthene	mg/kg	10	23	140	137	CLEA Model based on LQM / CIEH Research
Benzo(g,h)iperylene	mg/kg	47	160	660	154	CLEA Model based on LQM / CIEH Research
Chrysene	mg/kg	9.3	5.8	140	1160	CLEA Model based on LQM / CIEH Research
Di benzo(a,h)anthracene	mg/kg	0.9	2.3	13	1.42	CLEA Model based on LQM / CIEH Research
Indeno(1,2,3-cd)pyrene	mg/kg	4.2	7.1	62	12.7	CLEA Model based on LQM / CIEH Research
Fluoranthene	mg/kg	670	290	23000	3910	CLEA Model based on LQM / CIEH Research
Fluorene	mg/kg	780	160	71000	3900	CLEA Model based on LQM / CIEH Research
Naphthalene	mg/kg	8.7	23	1100 (432)sol	432	CLEA Model based on LQM / CIEH Research
Phenanthrene	mg/kg	380	90	23000		CLEA Model based on LQM / CIEH Research
Pyrene	mg/kg	1600	620	54000	2930	CLEA Model based on LQM / CIEH Research
Total PAHs	mg/kg	No Sum	No Sum	No Sum	No Sum	
Chlorinated Solvents						
1,2 Dichloroethene (DCA)	mg/kg	0.014	0.016	1.8	6.13	CLEA Model based on LQM / CIEH Research
1,1,1,2 Tetrachloroethane	mg/kg	4.8	4.4	590	441	CLEA Model based on LQM / CIEH Research
1,1,2,2 Tetrachloroethane	mg/kg	6.3	2	1200	483	CLEA Model based on LQM / CIEH Research
PCE (Tetrachloroethene)	mg/kg	4.8	8.7	660	1150	CLEA Model based on LQM / CIEH Research
1,1,1 Trichloroethane (111 TCA)	mg/kg	28	240	3100	6390	CLEA Model based on LQM / CIEH Research
Vinyl Chloride (Chloroethene)	mg/kg	0.00099	0.0018	0.12	1.14	CLEA Model based on LQM / CIEH Research
Tetrachloromethane	mg/kg	0.089	0.85	15.0		CLEA Model based on LQM / CIEH Research
Trichloroethene	mg/kg	0.49	2.2	55.0	246.0	CLEA Model based on LQM / CIEH Research
Phenolics						
Phenol	mg/kg	780	120	1200000		CLEA Model based on LQM / CIEH Research
TPH						
TPH Aliphatic >C5 6	mg/kg	110	3900	13000 (1150)sol	1100	CLEA Model based on LQM / CIEH Research
TPH Aliphatic >C6 8	mg/kg	370	13000	42000 (780)sol	7.69E+02	CLEA Model based on LQM / CIEH Research
TPH Aliphatic >C8 10	mg/kg	110	1700	12000 (451)vap	4.76E+02	CLEA Model based on LQM / CIEH Research
TPH Aliphatic >C10 12	mg/kg	540 (283)vap	7300	49000 (283)vap	2.97E+02	CLEA Model based on LQM / CIEH Research
TPH Aliphatic >C12 16	mg/kg	3000 (142)sol	13000	91000 (142)sol	1.26E+02	CLEA Model based on LQM / CIEH Research
TPH Aliphatic >C16 35	mg/kg	76,000	2.70E+05	1800000	1.08E+05	CLEA Model based on LQM / CIEH Research
TPH Aliphatic > C35 44	mg/kg	76,000	2.70E+05	1800000		CLEA Model based on LQM / CIEH Research
TPH Aromatic >EC5 7	mg/kg	280.00	57	90000 (4710)sol	23.9	Science Report SCO50021 / Benzene SGV
TPH Aromatic >EC7 8	mg/kg	611	120	190000 (4360)vap	4.36E+03	Science Report SCO50021 / Toluene SGV
TPH Aromatic >EC8 10	mg/kg	151	51	18000 (3580)vap	1.96E+03	CLEA Model based on LQM / CIEH Research
TPH Aromatic >EC10 12	mg/kg	346	74	34500 (2150)sol	2.08E+03	CLEA Model based on LQM / CIEH Research
TPH Aromatic >EC12 16	mg/kg	593	130	3.78E+04	9.25E+02	CLEA Model based on LQM / CIEH Research
TPH Aromatic >EC16 21	mg/kg	770	260	2.80E+04	1.61E+03	CLEA Model based on LQM / CIEH Research
TPH Aromatic >EC21 35	mg/kg	1230	1600	2.80E+04	1.61E+03	CLEA Model based on LQM / CIEH Research
TPH Aromatic >EC35 44	mg/kg	1230	1600	2.80E+04		CLEA Model based on LQM / CIEH Research
Aliphatic Aromatic EC44 70	mg/kg	1300	3000	2.80E+04		CLEA Model based on LQM / CIEH Research
Total TPH	mg/kg	no sum	no sum	no sum	no sum	CLEA Model based on LQM / CIEH Research
BTEX						
Benzene	mg/kg	0.33	0.07	95.00	23.90	Science Report SCO50021 / Benzene SGV
Toluene	mg/kg	610	120	4.40E+03	4.36E+03	Science Report SCO50021 / Toluene SGV
Ethylbenzene	mg/kg	350	90	2.80E+03	2.84E+03	Science Report SCO50021 / Ethylbenzene SGV
Xylenes (ortho)	mg/kg	250	160	2.60E+03	2.62E+03	Science Report SCO50021 / Xylene SGV
Xylenes (meta)	mg/kg	240	180	3.50E+03	3.46E+03	Science Report SCO50021 / Xylene SGV
Xylenes (para)	mg/kg	230	160	3.20E+03	3.17E+03	Science Report SCO50021 / Xylene SGV
Dioxins / Furans						
Dioxins/furans as 23787CDD WHO TEQ (see Tox 12 for data assessment method)	ug/kg	8.90E-03	0.05	1.3		RISC WORKBENCH 4

NOTES

- 1) A1 Shadbolt Environmental derived screening values calculated using an Fraction Organic Carbon (FOC) value of 1.45% which is equivalent to a Soil Organic Matter (SOM) of 2.5% For reference FOC = 0.58% SOM Check FOC/ SOM against your Conceptual Site Model
- 2) Screen individual constituent values initially and if exceedences are noted consider further in relation to averaging areas and statistical analysis
- 3) These values are for initial screening for potential risk to human health only They are not remediation thresholds Screening for other receptors to be done separately as appropriate for the site, e.g. for water, ecology, building materials
- 4) TSVs have been derived for common constituents only to date, pending future issues of this sheet Research has been undertaken for numerous other constituents already
- 5) Please note that the TSVs derived for certain compounds may be low in relation to standard laboratory detection limits This is likely to apply in particular for solvents such as Vinyl Chloride when using a standard VOC suite If these compounds are specifically being targeted on the site, please ensure that you check with the laboratory that appropriate detection limits can be achieved
- 6) *No significant toxicological risk to human health
For certain compounds not identified as a significant risk to human health (eg heavy end hydrocarbon fractions), aesthetic and other considerations may drive requirement for remediation

APPENDIX D

FUGRO GROUND INVESTIGATION EXTRACTS



LEGEND

- D Borehole Location
- Q Borehole Location
- R Borehole Location
- Static Cone Penetration Test Location


NOTES :

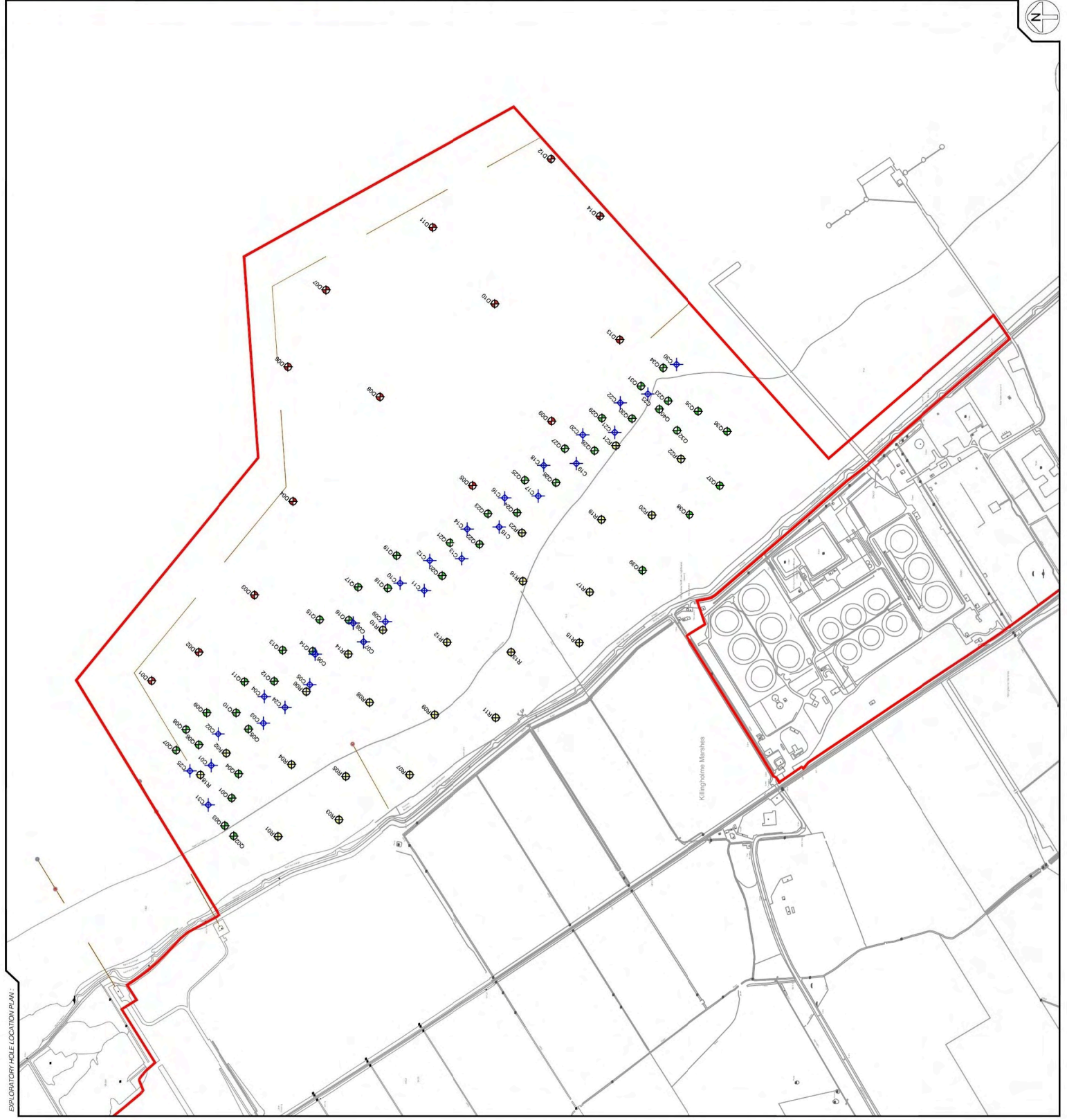
1. Reproduced from the 1992 Ordnance Survey 1:50,000 - Grimsby & Surrounding Area. Copyright: Fugro Engineering Services Ltd, Fugro House, Wallingford, OX10 9RB. License Number 100004922.
2. Base plan supplied by the Client for reporting purpose.

