Document

5.9.2.21

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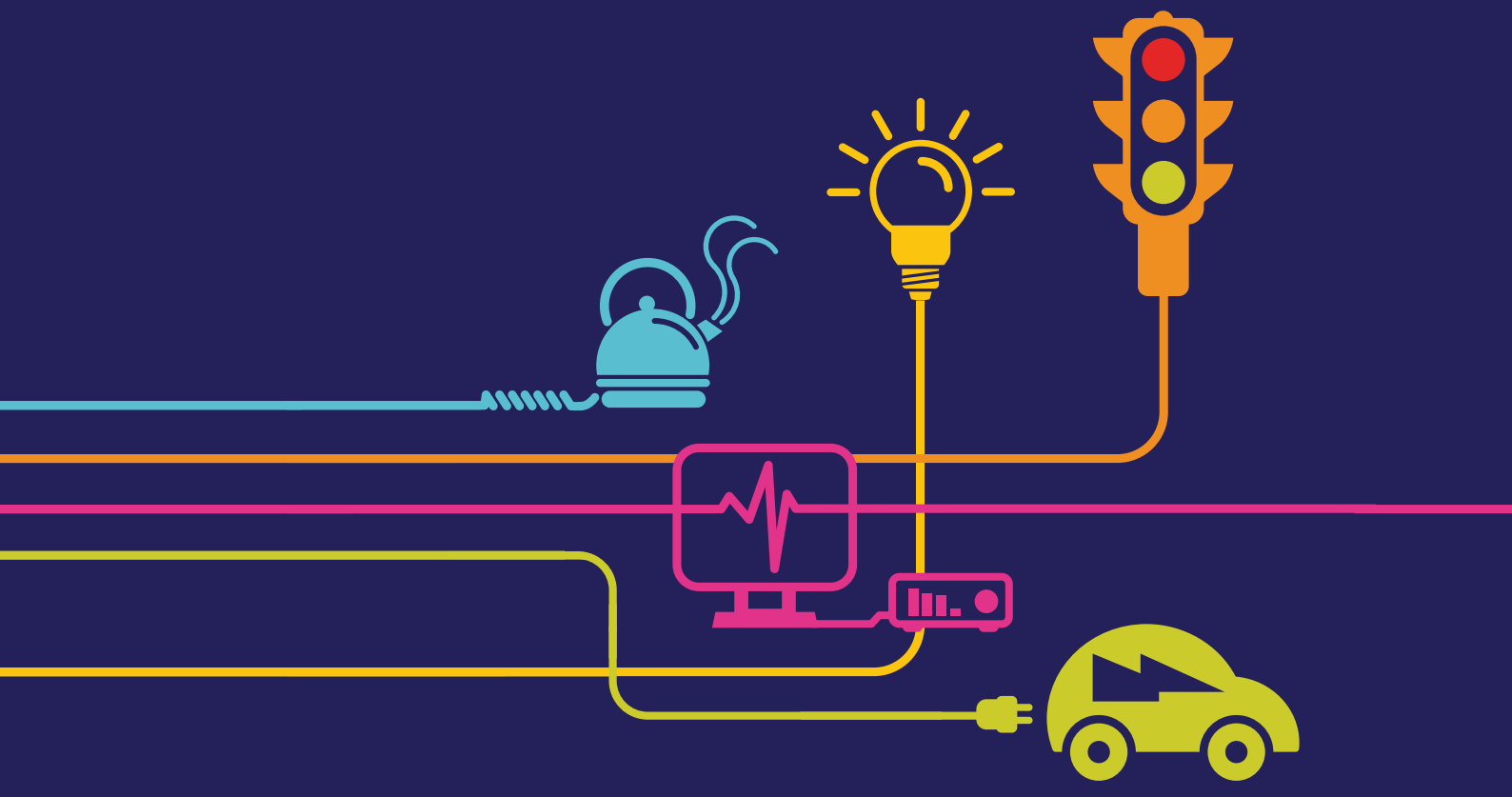
Environmental Statement Ground Environment Appendix 9J Part 1

Hinkley Point C Connection Project

Regulation 5(2)(a) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009



Application Reference EN020001

May 2014

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Environmental Statement

Hinkley Point C Connection Project

5.9.2 – Ground Environment– Appendices (orange highlight indicates the contents of this Volume)

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Appendix 9J – Factual Report on Ground Investigation
Hinkley to Seabank 400kV Connection

NATIONAL GRID TRANSMISSION PLC

FACTUAL REPORT

on

GROUND INVESTIGATION

on

HINKLEY TO SEABANK 400KV

CONNECTION

OCTOBER 2013

REPORT NO: 727635

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DOCUMENT ISSUE RECORD

Contract No:	727635
Client:	National Grid Transmission Plc
Contract:	Hinkley to Seabank 400kV Connection
Document:	Factual Report on Ground Investigation

Prepared by: [redacted] R Coward / A Dingle

Approved by: A Lumber

Date: October 2013

REVISION RECORD

Revision	Date	Description	Prepared by
0	16/08/2013	Draft report – for comment	RC/AD
1	18/10/2013	Final Report	AD

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Table of Contents

1 INTRODUCTION

This investigation was carried out on the instructions of the Electricity Alliance West (the Engineer) on behalf of National Grid Transmission Plc (the Client), with further technical direction and instruction being given by LSTC.

The purpose of the work was to investigate ground conditions, provide information for the design of the Hinkley to Seabank 400kV Connection and to undertake testing to allow others to assess the contamination status of the site. The work included an intrusive investigation, laboratory testing and the preparation of this report.

This report details the work carried out both on site and in the geotechnical and chemical testing laboratories; it contains a description of the site and the works undertaken, the exploratory hole logs and laboratory testing results.

The ground investigation has been carried out using cable percussion and rotary cored drilling techniques, hand dug trial pitting, TRL-DCP and static cone penetration testing techniques, in general accordance with the recommendations of BS5930: 1999 *Code of Practice for Site Investigations.* Whilst every attempt is made to record full details of the strata encountered in the exploratory holes, techniques of hole formation and sampling will inevitably lead to disturbance, mixing or loss of material in some soils and rocks.

A comprehensive desk study, other than an inspection of geological maps, has not been requested or undertaken as part of this investigation. Nor has a preliminary risk assessment been completed. No testing has been undertaken to detect the presence of gas in the ground.

All information given in this report is based on the ground conditions encountered during the site work, and on the results of laboratory and field tests performed during the investigation. However, there may be conditions at the site that have not been taken into account, such as unpredictable soil strata, contaminant concentrations, and water conditions between or below exploratory holes. It should be noted that groundwater levels usually vary due to seasonal and/or other effects and may at times differ to those measured during the investigation.

This report was prepared by Structural Soils Limited for the sole and exclusive use of the National Grid Transmission Plc in response to particular instructions. Any other parties using the information contained in this report do so at their own risk and any duty of care to those parties is excluded.

2 SITE DESCRIPTION

2.1 Location and Topography

The overall site comprises the transmission line route (overhead and underground), and associated electricity substations, that is proposed between Hinkley Point, near Wick in Somerset and Seabank Power Station in Avonmouth (see Site Location Plans in Appendix A).

The British National Grid Reference of the four main locations on the route are given below:

- ST 318 396 – Overhead starting point near Bridgewater.
- ST 373 543 – End of overhead / start of underground section near Webbington.
- ST 416 605 – End of underground section / start of overhead near Sandford.
- ST 538 821 – End of overhead section at Seabank Power Station, Avonmouth.

The site is appximately 50km in length, and follows the line of the proposed 400kV connection which is shown in 3 parts (see Site Location Plan in Appendix A), the southerly over-ground section, the northerly over-ground section and the central, underground section.

The majority of the site work was conducted within the underground section between Webbington and Sandford in Somerset. Locations were generally positioned either side of any road or river crossing, and at periodic positions along the route in between. The underground route runs predominantly through the Somerset Levels near Webbington, but does pass through a hilly area nearer Sandford.

The southerly overhead section of the route begins approximately 1.5km south of Puriton and continues on a north easterly bearing until it reaches Mark where it then continues north until Webbington.

The northerly route continues on a northerly bearing from Sandford until North End, from where it then bears north east, passing Nailsea, Portbury and Avonmouth until its end point at Seabank Power Station.

2.2 Geology

The British Geological Survey maps (sheets 264, 280, 295, 296, scales 1:63,360 and 1:50,000) show the site to be underlain by (at different points of the route); Carboniferous Limestone, the Mercia Mudstone Group, the Lias Group, and recent Tidal Flat Deposits and Head Deposits.

The underground section of the connection is shown to be underlain, in the lower lying areas, by Tidal Flat Deposits (*Clay, Silt and Sand*) over by the Mercia Mudstone Group (*Mudstone and Halite*).

3 FIELDWORK

3.1 Scope of Works

37 no. cable percussion boreholes, of which 32 no. were extended by rotary coring, 40 no. hand dug trial pits, 159 no. California Bearing Ratio (CBR) correlation tests and 35 no. static cone penetrometer tests (CPT) were completed between 12 March and 11 July 2013 at locations shown on the Exploratory Hole Location Plans in Appendix A.

The scope of investigation and choice of investigation equipment was decided by the Engineer. Sampling and in-situ testing details were specified by the Engineer.

The positions were selected by and set out by the Engineer in conjunction with Structural Soils Limited, and adjusted where necessary to take account of buried or overhead services, or other restrictions.

The exploratory holes were logged by an engineer in general accordance with the recommendations of BS5930: 1999 (2010 Amendment 2, which incorporates the requirements of BS EN ISO 14688-1, 14688-2 and 14689-1) and C570 ***Engineering in Mercia Mudstone***. Detailed descriptions, together with relevant comments, are given in the logs included in Appendix B.

Prior to the commencement of any exploratory hole or intrusive test a cable avoidance scan was carried out using a cable avoidance tool (CAT) and signal generator (‘genny’), and inspection pits were hand dug at the borehole locations prior to commencement of drilling.

3.2 Boreholes

The boreholes were commenced using a cable tool percussion drilling rig and were 150mm diameter. Upon refusal (i.e. the cable percussion rig could not progress the boreholes further) the boreholes were extended by rotary coring to a maximum depth of 21.70m. 100mm diameter undisturbed samples were recovered from the cohesive strata in the cable percussive section of the boreholes, and small disturbed and bulk soil samples were taken at regular intervals.

Rotary coring was carried out using a double tube PWF core barrel to produce a hole of 121mm (and a core of 87mm diameter). Steel casing was inserted where necessary to offer temporary support to the hole. Air mist was used as a flush medium.

Standard Penetration Tests (SPT) were carried out at regular intervals in the boreholes (see Section 3.6, In-Situ Testing).

Photographs of the core samples are contained in Appendix B.

3.3 Trial Pits

The hand dug trial pits were approximately 1.0m x 1.0m in plan and were up to 1.80m deep. Hand vane or hand penetrometer tests were carried out in the cohesive strata. Small disturbed and bulk soil samples were taken from the trial pits at regular intervals.

Photographs of the trial pits are contained with the engineer's logs in Appendix B.

3.4 Chemical Contamination Sampling

Samples for contamination testing were taken from the boreholes and placed in appropriate contamination sample containers that were supplied by the laboratory. Containers for volatiles testing of soil samples were filled to capacity. All samples were then kept in cool boxes with ice packs and were transported to the laboratories under Chain of Custody documentation, as promptly as possible to maintain sample integrity.

3.5 Backfill, Monitoring Wells and Installations

On completion 50mm diameter gas/groundwater monitoring wells were installed in the boreholes, the design having been decided by the Client's consulting engineer. The installation details are shown on the exploratory hole logs in Appendix B and listed on the In-situ Water Monitoring Results sheet in Appendix G.

The client or site owner should ensure that the monitoring wells (and their protective covers) are not damaged or covered until such time as information is no longer required from them. Extra costs would be incurred if it were necessary to reinstate damaged wells.

3.6 In-Situ Testing

Standard Penetration Tests (SPT) were carried out in the exploratory holes, where noted in the preceding sections, in accordance with BS EN ISO 22476-3 using a hammer or hammers which had been calibrated for efficiency. The calibration certificates are included in Appendix C.

The SPT N-values are reported on the exploratory hole logs, on which the serial number of the hammers used is recorded. The full results are presented in tabular format on the Summary of Standard Penetration Tests in Appendix C, on which the normalised N_{60} values are also reported (equivalent N-value for a hammer delivering 60% of the theoretical drop energy).

159 no. in-situ CBR correlation tests were conducted using a TRRL Dynamic Cone Penetrometer in accordance with the manufacturer's guidance. The results are contained in Appendix C.

3.7 Static CPT (Cone Penetration Testing)

Static CPT testing was carried out by Lankelma in 35 no. locations along the route. This was carried out using a 20 tonne track-truck and a 30 tonne truck. Parameters measured included cone resistance, friction and pore water pressure. A magnetometer was used to check for possible unexploded ordnance (UXO) at the test locations in and around the Royal Portbury Docks in Avonmouth. The CPT report is reproduced as Appendix F.

3.8 GPS Surveying

During the course of the works, a survey of the exploratory hole and in-situ test locations was undertaken using Global Positioning System (GPS) equipment. The coordinates of each exploratory hole were measured relative to British National Grid, and the level relative to Ordnance Datum. These are shown on the exploratory hole logs contained in Appendix B, which have been printed with a reduced level column, on the in-situ test results contained in Appendix C, and also on the Exploratory Hole Coordinates Summary sheet in Appendix A.

3.9 Monitoring and Post Fieldwork Monitoring

Groundwater levels were recorded in the monitoring wells on one occasion during the fieldwork period. The results together with the temporal (weather) conditions are tabulated in Appendix D.

At the time of issue of this report three further quarterly rounds of monitoring are planned over the next 9 months.

4 LABORATORY TESTING

Samples for potential geotechnical testing were returned to the company's laboratory in Bristol and those for potential contamination testing were sent to an accredited chemical testing laboratory. Geotechnical and contamination tests were scheduled by the Clients consulting engineer.

Geotechnical laboratory testing was generally carried out in accordance with BS1377: 1990, *Methods of Test for Soils for Civil Engineering Purposes*, Parts 1 to 8, unless indicated otherwise. Where non-standard procedures have been undertaken, this is recorded on the report sheet. The results are reported in tabular and/or graphical form and included as Appendix D of this report.

Contamination testing was carried out in accordance with MCERTs/UKAS standards. The results are reported in Appendix E of this report, along with the accreditation certificate for the laboratory.

4.1 Moisture Content

63 no. moisture content tests were undertaken using the oven-drying method in accordance with BS1377: Part 2: 1990. The results are tabulated in the Summary of Soil Classification Tests and below the Plasticity Chart (see Section 4.2, below).

4.2 Liquid Limit, Plastic Limit and Plasticity Index

63 no. liquid and plastic limit tests were performed in accordance with BS1377: Part 2: 1990. The results are plotted on the Plasticity Chart (in accordance with BS5930: 1999 Amendment 2) and tabulated below the chart, and in the Summary of Soil Classification Tests.

4.3 Particle Density

14 no. particle density tests were undertaken in accordance with BS1377: Part 2: 1990. The results are tabulated in the Summary of Classification Tests.

4.4 Particle Size Distribution

54 no. particle size distribution tests were undertaken by sieving. All tests were in accordance with BS1377: Part 2: 1990. The results are represented graphically as particle size distribution curves and in tabular format.

4.5 Unconsolidated Undrained Triaxial Compressive Shear Strength Tests (without the measurement of pore pressure)

14 no. single stage unconsolidated undrained triaxial compression tests without the measurement of pore pressure were undertaken in accordance with BS1377: Part 7: 1990. Each test was carried out on a single specimen nominally 100mm in diameter and 200mm in length. The confining pressures ranged between 20kPa and 180kPa.

Each test result is reported on an individual sheet that records test details including sample dimensions, confining pressures, mode of failure and measured undrained shear strength. A plot of applied deviator stress versus axial strain is also included on each sheet.

4.6 Unconfined Compressive Strength

2 no. unconfined compressive strength tests were carried out on selected rock cores following the recommendations of ISRM (1981).

4.7 Point Load Index

36 no. point load index determinations were carried out using axial, diametral and irregular tests in accordance with ISRM (1985). The results are tabulated on a summary sheet.

4.8 Chemical Analyses

37 no. soil samples were tested to determine their pH values, water soluble sulphate, total acid soluble sulphate and total sulphur contents. The results are tabulated in the Summary of Chemical Analysis.