CLIENT : ABLE UK LTD

PROJECT : ABLE MARINE ENERGY PARK
- MARINE GROUND INVESTIGATION

TITLE : EXPLORATORY HOLE LOCATION PLAN

INTERP. BY: Fugro Survey	DATE: 16/07/2011 - 05/11/2011	DRAWN BY: CA	DATE: 05/12/2011
CHECKED BY: [REDACTED]	DATE: 21/12/2011	APPROVED BY: [REDACTED]	DATE: 03/01/2012
CONTRACT No.: NEA111004		FIGURE SP1	
CAD FILE NAME: NEA111004_SPT.DWG			
PLOTTED DRAWING SIZE: A3 (420 X 297)			
<div><div></div><div><p>FUGRO ENGINEERING SERVICES LIMITED Fugro House, Hithercroft Road Wallingford, Oxfordshire, OX10 9RB Tel: +44 (0)1870 4021 400 Fax: +44 (0)1870 4021 499 Email: info@fes.co.uk www.fes.co.uk</p></div></div>			



EXPLORATORY HOLE LOCATION PLAN



KEY

- D Dredge Area Boreholes
- Q Quay Wall Boreholes
- R Reclamation Area Boreholes
- Line of Cross Section
- Quay Area
- Turning Area
- Approach Channel
- Berthing Pocket
- Anchor Trench

Rev	Date	Comments	FM	ID	RM
A	03/04/12	Preliminary Issue			
			Drw	Chk	App

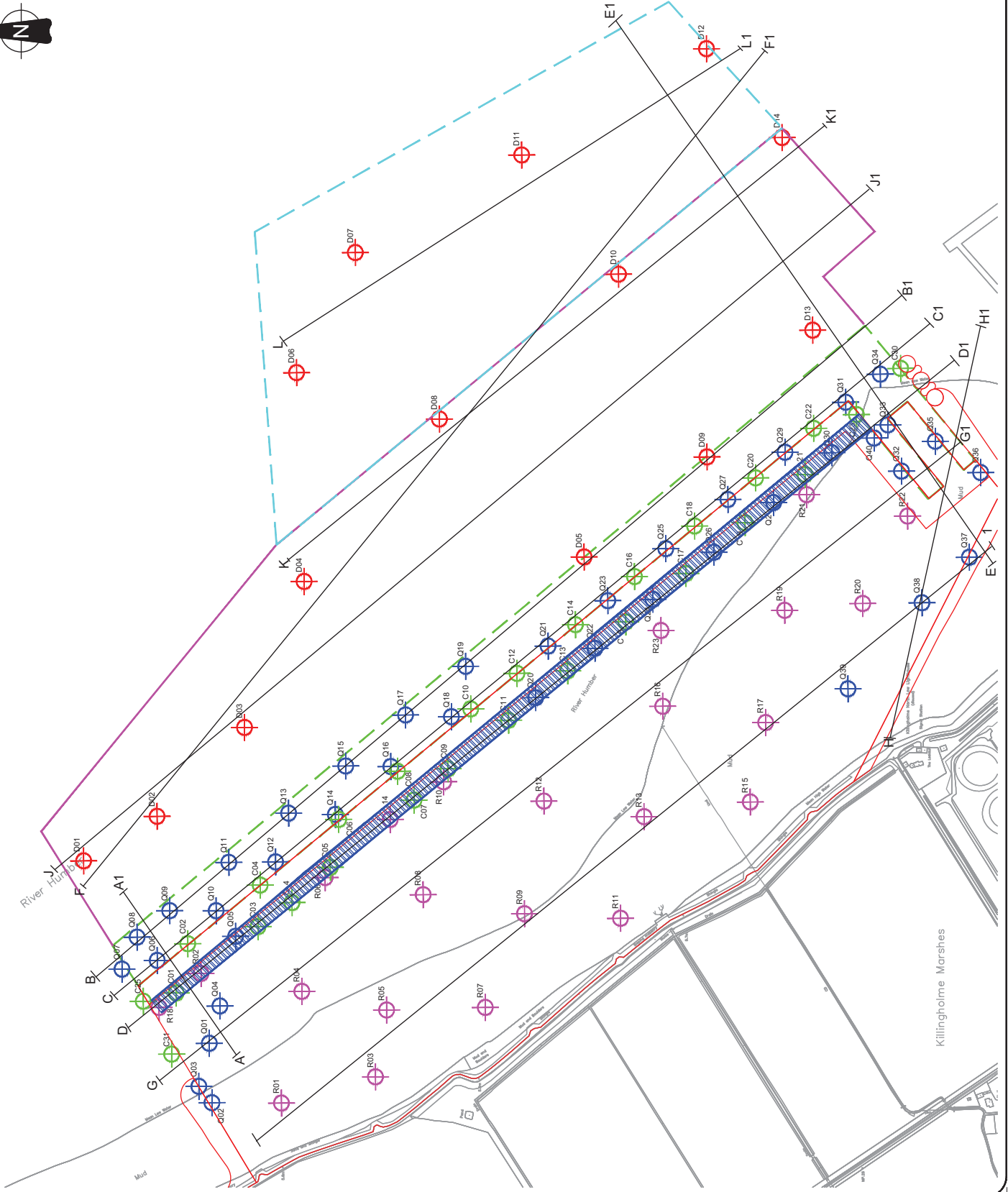


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Fax: +44(0)1642 855555
ABLE House
Riverside, Tinsley,
Sheffield, S10 2TS
www.ableuk.com
TS23 1PX

Project:	ABLE Marine Energy Park
Client:	ABLE UK Ltd
Title:	Geological Cross Section Location Plan

AS BUILT

Scale:	1:5,000@A3	Drawn	J Maddison	Checked	R Cram	Approved	R Cram
Date	03/04/2012						
Drawing No.	AME - 09296						
Revision:	A						



KEY					
A	19/04/12	Pre m nary Issue	FM	JD	RC
Rev	Date	Comments	Drw	Chk	App















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Project:	Able Marine energy park
Client:	Able UK Ltd
Title:	Dredge Cross Section - Key Plan

PRELIMINARY					
Scale:	1:1000@A4	Drawn	Checked	Approved	
		F Maddison	J Dawes	R Cram	
Date	19/04/2012	19/04/2012	19/04/2012	19/04/2012	
Drawing No.	AME - 09295	Revisions:		A	

Clay		Silt		Sand	
Sandy Clay		Silty Clay		Silty, Sandy Clay	
Silty Sand		Gravel		Sandy Gravel	
Gravelly Clay		Chalk		No Recovery. Assumed Zone of Core Loss	

KEY					
R verbed Contour					
Cha k Contour					
Geo ogy Key Presented n					
AME - 09296					
Rev	Date	Preliminary Issue	FM	JD	RC
A	29/03/12	Comments	Drw	Chk	App