4.9 Thermal Resistivity Testing

509 no. soil samples were tested to determine their thermal resistivity in accordance with recommendations of IEEE Standard 442-1981. The results are tabulated in the Summary of Thermal Properties of Soil Tests.

4.10 Contamination

3 no. soil samples were analysed for arsenic, cadmium, chromium (total), lead, mercury, selenium, copper, nickel, zinc, barium, beryllium, vanadium, water soluble boron, total phenols, total cyanide, speciated polycyclic aromatic hydrocarbons (PAH), total petroleum hydrocarbons (TPHCWG (speciated)), organic matter, soluble sulphate and pH.

5 REFERENCES

5.1 BS 5930:1999 *Code of Practice for Site Investigation,* including amendment A2 (2010)

5.2 British Geological Survey sheets 264, 280, 295, 296, scales 1:63,360 and 1:50,000

5.3 BS EN ISO 14688-1:2002 *Geotechnical investigation and testing – Identification and classification of soil: Part 1: Identification and description*

5.4 BS EN ISO 14688-1:2004 *Geotechnical investigation and testing – Identification and classification of soil: Part 2: Principles for a classification*

5.5 BS EN ISO 14689-1:2003 *Geotechnical investigation and testing – Identification and classification of rock: Part 1: Identification and description*

5.6 BS EN ISO 22476-3:2005 (updated February 2007) *Geotechnical Investigation and Testing – Field Testing Part 3: Standard Penetration Test, including Amendment A1* (2011)

5.7 BS 1377:1990 *Methods of Test for Soils for Civil Engineering Purposes*

5.8 International Society for Rock Mechanics (1981) *Rock characterisation testing and monitoring: ISRM suggested methods*

5.9 International Society for Rock Mechanics (1985) *Suggested method for determining Point Load Strength*

5.10 IEEE Standard 442-1981: *IEEE Guide for Soil Thermal Resistivity Measurements*

5.11 CIRIA Report C570 Engineering in Mercia mudstone (2001)

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APPENDIX A

(i) Site Location Plan

(ii) Exploratory Hole Location Plans

(iii) Exploratory Hole Location Coordinate Summary Sheet

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REV.	DATE	DESCRIPTION	BY	CHD.	APR.
00	16.08.2013	-	JAH	RC	AC

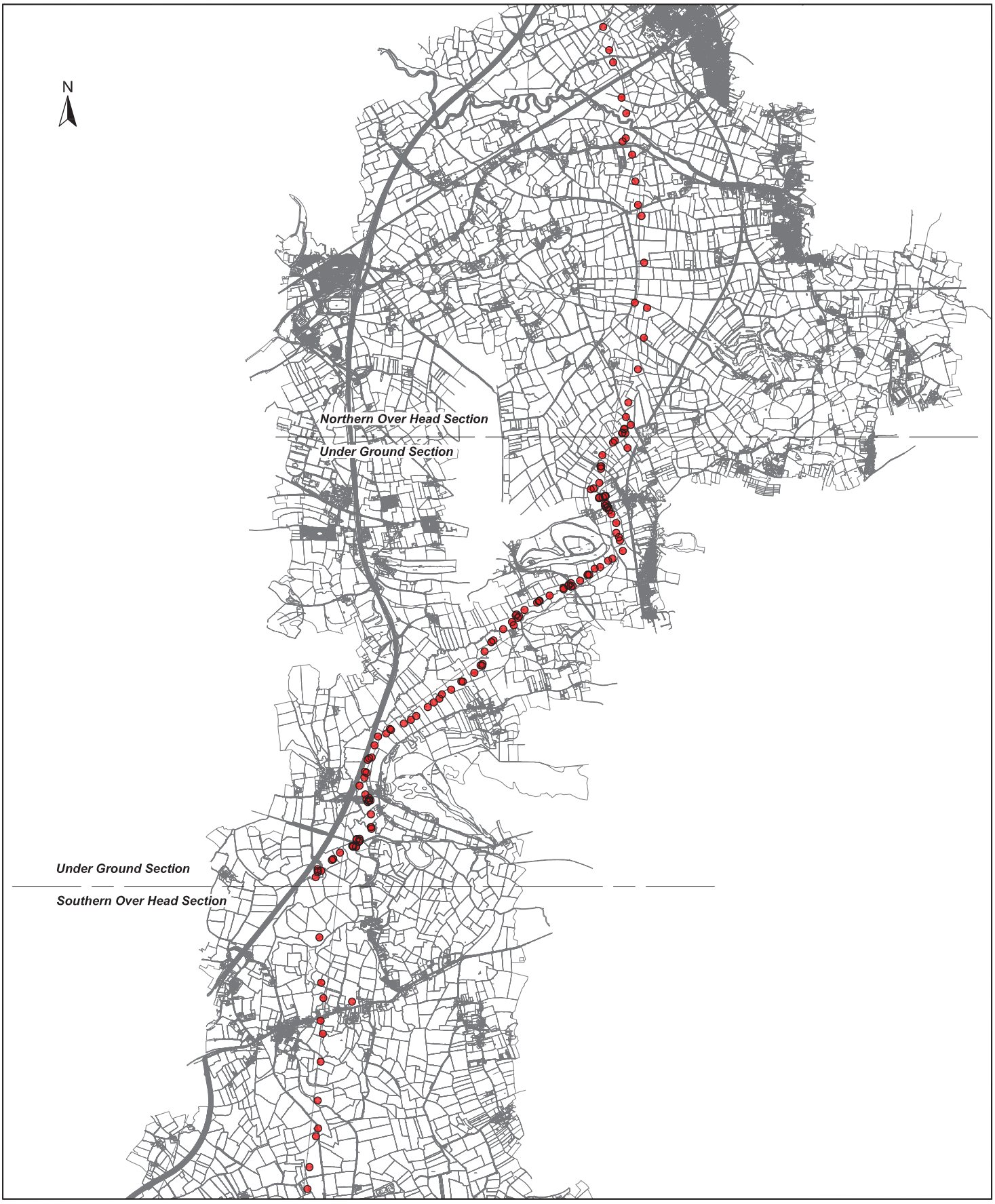
CLIENT: EAW

PROJECT: Hinkley to Seabank 400kV Connection

TITLE: SITE LOCATION MAP

DIMENSION	SCALE	DRAWING STATUS
m	1:250,000	-

CONTRACT No	GRID REFERENCE	SCALE BAR	ORIGIN SIZE	FIGURE No
727635	-	0 2500 5000 7500 10000m	A4	1



LEGEND

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REV.	DATE	DESCRIPTION	BY	CHD.	APR.
00	16.08.2013	-	JH	RC	AC

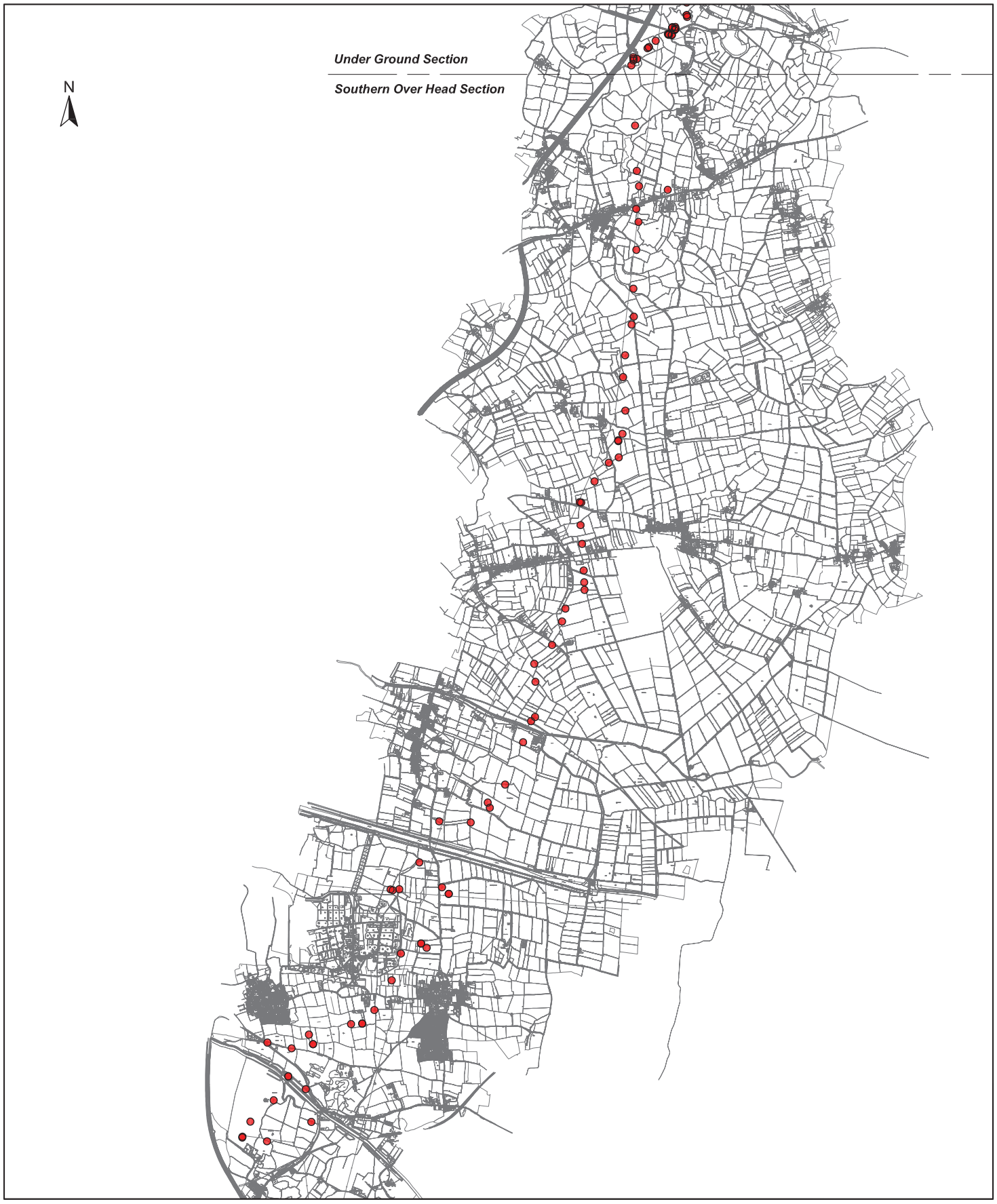
DIMENSION	SCALE	ORIGIN SIZE
m	1:50,000	A3

CLIENT: EAW

PROJECT: Hinkley to Seabank 400kV Connection

TITLE: EXPLORATORY HOLE LOCATION PLAN - (UNDER GROUND SECTION)

JOB NO.	SCALEBAR	DRAWING STATUS	FIGURE
727635	0 500 1,000 1,500 2,000 2,500 3,000 3,500 4000m	-	2-2



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REV.	DATE	DESCRIPTION	BY	CHD.	APR.
00	16.08.2013	-	JH	RC	AC

DIMENSION	SCALE	ORIGIN SIZE
m	1:50,000	A3

CLIENT: EAW

PROJECT: Hinkley to Seabank 400kV Connection

TITLE: EXPLORATORY HOLE LOCATION PLAN - (SOUTHERN OVER HEAD)

JOB NO.	SCALEBAR	DRAWING STATUS	FIGURE
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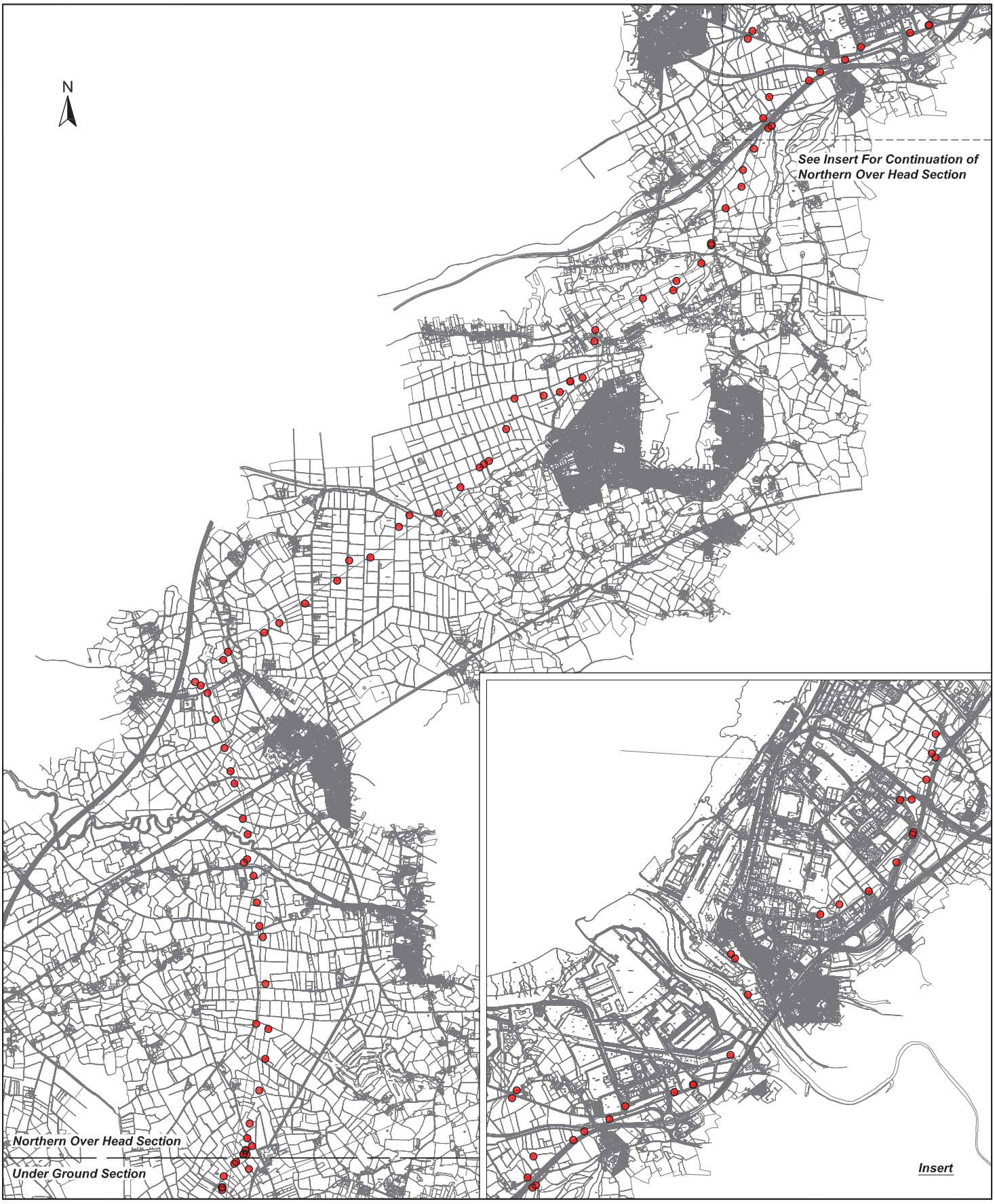

LEGEND

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REV.	DATE	DESCRIPTION	BY	CHD.	APR.
00	16.08.2013	-	JH	RC	AC

DIMENSION	SCALE	ORIGIN SIZE
m	1:50,000	A3

CLIENT: EAW

PROJECT: Hinkley to Seabank 400kV Connection

TITLE: EXPLORATORY HOLE LOCATION PLAN - (NORTHERN OVER HEAD)

JOB NO.	SCALEBAR	DRAWING STATUS	FIGURE
727635	0 500 1,000 1,500 2,000 2,500 3,000 3,500 4000m	-	2-3

STRUCTURAL SOILS

SUMMARY TABLE OF GROUND LEVELS AND CO-ORDINATES AT EXPLORATORY HOLE LOCATIONS

Contract:	Client:	Contract Ref:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**727635**

Exploratory Position ID	Grid Co-Ordinates		Ground Level (m AOD)	Hole Type Codes
	Eastings (m)	Northings (m)		
BHBWT1	**332274.4**	**139579.1**	**6.38**	CP
BHC1A	**337330.2**	**154538.0**	**5.93**	CP+RC
BHC1B	**337333.6**	**154514.6**	**6.21**	CP
BHC1C	**337333.4**	**154492.6**	**5.99**	CP+RC
BHC2A	**337819.1**	**154858.5**	**5.98**	CP+RC
BHC2B	**337864.8**	**154849.0**	**6.47**	CP
BHC2C	**337865.7**	**154941.9**	**5.97**	CP
BHC2D	**337914.9**	**154928.8**	**6.58**	CP
BHC2DA	**337915.1**	**154931.6**	**6.73**	CP+RC
BHC3A	**338023.3**	**155460.9**	**6.63**	CP+RC
BHC3B	**338061.7**	**155484.7**	**6.81**	CP+RC
BHC3C	**338043.5**	**155517.4**	**8.40**	CP+RC
BHC3D	**338005.7**	**155499.0**	**7.75**	CP+RC
BHC4	**338021.4**	**156045.0**	**11.01**	CP+RC
BHC5	**338330.0**	**156471.5**	**10.92**	CP+RC
BHC6	**339047.9**	**156948.7**	**12.09**	CP+RC
BHC7	**339581.7**	**157349.1**	**15.03**	CP+RC
BHC8A	**340066.8**	**158036.5**	**13.25**	CP+RC
BHC8B	**340094.1**	**158003.4**	**12.02**	CP+RC
BHC8C	**340077.8**	**158051.7**	**13.08**	CP+RC
BHC8D	**340114.5**	**158024.2**	**12.22**	CP+RC
BHC9A	**340798.8**	**158463.6**	**21.14**	CP+RC
BHC9B	**340828.2**	**158434.9**	**20.73**	CP+RC
BHC9C	**340827.6**	**158483.5**	**21.08**	CP+RC
BHC9D	**340853.0**	**158444.0**	**20.32**	CP+RC
BHC10	**341156.4**	**158684.0**	**33.28**	CP+RC
BHC11	**341454.0**	**159177.5**	**32.20**	CP+RC
BHC12A	**341317.9**	**159519.9**	**10.98**	CP+RC
BHC12B	**341340.8**	**159536.4**	**10.53**	CP+RC
BHC12C	**341298.5**	**159551.2**	**9.70**	CP+RC
BHC12D	**341322.0**	**159572.0**	**9.91**	CP+RC
BHC13	**341234.8**	**160094.9**	**9.68**	CP

Notes:

Hole type codes: **CP = Cable Percussion, RC = Rotary Cored, DCP = Dynamic Cone Penetrometer, TP = Trial Pit/trench**

STRUCTURAL SOILS

SUMMARY TABLE OF GROUND LEVELS AND CO-ORDINATES AT EXPLORATORY HOLE LOCATIONS

Contract:	Client:	Contract Ref:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**727635**

Exploratory Position ID	Grid Co-Ordinates		Ground Level (m AOD)	Hole Type Codes
	Eastings (m)	Northings (m)		
BHC14	**341532.5**	**160552.7**	**7.58**	CP+RC
BHC-LD1	**334011.8**	**143042.9**	**4.95**	CP+RC
BHC-LD23	**337121.6**	**149252.1**	**4.81**	CP+RC
BHC-LD39	**341561.0**	**160606.9**	**6.85**	CP+RC
BHVQ43R	**331935.3**	**139642.6**	**5.82**	CP+RC
CPTC2A	**337815.7**	**154851.2**	**6.09**	TP
CPTC2B	**337861.2**	**154840.7**	**6.46**	TP
CPTC2C	**337870.9**	**154953.2**	**6.00**	TP
CPTC2D	**337910.9**	**154955.4**	**6.14**	TP
CPTC-LD1	**333979.4**	**143053.6**	**5.87**	TP
CPTC-LD6	**335321.9**	**144252.6**	**5.24**	TP
CPTC-LD10	**335974.5**	**145433.9**	**5.53**	TP
CPTC-LD14	**336393.7**	**146929.3**	**4.35**	TP
CPTC-LD16	**336657.8**	**147188.1**	**5.17**	TP
CPTC-LD20	**336592.4**	**148397.9**	**5.18**	TP
CPTC-LD23	**337125.0**	**149239.8**	**5.22**	TP
CPTC-LD31	**337403.2**	**152264.7**	**5.81**	TP
CPTC-LD39	**341566.7**	**160612.6**	**6.62**	TP
CPTC-LD44	**341710.5**	**162353.6**	**4.69**	TP
CPTC-LD51	**341540.6**	**164578.1**	**5.11**	TP
CPTC-LD59	**340867.2**	**167069.8**	**5.47**	TP
CPTC-LD61	**341321.0**	**167486.6**	**5.76**	TP
CPTC-LD67	**342993.9**	**168746.0**	**4.36**	TP
CPTC-LD73	**344854.7**	**170075.0**	**4.21**	TP
CPTC-LD77	**346047.5**	**171218.3**	**4.75**	TP
CPTC-LD77A	**346045.2**	**171217.5**	**4.82**	TP
CPTC-LD80	**346391.8**	**171927.1**	**22.01**	TP
CPTC-LD83	**347468.6**	**172475.8**	**60.00**	TP
CPTC-LD86	**347991.6**	**173125.1**	**131.35**	TP
CPTC-LD91	**348781.2**	**174711.2**	**37.83**	TP
CPTC-LD92	**348711.0**	**174850.7**	**18.54**	TP
CPTC-LD93	**348793.7**	**175142.0**	**9.44**	TP

Notes:

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STRUCTURAL SOILS

SUMMARY TABLE OF GROUND LEVELS AND CO-ORDINATES AT EXPLORATORY HOLE LOCATIONS

Contract:	Client:	Contract Ref:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**727635**

Exploratory Position ID	Grid Co-Ordinates		Ground Level (m AOD)	Hole Type Codes
	Eastings (m)	Northings (m)		
CPTC-LD97	**350060.4**	**175834.0**	**5.66**	TP
CPTC-LD100	**351000.9**	**176135.3**	**9.92**	TP
CPTC-LD100A	**350994.0**	**176131.9**	**9.79**	TP
CPTC-LD102	**351512.1**	**176542.4**	**12.32**	TP
CPTC-LD119	**354025.5**	**179579.2**	**7.23**	TP
CPTC-ZG3	**332567.9**	**140475.1**	**9.26**	TP
CPTC-ZG5	**332910.2**	**140919.0**	**51.76**	TP
CPTC-ZG7	**333588.1**	**141203.1**	**39.68**	TP
CPTC-ZG11	**334401.7**	**142307.6**	**4.85**	TP
CPTC-ZG13	**334783.3**	**142993.0**	**5.01**	TP
CPTVQ43R	**331932.8**	**139630.2**	**7.78**	TP
OH-CBR1	**332044.7**	**139850.2**	**5.72**	DCP
OH-CBR2	**332886.1**	**139845.9**	**6.39**	DCP
OH-CBR3	**332366.4**	**140144.4**	**5.83**	DCP
OH-CBR4	**332810.5**	**140298.0**	**7.19**	DCP
OH-CBR5	**332279.9**	**140940.5**	**51.78**	DCP
OH-CBR6	**332613.9**	**140861.2**	**54.26**	DCP
OH-CBR7	**332853.0**	**141050.5**	**44.46**	DCP
OH-CBR8	**333433.9**	**141196.3**	**40.76**	DCP
OH-CBR9	**333756.7**	**141390.5**	**27.65**	DCP
OH-CBR10	**333995.5**	**141799.9**	**9.17**	DCP
OH-CBR11	**334122.3**	**142169.2**	**6.48**	DCP
OH-CBR12	**334478.1**	**142249.2**	**4.93**	DCP
OH-CBR13	**334689.7**	**143083.7**	**5.08**	DCP
OH-CBR14	**334100.9**	**143057.2**	**5.00**	DCP
OH-CBR15	**334378.0**	**143427.0**	**4.76**	DCP
OH-CBR16	**334652.1**	**143993.7**	**4.92**	DCP
OH-CBR17	**335087.0**	**143978.2**	**5.25**	DCP
OH-CBR18	**335349.9**	**144181.1**	**4.93**	DCP
OH-CBR19	**335562.2**	**144501.0**	**4.97**	DCP
OH-CBR20	**335809.4**	**145085.2**	**4.81**	DCP
OH-CBR21	**335920.2**	**145376.0**	**4.65**	DCP

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	Eastings (m)	Northings (m)		
OH-CBR22	**335980.2**	**145919.1**	**4.85**	DCP
OH-CBR23	**335963.7**	**146168.2**	**4.94**	DCP
OH-CBR24	**336210.3**	**146427.3**	**4.88**	DCP
OH-CBR25	**336347.8**	**146751.5**	**5.15**	DCP
OH-CBR26	**336653.0**	**147291.7**	**4.90**	DCP
OH-CBR27	**336645.8**	**147455.5**	**5.06**	DCP
OH-CBR28	**336623.9**	**147823.1**	**5.07**	DCP
OH-CBR29	**336603.1**	**148082.1**	**5.15**	DCP
OH-CBR30	**336612.0**	**148392.9**	**5.16**	DCP
OH-CBR31	**336795.7**	**148684.5**	**5.15**	DCP
OH-CBR32	**336992.5**	**148942.0**	**5.08**	DCP
OH-CBR33	**337130.4**	**149016.1**	**5.24**	DCP
OH-CBR34	**337181.6**	**149341.0**	**5.33**	DCP
OH-CBR35	**337221.8**	**149661.1**	**5.55**	DCP
OH-CBR36	**337190.6**	**150123.5**	**5.30**	DCP
OH-CBR37	**337218.5**	**150424.9**	**5.21**	DCP
OH-CBR38	**337308.2**	**150849.3**	**4.99**	DCP
OH-CBR39	**337339.2**	**150958.7**	**5.30**	DCP
OH-CBR40	**337331.7**	**151344.1**	**4.96**	DCP
OH-CBR41	**337373.4**	**151879.6**	**5.72**	DCP
OH-CBR42	**337372.0**	**152444.6**	**6.02**	DCP
OH-CBR43	**337806.8**	**152708.2**	**5.71**	DCP
OH-CBR44	**337410.8**	**152758.3**	**5.76**	DCP
OH-CBR45	**337380.6**	**152969.4**	**5.80**	DCP
OH-CBR46	**337356.1**	**153595.1**	**6.49**	DCP
OH-CBR47	**337304.6**	**154425.5**	**5.87**	DCP
OH-CBR48	**341587.9**	**160775.9**	**5.50**	DCP
OH-CBR49	**341621.1**	**160976.2**	**4.82**	DCP
OH-CBR50	**341752.7**	**161433.6**	**5.56**	DCP
OH-CBR51	**341835.8**	**161869.0**	**4.70**	DCP
OH-CBR52	**341879.3**	**162281.6**	**5.16**	DCP
OH-CBR53	**341838.4**	**162905.8**	**4.51**	DCP

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Exploratory Position ID	Grid Co-Ordinates		Ground Level (m AOD)	Hole Type Codes
	Eastings (m)	Northings (m)		
OH-CBR54	**341802.9**	**163550.3**	**4.27**	DCP
OH-CBR55	**341754.7**	**163702.7**	**4.61**	DCP
OH-CBR56	**341717.1**	**164027.7**	**5.40**	DCP
OH-CBR57	**341673.7**	**164395.5**	**4.88**	DCP
OH-CBR58	**341585.3**	**164623.8**	**5.14**	DCP
OH-CBR59	**341592.4**	**164967.4**	**5.27**	DCP
OH-CBR60	**341527.2**	**165181.9**	**5.37**	DCP
OH-CBR61	**341410.7**	**165670.1**	**5.34**	DCP
OH-CBR62	**341356.6**	**165839.1**	**5.53**	DCP
OH-CBR63	**341273.1**	**166159.3**	**5.33**	DCP
OH-CBR64	**341149.9**	**166551.8**	**5.63**	DCP
OH-CBR65	**341039.5**	**166918.5**	**5.66**	DCP
OH-CBR66	**340944.7**	**167020.9**	**5.59**	DCP
OH-CBR67	**341254.0**	**167375.7**	**5.44**	DCP
OH-CBR68	**341822.5**	**167752.2**	**5.86**	DCP
OH-CBR69	**342029.9**	**167883.4**	**5.70**	DCP
OH-CBR70	**342385.6**	**168152.5**	**5.08**	DCP
OH-CBR71	**342828.7**	**168468.2**	**4.60**	DCP
OH-CBR72	**343288.0**	**168788.2**	**4.04**	DCP
OH-CBR73	**343681.2**	**169210.8**	**4.39**	DCP
OH-CBR74	**343826.5**	**169371.1**	**4.62**	DCP
OH-CBR75	**344230.1**	**169402.0**	**4.49**	DCP
OH-CBR76	**344530.4**	**169757.3**	**4.42**	DCP
OH-CBR77	**344795.9**	**170031.8**	**4.29**	DCP
OH-CBR78	**344923.8**	**170120.7**	**6.81**	DCP
OH-CBR79	**345162.1**	**170559.9**	**4.02**	DCP
OH-CBR80	**345276.5**	**170981.2**	**4.00**	DCP
OH-CBR81	**345680.0**	**171021.4**	**2.44**	DCP
OH-CBR82	**345903.1**	**171070.5**	**4.32**	DCP
OH-CBR83	**346216.4**	**171268.4**	**5.48**	DCP
OH-CBR84	**346381.0**	**171772.4**	**20.09**	DCP
OH-CBR87	**347049.4**	**172364.0**	**39.91**	DCP

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Exploratory Position ID	Grid Co-Ordinates		Ground Level (m AOD)	Hole Type Codes
	Eastings (m)	Northings (m)		
OH-CBR88	**347511.9**	**172605.0**	**61.47**	DCP
OH-CBR89	**347856.2**	**172849.3**	**115.85**	DCP
OH-CBR90	**347991.1**	**173098.4**	**129.87**	DCP
OH-CBR90A	**347992.3**	**173097.6**	**130.11**	DCP
OH-CBR91	**348192.1**	**173606.9**	**129.02**	DCP
OH-CBR92	**348410.9**	**173904.3**	**111.44**	DCP
OH-CBR93	**348430.8**	**174135.3**	**88.06**	DCP
OH-CBR94	**348581.9**	**174429.1**	**64.71**	DCP
OH-CBR95	**348827.6**	**174744.8**	**32.54**	DCP
OH-CBR99	**349342.8**	**175368.7**	**6.56**	DCP
OH-CBR100	**349494.9**	**175485.9**	**7.71**	DCP
OH-CBR101	**349841.1**	**175656.5**	**8.55**	DCP
OH-CBR102	**350738.0**	**176029.2**	**8.41**	DCP
OH-CBR103	**351752.2**	**177374.5**	**8.44**	DCP
OH-CBR104	**351575.0**	**177874.0**	**9.41**	DCP
OH-CBR105	**351519.2**	**177934.4**	**8.94**	DCP
OH-CBR107	**352752.0**	**178482.0**	**6.51**	DCP
OH-CBR108	**353014.0**	**178619.0**	**6.17**	DCP
OH-CBR109	**353420.2**	**178800.8**	**5.89**	DCP
OH-CBR112	**353801.6**	**179199.4**	**6.10**	DCP
OH-CBR113	**354035.7**	**179613.4**	**5.02**	DCP
OH-CBR114	**354013.5**	**180066.8**	**6.13**	DCP
OH-CBR115	**353853.2**	**180061.2**	**7.14**	DCP
OH-CBR116	**354215.7**	**180341.4**	**5.78**	DCP
OH-CBR117	**354342.8**	**180645.8**	**6.28**	DCP
OH-CBR118	**354292.1**	**180703.2**	**6.37**	DCP
OH-CBR119	**354344.4**	**180971.4**	**6.39**	DCP
OH-PD-CBR3	**348497.9**	**175945.9**	**7.90**	DCP
OH-PD-CBR4	**348562.2**	**176053.2**	**10.23**	DCP
TH1	**337809.3**	**154857.0**	**6.21**	TP
TH1A	**337545.2**	**154675.6**	**5.90**	TP
TH2	**338040.3**	**155484.4**	**7.63**	TP