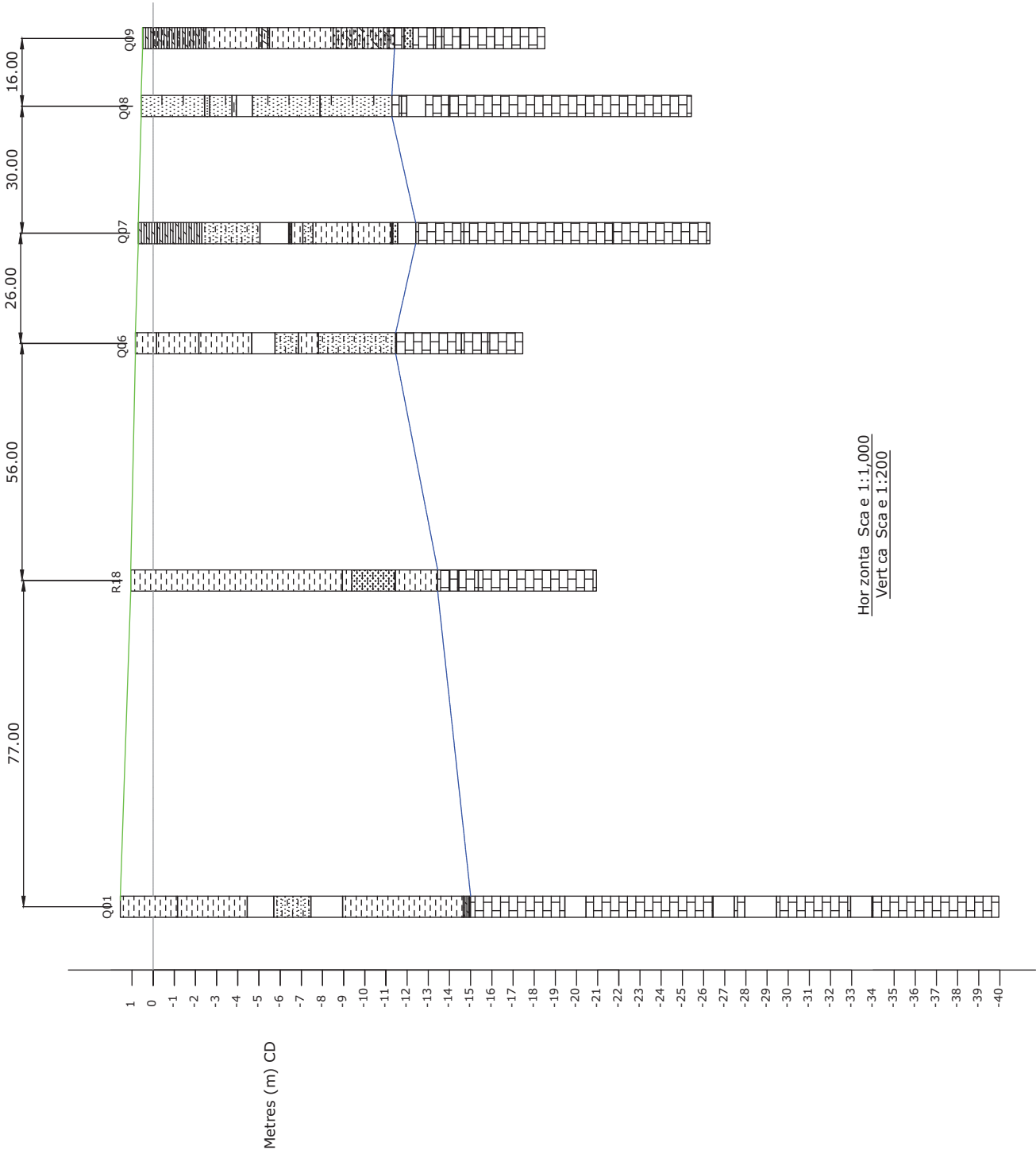


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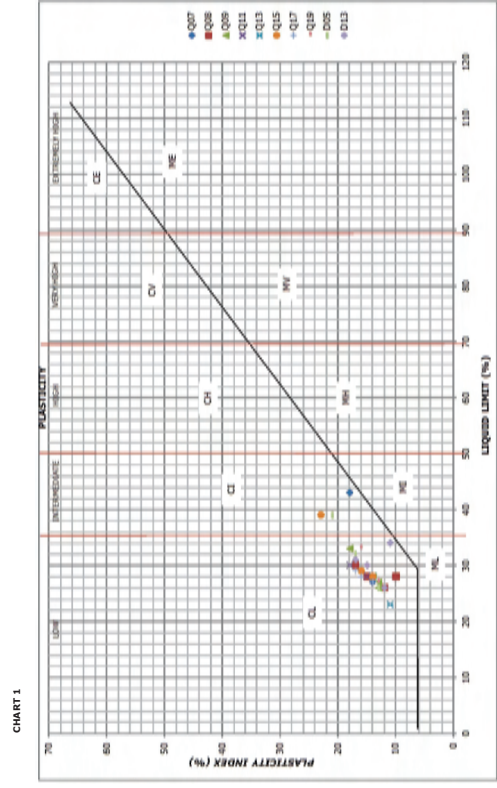
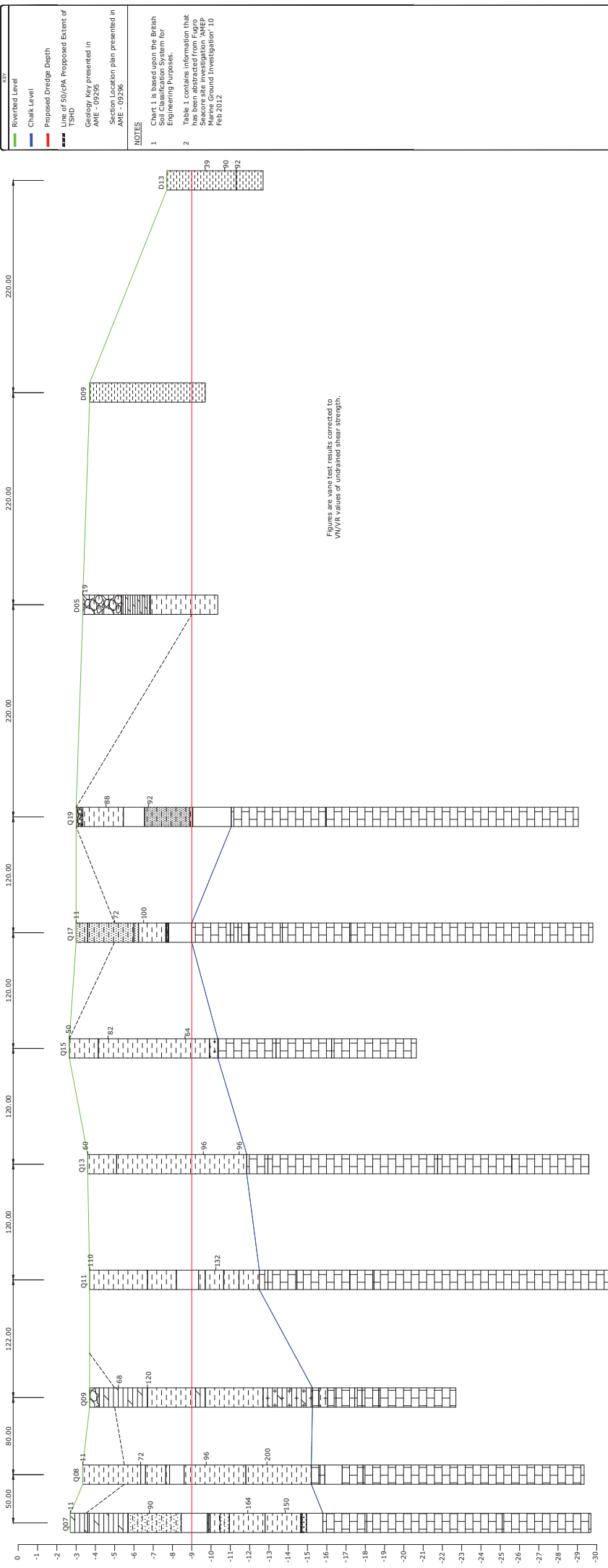
Project	Ab e Mar ne Energy Park
Client	Ab e UK Ltd
Title	Dredge Cross Sect on A - Berth ng Pocket

PRELIMINARY

Scale	Drawn	Checked	Approved
As Shown@A1	F Maddison	J Dawes	R Cram
Date	29/03/2012	04/04/2012	04/04/2012
Drawing No	AME - 09287	Revision	A



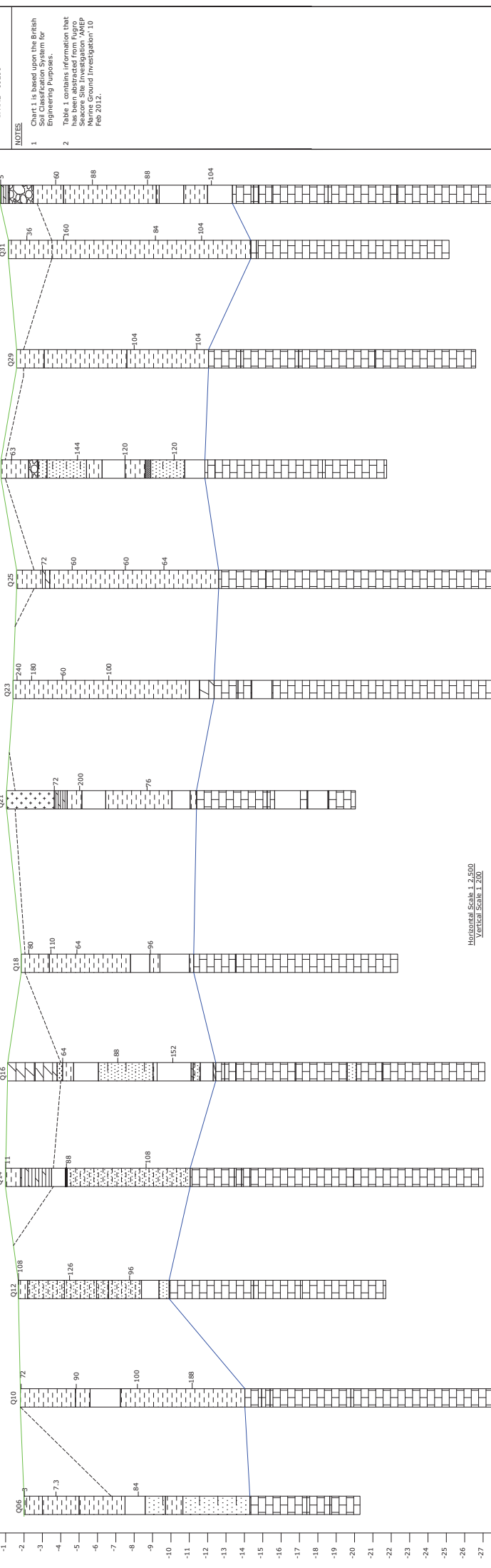
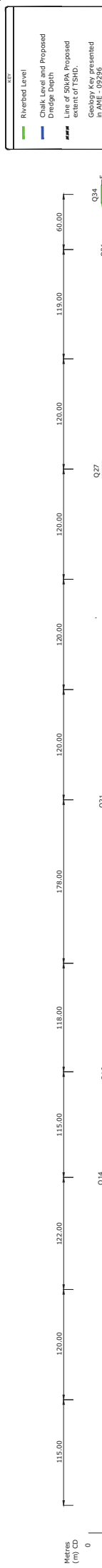
Hor zonta Sca e 1:1,000
Vert ca Sca e 1:200



Horizontal Scale 1 2 500
Vertical Scale 1 200

TABLE 1

B&E	Sample No.	Soil Type	Depth (m)	Moisture Content (%)	Shrinkage (%)	Liquid Limit (%)	Plasticity Index (%)	PI	Clay	Silt	PSD (%)	Gravel	Cobbles	Notes																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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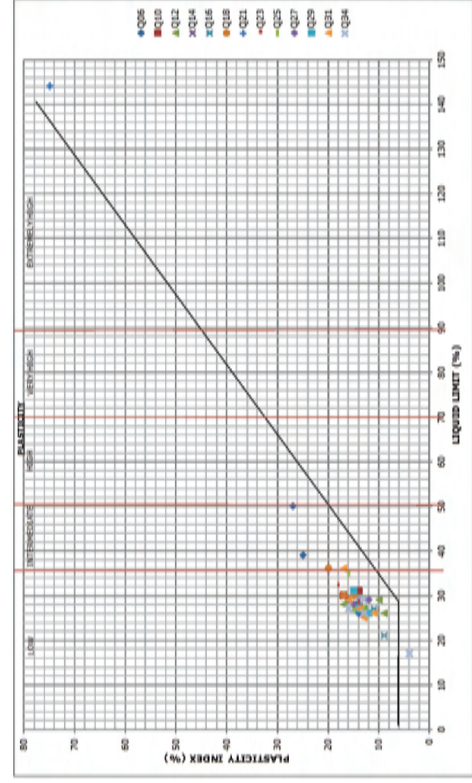


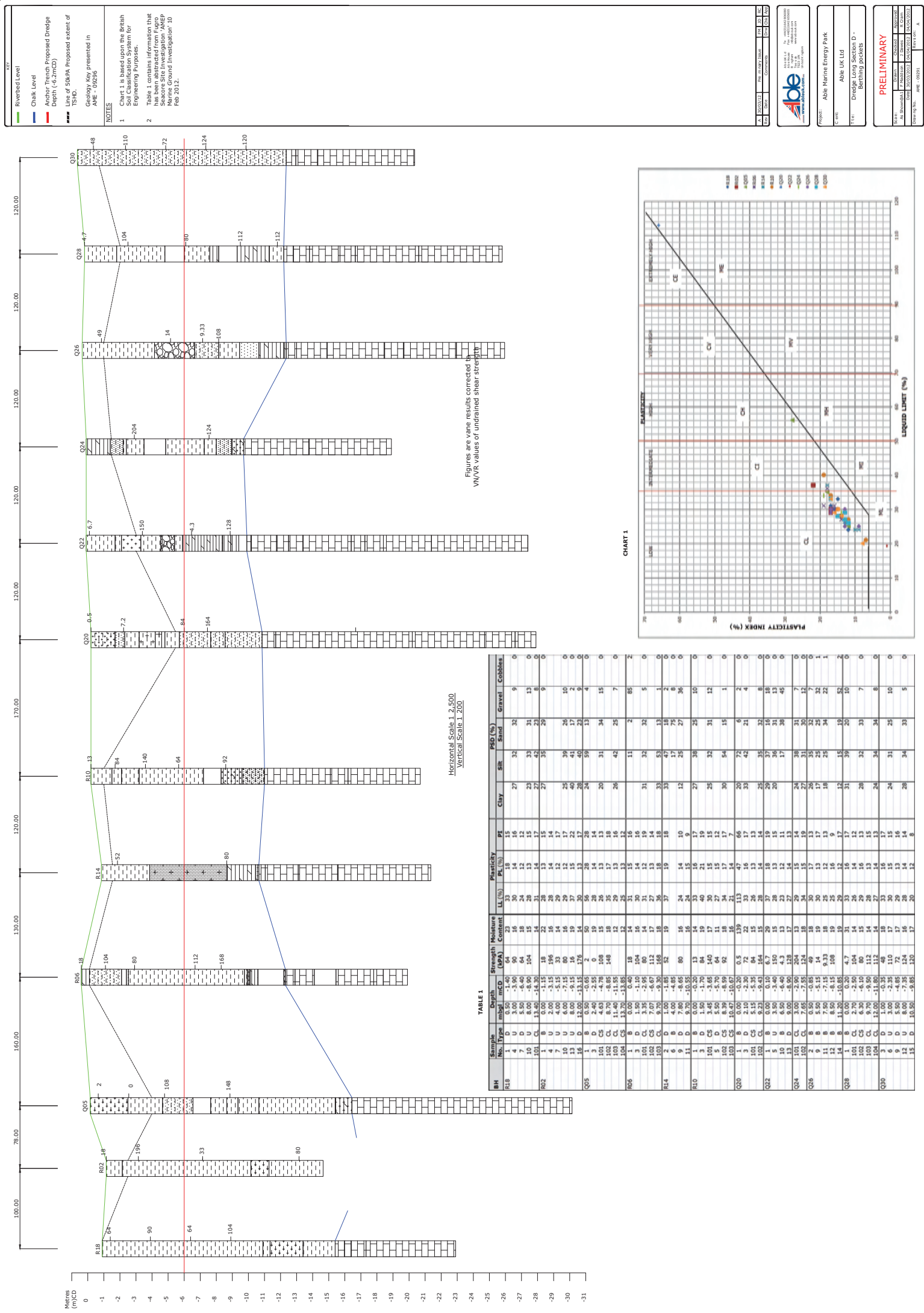
Figures are vane test results corrected to VN/VR values of undrained shear strength.