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Exploratory Position ID	Grid Co-Ordinates		Ground Level (m AOD)	Hole Type Codes
	Eastings (m)	Northings (m)		
TH2A	**338068.2**	**155117.7**	**6.28**	TP
TH3	**337989.6**	**155568.1**	**9.78**	TP
TH3A	**337976.4**	**155798.0**	**10.28**	TP
TH4	**338278.4**	**156408.4**	**10.51**	TP
TH4A	**338006.5**	**155865.7**	**11.37**	TP
TH4C	**338077.0**	**156078.8**	**15.23**	TP
TH5	**339608.9**	**157367.9**	**13.88**	TP
TH5A	**338620.0**	**156597.7**	**12.70**	TP
TH5C	**339315.1**	**157127.5**	**13.83**	TP
TH6A	**340390.8**	**158238.2**	**15.77**	TP
TH6B	**340388.8**	**158236.7**	**15.46**	TP
TH6C	**339728.8**	**157669.8**	**9.49**	TP
TH6D	**340014.4**	**157947.7**	**11.05**	TP
TH6E	**340723.8**	**158415.7**	**18.69**	TP
TH6X	**340393.8**	**158239.4**	**15.56**	TP
TH6Y	**340385.5**	**158234.4**	**15.45**	TP
TH6Z	**340395.2**	**158240.4**	**15.69**	TP
TH7	**341057.2**	**158594.6**	**28.39**	TP
TH7A	**340793.1**	**158446.4**	**19.91**	TP
TH7B	**341082.6**	**158599.3**	**28.46**	TP
TH8	**341341.5**	**158793.0**	**37.09**	TP
TH9	**341504.4**	**159070.8**	**29.07**	TP
TH10	**341388.7**	**159436.3**	**16.32**	TP
TH11	**341334.4**	**159530.4**	**10.71**	TP
TH12	**341298.8**	**159582.2**	**9.19**	TP
TH12A	**341142.4**	**159790.2**	**7.10**	TP
TH12B	**341248.1**	**160098.0**	**9.33**	TP
TH12C	**341433.9**	**160449.5**	**8.69**	TP
TH12D	**341219.1**	**159668.2**	**7.89**	TP
TH12D1	**341215.6**	**159656.6**	**7.93**	TP
TH12D2	**341219.5**	**159662.9**	**8.09**	TP
TH12D3	**341302.6**	**159687.9**	**9.39**	TP

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Exploratory Position ID	Grid Co-Ordinates		Ground Level (m AOD)	Hole Type Codes
	Eastings (m)	Northings (m)		
TH12D3A	**341303.0**	**159689.7**	**9.43**	TP
TH12D3B	**341302.3**	**159686.4**	**9.32**	TP
TH12D3C	**341302.4**	**159685.1**	**9.27**	TP
TH12D3D	**341304.7**	**159684.1**	**8.87**	TP
TH12DD	**341294.8**	**159681.1**	**9.29**	TP
UG-CBR1	**337381.8**	**154514.2**	**5.83**	DCP
UG-CBR2	**337527.5**	**154661.9**	**5.87**	DCP
UG-CBR3	**337640.3**	**154764.3**	**6.10**	DCP
UG-CBR4	**337822.2**	**154845.9**	**6.42**	DCP
UG-CBR5	**337901.3**	**154912.0**	**7.38**	DCP
UG-CBR6	**338074.7**	**155093.3**	**6.47**	DCP
UG-CBR7	**338067.8**	**155292.6**	**6.76**	DCP
UG-CBR8	**338034.8**	**155475.4**	**6.83**	DCP
UG-CBR9	**337909.0**	**155688.1**	**6.69**	DCP
UG-CBR10	**337983.4**	**155880.0**	**9.19**	DCP
UG-CBR11	**338044.2**	**156066.4**	**12.18**	DCP
UG-CBR12	**338117.3**	**156245.2**	**11.79**	DCP
UG-CBR13	**338165.2**	**156366.3**	**10.47**	DCP
UG-CBR14	**338343.5**	**156457.5**	**12.03**	DCP
UG-CBR15	**338521.5**	**156546.7**	**12.73**	DCP
UG-CBR16	**338692.7**	**156650.1**	**12.39**	DCP
UG-CBR17	**338852.0**	**156772.8**	**12.54**	DCP
UG-CBR18	**339012.2**	**156889.8**	**12.14**	DCP
UG-CBR19	**339175.1**	**157012.6**	**14.73**	DCP
UG-CBR20	**339336.6**	**157124.6**	**14.62**	DCP
UG-CBR21	**339495.4**	**157245.4**	**18.10**	DCP
UG-CBR22	**339604.0**	**157342.4**	**15.70**	DCP
UG-CBR23	**339636.0**	**157540.0**	**12.39**	DCP
UG-CBR24	**339758.0**	**157693.0**	**9.61**	DCP
UG-CBR25	**339893.0**	**157848.3**	**9.89**	DCP
UG-CBR26	**340038.9**	**157902.0**	**10.93**	DCP
UG-CBR27	**340187.6**	**158113.0**	**13.51**	DCP

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	Eastings (m)	Northings (m)		
UG-CBR28	**340361.6**	**158214.8**	**14.96**	DCP
UG-CBR29	**340534.1**	**158311.9**	**16.30**	DCP
UG-CBR30	**340727.2**	**158399.3**	**18.66**	DCP
UG-CBR31	**340954.7**	**158516.2**	**23.12**	DCP
UG-CBR32	**341060.7**	**158601.7**	**28.80**	DCP
UG-CBR33	**341232.0**	**158706.5**	**34.60**	DCP
UG-CBR34	**341402.0**	**158822.5**	**36.00**	DCP
UG-CBR35	**341544.8**	**158927.5**	**30.39**	DCP
UG-CBR36	**341490.3**	**159118.1**	**29.49**	DCP
UG-CBR37	**341453.6**	**159313.0**	**25.14**	DCP
UG-CBR38	**341354.1**	**159487.5**	**11.64**	DCP
UG-CBR39	**341267.3**	**159667.3**	**7.94**	DCP
UG-CBR40	**341100.9**	**159777.7**	**6.30**	DCP
UG-CBR41	**341219.9**	**159867.3**	**10.99**	DCP
UG-CBR42	**341242.6**	**160062.6**	**10.80**	DCP
UG-CBR43	**341262.3**	**160249.6**	**7.32**	DCP
UG-CBR44	**341407.9**	**160423.5**	**8.64**	DCP
UG-CBR45	**341539.3**	**160560.3**	**7.46**	DCP

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APPENDIX B

(i) Key to Exploratory Hole Logs

(ii) Borehole Logs & Photographs

(iii) Trial Pit Logs & Photographs

STRUCTURAL SOILS

Contract Reference: **727635**

KEY TO EXPLORATORY HOLE LOGS - SUMMARY OF GRAPHIC SYMBOLS

WATER COLUMN SYMBOLS

First water strike, second water strike etc.

Standing water level following first strike, standing water level following second strike etc.

Seepage.

Standing water level recorded at documented date.

MATERIAL GRAPHIC LEGENDS

	CLAY		Clayey GRAVEL		Clayey GRAVEL with COBBLES		Clayey gravelly SAND
	Gravelly clayey SAND		Clayey gravelly SAND with COBBLES		Conglomerate		Clayey SAND
	Clayey SAND with COBBLES		Clayey sandy GRAVEL		GRAVEL		Gravelly CLAY
	Gravelly silty CLAY		Silty gravelly CLAY		Limestone		MADE GROUND
	Mudstone		PEAT		PEAT with COBBLES		Possible MADE GROUND

INSTRUMENTATION SYMBOLS

	Backfill		Bentonite cement grout		Bentonite seal		Concrete
	Gravel filter		Stopcock cover				
	Plain pipe		Slotted pipe				

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KEY TO EXPLORATORY HOLE LOGS - SUMMARY OF ABBREVIATIONS

SAMPLING

Sample type codes

B	=	Bulk disturbed sample.
C	=	Core sample.
CS	=	Core sample taken from rotary core for lab testing.
D	=	Small disturbed sample.
DSPT	=	Small disturbed sample originating from SPT test.
ES	=	Soil sample for environmental testing.
ExU	=	Extruded undisturbed sample remnants.
U	=	Undisturbed driven tube sample - Number of blows indicated. % recovery reported.
W	=	Water sample.

Undisturbed sample detail codes

$U_{(100)}$	=	100mm diameter undisturbed sample.

IN-SITU TESTING

$SPT_{(c)}$	=	Standard Penetration Test using a solid 60 degree cone.
SPT	=	Standard Penetration Test using split spoon sampler. ($SPT_{(NR)}$ indicates 'No Sample Recovery').
	=	* denotes extrapolated N value. NP denotes 'No Penetration'.
HP	=	Hand Penetrometer Test. Value given as shear strength c_u, in kPa.

ROTARY DRILLING INFORMATION

W	=	Water flush returns (%)
TCR	=	Total core recovery (%)
SCR	=	Solid core recovery (%)
RQD	=	Rock quality designations (%)
If	=	Fracture spacing (mm). In the fracture column (i) denotes discontinuity is infilled (refer to Fracture Table for details). Where variable the minimum - average - maximum spacing may be quoted. 'NI' denotes non-intact core. 'NA' denotes not applicable.

All lengths used to determine rock core mechanical properties taken along the centre line of the core.
Obvious induced fractures have been ignored.
The assessment of solid core is based on lengths that show a full diameter and not necessarily a full circumference.
AZCL = Assumed zone of core loss.

ADDITIONAL NOTES

1. All soil and rock descriptions and legends in general accordance with BS EN ISO 14688-1, 14688-2, 14689-1, and BS5930:1999 including Amendment 2 (2010).
2. Material types divided by a broken line (- - -) indicates an unclear boundary.
3. The data on any sheet within the report showing the AGS icon is available in the AGS format.

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHVQ43R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**24.6.13** End: **26.6.13**	**5.82**	**E:331935.3 N:139642.6**	**1** of **11**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00-0.50	1	B								MADE GROUND: Grass over very stiff very closely fissured (dessicated) dark grey brown slightly sandy slightly gravelly CLAY. Gravel is subangular fine rare clinker. (MADE GROUND)	5.32	(0.50) 0.50	
0.50-1.20	2	B								Very stiff extremely and very closely fissured dark grey brown slightly sandy CLAY. (ALLUVIUM)	4.82	(0.50) 1.00	
1.00	3	B								Firm to stiff grey brown slightly sandy CLAY with occasional lenses of light grey silt (less than 1mm thick and at least 75mm diameter). (ALLUVIUM)	4.62	(0.20) 1.20	
1.20-1.65 1.20-2.00	4 5	SPT B	N=4							Soft locally firm grey brown slightly sandy CLAY with occasional lenses of light grey silty and grey brown silty fine sand (less than 2mm thick and at least 75mm diameter). (ALLUVIUM)	3.52	(1.10) 2.30	
2.00-2.45 2.00-3.00	6 7	SPT D	N=2							Very soft grey CLAY with occasional laminae/lenses of grey clayey fine sand (less than 10mm thick). (ALLUVIUM)			

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/06/13	16:00	9.50	9.00	150	9.50
25/06/13	09:00	9.50	9.00	150	3.50
25/06/13	16:45	19.90	19.50	150	6.90
26/06/13	08:00	19.90	19.50	150	1.60
26/06/13	08:45	20.10	19.50	150	2.80

Chiselling / Slow Progress

From	To	Duration (hh:mm)
18.80	19.50	00:45
19.50	19.90	00:30
19.90	20.10	00:45

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Cable percussion borehole terminated in mudstone at 20.30m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Unknown**	**HA**	**WAllwood**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHVQ43R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
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Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
3.00-4.00	10	D								Very soft grey CLAY with occasional laminae/lenses of grey clayey fine sand (less than 10mm thick). (ALLUVIUM) *(stratum text copied from layer at 2.30m* depth from previous sheet)			
3.00-3.45	8	U	10 blows 0% recovery										
3.50-3.95	9	SPT	N=1						1			(2.80)	
4.00-4.45	11	U	7 blows 0% recovery										
4.00-5.00	13	B											
4.50-4.95	12	SPT	N=1										
5.00-5.45	14	SPT	N=13								0.72	5.10	
5.10-6.50	15	B								Medium dense grey slightly silty fine SAND. (ALLUVIUM)			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

4. Location: Bridgwater Tee.
5. SPT hammers EQU084 - 2013 (E_r = 67.22%) , EQU089-2012 (E_r = 61.46%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Unknown**	**HA**	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHVQ43R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
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Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										Medium dense grey slightly silty fine SAND. (ALLUVIUM) *(stratum text copied from layer at 5.10m* depth from previous sheet)			
6.50-6.95	16	SPT	N=3							. . . between 6.50m and 6.95m depth occasional laminations of very soft dark grey to black organic clay up to at least 50mm thick. Strong natural organic odour.			
7.00-8.00	17	B								. . . between 7.00m and 8.00m depth occasional laminations of very soft to soft grey slightly sandy clay (up to 120mm thick).		(4.90)	
8.00-8.45	18	SPT	N=17							. . . at 8.00m depth slightly gravelly. gravel is subangular to subrounded fine sandstone.			
8.50-9.50	19	B											

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Unknown**	**HA**	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHVQ43R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**24.6.13** End: **26.6.13**	**5.82**	**E:331935.3 N:139642.6**	**4** of **11**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										Medium dense grey slightly silty fine SAND. (ALLUVIUM) *(stratum text copied from layer at 5.10m* depth from previous sheet)			
9.50-9.95	20	SPT	N=14						1				
											-4.18	10.00	
10.00-11.00	21	B								Loose and loose to medium dense silty locally very silty fine SAND. (ALLUVIUM) . . . between 10.00m and 11.00m depth occasional dark grey to black lenses (less than 10mm thick			
11.00-11.45	22	SPT	N=9										
11.50-12.50	23	B								. . . between 11.50m and 13.00m depth occasional laminations of firm dark grey clay (50mm thick).			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Unknown**	**HA**	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHVQ43R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**24.6.13** End: **26.6.13**	**5.82**	**E:331935.3 N:139642.6**	**5** of **11**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										Loose and loose to medium dense silty locally very silty fine SAND. (ALLUVIUM)			
										. . . between 10.00m and 11.00m depth occasional dark grey to black lenses (less than 10mm thick *(stratum text copied from* layer at 10.00m depth from previous sheet)			
12.50-12.95	24	SPT	N=11										
												(6.00)	
13.00-14.00	25	B								. . . between 13.00m and 14.00m depth slightly gravelly. gravel is rare subrounded fine quartz.			
14.00-14.45	26	SPT	N=8										
14.50-15.50	27	B								. . . generally very silty below 14.50m depth.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Unknown**	**HA**	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHVQ43R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
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Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										Loose and loose to medium dense silty locally very silty fine SAND. (ALLUVIUM) . . . between 10.00m and 11.00m depth occasional dark grey to black lenses (less than 10mm thick *(stratum text copied from* layer at 10.00m depth from previous sheet)			
15.50-15.95	28	SPT	N=10										
											-10.18	16.00	
16.00-17.00	29	B								Loose grey very silty fine SAND with occasional laminations of (less than 40mm thick) soft to firm and firm grey brown slightly sandy clay containing occasional white gastropod shells and shell fragments (less than 6mm diameter). (ALLUVIUM)			
17.00-17.45	30	SPT	N=6									(2.50)	
										. . . between 17.30m and 17.50m depth band of firm dark brown fibrous PEAT (200mm thick).			
17.50-18.50	31	B											

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Unknown**	**HA**	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHVQ43R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**24.6.13** End: **26.6.13**	**5.82**	**E:331935.3 N:139642.6**	**7** of **11**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										Loose grey very silty fine SAND with occasional laminations of (less than 40mm thick) soft to firm and firm grey brown slightly sandy clay containing occasional white gastropod shells and shell fragments (less than 6mm diameter). (ALLUVIUM) *(stratum text copied from layer at 16.00m* depth from previous sheet)	-12.68	18.50	
18.50-18.95	32	SPT	N=44							Very stiff extremely closely fissured red brown occasionally speckled light green grey slightly sandy slightly gravelly CLAY with occasional black decomposed ancient rootlets (less than 3mm diameter). (MERCIA MUDSTONE GROUP Zone IVb)		(1.00)	
18.60-19.50	33	B									-13.68	19.50	
19.50-19.95	35	B								Extremely weak locally very weak to weak extremely closely jointed light grey muddy SILTSTONE. Joints randomly orientated extremely closely and very closely spaced (less than 30mm) with weathered zones of compact light grey clayey silt up to at least 50mm thick. Recovered as light grey silty sandy GRAVEL. gravel is subangular to angular fine to coarse extremely weak to weak siltstone. (MERCIA MUDSTONE GROUP Zone II)		(0.70)	
19.90-20.10	36	B											
20.00-21.30													
20.10-20.33	37	SPT	N=100*								-14.38	20.20	
				100	20	0				Extremely weak to very weak bluish grey grade 1 SILTSTONE. (MERCIA MUDSTONE GROUP) . . . from 20.47m to 20.47m and 20.60m to 20.70m depth bluish grey silty clay (grade III partially weathered MMG).		(0.75)	
										. . . between 20.70m and 20.78m depth becomes very weak bluish grey (crumbles to angular blocks) grade II partially weathered MMG).	-15.13	20.95	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Unknown**	**HA**	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHVQ43R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
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	End: **26.6.13**			

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										Description on next sheet Very weak reddish brown partially weathered grade II MUDSTONE (MMG) with occasional irregular greenish grey siltstone of mudstone crumbles/recovered as fine to coarse angular blocks of mudstone. (MERCIA MUDSTONE GROUP)			
				100	20	0							
21.30-22.30 21.30-21.75	38	SPT	N=79							. . . from 20.95m to 21.02m depth becomes grade II very weak bluish grey siltstone. *(stratum text copied from layer at* 20.95m depth from previous sheet)		(1.25)	
										. . . between 21.02m and 21.05m depth lamination of reddish brown silty clay.			
				100	0	0				. . . from 21.05 to 21.25m crumbles into angular blocks (crumbly) of very weak bluish grey grade II MMG siltstone. Becomes partially reddish brown mudstone interbedded with bluish grey siltstone.			
										. . . between 21.30m and 21.35m depth pockets of bluish grey siltstone.			
										. . . from 21.57m to 21.62m depth becomes grade I reddish brown mudstone.	-16.38	22.20	
22.30-23.30 22.30-22.70	39	SPT	N=122*							. . . from 21.87m to 22.03m depth occasional laminations of reddish brown clay with occasional lithorelicts becomes grade IVa partially weathered |MMG.		(0.40)	
										. . . between 22.07m and 22.30m depth occasional pockets of bluish grey siltstone.			
										Weak reddish brown mottled greenish grey silty MUDSTONE. Bedding is subvertical. (MERCIA MUDSTONE GROUP Zone I)	-16.78	22.60	
				90	23	0				. . . MMGII becomes MMGI below 22.20m depth (possible differential weathering).		(0.50)	
										. . . between 22.30m and 22.45m depth mudstone is fractured and recovered as fine to coarse angular gravel of mudstone up to 60mm.	-17.28	23.10	
										Weak reddish brown mottled greenish grey silty MUDSTONE crumbles into fine to coarse angular blocks of weak mudstone. (MERCIA MUDSTONE GROUP Zone II)			
										. . . mudstone is between MMGII and MMGIII at 22.95m depth (possibly due to differential weathering).			
23.30-24.80 23.30-23.69	40	SPT	N=128*							*Description on next sheet* . . . between 23.30m and 23.39m depth joint is 70° planar infilled with greenish grey clay up to 2mm.			
				100	53	41	NI 80 140			. . . between 23.52m and 23.60m depth greenish grey siltstone is extremely closely fractured with weathering penetrating downward along the fracture. *Description on next sheet*		(1.70)	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Unknown**	**HA**	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHVQ43R**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**24.6.13** End: **26.6.13**	**5.82**	**E:331935.3 N:139642.6**	**9** of **11**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										. . . between 23.53m and 23.70m depth greenish grey siltstone. . . . between 23.65m and 23.72m depth joint is 65° undulating rough partly open clean. . . . between 23.72m and 23.76m depth non intact recovered as fine to medium weak reddish brown mudstone (possible weathering into MMGII). . . . between 23.86m and 24.00m depth irregular beds of greenish grey siltstone.			
				100	53	41	NI 80 140			Very weak to weak thinly to medium bedded reddish brown MUDSTONE with closely to medium spaced thinly to medium bedded weak greenish grey siltstone. Fractures 5° to 7° very closely spaced undulating rough infilled with grey clay/thin gravel. (MERCIA MUDSTONE GROUP Zone I)	-18.98	24.80	
24.80-26.30 24.80-25.08	41	SPT	N=162*							*(stratum text copied from layer at 23.10m* depth from previous sheet) . . . between 24.00m and 24.10m depth MMGI mudstone grades back MMGI and crumbles into fine to coarse angular blocks. . . . between 24.30m and 24.40m depth MMGI becomes very weak MMGII and crumbles into fine to coarse angular block. . . . at 24.55m depth weathering penetrates downward along the fracture coring the wall rocks disintegrate into fine to coarse angular blocks of greenish grey mudstone. . . . between 24.55m and 24.78m depth weak greenish grey siltstone.		(0.95)	
				100	20	0				Very weak to weak reddish brown silty MUDSTONE (possibly fractured mudstone). fractures are extremely closely to very closely spaced undulating rough open infilled with clay. (MERCIA MUDSTONE GROUP Zone I) . . . non intact (possible fracture) between 24.80m and 25.00m depth. . . . fractures are extremely to very closely spaced between 25.00m and 25.40m depth. . . . joint is 85° planar rough between 25.20m and 25.35m depth.	-19.93	25.75	
26.30-26.56	42	SPT	N=169*							Very weak reddish brown silty MUDSTONE crumbles into fine to coarse angular fragments of weak mudstone. (MERCIA MUDSTONE GROUP Zone II) . . . MMGII becomes weak MMGi between 26.05m and 26.30m depth. Borehole terminated at 26.30m depth.	-20.48	(0.55) 26.30	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Unknown**	**HA**	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHVQ43R**
Contract Ref:	Start: **24.6.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
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BHVQ43R 20.00m to 22.30m

BHVQ43R 22.30m to 24.80m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Unknown**	Drilled By:	**HA**	Logged By:	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHVQ43R**
Contract Ref:	Start: **24.6.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **26.6.13**	**5.82**	**E:331935.3 N:139642.6**	**11** of **11**

BHVQ43R 24.80m to 26.30m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Unknown**	Drilled By:	**HA**	Logged By:	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHBWT1**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**8.7.13** End: **9.7.13**	**6.38**	**E:332274.4 N:139579.1**	**1** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.10-1.00	1	B				Brownish grey slightly clayey sandy GRAVEL of mudstone and rare shale and chalk. With frequent plant rootlets. (ALLUVIUM)	5.38	(1.00) 1.00	
1.00-1.20	2	B				Firm greyish brown silty CLAY with occasional laminations of bluish grey silty clay. With rare plant rootlets. (ALLUVIUM)	5.18	1.20	
1.20-1.65	3	SPT	N=3			Soft greyish brown slightly gravelly slightly sandy CLAY with occasional laminations of brown silt. (ALLUVIUM)	4.38	(0.80) 2.00	
1.20-2.00	4	B							
1.20		HP	c_u=60/60/60						
2.00-2.45	5	U	17 blows			Very soft dark grey greyish brown silty CLAY with rare pockets of amorphous black peat and occasional lenses of silty clay. (ALLUVIUM)	3.38	(1.00) 3.00	
	7		100% recovery						
2.00-3.00		D							
2.45	6	D							
3.00-3.45	8	SPT	N=3			Very soft dark greyish brown slightly gravelly silty CLAY. Gravel is fine to coarse subangular to subrounded very weak mudstone. (ALLUVIUM)	1.88	(1.50) 4.50	
3.00-4.00	9	D							
4.00-4.50	10	U	0% recovery						
4.00-5.00	12	D							
4.50-4.95	11	SPT	N=1			Very soft dark bluish grey silty CLAY. (ALLUVIUM)			
5.00-5.45	13	SPT	N=3			. . . pockets of black amorphous peat at 5.00m depth.		(2.00)	
5.80-6.50	14	D							

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
08/07/13	08:00	5.00	5.00	150	3.50
08/07/13	16:00	15.00	15.00	150	15.00
09/07/13	08:00	15.00	15.00	150	7.70

Chiselling / Slow Progress

From	To	Duration (hh:mm)
15.00	15.25	00:30

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Refusal at 15.45m depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.
4. Location: Bridgwater Tee.
5. SPT hammer EQU084 - 2013 (E_r = 67.22%)

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion	**Dando 2000**	**HA**	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHBWT1**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**8.7.13** End: **9.7.13**	**6.38**	**E:332274.4 N:139579.1**	**2** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
						Very soft dark bluish grey silty CLAY. (ALLUVIUM) *(stratum text copied from layer at 4.50m depth from previous* sheet)	-0.12	6.50	
6.50-6.95	15	U	15 blows 90% recovery			Firm dark bluish grey and brown silty CLAY with rare shell fragments (ALLUVIUM)			
7.00-8.00	16	D			09/07 08:00			(1.50)	
							-1.62	8.00	
8.00-8.45	17	SPT	N=3			Firm bluish grey silty CLAY. (ALLUVIUM)			
8.50-9.50	18	D						(1.50)	
							-3.12	9.50	
9.50-9.95	19	SPT	N=2			Very soft dark bluish grey very sandy silty CLAY. Dark grey brownish sand is fine to medium. (ALLUVIUM)			
9.50-10.00	20	D							
10.00-10.45	21	SPT	N=2						
10.50-11.50	22	D						(2.00)	
							-5.12	11.50	
11.50-11.95	23	SPT	N=1			Very soft dark grey silty CLAY with rare pockets of black pseudofibrous peat. (ALLUVIUM)			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion	**Dando 2000**	**HA**	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHBWT1**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**8.7.13** End: **9.7.13**	**6.38**	**E:332274.4 N:139579.1**	**3** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
12.00-13.00	24	D				Very soft dark grey silty CLAY with rare pockets of black pseudofibrous peat. (ALLUVIUM) *(stratum text copied from layer at 11.50m depth from previous* sheet)		(2.20)	
13.00-13.45	25	SPT	N=6			. . . rare pockets of amorphous peat at 13.00m depth.	-7.32	13.70	
13.70-15.00	26	D				Reddish brown and grey gravelly slightly sandy CLAY with pockets of bluish grey silty clay. Gravel is fine to coarse subangular to angular of weak brown mudstone. (ALLUVIUM)	-8.62	(1.30) 15.00	
15.00-15.29	27	SPT	N=107*			Very stiff reddish greyish brown and grey very clayey very sandy GRAVEL of fine to coarse subangular to angular weak mudstone and rare weak siltstone (possible MMGII). (MERCIA MUDSTONE GROUP)	-8.87	15.25	
15.00-15.25	28	B					-9.07	15.45	
15.25-15.46	29	SPT	N=115*			Very stiff reddish brown slightly sandy CLAY with subrounded lithorelicts of MMG and possibly MMGIVb with occasional pockets of bluish grey silt. (MERCIA MUDSTONE GROUP)			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion	**Dando 2000**	**HA**	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC-LD1**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**3.7.13** End: **8.7.13**	**4.95**	**E:334011.8 N:143042.9**	**1** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00-0.70	1	B								Grass over very stiff extremely closely spaced to very closely fissured grey brown slightly sandy CLAY with frequent rootlets (less than 1mm diameter). (ALLUVIUM)	4.70	(0.25) 0.25	
										Stiff to very stiff grey extremely closely spaced to very closely fissured grey brown slightly sandy CLAY with frequent rootlets (less than 1mm diameter). (ALLUVIUM)	4.25	(0.45) 0.70	
0.70-1.20	2	B								Stiff extremely closely fissured grey brown mottled grey and orange brown CLAY with occasional partings of compact light grey silt (less than 1mm thick). (ALLUVIUM)	3.75	(0.50) 1.20	
1.20-1.65 1.20-2.00	3 4	SPT D	N=1							Stiff grey brown CLAY with occasional partings of slightly gravelly orange brown siltstone. (ALLUVIUM)	2.95	(0.80) 2.00	
2.00-2.45 2.00-3.00	5 6	U D	15 blows 100% recovery							Very soft grey CLAY. Natural organic odour. (ALLUVIUM)	1.95	(1.00) 3.00	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
03/07/13	15:00	3.00	3.00	150	3.00
03/07/13	16:45	6.50	6.00	150	Dry
04/07/13	08:15	6.50	6.00	150	5.50
04/07/13	16:00	21.50	21.50	150	9.10
05/07/13	08:15	21.50	21.50	150	9.80
05/07/13	11:45	22.20	22.00	150	10.10

Chiselling / Slow Progress

From	To	Duration (hh:mm)
22.20	22.20	00:45

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Cable percussion borehole terminated in mudstone at 22.40m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC-LD1**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**3.7.13** End: **8.7.13**	**4.95**	**E:334011.8 N:143042.9**	**2** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
3.00-3.45	7	SPT	N=1							Soft grey CLAY with occasional fragments of decomposing black organic matter (less than 5mm diameter). (ALLUVIUM)		(1.20)	
3.00-4.00	8	D											
4.00-4.45	9	SPT	N=4								0.75	4.20	
4.20-5.50	10	D								Firm dark brown to black fibrous PEAT becoming spongy black pseudofibrous PEAT. (PEAT)		(1.30)	
5.00-5.45	11	SPT	N=1								-0.55	5.50	
5.50-6.50	12	D								Soft to firm light grey to grey silty CLAY with occasional fragments of dark brown to black decomposed plant matter (less than 4mm diameter). (ALLUVIUM)			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

4. Location: Woolavington.
5. SPT hammers EQU084 - 2013 (E_r = 67.22%) , EQU089-2012 (E_r = 61.46%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC-LD1**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**3.7.13** End: **8.7.13**	**4.95**	**E:334011.8 N:143042.9**	**3** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
6.50-6.95	13	SPT	N=1							Soft to firm light grey to grey silty CLAY with occasional fragments of dark brown to black decomposed plant matter (less than 4mm diameter). (ALLUVIUM) *(stratum text copied from layer at 5.50m* depth from previous sheet)		(2.50)	
7.00-8.00	14	D											
8.00-8.45	15	U	15 blows 50% recovery							Firm extremely closely fissured grey silty CLAY with occasional fragments of black decomposing organic plant matter (less than 25mm long and 3mm diameter). (ALLUVIUM)	-3.05	8.00	
8.45	16	D											
8.50-9.50	17	D										(1.50)	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC-LD1**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**3.7.13** End: **8.7.13**	**4.95**	**E:334011.8 N:143042.9**	**4** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										Firm extremely closely fissured grey silty CLAY with occasional fragments of black decomposing organic plant matter (less than 25mm long and 3mm diameter). (ALLUVIUM) *(stratum text copied from layer at 8.00m* depth from previous sheet)	-4.55	9.50	
9.50-9.95	18	SPT	N=8							Thinly interlaminated firm grey silty CLAY with grey silty fine SAND. Laminations typically less than 2mm thick. (ALLUVIUM)	-5.05	(0.50) 10.00	
10.00-11.00	19	D								Soft to firm locally firm grey slightly sandy CLAY with occasional fragments of decomposing organic plant matter (less than 5mm diameter). (ALLUVIUM)	-6.55	(1.50) 11.50	
11.00-11.45	20	U	10 blows 0% recovery										
11.50-11.95 11.50-12.50	21 22	SPT D	N=6							Thinly to thickly interlaminated firm grey silty slightly sandy CLAY and grey silty fine SAND. Laminations typically less than 8mm thick. (ALLUVIUM)		(1.00)	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC-LD1**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**3.7.13** End: **8.7.13**	**4.95**	**E:334011.8 N:143042.9**	**5** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										Thinly to thickly interlaminated firm grey silty slightly sandy CLAY and grey silty fine SAND. Laminations typically less than 8mm thick. (ALLUVIUM) *(stratum text copied from layer at 11.50m* depth from previous sheet)	-7.55	12.50	
12.50-12.95	23	SPT	N=3							Soft to firm light grey to grey slightly sandy CLAY with occasional decomposing dark brown to black organic plant matter (less than 35mm long by 4mm diameter). (ALLUVIUM)			
13.00-14.00	24	D											
14.00-14.45	25	SPT	N=4									(3.50)	
14.50-15.50	26	D											