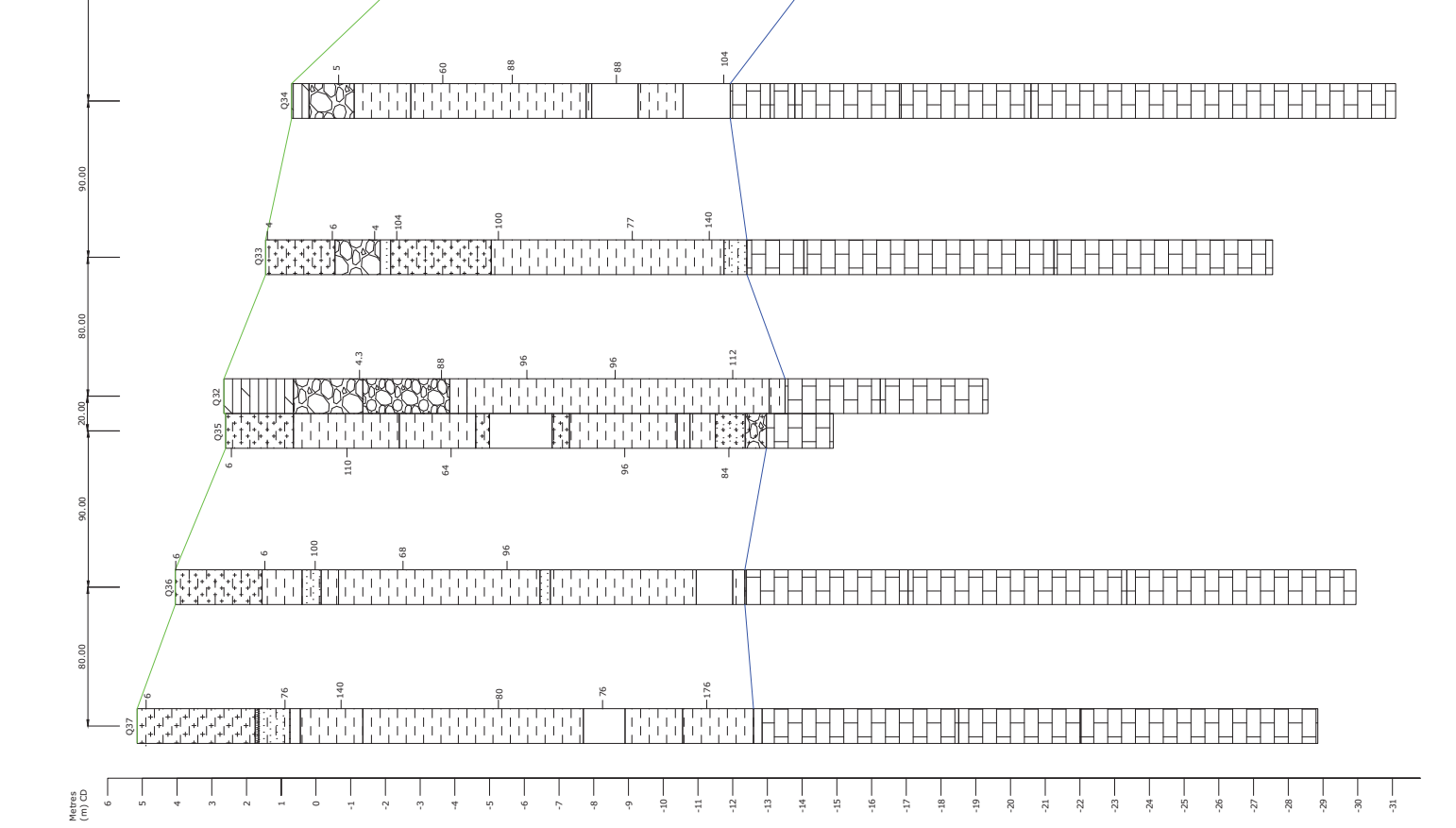


TABLE 1

BH	Sample No.		Depth mbal	mCD	Spent Mixture	LL (%)		PL (%)	PT	PSD (%)					
	Type	Sub				Content	Clay			SIR	Sand	Gravel	Cobbles		
Q06	1	B	1.00	-2.00	3	28	22	50	23	27	22	44	26	0	
	4	B	1.70	-3.70	7.3	22	14	14	14	20	33	16	0		
	8	B	2.40	-6.40	94	16	29	14	25	45	41	12	2		
Q10	101	C	7.90	-10.20	13	29	13	16	16	21	34	29	16	0	
	102	C	10.20	-13.20	13	28	14	14	14	21	34	29	16	0	
	1	D	0.00	-1.80	72	18	26	13	17	23	46	27	3	0	
Q12	101	A	6.50	-4.30	100	13	26	13	17	23	46	27	3	0	
	102	C	9.50	-11.30	188	14	30	13	17	23	46	27	3	0	
	1	B	0.00	-1.70	108	22	29	19	10	20	35	34	6	0	
Q14	101	C	4.15	-7.65	56	14	26	17	13	22	31	34	13	0	
	102	C	7.15	-9.65	56	14	26	17	13	22	31	34	13	0	
	7	D	8.20	-9.90	18	26	17	6	10	39	21	19	1	1	
Q16	1	B	0.00	-1.00	11	21	28	14	14	20	39	21	19	1	
	101	C	7.00	-4.70	108	15	27	13	15	18	34	25	30	3	
	102	C	7.00	-4.70	109	16	27	13	15	18	34	25	30	3	
Q18	101	C	3.50	-1.60	10	17	27	16	11	21	52	23	4	0	
	5	D	6.00	-1.10	85	15	21	13	15	10	26	34	30	0	
	1	D	0.40	-2.20	80	19	30	15	15	21	33	26	20	0	
Q20	3	D	1.60	-3.45	110	17	36	16	20	20	25	35	34	6	
	101	C	2.00	-4.85	14	15	24	17	17	25	34	6	0	0	
	102	C	2.00	-4.85	56	14	24	17	17	25	34	6	0	0	
Q21	1	D	0.50	-1.55	113	144	69	75	26	56	12	6	0	0	
	3	B	2.60	-3.65	72	14	28	14	14	7	13	22	57	1	
	6	D	4.00	-5.05	200	13	29	13	16	23	35	34	8	0	
Q23	1	D	1.00	-2.40	108	17	32	14	18	23	35	34	8	0	
	5	D	3.00	-1.60	240	13	29	13	16	26	31	32	11	0	
	9	D	5.00	-4.10	60	14	27	13	14	25	32	30	13	0	
Q25	3	B	1.40	-3.00	72	17	35	15	16	12	8	5	75	0	
	6	D	3.00	-4.60	60	15	27	14	13	24	30	31	15	0	
	10	D	5.00	-7.50	60	16	27	12	15	25	36	33	7	0	
Q27	101	C	3.20	-3.95	144	15	28	13	15	31	42	20	7	0	
	102	C	6.80	-7.55	120	16	26	14	12	22	45	23	10	0	
	1	B	0.50	-1.35	63	24	29	17	12	22	45	23	10	0	
Q29	1	B	0.00	-1.60	120	20	31	16	15	23	26	10	0	0	
	6	D	6.40	-8.00	104	15	26	14	12	27	37	28	10	0	
	102	C	9.80	-11.40	104	14	27	13	14	27	37	28	10	0	
Q31	4	D	3.00	-4.15	160	14	29	13	16	26	35	33	6	0	
	7	D	5.50	-6.65	112	15	25	12	13	24	25	32	31	12	0
	10	D	8.00	-10.15	84	18	27	13	14	25	32	31	12	0	
Q34	1	B	0.00	-0.70	144	17	28	15	11	23	33	43	3	1	
	6	D	3.00	-3.70	60	16	29	16	13	26	34	31	9	0	
	9	D	5.00	-5.70	88	16	26	13	13	26	31	32	12	0	
Q36	16	D	11.50	-12.20	104	16	27	13	14	26	34	14	42	36	
	16	D	11.50	-12.20	104	16	27	13	14	26	34	14	42	36	
	16	D	11.50	-12.20	104	16	27	13	14	26	34	14	42	36	







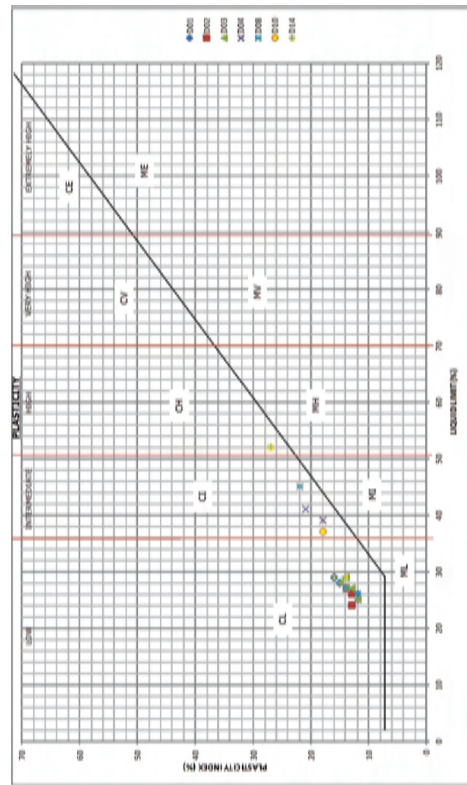
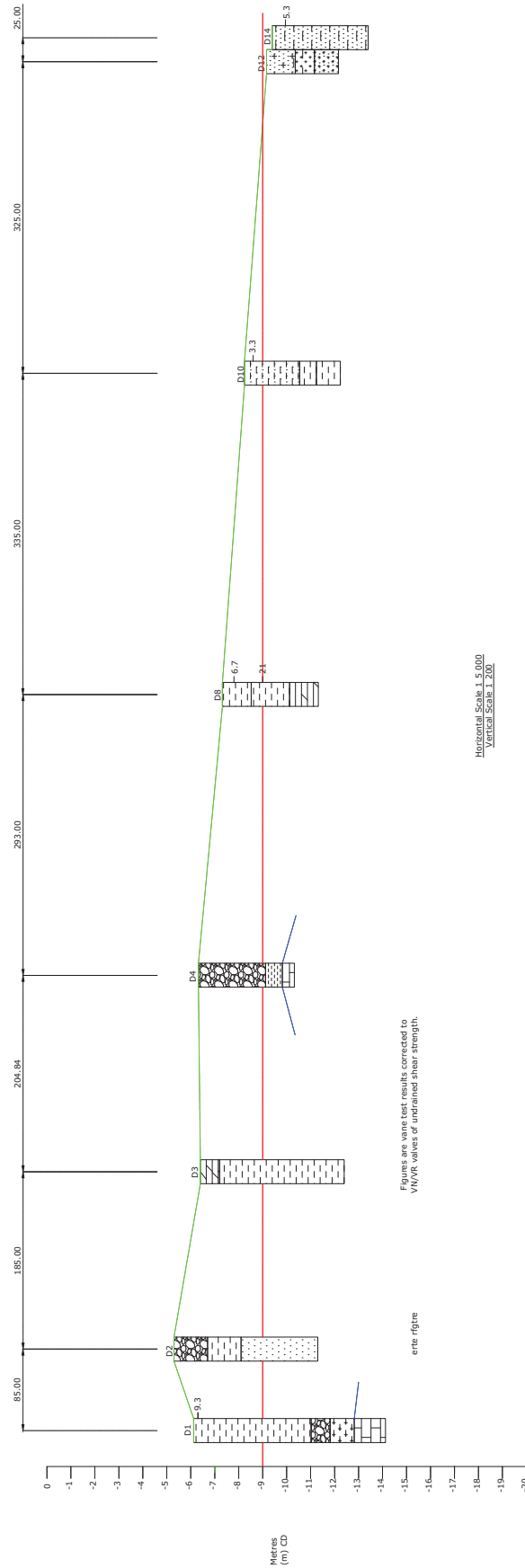
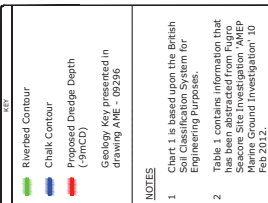