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC-LD1**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**3.7.13** End: **8.7.13**	**4.95**	**E:334011.8 N:143042.9**	**6** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										Soft to firm light grey to grey slightly sandy CLAY with occasional decomposing dark brown to black organic plant matter (less than 35mm long by 4mm diameter). (ALLUVIUM) *(stratum text copied from layer at 12.50m* depth from previous sheet)			
15.50-15.95	28	SPT	N=5										
											-11.05	16.00	
16.00-17.00	29	D								Firm to locally firm to stiff grey slightly sandy CLAY with occasional lenses of grey silty fine sand (less than 6mm thick) and occasional decomposing organic matter (less than 35mm by 4mm diameter). (ALLUVIUM)		(1.60)	
17.00-17.45	30	SPT	N=5										
17.50-18.50	31	B									-12.65	17.60	
										Very loose grey very silty fine SAND. (ALLUVIUM)			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC-LD1**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**3.7.13** End: **8.7.13**	**4.95**	**E:334011.8 N:143042.9**	**7** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										Very loose grey very silty fine SAND. (ALLUVIUM) *(stratum text copied from layer at 17.60m* depth from previous sheet)	-13.55	(0.90) 18.50	
18.50-18.95	32	SPT	N=2							Very loose grey silty fine SAND. (ALLUVIUM)			
19.00-20.00	33	B										(1.60)	
20.00-20.45	34	SPT	N=10								-15.15	20.10	
20.10-20.70	35	B								Firm and firm to stiff grey slightly sandy locally sandy silty CLAY with pockets/horizons of firm dark brown slightly sandy slightly gravelly organic CLAY. Gravel is subangular fine limestone of siltstone. Organic clay contains white shell fragments white gastropod shells (less than 4mm diameter). (LIAS GROUP)		(0.60)	
											-15.75	20.70	
										Description on next sheet			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC-LD1**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**3.7.13**	**4.95**	**E:334011.8 N:143042.9**	**8** of **12**
	End: **8.7.13**			

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										Stiff and stiff to very stiff grey slightly sandy locally silty slightly gravelly CLAY. Gravel is subangular fine to medium siltstone (probably disordered lithorelicts). (LIAS GROUP) *(stratum text copied from layer at 20.70m* depth from previous sheet)	-16.55	(0.80) 21.50	
21.50-21.95	37	U	50 blows 0% recovery							Very stiff to hard extremely closely fissured grey locally slightly sandy slightly gravelly CLAY thinly to thickly interlaminated with extremely weak to very weak extremely closely jointed dark grey silty MUDSTONE/SILTSTONE. (LIAS GROUP)			
	38												
21.50	39	D											
21.50-22.20		B										(1.00)	
22.20	40	D								. . . at 22.20m depth predominantly thin laminations of very weak to weak dark grey calcite siltstone.			
22.20-22.28	41	SPT	N=3000*								-17.55	22.50	
22.50-23.50				95	79	44	NI 200 290			Weak thinly laminated grey calcareous MUDSTONE interbedded with medium strong medium bedded grey argillaceous LIMESTONE. Fractures are very closely to closely spaced undulating rough infilled with fine to medium gravel of grey mudstone. (LIAS GROUP) . . . subvertical 85° joint between 22.50m and 22.85m depth is of limestone and is planar rough with smear of clay. . . . at 22.93m depth grey mudstone is non intact (possible movement along the fracture at 22.95m depth). . . . between 23.00m and 23.05m depth grey mudstone is non intact (possible movement along bedding fracture at 23.00m and 23.05m depth). . . . medium strong limestone at 23.10m depth. . . . between 23.30m and 23.50m depth medium strong grey limestone. . . . joint at 23.60m depth is 2° planar rough infilled fine to medium grey gravel of mudstone up to 2.50m depth. . . . bedding fracture infilled with fine to medium fragments of grey mudstone (possibly formed by the possible			
23.40-23.65	42	SPT	N=188*										
23.50-24.50				100	60	15	NI 90 150						

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC-LD1**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**3.7.13** End: **8.7.13**	**4.95**	**E:334011.8 N:143042.9**	**9** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										movement along the fracture at 23.72m and 23.76m depth. . . . mudstone is more fossilised and very weak between 23.85m and 24.00m depth. Weak thinly laminated grey calcareous MUDSTONE interbedded with medium strong medium bedded grey argillaceous LIMESTONE. Fractures are very closely to closely spaced undulating rough infilled with fine to medium gravel of grey mudstone. (LIAS GROUP) . . . subvertical 85° joint between 22.50m and 22.85m depth is of limestone and is planar rough with smear of clay. *(stratum text copied from layer at 22.50m depth* from previous sheet) . . . between 24.05m and 24.25m depth medium strong grey limestone with occasional stylolites and possible subvertical insipient joint formed along styolithics. . . . mudstone contains occasional shells between 24.50m and 25.00m depth. . . . between 24.80m and 24.88m depth mudstone becomes weak and splits along extremely closely spaced bedding planes (possible prolonged weathering) leaving the joint of extremely closely spaced bedding fractures. . . . between 24.98m and 25.27m depth medium strong grey limestone with stylolites. . . . between 25.38m and 25.38m depth infilled with 15mm thick gravelly clay (possible gorge formed by the movement). . . . between 25.40m and 25.47m depth non intact recovered as fine to coarse crushed very clayey angular gravel of mudstone (possible movement) along the fracture. . . . between 25.47m and 25.76m depth medium strong argillaceous grey limestone with subvertical (85°) fractures. . . . between 25.80m and 25.98m depth mudstone becomes very weak. . . . between 25.85m and 25.93m depth non intact with grey clay (possible gorge formed by crushing/possible movement along the fracture). . . . joint is 80° undulating rough partly open between 26.00m and 26.16m depth. . . . between 26.00m and 26.18m depth medium strong grey argillaceous limestone. . . . between 26.20m and 26.26m depth fracture is 5° undulating rough infilled			
24.40-24.52	43	SPT	N=300*	100	60	15	NI 90 150						
24.50-25.50				85	60	30	NI 80 270					(5.60)	
25.40-25.51	44	SPT	N=316*										
25.50-26.90				100	89	71	NI 330 440						
26.90-28.10				96	83	38							

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC-LD1**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**3.7.13** End: **8.7.13**	**4.95**	**E:334011.8 N:143042.9**	**10** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
26.90-27.02	45	SPT	N=306*	96	83	38	NI 160 300			with fine to medium gravel of mudstone (up to 10mm) (possibly crushed fragments of mudstone by possible movement along the fracture). . . . between 26.35m and 26.60m depth medium strong grey argillaceous limestone. . . . between 26.65m and 26.75m depth medium strong argillaceous limestone. . . . possible drilling induced fracture between 26.75m and 26.90m depth. Weak thinly laminated grey calcareous MUDSTONE interbedded with medium strong medium bedded grey argillaceous LIMESTONE. Fractures are very closely to closely spaced undulating rough infilled with fine to medium gravel of grey mudstone. (LIAS GROUP) . . . subvertical 85° joint between 22.50m and 22.85m depth is of limestone and is	-23.15	28.10	
28.10-28.22	46	SPT	N=300*							planar rough with smear of clay. *(stratum text copied from layer at 22.50m depth* from previous sheet) . . . between 27.15m and 27.25m depth non intact possibly closely spaced fracture. . . . between 27.36m and 27.49m depth mudstone is very weak bedding fracture becoming extremely closely spaced. . . . between 27.85m and 28.05m depth bed of medium strong limestone. Borehole termianted at 28.10m depth.			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 205**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC-LD1**
Contract Ref:	Start: **3.7.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **8.7.13**	**4.95**	**E:334011.8 N:143042.9**	**11** of **12**

BHC-LD1 22.50m to 24.50m

BHC-LD1 24.50m to 26.90m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 205**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC-LD1**
Contract Ref:	Start: **3.7.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **8.7.13**	**4.95**	**E:334011.8 N:143042.9**	**12** of **12**

BHC-LD1 26.90m to 28.10m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 205**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC-LD23**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**27.6.13** End: **5.7.13**	**4.81**	**E:337121.6 N:149252.1**	**1** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00-0.40	1	B								Grass over stiff to very stiff very closely fissured (dessicated) grey brown slightly sandy slightly gravelly CLAY. Gravel is subangular fine to coarse limestone. (ALLUVIUM)	4.41	(0.40)	
0.40-1.00	2	B								Stiff extremely closely fissured (dessicated) mottled grey brown and grey slightly sandy CLAY. (ALLUVIUM)	3.81	(0.60)	
1.00-1.20	3	B								Firm to stiff extremely closely fissured mottled grey brown and grey slightly sandy CLAY with occasional sand sized white shell fragments. (ALLUVIUM)	3.61	1.20	
1.20-1.65	4	SPT	N=1										
1.20-2.00	5	B								Very soft grey CLAY. (ALLUVIUM)			
2.00-2.45	6	SPT	N=1										
2.00-3.00	7	D										(2.80)	
3.00-4.00	10	D											
3.00-3.45	8	U	5 blows 0% recovery										
3.50-3.95	9	SPT	N=1						27/06 12:45		0.81	4.00	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
27/06/13	12:00	3.00	3.00	200	3.00
27/06/13	12:45	5.50	5.50	200	3.90
28/06/13	08:00	14.50	14.50	200	12.50
28/06/13	14:00	24.50	24.50	150	13.20
02/07/13	09:00	27.65	27.60	150	12.10
05/07/13	07:00	31.90	28.00	N/R	21.30

Chiselling / Slow Progress

From	To	Duration (hh:mm)
24.50	25.20	00:45
25.30	26.20	01:15
26.20	27.00	01:00
27.00	27.65	01:00

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Cable percussion borehole terminated in mudstone at 27.80m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Unknown**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC-LD23**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**27.6.13** End: **5.7.13**	**4.81**	**E:337121.6 N:149252.1**	**2** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
4.00-4.45	11 13	U	5 blows 0% recovery							Very soft grey to dark grey CLAY with occasional inclusions of black decomposed organic matter (less than 8mm by 5mm diameter). (ALLUVIUM)			
4.00-5.00		D											
4.50-4.95	12	SPT	N=1										
5.00-5.45	14	SPT	N=1							. . . occasional parting of compact light grey silt (less than 1mm thick) between 5.00m and 5.45m depth.			
5.50-6.50	15	D											
6.50-6.95	16	U	10 blows 0% recovery										
7.00-7.45	17	SPT	N=2										
7.50-8.50	18	D										(7.20)	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

4. Location: Mark.
5. SPT hammers EQU084 - 2013 (E_r = 67.22%) , EQU089-2012 (E_r = 61.46%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Unknown**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC-LD23**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**27.6.13** End: **5.7.13**	**4.81**	**E:337121.6 N:149252.1**	**3** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
8.00-8.45	19	SPT	N=3							Very soft grey to dark grey CLAY with occasional inclusions of black decomposed organic matter (less than 8mm by 5mm diameter). (ALLUVIUM) *(stratum text copied from layer at 4.00m* depth from previous sheet)			
9.00-10.00	20	D											
10.00-10.45	21	U	15 blows 85% recovery										
10.45	22	D											
10.50-11.50	23	D									-6.39	11.20	
11.50-11.95	24	SPT	N=8							Firm dark brown to black PEAT. (PEAT)		(0.80)	
11.70-12.00	25	D							02/07		-7.19	12.00	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Unknown**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC-LD23**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**27.6.13** End: **5.7.13**	**4.81**	**E:337121.6 N:149252.1**	**4** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
12.00-13.00	26	D							09:00	Very soft grey CLAY. (ALLUVIUM)		(1.30)	
									28/06 08:00				
13.00-13.45	27	SPT	N=5						28/06 14:00		-8.49	13.30	
13.50-14.50	28	B								Grey to dark grey very silty fine SAND. (ALLUVIUM)		(1.60)	
14.50-14.95	29	SPT	N=8								-10.09	14.90	
14.90-16.00	30	D								Soft grey slightly sandy silty CLAY with occasional lenses of silty fine sand (less than 50mm thick). (ALLUVIUM)			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Unknown**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC-LD23**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**27.6.13** End: **5.7.13**	**4.81**	**E:337121.6 N:149252.1**	**5** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
16.00-16.45	31	SPT	N=2							Soft grey slightly sandy silty CLAY with occasional lenses of silty fine sand (less than 50mm thick). (ALLUVIUM) *(stratum text copied from layer at 14.90m* depth from previous sheet)		(2.70)	
16.50-17.50	32	B											
17.50-18.00	33	U	10 blows 0% recovery								-12.79	17.60	
										Grey silty fine SAND. (ALLUVIUM)			
18.50-19.50	35	B										(1.90)	
											-14.69	19.50	
19.50-19.95	36	SPT	N=9							Soft to firm grey slightly sandy locally sandy silty CLAY with occasional fragments of dark brown and black decomposed plant matter (less than 10mm diameter). (ALLUVIUM)			

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Unknown**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC-LD23**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**27.6.13** End: **5.7.13**	**4.81**	**E:337121.6 N:149252.1**	**6** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
20.00-21.00	37	D								Soft to firm grey slightly sandy locally sandy silty CLAY with occasional fragments of dark brown and black decomposed plant matter (less than 10mm diameter). (ALLUVIUM) *(stratum text copied from layer at 19.50m* depth from previous sheet)		(1.95)	
21.00-21.45	38	U	40 blows 0% recovery						1		-16.64	21.45	
21.45	39	D								Grey slightly silty fine SAND. (ALLUVIUM)			
21.50-22.50	40	B										(1.45)	
22.50-22.95	41	SPT	N=13								-18.09	22.90	
22.90-23.00	42	D								Firm dark brown fibrous PEAT with pockets (less than 50mm diameter) of firm grey brown slightly sandy clay. Fibres probably tree bark. (PEAT)	-18.19	23.00	
23.00	43	B								Grey silty fine SAND. (ALLUVIUM)		(0.80)	
											-18.99	23.80	
										Description on next sheet			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Unknown**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC-LD23**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**27.6.13** End: **5.7.13**	**4.81**	**E:337121.6 N:149252.1**	**7** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
24.00-24.45	44	U	30 blows 0% recovery							Firm to stiff becoming stiff extremely closely fissured grey to dark grey CLAY. (CHARMOUTH MUDSTONE FORMATION) *(stratum text copied from layer at 23.80m* depth from previous sheet)		(1.95)	
24.80-25.60	45	D											
25.50-25.95	46	U	60 blows 100% recovery								-20.94	25.75	
26.00-27.00	47	D								Stiff to very stiff locally very stiff extremely closely fissured grey to dark grey slightly sandy slightly gravelly CLAY. Gravel is occasionally subrounded fine siltstone lithorelicts. (CHARMOUTH MUDSTONE FORMATION)		(1.25)	
27.00-27.45	48	SPT	N=62								-22.19	27.00	
27.00-27.60	49	B								Very stiff thinly laminated extremely closely fissured grey to dark grey slightly gravelly silty CLAY with occasional subangular fine extremely weak and very weak mudstone and siltstone lithorelicts locally extremely weak and very weak thinly laminated extremely closely jointed grey to dark grey MUDSTONE. (CHARMOUTH MUDSTONE FORMATION)		(1.00)	
27.60-27.70	50	SPT	N=600*										
27.65	51	D											
27.65-27.75	52	SPT	N=600*							. . . occasional bands (less than 25mm thick) of medium strong grey to dark grey calcite siltstone between 27.65m and 27.80m depth.	-23.19	28.00	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Unknown**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC-LD23**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**27.6.13** End: **5.7.13**	**4.81**	**E:337121.6 N:149252.1**	**8** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
28.00-29.30													
28.00-28.28	53	SPT	N=162*							Very weak thinly laminated grey black slightly weathered calcareous fossil MUDSTONE with extremely closely to very closely spaced (5mm to 10mm) thin laminations of white compressed shells. Bedding fracture 0° to 5° extremely closely to medium spaced undulating rough open infilled with grey clay up to 2.5mm. (CHARMOUTH MUDSTONE FORMATION)			
				96	85	56	NI 170 260			. . . between 28.00m and 28.24m depth extremely closely spaced bedding fractures and non intact in place.			
										. . . bedding fracture closely and medium spaced between 28.27m and 28.69m depth.			
										. . . bedding fracture extremely closely and closely spaced (10mm to 17mm) between 28.69m and 29.30m depth.		(2.40)	
29.30-30.40													
29.30-29.52	54	SPT	N=164*							. . . lower wall rocks at 29.16m depth weakened and disintegrated (possible weathering along bedding fracture at 29.16m depth).			
										. . . between 29.34m and 29.43m depth weak bed of grey argillaceous limestone.			
				100	82	32	NI 140 200			. . . mudstone becomes extremely weak between 29.90m and 30.10m depth and between 30.25m and 30.40m depth (possibly due to weathering along bedding fracture to disintegrate mudstone into weaker rocks/clay).			
											-25.59	30.40	
30.40-31.90										Extremely weak to very weak thinly laminated grey silty calcareous slightly weathered MUDSTONE with occasional fine to coarse shells and laminations of shells and beds of grey weak argillaceous limestone. Bedding fracture 0° to 5° very closely to closely spaced undulating rough open to medium wide infilled with grey clay up to 10mm. (CHARMOUTH MUDSTONE FORMATION)	-25.64	30.45	
30.40-30.59	55	SPT	N=180*										
				100	93	26	NI 130 220					(1.45)	
										Very weak thinly laminated grey black calcareous fissure MUDSTONE with occasional discontinuous thin laminations of compressed white shell fragments. Bedding fracture is 0° to 5° very closely to medium spaced undulating rough open infilled with clay/thin gravel disintegrated wall rocks up to 5mm. (CHARMOUTH MUDSTONE FORMATION)	-27.09	31.90	
31.90-33.50				88	81	39				. . . between 30.45m and 31.35m depth			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Unknown**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC-LD23**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**27.6.13** End: **5.7.13**	**4.81**	**E:337121.6 N:149252.1**	**9** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
31.90-32.01	56	SPT	N=333*	88	81	39	NI 140 290			bedding fractures are very closely to closely spaced. . . . between 31.10m and 31.90m depth occasional discontinuous laminations of compounded shells. . . . between 31.35m and 31.90m depth mudstone is very weak and bedding fracture very closely to medium spaced. Very weak becoming weak thinly laminated greenish black slightly weathered calcareous fissile MUDSTONE with occasional discontinuous compressed shells. Bedding fracture 0° to 5° extremely closely to medium spaced undulating rough infilled with grey clay/fine gravel of mudstone up to 4mm. (CHARMOUTH MUDSTONE FORMATION) *(stratum text copied from layer at 31.90m* depth from previous sheet) . . . between 32.35m and 32.50m depth and 32.60m and 32.85m depth mudstone is weak. . . . between 32.50m and 32.59m depth bedding fractures extremely closely spaced. . . . between 32.65m and 32.90m depth drilling induced fractures. . . . between 33.05 and 33.25m depth mudstone is being disintegrated and fractures become closer. Borehole terminated at 33.50m depth.	-28.69	(1.60) 33.50	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	