TABLE 1

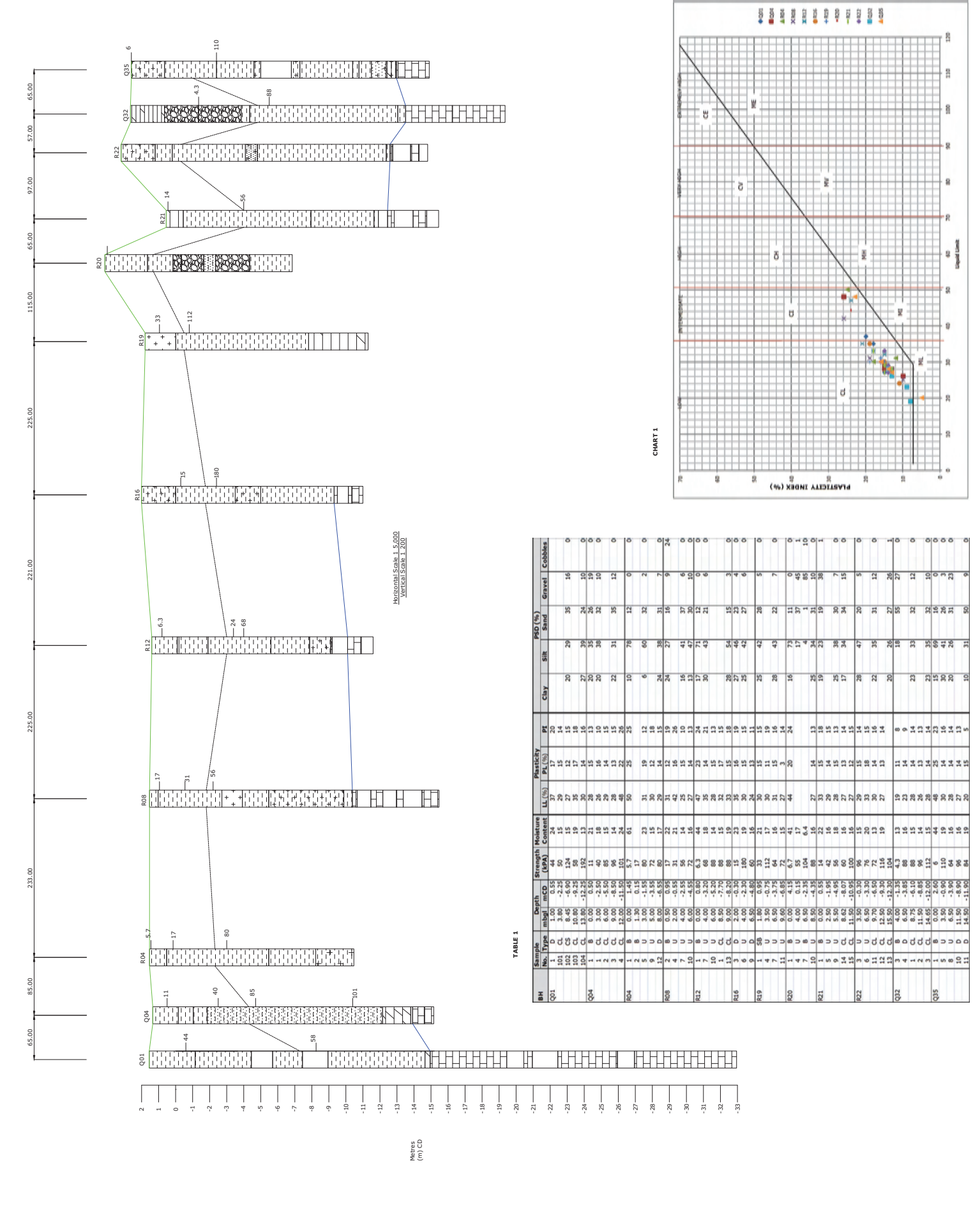
CHART 1

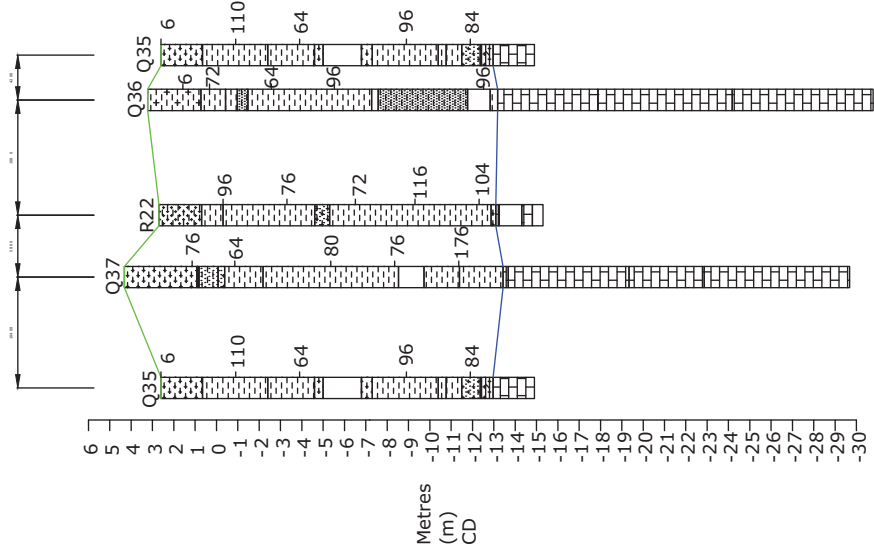
BH	Sample No.	Type	Depth m	Strength mCD	Moisture Content	LL (%)	Pl. (%)	PI	PSD (%)				
									Clay	Silt	Sand	Gravel	Cobbles
D01	1	B	0.0 - 6.30	9.3	21	26	14	12					
	2	B	1.00 - 7.30	18	28	13	15						
	3	B	2.00 - 8.30	25	35	14	15						
	4	B	3.00 - 9.30	34	44	28	13	15	24	34	8	0	
D02	5	U	1.00 - 9.30	15	29	13	16						
	1	B	0.00 - 5.75	28	34	11	13	12	20	27	40	1	
	2	B	1.00 - 6.75	35	43	27	13	13	20	30	13	0	
	3	B	2.00 - 7.75	16	27	13	13	27	18	21	36	25	
D03	1	B	0.00 - 6.10	17	25	13	15						
	2	U	1.00 - 7.10	16	28	13	15						
	3	B	2.00 - 8.10	25	37	13	13	22	33	34	11	0	
	4	B	3.00 - 9.10	19	29	13	14						
D04	1	B	0.00 - 6.80	29	41	20	21	17	27	29	27	0	
	2	B	1.00 - 7.80	16	39	21	18						
	3	B	2.00 - 8.80	16	39	21	18						
	4	B	3.00 - 9.80	16	39	21	18						
D08	1	B	0.00 - 7.80	6.7	46	45	23	22	17	66	17	0	
	2	B	1.20 - 9.00	21	20	27	13	14					
	3	B	2.40 - 10.20	17	35	19	19	12					
	4	B	3.60 - 11.40	17	35	19	19	12					
D10	1	B	0.00 - 8.60	3	41	52	25	27	14	37	43	6	
	2	B	1.20 - 9.80	5.3	61	52	25	27	21	37	42	0	
	3	B	2.40 - 11.00	5.3	61	52	25	27	21	37	42	0	
	4	B	3.60 - 12.20	5.3	61	52	25	27	21	37	42	0	
D12	1	PB	0.00 - 5.40	25					5	95	0	0	
	2	PB	1.20 - 6.60	25					5	95	0	0	

A	04/03/12	Primary Issue	FM	JD	RC
Rev	Date	Comments	Draw	Chk	Acco



Project:	Able Marine Energy Park				
IC ref:	Able UK Ltd				
File:	Dredge Long Section F - Turning and Approach Areas				
PRELIMINARY					
Sheet:	12504/01	Revision:	0	Checked:	Approved:
Drawn by:	AMC	Checked by:	12504/01	Drawn by:	AMC
Date:	24/03/2012	Date:	24/03/2012	Date:	24/04/2012
Drawing No:	AME - 029223				Revise: A



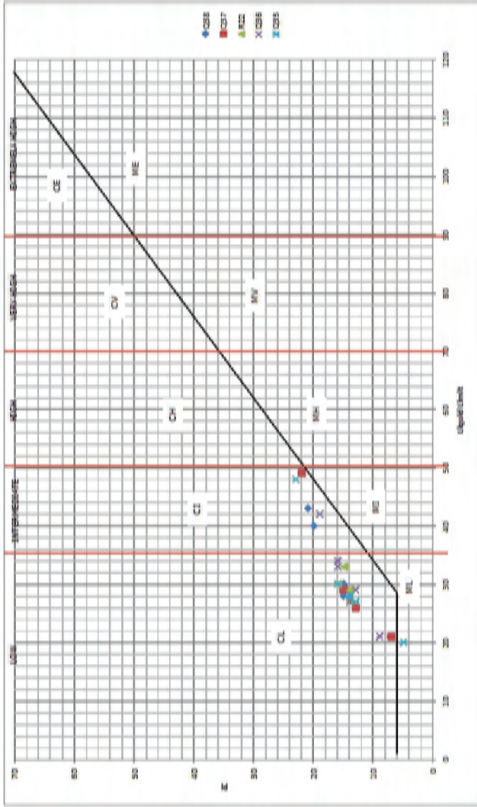


Horizontal Scale 1:5,000
Vertical Scale 1:200

TABLE 1

BH	Sample No.	Type	Depth (m)	Strength (kPa)	Moisture Content (%)	Plasticity		PSD (%)		
						LL (%)	PI (%)	Clay	Silt	Gravel
Q38	2	B	1.50	4.05	6.7	43	22	13	77	10
	4	B	3.00	2.55	24	33	20	20	20	0
	6	B	4.50	0.95	11	28	14	14	14	12
	8	B	5.50	0.05	9.7	20	13	15	24	36
	10	B	6.00	2.45	48	20	30	15	14	14
Q37	1	B	10.00	5.15	6	45	22	16	77	7
	4	B	4.00	1.15	76	18	14	14	46	31
	7	D	6.00	0.85	64	17	15	15	15	9
	8	D	10.50	5.35	80	15	29	14	15	15
	9	D	13.50	8.35	76	14	26	13	13	13
R22	10	D	16.50	11.35	176	14	21	14	7	14
	3	U	3.50	0.30	96	15	29	15	14	14
	6	U	6.50	3.30	76	20	33	18	15	14
	11	U	9.50	6.30	112	13	30	14	16	16
	13	U	15.50	12.30	104	19	27	13	14	14
Q36	1	B	0.00	4.05	6	39	42	13	72	15
	2	B	2.50	1.55	6	29	34	18	16	6
	5	U	3.75	0.30	72	20	33	17	16	16
	1	U	6.65	2.60	64	18	29	16	13	13
	2	U	9.60	5.55	96	15	27	13	14	14
Q35	4	U	16.05	12.00	96	10	21	12	9	12
	1	B	0.00	2.60	6	44	25	23	69	16
	8	U	3.50	3.90	40	14	16	10	11	36
	10	D	11.50	8.90	96	16	20	26	31	23
	11	D	14.50	11.90	84	19	20	15	31	50

CHART 1



KEY					
<div></div>	R verbed Leve				
<div></div>	Cha k Leve and Proposed Dredge Leve				
	Geo og ca Key presented n AME - 09296				
NOTES					
1	Chart 1 s based upon the Br t sh So C ass f cat on System for Eng neer ng Porposes.				
2	Tab e 1 conta ns nformat on that has been abstracted form Fugro Seacore S te Invest gat on AMEP Mar ne Ground nvest gat on 10 Feb 2012.				
Rev	A	05/04/2012	Preliminary Issue	FM	
	Rev	Date	Comments	Drw	Chk

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Project	Ab e Marine Energy Park
Client	Ab e UK Ltd
Title	Dredge Cross Section on H - Proposed outfall channel

PRELIMINARY			
Scale	@A3	Drawn	Checked
		F Maddison	Approved
Date	05/04/2012	00/00/0000	00/00/0000
Drawing No	AME - 09297	Revision	A

KEY	
—	R verbed Contour
—	Cha k contour
Geo og ca Key presented n AME - 09295	
Sect on Locat on Pan n AME - 09296	

NOTES

- Chart 1 s based upon the Br t sh
So C ass f cat on System for
Eng neer ng Purposes.
- Tab e 1 conta ns nformat on that
has been abstracted from Fugro
Seacore S te Invest gat on AMEP
Mar ne Ground S te Invest gat on
10 Feb 2012.

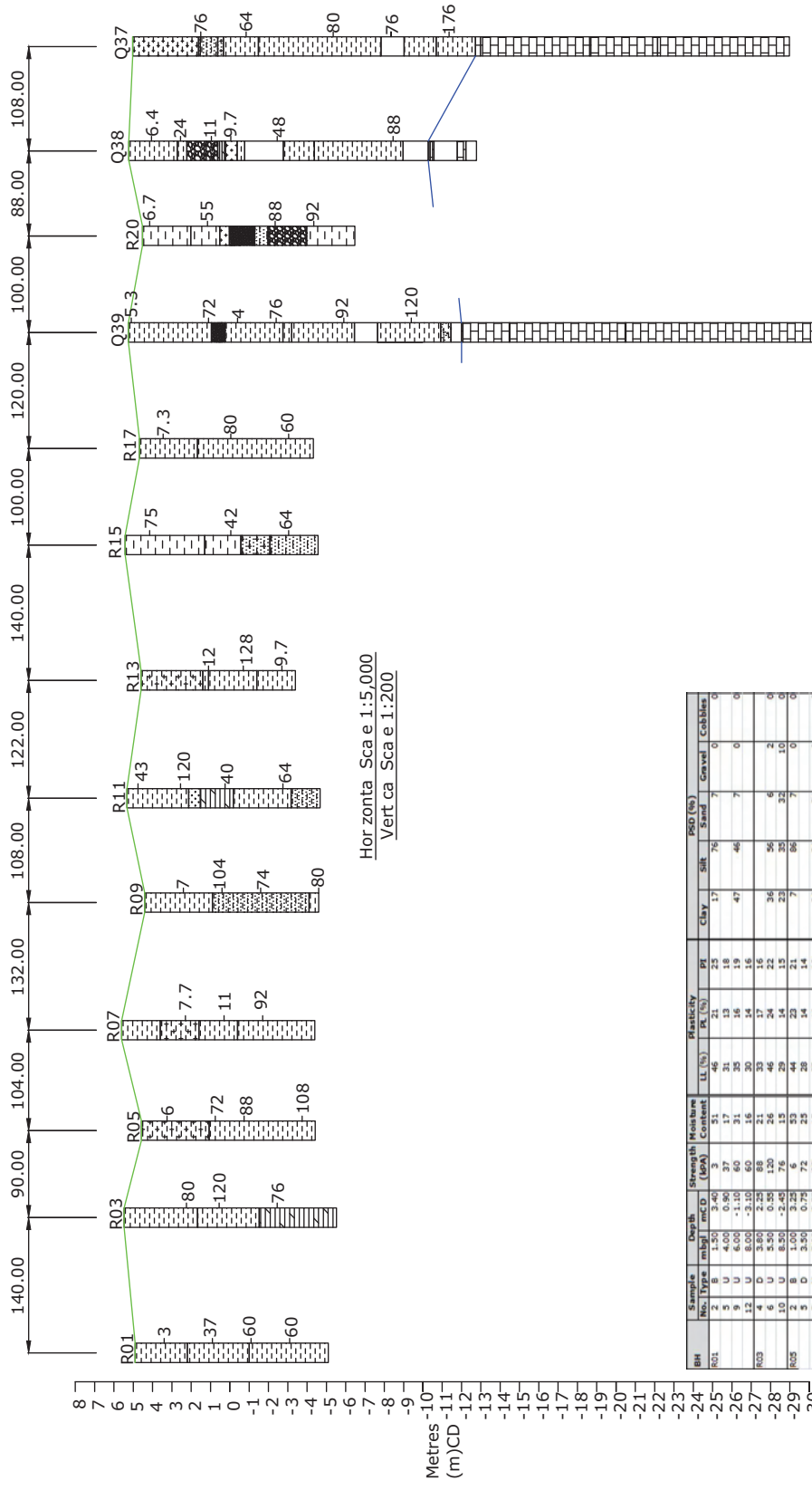
Rev	Date	Comments	FM	Drw	Chk	App
A	10/04/12	Preliminary Issue				



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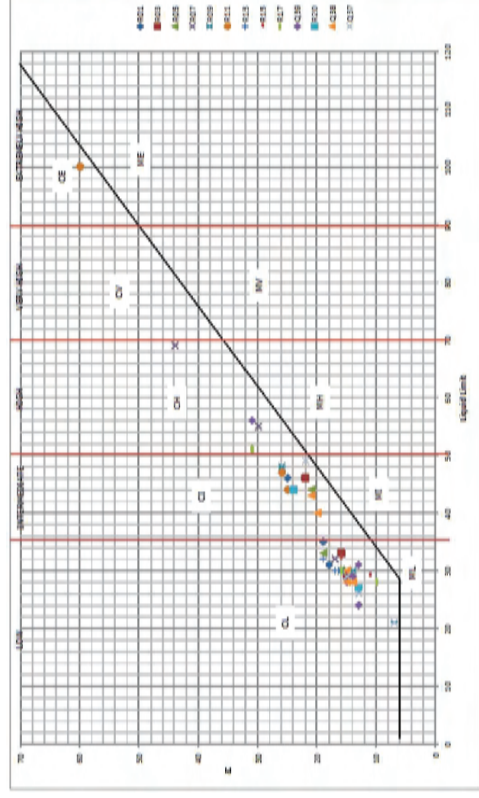
Project	Ab e Mar ne Energy Park
Client	Ab e UK Ltd
Title	Dredge Cross Sect ons I - Proposed Recamat on Area (Mud Pats)

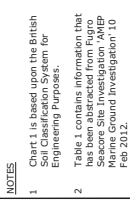
PRELIMINARY					
Scale	As Shown@A3	Drawn	Checked	Approved	
Date	10/04/2012	F Maddison			00/00/0000
Drawing No	AME - 09298	Revision			A



Hor zonta Sca e 1:5,000
 Vert ca Sca e 1:200

BH	Sample No.	Depth (m)	Strength (kN/m²)	Moisture Content (%)	Plasticity (%)	Clay (%)	Silt (%)	Gravel (%)	Coarse Gravel (%)
R01	1	1.50	3.40	31	46	23	76	7	0
R01	2	1.50	3.40	31	46	23	76	7	0
R01	3	1.50	3.40	31	46	23	76	7	0
R01	4	1.50	3.40	31	46	23	76	7	0
R01	5	1.50	3.40	31	46	23	76	7	0
R01	6	1.50	3.40	31	46	23	76	7	0
R01	7	1.50	3.40	31	46	23	76	7	0
R01	8	1.50	3.40	31	46	23	76	7	0
R01	9	1.50	3.40	31	46	23	76	7	0
R01	10	1.50	3.40	31	46	23	76	7	0
R01	11	1.50	3.40	31	46	23	76	7	0
R01	12	1.50	3.40	31	46	23	76	7	0
R01	13	1.50	3.40	31	46	23	76	7	0
R01	14	1.50	3.40	31	46	23	76	7	0
R01	15	1.50	3.40	31	46	23	76	7	0
R01	16	1.50	3.40	31	46	23	76	7	0
R01	17	1.50	3.40	31	46	23	76	7	0
R01	18	1.50	3.40	31	46	23	76	7	0
R01	19	1.50	3.40	31	46	23	76	7	0
R01	20	1.50	3.40	31	46	23	76	7	0
R01	21	1.50	3.40	31	46	23	76	7	0
R01	22	1.50	3.40	31	46	23	76	7	0
R01	23	1.50	3.40	31	46	23	76	7	0
R01	24	1.50	3.40	31	46	23	76	7	0
R01	25	1.50	3.40	31	46	23	76	7	0
R01	26	1.50	3.40	31	46	23	76	7	0
R01	27	1.50	3.40	31	46	23	76	7	0
R01	28	1.50	3.40	31	46	23	76	7	0
R01	29	1.50	3.40	31	46	23	76	7	0
R01	30	1.50	3.40	31	46	23	76	7	0
R01	31	1.50	3.40	31	46	23	76	7	0
R01	32	1.50	3.40	31	46	23	76	7	0
R01	33	1.50	3.40	31	46	23	76	7	0
R01	34	1.50	3.40	31	46	23	76	7	0
R01	35	1.50	3.40	31	46	23	76	7	0
R01	36	1.50	3.40	31	46	23	76	7	0
R01	37	1.50	3.40	31	46	23	76	7	0
R01	38	1.50	3.40	31	46	23	76	7	0
R01	39	1.50	3.40	31	46	23	76	7	0
R01	40	1.50	3.40	31	46	23	76	7	0
R01	41	1.50	3.40	31	46	23	76	7	0
R01	42	1.50	3.40	31	46	23	76	7	0
R01	43	1.50	3.40	31	46	23	76	7	0
R01	44	1.50	3.40	31	46	23	76	7	0
R01	45	1.50	3.40	31	46	23	76	7	0
R01	46	1.50	3.40	31	46	23	76	7	0
R01	47	1.50	3.40	31	46	23	76	7	0
R01	48	1.50	3.40	31	46	23	76	7	0
R01	49	1.50	3.40	31	46	23	76	7	0
R01	50	1.50	3.40	31	46	23	76	7	0
R01	51	1.50	3.40	31	46	23	76	7	0
R01	52	1.50	3.40	31	46	23	76	7	0
R01	53	1.50	3.40	31	46	23	76	7	0
R01	54	1.50	3.40	31	46	23	76	7	0
R01	55	1.50	3.40	31	46	23	76	7	0
R01	56	1.50	3.40	31	46	23	76	7	0
R01	57	1.50	3.40	31	46	23	76	7	0
R01	58	1.50	3.40	31	46	23	76	7	0
R01	59	1.50	3.40	31	46	23	76	7	0
R01	60	1.50	3.40	31	46	23	76	7	0
R01	61	1.50	3.40	31	46	23	76	7	0
R01	62	1.50	3.40	31	46	23	76	7	0
R01	63	1.50	3.40	31	46	23	76	7	0
R01	64	1.50	3.40	31	46	23	76	7	0
R01	65	1.50	3.40	31	46	23	76	7	0
R01	66	1.50	3.40	31	46	23	76	7	0
R01	67	1.50	3.40	31	46	23	76	7	0
R01	68	1.50	3.40	31	46	23	76	7	0
R01	69	1.50	3.40	31	46	23	76	7	0
R01	70	1.50	3.40	31	46	23	76	7	0
R01	71	1.50	3.40	31	46	23	76	7	0
R01	72	1.50	3.40	31	46	23	76	7	0
R01	73	1.50	3.40	31	46	23	76	7	0
R01	74	1.50	3.40	31	46	23	76	7	0
R01	75	1.50	3.40	31	46	23	76	7	0
R01	76	1.50	3.40	31	46	23	76	7	0
R01	77	1.50	3.40	31	46	23	76	7	0
R01	78	1.50	3.40	31	46	23	76	7	0
R01	79	1.50	3.40	31	46	23	76	7	0
R01	80	1.50	3.40	31	46	23	76	7	0
R01	81	1.50	3.40	31	46	23	76	7	0
R01	82	1.50	3.40	31	46	23	76	7	0
R01	83	1.50	3.40	31	46	23	76	7	0
R01	84	1.50	3.40	31	46	23	76	7	0
R01	85	1.50	3.40	31	46	23	76	7	0
R01	86	1.50	3.40	31	46	23	76	7	0
R01	87	1.50	3.40	31	46	23	76	7	0
R01	88	1.50	3.40	31	46	23	76	7	0
R01	89	1.50	3.40	31	46	23	76	7	0
R01	90	1.50	3.40	31	46	23	76	7	0
R01	91	1.50	3.40	31	46	23	76	7	0
R01	92	1.50	3.40	31	46	23	76	7	0
R01	93	1.50	3.40	31	46	23	76	7	0
R01	94	1.50	3.40	31	46	23	76	7	0
R01	95	1.50	3.40	31	46	23	76	7	0
R01	96	1.50	3.40	31	46	23	76	7	0
R01	97	1.50	3.40	31	46	23	76	7	0
R01	98	1.50	3.40	31	46	23	76	7	0
R01	99	1.50	3.40	31	46	23	76	7	0
R01	100	1.50	3.40	31	46	23	76	7	0
R01	101	1.50	3.40	31	46	23	76	7	0
R01	102	1.50	3.40	31	46	23	76	7	0
R01	103	1.50	3.40	31	46	23	76	7	0
R01	104	1.50	3.40	31	46	23	76	7	0
R01	105	1.50	3.40	31	46	23	76	7	0
R01	106	1.50	3.40	31	46	23	76	7	0
R01	107	1.50	3.40	31	46	23	76	7	0
R01	108	1.50	3.40	31	46	23	76	7	0
R01	109	1.50	3.40	31	46	23	76	7	0
R01	110	1.50	3.40	31	46	23	76	7	0
R01	111	1.50	3.40	31	46	23	76	7	0
R01	112	1.50	3.40	31	46	23	76	7	0
R01	113	1.50	3.40	31	46	23	76	7	0
R01	114	1.50	3.40	31	46	23	76	7	0
R01	115	1.50	3.40	31	46	23	76	7	0
R01	116	1.50	3.40	31	46	23	76	7	0
R01	117	1.50	3.40	31	46	23	76	7	0
R01	118	1.50	3.40	31	46	23	76	7	0
R01	119	1.50	3.40	31	46	23	76	7	0
R01	120	1.50	3.40	31	46	23	76	7	0
R01	121	1.50	3.40	31	46	23	76	7	0
R01	122	1.50	3.40	31	46	23	76	7	0
R01	123	1.50	3.40	31	46	23	76	7	0
R01	124	1.50	3.40	31	46	23	76	7	0
R01	125	1.50	3.40	31	46	23	76	7	0
R01	126	1.50	3.40	31	46	23	76	7	0
R01	127	1.50	3.40	31	46	23	76	7	0
R01	128	1.50	3.40	31	46	23	76	7	0
R01	129	1.50	3.40	31	46	23	76	7	0
R01	130	1.50	3.40	31	46	23	76	7	0
R01	131	1.50	3.40	31	46	23	76	7	0
R01	132	1.50	3.40	31	46	23	76	7	0
R01	133	1.50	3.40	31	46	23	76	7	0
R01	134	1.50	3.40	31	46	23	76	7	0
R01	135	1.50	3.40	31	46	23	76	7	0
R01	136	1.50	3.40	31	46	23	76	7	0
R01	137	1.50	3.40	31	46	23	76	7	0
R01	138	1.50	3.40	31	46	23	76	7	0
R01	139	1.50	3.40	31	46	23	76	7	0
R01	140	1.50	3.40	31	46	23	76	7	0