All dimensions in metres

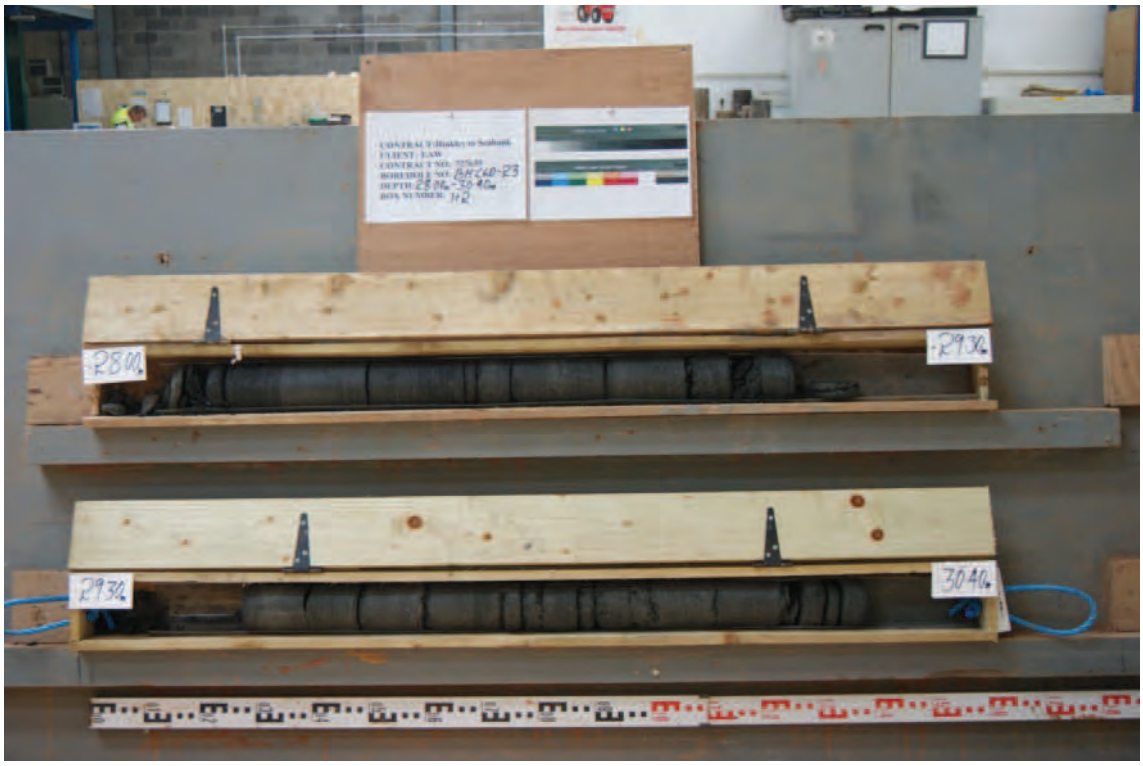
Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Unknown**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC-LD23**
Contract Ref:	Start: **27.6.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **5.7.13**	**4.81**	**E:337121.6 N:149252.1**	**10** of **10**

BHC-LD23 28.00m to 30.40m



BHC-LD23 30.40m to 33.50m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Unknown**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC1A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.5.13** End: **23.5.13**	**5.93**	**E:337330.2 N:154538.0**	**1** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										MADE GROUND: Grass overlying soft dark brown slightly sandy CLAY. (TOPSOIL)	5.63	0.30	
0.30	1	D							23/05 07:00	Very soft brownish grey slightly gravelly slightly sandy CLAY. (ALLUVIUM)			
0.60	2	D							22/05 07:00			(0.70)	
											4.93	1.00	
1.00	3	D								Very soft brownish grey CLAY. (ALLUVIUM)			
1.20-1.70	4	U	11 blows 100% recovery										
1.70-1.90	5	D											
1.80	6	D											
2.00-2.45	7	SPT	N=1										
2.50-3.00	8	B										(3.50)	
3.00-3.50	9	U	6 blows 100% recovery										
3.50-3.70	10	D											
3.50-4.00	11	B											
4.00-4.45	12	SPT	N=0										
											1.43	4.50	
4.50-5.00	13	B								Very soft brownish grey slightly sandy CLAY. (ALLUVIUM)			
5.00-5.50	14	U	4 blows 100% recovery										
5.50-5.60	15	D											
5.50-6.50	16	B											

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
13/05/13	16:30	0.70	None	150	0.60
14/05/13	09:00	6.50	6.20	150	6.10
15/05/13	16:30	20.00	19.20	150	0.65
21/05/13	15:00	20.00	20.00	150	0.50
22/05/13	07:00	21.00	None	20	0.90
23/05/13	07:00	22.00	None	20	0.50

Chiselling / Slow Progress

From	To	Duration (hh:mm)
19.70	20.00	00:30

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Cable percussion borehole terminated in mudstone at 20.35m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**AL + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC1A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.5.13** End: **23.5.13**	**5.93**	**E:337330.2 N:154538.0**	**2** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
6.50-6.95	17	SPT	N=0							Very soft brownish grey slightly sandy CLAY. (ALLUVIUM) *(stratum text copied from layer at 4.50m* depth from previous sheet)		(5.00)	
7.00-8.00	18	B											
8.00-8.50	19	U	6 blows 100% recovery										
8.50-8.70	20	D											
9.00-9.50	21	B											
											-3.57	9.50	
9.50-9.95	22	SPT	N=0							Very loose dark grey very clayey SAND. (ALLUVIUM)		(1.50)	
10.00-11.00	23	B											
											-5.07	11.00	
11.00-11.45	24	SPT	N=4							Very loose to loose dark grey slightly gravelly very clayey SAND. (ALLUVIUM)			
11.00-11.60	25	B											
11.60-12.50	26	B										(1.50)	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

4. Location: Biddisham (South Mendips Sealing End).
5. SPT hammers EQU089-2012 (E_r = 61.46%) , EQU251-2013 (E_r = 70.02%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**AL + JP**	**BSaimen + WDixon**

GINT_LIBRARY_V8_04.GLB|Log COMPOSITE LOG | 727635_HINKLEY_TO_SEABANK.GPJ - v8_04 | 17/10/13 - 19:18 | AD.
Structural Soils Ltd, Head Office - Bristol: The Old School, Stillhouse Lane, Bedminster, Bristol, BS3 4EB. Tel: 0117-947-1000, Fax: 0117-947-1004, Web: www.soils.co.uk, Email: ask@soils.co.uk.

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC1A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.5.13** End: **23.5.13**	**5.93**	**E:337330.2 N:154538.0**	**3** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instru-mentation	Water	Description of Strata	Reduced Level	Depth (Thick ness)	Material Graphic Legend
										Very loose to loose dark grey slightly gravelly very clayey SAND. (ALLUVIUM) *(stratum text copied from layer at 11.00m depth from previous sheet)*	-6.57	12.50	
12.50-12.95	27	SPT	N=9							Loose to medium dense dark grey silty SAND. (ALLUVIUM)			
13.00-14.00	28	B										(2.00)	
14.00-14.45	29	SPT	N=12								-8.57	14.50	
14.50-15.50	30	B								Soft dark grey slightly gravelly slightly sandy CLAY. (ALLUVIUM)			
15.50-15.95	31	SPT	N=5										
15.50-16.00	32	B										(2.50)	
16.00-17.00	33	B											
											-11.07	17.00	
17.00-17.45	34	SPT	N=10							Extremely weak dark reddish brown mottled grey MUDSTONE. (MERCIA MUDSTONE GROUP)			
17.50-18.50	35	B											

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**AL + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC1A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.5.13** End: **23.5.13**	**5.93**	**E:337330.2 N:154538.0**	**4** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
18.50-18.89	36	SPT	N=64*							Extremely weak dark reddish brown mottled grey MUDSTONE. (MERCIA MUDSTONE GROUP) *(stratum text copied from layer at 17.00m* depth from previous sheet)		(3.00)	
19.00-20.00	37	B									-14.07	20.00	
20.00-21.00 20.00-20.37	38	SPT	N=70*	25	0	0				Extremely weak to very weak thinly laminated reddish brown MUDSTONE crumbles into fine to coarse angular blocks of extremely weak/very weak mudstone. (MERCIA MUDSTONE GROUP Zone II) . . . between 20.00m and 21.00m depth 25% recovery.	-15.07	(1.00) 21.00	
21.00-22.00 21.00-21.45	39	SPT	N=85	30	0	0				Very stiff reddish brown silty CLAY with occasional fine to coarse pockets of greenish grey completely weathered siltstone/mudstone. (MERCIA MUDSTONE GROUP Zone IVb) . . . between 21.00m and 22.00m depth recovery is 30%.	-16.07	(1.00) 22.00	
21.80		HP	c_u=>225										
22.00-23.00 22.00-22.45	40	SPT	N=70	30	30	27				Very weak thinly laminated reddish brown MUDSTONE with occasional thin laminations of discontinuous gypsum along the bedding and irregular pockets of greenish grey siltstone/mudstone. (MERCIA MUDSTONE GROUP Zone I) . . . between 22.00m and 23.00m depth recovery is 30%.	-17.07	(1.00) 23.00	
23.00-24.00 23.00-23.45	41	SPT	N=100	30	0	0				Recovered as reddish brown gravelly CLAY. Gravel is fine to coarse subrounded to rounded very weak mudstone fragments. (MERCIA MUDSTONE GROUP)	-18.07	(1.00) 24.00	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**AL + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC1A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.5.13** End: **23.5.13**	**5.93**	**E:337330.2 N:154538.0**	**5** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
24.00-25.00 24.00-24.33	42	SPT	N=169*	85	44	30	NI 60 160			. . . very weak mudstone of MMGI. Very weak thinly laminated reddish brown MUDSTONE with occasional discontinuous gypsum laminations along the bedding. (MERCIA MUDSTONE GROUP Zone I) . . . between 24.54m and 24.60m depth recovered as fine to coarse angular blocks of very weak reddish brown mudstone. . . . between 24.80m and 24.90m depth becomes MMGII recovered as non intact fine to coarse gravel of very weak mudstone. . . . bedding fracture is 5° to 10° undulating rough closely to medium spaced infilled with fine to medium gravel of mudstone/weathering penetrating downward along the bedding fracture with weakening of wall rock on either side. . . . between 25.00m and 25.55m depth mudstone is very weak and becomes MMGII. . . . mudstone between 25.72m and 25.78m depth is weakened and disintegrated (possible weathering due to continued percolation of water along the fracture).			
25.00-26.50 25.00-25.26	43	SPT	N=176*	87	59	29	NI 150 280					(2.50)	
26.50-26.70	44	SPT	N=273*							Borehole terminated at 26.50m depth.	-20.57	26.50	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

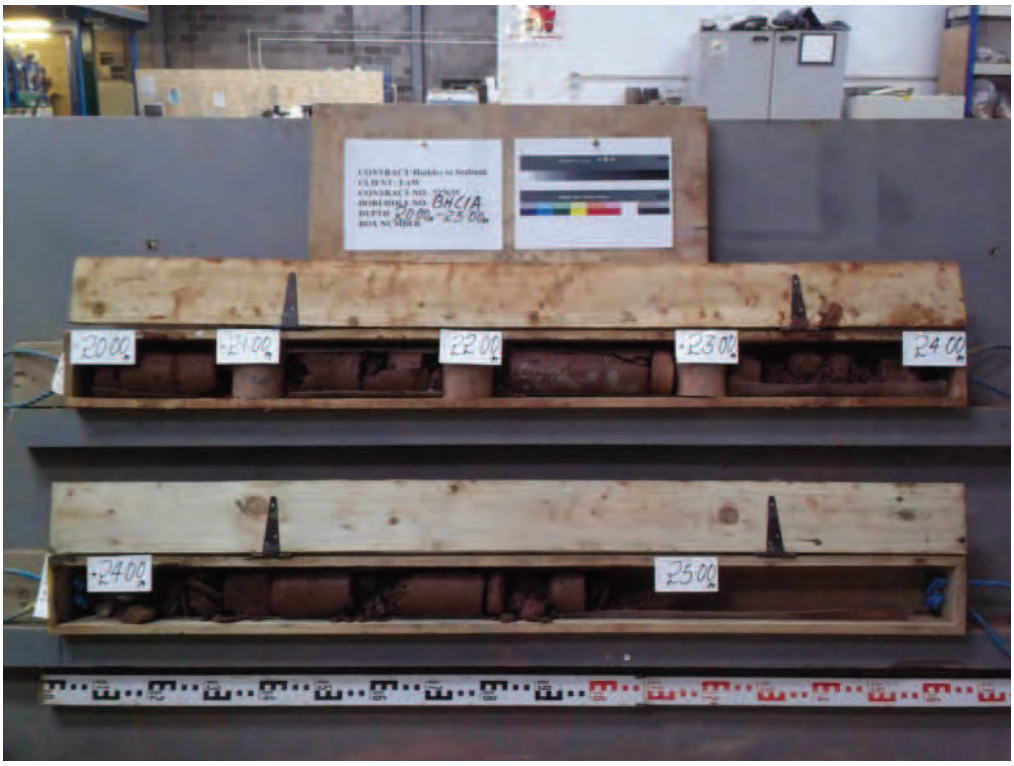
Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**AL + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC1A**
Contract Ref:	Start: **13.5.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **23.5.13**	**5.93**	**E:337330.2 N:154538.0**	**6** of **6**

BHC1A 20.00m to 25.00m



BHC1A 25.00m to 26.50m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 205**	Drilled By:	**AL + JP**	Logged By:	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC1B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**15.5.13** End: **16.5.13**	**6.21**	**E:337333.6 N:154514.6**	**1** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
						Grass overlaying soft dark brown CLAY. (TOPSOIL)	5.91	0.30	
0.60	1	D				Soft brownish grey CLAY. (ALLUVIUM)			
1.00	2	D						(1.45)	
1.20-1.80	3	U	14 blows 75% recovery						
1.50-2.00	5	B							
1.70-1.90	4	D					4.46	1.75	
2.00-2.45	6	SPT	N=0			Very soft brownish bluish grey slightly sandy CLAY. (ALLUVIUM)			
2.50-3.00	7	B							
3.00-3.50	8	U	8 blows 100% recovery						
3.50-4.00	10	B							
3.50-3.70	9	D							
4.00-4.45	11	SPT	N=0					(4.75)	
4.50-5.00	12	B							
5.00-5.50	13	U	6 blows 100% recovery						
5.50-5.70	14	D							
5.50-6.50	15	B							

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
15/05/13	12:00	0.70	None	150	0.60
15/05/13	15:15	12.00	10.70	150	10.00

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Refusal at 20.00m depth, 30minutes chiselling, refusal at 21.70m depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.
4. Location: Biddisham (South Mendips Sealing