Bit	Sample No.	Type	Depth m	Strength [MPa]	Moisture Content %	LL (%)	PL (%)	PSD (%)			Cohesion
								Clay	Silt	Sand	
D01	1	0	0.00	0.34	21	10	14	14	14		
	2	0	0.00	0.34	21	10	13	13	13		
	3	0	0.00	0.34	21	10	13	13	13		
	4	0	0.00	0.34	21	10	13	13	13		
	5	0	0.00	0.34	21	10	13	13	13		
D02	1	0	0.00	0.34	15	10	13	13	13		
	2	0	0.00	0.34	15	10	13	13	13		
	3	0	0.00	0.34	15	10	13	13	13		
	4	0	0.00	0.34	15	10	13	13	13		
	5	0	0.00	0.34	15	10	13	13	13		
D03	1	0	0.00	0.34	17	10	13	13	13		
	2	0	0.00	0.34	17	10	13	13	13		
	3	0	0.00	0.34	17	10	13	13	13		
	4	0	0.00	0.34	17	10	13	13	13		
	5	0	0.00	0.34	17	10	13	13	13		
D04	1	0	0.00	0.34	19	10	13	13	13		
	2	0	0.00	0.34	19	10	13	13	13		
	3	0	0.00	0.34	19	10	13	13	13		
	4	0	0.00	0.34	19	10	13	13	13		
	5	0	0.00	0.34	19	10	13	13	13		
D05	1	0	0.00	0.34	20	10	13	13	13		
	2	0	0.00	0.34	20	10	13	13	13		
	3	0	0.00	0.34	20	10	13	13	13		
	4	0	0.00	0.34	20	10	13	13	13		
	5	0	0.00	0.34	20	10	13	13	13		
D06	1	0	0.00	0.34	15	10	13	13	13		
	2	0	0.00	0.34	15	10	13	13	13		
	3	0	0.00	0.34	15	10	13	13	13		
	4	0	0.00	0.34	15	10	13	13	13		
	5	0	0.00	0.34	15	10	13	13	13		
D07	1	0	0.00	0.34	16	10	13	13	13		
	2	0	0.00	0.34	16	10	13	13	13		
	3	0	0.00	0.34	16	10	13	13	13		
	4	0	0.00	0.34	16	10	13	13	13		
	5	0	0.00	0.34	16	10	13	13	13		

Sublim Processor Display Depth (1-9mCD)

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Dredge Long section J

Scale: As Shown (A1)	Drawn	Checked	Approved
	F. Maddison		
Date:	12/04/2012	00/00/0000	00/00/0000
Drawing No.	4444	Revisions	

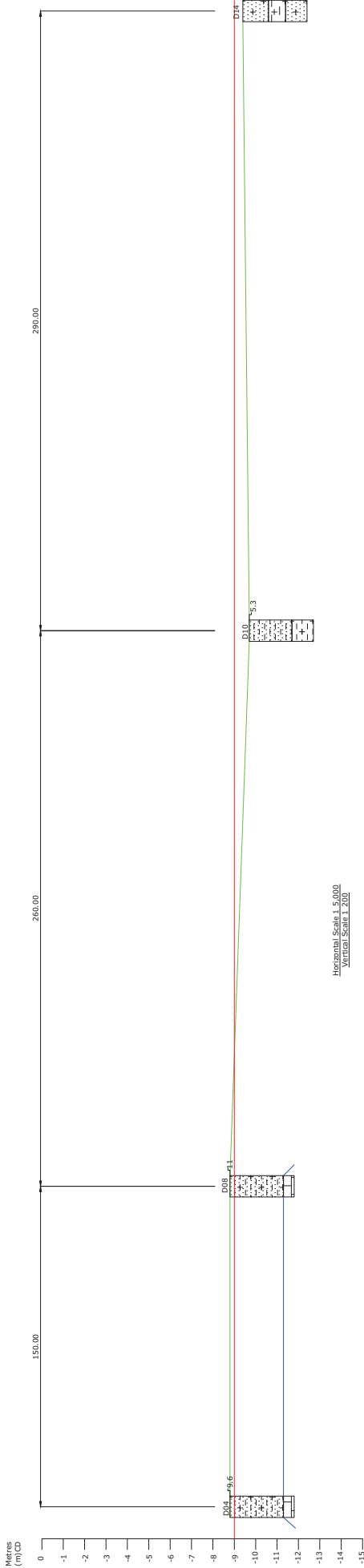
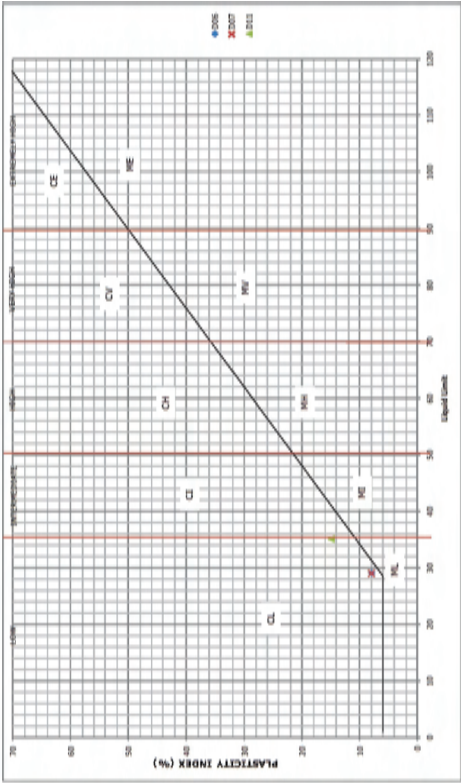


CHART 1



Figures are vane test results corrected to
VWVR values of undrained shear strength.

TABLE 1

BH	Sample No.	Type	Depth (m)CD	Strength (kPa)	Moisture Content (%)	Plasticity				PSD (%)			
						LL (%)	PL (%)	PI (%)	PT (%)	Clay (%)	Silt (%)	Sand (%)	Cobbles (%)
D05	1	B	0.00	9.3	26	29	29	0	0	29	29	42	0
D06	1	B	0.00	8.80	29	29	29	0	0	29	29	42	0
D11	1	B	0.00	9.70	41	29	35	20	15	10	26	64	0
D12	1	PB	0.00	9.40	25							95	0
Below Proposed Dredge Depth (-9mCD)													

- KEY
- Riverbed Level
 - Chalk Level
 - Proposed Dredge Depth
 - Geology Key Presented in AME - 09295
 - Section Location Plan in AME - 09296

NOTES

- Chart 1 is based upon the British Soil Classification System for Engineering Purposes.
- Table 1 contains information that has been extracted from the Marine Ground Investigation 1.0 Feb 2012.

No.	Date	Rev.	Comments	Rev.	Comments	Rev.	Comments
1	12/04/2012	1	Initial Issue	1	12/04/2012	1	Initial Issue



Project:	Able Marine Energy Park
Client:	Able UK Ltd
File:	Dredge Long Section L-Tuning Area

PRELIMINARY			
Rev.	1	Date	12/04/2012
By	AM	Check	AM
Drawn by	AM	Checked by	AM

Polycyclic Aromatic Hydrocarbon Results for Defra

Das: IPCDC9172

Application: Able UK

Location: Killingholme

DC/MCU:

Date Sampled: 24/03/2011

mg/kg (ppm)										mg/kg (ppm)									
Dry weight										Dry weight									
LSN	Sample No.	Location	Excluded	TS (%)	23BA	ACENAPH	ACENAPT	ANTHRAC	IBAA	IBAP	IBBF	BENZGHI	BEP	BKF	CIIN	CIPEN			
2011/00859	1+4	Turning Area A+C surface		67.5583	0.000	0.025	0.100	0.141	0.368	0.460	0.487	0.449	0.394	0.263	1.276	1.105			
2011/00860	3	Turning Area B 1.0m		65.5582	0.000	0.034	0.119	0.154	0.443	0.518	0.612	0.541	0.471	0.310	1.597	1.261			
2011/00861	5	Approach Channel D 0m		66.0763	0.000	0.015	0.049	0.067	0.207	0.224	0.257	0.235	0.224	0.133	0.898	0.768			
2011/00862	8	Approach Channel E 1.0m		70.5172	0.000	0.013	0.043	0.056	0.183	0.181	0.240	0.233	0.210	0.123	0.761	0.617			
2011/00863	9	Berthing Pocket F 0m		82.7190	0.000	0.019	0.062	0.073	0.238	0.260	0.333	0.305	0.273	0.150	0.573	0.639			
2011/00864	23+25	Berthing Pocket K+L 0m		56.2004	0.000	0.028	0.103	0.147	0.432	0.512	0.654	0.541	0.463	0.313	1.640	1.320			
2011/00865	19+26	Approach Channel I+L 1.0m		62.1910	0.000	0.025	0.081	0.149	0.368	0.423	0.554	0.430	0.390	0.261	1.363	1.197			
2011/00866	27	Approach Channel M 0m		71.5469	0.000	0.012	0.041	0.054	0.178	0.204	0.251	0.224	0.196	0.122	0.604	0.534			
2011/00867	28	Approach Channel M 1.0m		78.1555	0.000	0.012	0.041	0.054	0.178	0.204	0.251	0.224	0.196	0.122	0.604	0.534			
2011/00868	36	Berthing Pocket Q 0m		55.3366	0.000	0.029	0.087	0.132	0.418	0.512	0.611	0.573	0.511	0.308	1.481	1.223			
2011/00869	37	Berthing Pocket Q 1.0m		87.2336	0.000	0.000	0.001	0.002	0.008	0.008	0.013	0.021	0.014	0.004	0.034	0.024			
2011/00871	40	Reclamation Area R 0m		80.5439	0.000	0.000	0.000	0.024	0.025	0.087	0.110	0.123	0.125	0.031	0.687	1.129			
2011/00872	45	Reclamation Area T 1.0m		62.3512	0.000	0.021	0.091	0.121	0.308	0.470	0.461	0.457	0.349	0.221	1.719	1.464			
2011/00873	46+48+50	Reclamation Area U+V+W 0m		57.9122	0.000	0.016	0.082	0.114	0.309	0.430	0.474	0.429	0.333	0.203	1.683	1.328			
2011/00874	47+49	Reclamation Area U+V 1m		62.0351	0.000	0.024	0.079	0.123	0.321	0.450	0.492	0.421	0.321	0.213	1.654	1.464			
2011/00875	2	Turning Area B 0m		67.7681	0.000	0.009	0.059	0.080	0.155	0.217	0.293	0.195	0.160	0.100	0.789	0.567			
2011/00876	7	Approach Channel E 0m		76.6187	0.000	0.003	0.013	0.020	0.068	0.098	0.093	0.093	0.074	0.047	0.317	0.268			
2011/00877	12	Berthing Pocket G 0m		55.1559	0.000	0.025	0.098	0.143	0.393	0.576	0.657	0.566	0.441	0.291	1.793	1.682			
2011/00878	15	Anchorage Trench H 0m		74.2531	0.000	0.009	0.043	0.067	0.164	0.222	0.225	0.219	0.178	0.096	1.177	0.955			
2011/00879	18	Approach Channel I 0m		69.7516	0.000	0.011	0.088	0.125	0.263	0.325	0.377	0.347	0.288	0.140	2.426	2.323			
2011/00880	29	Approach Channel N 0m		77.2661	0.000	0.002	0.010	0.019	0.041	0.053	0.061	0.053	0.044	0.028	0.164	0.139			
2011/00881	30	Approach Channel N 1.0m		55.2821	0.000	0.023	0.106	0.149	0.413	0.536	0.674	0.607	0.473	0.304	1.604	1.302			
Mean					0.000	0.016	0.065	0.093	0.253	0.319	0.370	0.335	0.280	0.173	1.141	1.003			

AL1 (ppm dry)

0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
AL1 (ppm dry)																			

mg/kg (ppm)										mg/kg (ppm)									
Dry weight										Dry weight									
LSN	Sample No.	Location	Excluded	TS (%)	CSN	CHRYSEN	IDBENZAH	FLUORAN	INDPYR	NAPTH	PERYLEN	PHENANT	PYRENE	THC					
2011/00859	1+4	Turning Area A+C surface		67.5583	2.308	2.931	0.297	0.082	0.725	0.155	0.430	0.388	0.187	0.548	0.597	1006			
2011/00860	3	Turning Area B 1.0m		65.5582	2.873	3.804	0.361	0.100	0.850	0.205	0.511	0.472	0.253	0.663	0.652	1107			
2011/00861	5	Approach Channel D 0m		66.0763	1.589	2.027	0.170	0.040	0.376	0.091	0.200	0.255	0.099	0.376	0.328	591			
2011/00862	8	Approach Channel E 1.0m		70.5172	1.481	1.828	0.138	0.032	0.300	0.080	0.188	0.226	0.090	0.318	0.256	478			
2011/00863	9	Berthing Pocket F 0m		82.7190	1.149	1.521	0.203	0.049	0.384	0.080	0.277	0.195	0.083	0.351	0.357	483			
2011/00864	23+25	Berthing Pocket K+L 0m		56.2004	2.909	3.689	0.316	0.095	0.821	0.192	0.492	0.483	0.229	0.692	0.639	1114			
2011/00865	19+26	Approach Channel I+L 1.0m		62.1910	2.428	3.065	0.289	0.072	0.705	0.160	0.405	0.388	0.183	0.579	0.581	914			
2011/00866	27	Approach Channel M 0m		71.5469	1.436	1.856	0.166	0.037	0.393	0.103	0.207	0.246	0.106	0.362	0.299	601			
2011/00867	28	Approach Channel M 1.0m		78.1555	1.124	1.371	0.136	0.035	0.308	0.080	0.206	0.187	0.101	0.261	0.237	450			
2011/00868	36	Berthing Pocket Q 0m		55.3366	2.670	3.194	0.323	0.094	0.773	0.178	0.527	0.440	0.240	0.657	0.602	794			
2011/00869	37	Berthing Pocket Q 1.0m		87.2336	0.038	0.055	0.006	0.002	0.010	0.003	0.009	0.010	0.003	0.013	0.009	79			
2011/00871	40	Reclamation Area R 0m		80.5439	1.339	2.603	0.071	0.021	0.140	0.068	0.059	0.100	0.044	0.355	0.173	788			
2011/00872	45	Reclamation Area T 1.0m		62.3512	2.756	3.892	0.242	0.076	0.675	0.193	0.400	0.456	0.212	0.611	0.499	955			
2011/00873	46+48+50	Reclamation Area U+V+W 0m		57.9122	2.519	3.585	0.253	0.070	0.630	0.189	0.363	0.437	0.202	0.594	0.478	995			
2011/00874	47+49	Reclamation Area U+V 1m		62.0351	2.350	3.316	0.256	0.074	0.694	0.185	0.381	0.442	0.193	0.578	0.586	968			
2011/00875	2	Turning Area B 0m		67.7681	1.127	1.605	0.124	0.033	0.362	0.093	0.182	0.224	0.097	0.298	0.281	516			
2011/00876	7	Approach Channel E 0m		76.6187	0.420	0.659	0.062	0.016	0.125	0.030	0.080	0.078	0.042	0.136	0.094	279			
2011/00877	12	Berthing Pocket G 0m		55.1559	2.733	3.938	0.328	0.096	0.839	0.210	0.525	0.486	0.272	0.687	0.632	1064			
2011/00878	15	Anchorage Trench H 0m		74.2531	1.707	2.650	0.136	0.035	0.315	0.099	0.177	0.295	0.099	0.366	0.249	588			
2011/00879	18	Approach Channel I 0m		69.7516	4.129	6.456	0.226	0.054	0.537	0.164	0.333	0.568	0.129	0.848	0.523	1127			
2011/00880	29	Approach Channel N 0m		77.2661	0.243	0.334	0.033	0.009	0.092	0.021	0.048	0.052	0.027	0.074	0.070	174			
2011/00881	30	Approach Channel N 1.0m		55.2821	2.557	3.516	0.371	0.104	0.797	0.202	0.535	0.460	0.276	0.733	0.669	1230			
Mean					1.904	2.632	0.204	0.056	0.493	0.127	0.293	0.313	0.145	0.459	0.400	741			

AL1 (ppm dry)

Produced by: ARB

Date: 06/07/2011

F002_V5_SP_24/06/10

Polycyclic Aromatic Hydrocarbon Results for Defra

Das: IPCDC9172
Application: Able UK
Location: Killingholme
DC/MCU:
Date Sampled: 24/03/2011

mg/kg (ppm) Dry weight																
LSN	Sample No.	Location	Excluded	TS (%)	23BA	ACENAPH	ACENAPT	ANTHRAC	BAA	BBP	BBF	BENZGHI	BEP	BKF	CTN	CTPHEN
2011/00882	42	Reclamation Area S 0m		61.7584	0.000	0.018	0.085	0.128	0.347	0.406	0.485	0.448	0.357	0.231	1.458	1.159
2011/00883	44	Reclamation Area T 0m		56.7137	0.000	0.014	0.070	0.099	0.283	0.317	0.411	0.402	0.323	0.186	1.262	1.159
		</														

APPENDIX E

TYPICAL TRACKING CONTROL SHEETS

[illegible]

Able Marine Energy Park

Use of Material Management Plans

Commentary



Able UK intends to create a Marine Energy Park on the southern bank of the River Humber. As part of these development works a new quay and berthing area will be constructed which will produce significant soils arisings from the “cut” area.

It is the intention to reuse the excavated clays from the berthing area as engineered “fill” in the construction of a suitable development platform for the Able Marine Energy Park.

In order to reuse the excavated clays Able UK has commissioned the production of a Materials Management Plan, in accordance with the Development Industry Code of Practice.

Development Industry Code of Practice

The use of the Code of practice and specifically a Materials Management Plan provides the following benefits;

Environmental:

- Promotes the use of materials in accordance with the waste hierarchy:
 - waste being minimised;
 - waste that is produced is recovered and reused; and
 - less waste will be sent to landfill;
- Natural resource consumption will be less, e.g. quarried product and fuel;
- Reduced vehicle emissions and contribution to a reduced carbon foot print of the development process; and
- Pollution of the environment and harm to human health is prevented.

Social:

- Bringing brownfield and contaminated land back in to beneficial use;
- hence preserving greenfield land;
- creating communities on the developed land;
- Blight issues associated with the use of materials classified as waste on a development site will no longer exist; and
- Reduced vehicle movements (e.g. less congestion, air quality and disturbance).

Able Marine Energy Park

Use of Material Management Plans

Commentary



Shadbolt Environmental
Geo-Environmental Solutions

Economic:

- Lower development costs
- Lower transport costs as less distance to another development site than a landfill;
- Reduced need for importation of other materials, e.g. natural quarried products;
- Working to the CoP is considered less expensive than applying for, working under and formally surrendering an Environmental Permit;
- Provides a clear, consistent, systematic and more certain approach utilising documentation normally associated with land development procedures;
- Quicker to marshal information in to a MMP and have it reviewed by a **Qualified Person** than applying for a Standard Rules Environmental Permit or Bespoke Environmental Permit;
- Less complex than waste legislation and
- Lower regulatory costs.

The Materials Management Plan

In order to satisfy the requirements of the Industry Code of Practice an MMP will be produced.

In summary the MMP provides:

- Details of the parties that will be involved with the implementation of the MMP;
- A description of the materials in terms of potential use and relative quantities of each type of soil
- The specification for use of materials against which proposed materials will be assessed, underpinned by an appropriate risk assessment related to the place where they are to be used;
- Details of where and, if appropriate, how these materials will be stored;
- Details of the intended final destination and use of these materials;
- Details of how these materials are to be tracked;
- Contingency arrangements that must be put in place prior to movement of these materials; and
- A Verification Plan.

A draft MMP has been produced for the site and on appointment of the main earthworks contractor (TBA) the “construction issue” MMP will be completed and forwarded to a Qualified Person (proposed to be Mr. Mike Taylor) for review and the site will be registered with the Environment Agency. No placement of clays within the Marine Energy Park will be undertaken until the Qualified Person has signed off the MMP and the Environment Agency has been notified. On completion of the development works at the Marine Energy Park site (acknowledged to be an ongoing project over many years) a verification report will produced to confirm that the MMP has been implemented appropriately.

Shadbolt Environmental LLP