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion	**Dando 2000**	**AL**	**WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC1B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**15.5.13** End: **16.5.13**	**6.21**	**E:337333.6 N:154514.6**	**2** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
						Very soft brownish bluish grey slightly sandy CLAY. (ALLUVIUM) *(stratum text copied from layer at 1.75m depth from previous sheet)*	-0.29	6.50	
6.50-6.95	16	SPT	N=0			Very soft brownish bluish grey sandy CLAY. (ALLUVIUM)			
7.00-8.00	17	B						(2.50)	
8.00-8.50	18	U	8 blows 100% recovery						
8.50-8.90	19	D							
8.50-9.50	20	B					-2.79	9.00	
						Very loose grey clayey SAND. (ALLUVIUM)			
9.50-9.95	21	SPT	N=0						
10.00-11.00	22	B						(2.40)	
11.00-11.45	23	SPT	N=4				-5.19	11.40	
						Dark brown PEAT. (PEAT)	-5.29	11.50	
11.50	24	D				Loose grey clayey SAND. (ALLUVIUM)			
11.60-12.00	25	B							

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

End).
5. SPT hammer EQU251-2013 (E_r = 70.02%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion	**Dando 2000**	**AL**	**WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC1B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**15.5.13** End: **16.5.13**	**6.21**	**E:337333.6 N:154514.6**	**3** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
12.00-12.50	26	B				Loose grey clayey SAND. (ALLUVIUM) *(stratum text copied from layer at 11.50m depth from previous* sheet)			
12.50-12.95	27	SPT	N=5					(2.50)	
13.00-14.00	28	B					-7.79	14.00	
14.00-14.45	29	SPT	N=6			Loose dark grey SAND. (ALLUVIUM)			
14.00-14.50	30	B							
14.50-15.00	31	B						(1.00)	
15.00-15.50	32	B				Soft to firm dark grey sandy CLAY. (ALLUVIUM)	-8.79	15.00	
15.50-15.95	33	SPT	N=7						
15.80	34	D							
15.90-17.00	35	B						(2.00)	
17.00-17.45	36	SPT	N=9			Firm reddish brown slightly gravelly sandy CLAY. Gravel is subangular fine mudstone. (MERCIA MUDSTONE GROUP Zone IVa)	-10.79	17.00	
17.50-18.00	37	B						(1.50)	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion	**Dando 2000**	**AL**	**WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC1B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**15.5.13** End: **16.5.13**	**6.21**	**E:337333.6 N:154514.6**	**4** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
18.00-18.50	38	B				Firm reddish brown slightly gravelly sandy CLAY. Gravel is subangular fine mudstone. (MERCIA MUDSTONE GROUP Zone IVa) *(stratum text copied from layer at 17.00m depth from previous sheet)*	-12.29	18.50	
18.50-18.95	39	SPT	N=44			Very stiff to hard dark brownish red mottled grey CLAY / weathered MUDSTONE. (MERCIA MUDSTONE GROUP Zone III)			
19.00-20.00	40	B						(1.50)	
							-13.79	20.00	
20.00-20.26	41	SPT	N=143*			Extremely weak reddish brown mottled grey-green MUDSTONE. (MERCIA MUDSTONE GROUP Zone II)			
20.00-20.40	42	B							
20.50-21.40	43	B						(1.70)	
21.40-21.70	44	SPT	N=100*						
							-15.49	21.70	
						Borehole terminated at 21.70m depth due to refusal.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion	**Dando 2000**	**AL**	**WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC1C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**20.5.13** End: **24.5.13**	**5.99**	**E:337333.4 N:154492.6**	**1** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00-1.20	1	B								Grass overlaying brown clayey SAND. (TOPSOIL)	5.69	0.30	
									28/05 08:00	Firm brownish grey CLAY. (ALLUVIUM)		(1.70)	
1.20-1.65	2	U	15 blows 100% recovery										
1.20-2.00	4	D							24/05 11:00				
1.65	3	D									3.99	2.00	
2.00-2.45	5	SPT	N=1							Very soft brown mottled grey sandy CLAY. (ALLUVIUM)			
2.00-3.00	6	D							22/05				
3.00-3.45	7	U	5 blows 0% recovery						22/05				
3.00-4.00	8	D											
4.00-4.45	9	SPT	N=2										
5.00-5.45	11	U	5 blows 0% recovery										
5.50-6.50	12	D										(7.25)	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
21/05/13		14.00	13.50	150	14.00
21/05/13		14.00	13.50	150	7.20
21/05/13		18.50	18.00	150	10.90
22/05/13		18.50	18.00	150	2.90
22/05/13		19.90	19.50	150	3.20
24/05/13	11:00	19.40	19.50	150	1.80
28/05/13	08:00	21.60	21.60	150	0.50

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Cable percussion borehole terminated in mudstone at 19.90m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Cable Percussion + Rotary Cored	**Unknown**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC1C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**20.5.13** End: **24.5.13**	**5.99**	**E:337333.4 N:154492.6**	**2** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
6.50-6.95	13	SPT	N=3						21/05	Very soft brown mottled grey sandy CLAY. (ALLUVIUM) *(stratum text copied from layer at 2.00m* depth from previous sheet)			
8.00-8.45	15	U	5 blows 0% recovery										
8.50-9.50	16	D											
											-3.26	9.25	
9.50-9.95	17	SPT	N=3							Very loose dark grey clayey SAND. (ALLUVIUM)			
10.00-11.00	18	D							21/05			(3.25)	
11.00-11.45	19	SPT	N=3										
11.50-12.50	20	D											

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

4. Location: Biddisham (South Mendips Sealing End).
5. SPT hammers EQU084-2012 (E_r = 67.22%) , EQU089-2012 (E_r = 61.46%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Cable Percussion + Rotary Cored	**Unknown**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC1C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**20.5.13** End: **24.5.13**	**5.99**	**E:337333.4 N:154492.6**	**3** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										Very loose dark grey clayey SAND. (ALLUVIUM) *(stratum text copied from layer at 9.25m* depth from previous sheet)	-6.51	12.50	
12.50-12.95	21	SPT	N=16							Medium dense dark grey slightly clayey SAND. (ALLUVIUM)			
13.00-14.00	22	B											
									1				
14.00-14.45	23	SPT	N=16										
14.50-15.50	24	B										(4.50)	
15.50-15.95	25	SPT	N=15										
16.00-17.00	26	B									-11.01	17.00	
17.00-17.45	27	SPT	N=24							Stiff dark red brown slightly gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone. (ALLUVIUM)		(0.80)	
17.80-18.50	28	B								*Description on next sheet*	-11.81	17.80	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Cable Percussion + Rotary Cored	**Unknown**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC1C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**20.5.13** End: **24.5.13**	**5.99**	**E:337333.4 N:154492.6**	**4** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										Firm orange red brown with rare grey speckling silty CLAY. (ALLUVIUM) *(stratum text copied from layer at 17.80m depth from previous sheet)*			
18.50-18.95	29	SPT	N=11									(2.10)	
19.00-19.90	30	D									-13.91	19.90	
19.90-20.90										Extremely weak to very weak thinly laminated reddish brown MUDSTONE crumbles/breaks up into fine to coarse angular blocks of very weak or extremely weak mudstone. (MERCIA MUDSTONE GROUP Zone II)			
19.90-20.28	31	SPT	N=85*	60	0	0				. . . between 19.90m and 20.90m depth percentage of recovery is 60%.			
20.90-21.60										. . . mudstone is very weak at 20.90m depth.			
20.90-21.35	32	SPT	N=57	43	0	0				. . . recovery between 20.90m and 21.60m depth is 40%.		(3.45)	
21.60-22.60				30	0	0				. . . at 21.60m depth mudstone is extremely weak and MMGII. . . . between 21.60m and 22.50m depth recovered as fine to coarse angular blocks of very weak reddish brown mudstone.			
22.60-23.90										. . . at 22.60m depth bed of very stiff reddish brown and greenish grey silty clay (MMGIVB). (Possible differential weathering between MMGII and MMGIVb).			
22.60-23.05	33	SPT(c)	N=58	100	26	18	NI 40 130			. . . between 22.60m and 22.90m depth MMGII becomes MMGIII. (Soft reddish clay with frequent extremely weak/very weak lithorelicts arranged in ordered way). . . . between 22.90m and 23.30m depth MMGIII becomes MMGII (possible differential weathering).	-17.36	23.35	
23.90-25.60										*Description on next sheet*			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Cable Percussion + Rotary Cored	**Unknown**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC1C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**20.5.13** End: **24.5.13**	**5.99**	**E:337333.4 N:154492.6**	**5** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
23.90-24.29	34	SPT(c)	N=125*	88	76	29	NI 30 80			. . . mudstone is very weak between 23.72m and 23.90m depth. . . . between 23.90m and 24.75m depth fractures 5° to 10° very closely to closely spaced with weathered clay infilled along the fractures.		(1.40)	
										Very weak thinly laminated reddish brown MUDSTONE with occasional thin laminae of gypsum along the bedding fractures. Bedding fracture is one 5° to 10° extremely closely to closely spaced undulating rough with completely weathered clay formed by the weathering of wall rocks on either side of the fractures, (MERCIA MUDSTONE GROUP Zone I) *(stratum text copied from layer at 23.35m* depth from previous sheet)	-18.76	24.75	
				88	76	29	NI 140 250					(0.85)	
25.60-25.93	35	SPT(c)	N=130*							Very weak to weak thinly laminated reddish brown MUDSTONE with occasional thin laminations of gypsum veins. Bedding fractures 5° to 10° closely to medium spaced undulating rough infilled with fine to coarse very clayey gravel of mudstone. (MERCIA MUDSTONE GROUP Zone I) . . . between 24.90m and 24.99m depth mudstone is weakened to MMGII. . . . between 25.07m bedding fracture and 25.18m depth mudstone is weakened to MMGII.	-19.61	25.60	
										Borehole terminated at 25.60m depth.			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Cable Percussion + Rotary Cored	**Unknown**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC1C**
Contract Ref:	Start: **20.5.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **24.5.13**	**5.99**	**E:337333.4 N:154492.6**	**6** of **6**

BHC1C 19.90m to 23.90m

BHC1C 23.90m to 25.60m

Method Used:	**Cable Percussion + Rotary Cored**	Plant Used:	**Unknown**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**22.5.13** End: **29.5.13**	**5.98**	**E:337819.1 N:154858.5**	**1** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
									29/05 07:30	Grass over dark brown clayey SAND. (TOPSOIL)	5.88	0.10	
										Soft to firm light grey brown slightly sandy CLAY. (ALLUVIUM)		(1.10)	
1.00	1	ES									4.78	1.20	
1.20-1.65	2	SPT	N=2							Soft to very soft light grey brown silty CLAY with localised fissuring and grey silt partings. (ALLUVIUM)			
1.20-2.00	3	D											
2.00-3.00	5	D										(1.80)	
											2.98	3.00	
3.00-3.45	6	SPT	N=3							Very soft grey clayey SILT. (No recovery of U-Samples due to very soft consistency) (ALLUVIUM)			
3.00-4.00	7	D											
4.00-4.45	8	U	5 blows 0% recovery						24/05 16:00				
	9												
4.00-5.00		D										(3.80)	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/05/13	13:00	12.00	12.00	150	6.80
24/05/13	14:00	15.00	15.00	150	9.10
24/05/13	16:00	17.70	17.70	150	4.20
29/05/13	07:30	17.60	17.60	150	0.50

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Cable percussion borehole terminated in mudstone at 17.90m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + RCoward**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**22.5.13** End: **29.5.13**	**5.98**	**E:337819.1 N:154858.5**	**2** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
5.00-5.45	10	SPT	N=1							Very soft grey clayey SILT. (No recovery of U-Samples due to very soft consistency) (ALLUVIUM) *(stratum text copied from layer at 3.00m* depth from previous sheet)			
5.50-6.50	11	D											
6.50-6.95	12	U	0 blows 0% recovery						24/05 13:00		-0.82	6.80	
7.00-8.00	14	B								Medium dense light grey silty SAND with high to medium content of rounded peat pockets. (ALLUVIUM)			
8.00-8.45	15	SPT	N=13										
8.50-9.50	16	B							1				
9.50-9.95	17	SPT	N=18									(5.40)	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

4. Location: Biddisham (River Axe).
5. SPT hammers EQU084-2012 (E_r = 67.22%) , EQU089-2012 (E_r = 61.46%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + RCoward**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**22.5.13** End: **29.5.13**	**5.98**	**E:337819.1 N:154858.5**	**3** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
10.00-11.00	18	B								Medium dense light grey silty SAND with high to medium content of rounded peat pockets. (ALLUVIUM) *(stratum text copied from layer at 6.80m* depth from previous sheet) . . . becoming slightly silty with low to medium peat content and wood content after 10.00m depth.			
11.00-11.45	19	SPT	N=7										
11.50-12.50	20	B									-6.22	12.20	
12.50-12.95	21	SPT	N=20							Very dark brown/black amorphous PEAT. (PEAT)			
13.00-14.00	22	B										(2.10)	
14.00-14.45	23	U	10 blows 0% recovery								-8.32	14.30	
14.30-15.00	25	B								Soft to firm light grey brown slightly gravelly sandy CLAY. Gravel is angular to subangular fine of sandstone and mudstone. (MERCIA MUDSTONE GROUP)			
14.50-14.95	24	SPT	N=8									(0.70)	
											-9.02	15.00	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + RCoward**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**22.5.13** End: **29.5.13**	**5.98**	**E:337819.1 N:154858.5**	**4** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										Medium dense brown mottled yellow mottled red brown mottled black sandy clayey subangular to well rounded fine to coarse GRAVEL of sandstone and mudstone. (MERCIA MUDSTONE GROUP)	-9.52	(0.50) 15.50	
15.50-16.00	26	D								Stiff locally firm grey mottled orange brown slightly gravelly CLAY. Gravel is subrounded medium of mudstone. (MERCIA MUDSTONE GROUP)			
16.00-16.45	27	SPT	N=26										
16.50-17.70	28	B										(1.70)	
											-11.22	17.20	
										Extremely weak red brown mudstone recovered as angular to subangular fine to coarse GRAVEL (possible intensely fractured zone). (MERCIA MUDSTONE GROUP)		(0.70)	
17.90-18.90											-11.92	17.90	
17.90-18.35	1	SPT	N=63	50	9	0				Very weak thinly laminated reddish brown silty MUDSTONE recovered as alternate bands of fine to coarse angular gravel of reddish brown mudstone and intact reddish brown mudstone (possible intensely fractured zone). (MERCIA MUDSTONE GROUP) . . . only 50% recovery between 17.90m and 18.90m depth.		(1.00)	
											-12.92	18.90	
18.90-19.90													
18.90-19.23	2	SPT	N=117*	100	30	0				Weak becoming very weak/extremely weak reddish brown silty MUDSTONE with occasional weak thin beds of green siltstone recovered as intact rock with fine to coarse angular blocks of mudstone (possible intensely fractured zone. (MERCIA MUDSTONE GROUP) . . . weak greenish grey siltstone (up to 100mm) between 18.90m and 19.00m depth, 19.22m and 19.29m depth and 19.25m and 19.35m depth. *Description on next sheet*		(1.40)	
19.90-20.90													

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + RCoward**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**22.5.13** End: **29.5.13**	**5.98**	**E:337819.1 N:154858.5**	**5** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
19.90-20.35	3	SPT	N=91	100	28	12				. . . between 19.60m and 19.90m depth MMGI weathers back to MMGII and is recovered as fine to coarse angular blocks of very weak or extremely weak mudstone.	-14.32	20.30	
				100	28	12	NI 70 100			. . . between 19.90m and 20.30m depth recovered as fine to coarse angular blocks of mudstone. Very weak/weak thinly laminated greenish grey SILTSTONE. Bedding fracture 10° closely spaced undulating rough infilled with fine to coarse angular fragments of siltstone (possible intensely fractured zone). (MERCIA MUDSTONE GROUP)	-14.92	(0.60) 20.90	
20.90-22.40													
20.90-21.35	4	SPT	N=59	57	0	0				. . . between 20.30m and 20.43m depth non intact recovered as fine to coarse angular fragments of weak siltstone (possible intensely fractured zone). . . . greenish grey siltstone becomes conglomerate with fine to coarse subrounded greenish grey siltstone embedded in greenish silty matrix between 20.60m and 20.90m depth. . . . occasional fine to coarse gravel of calcareous material between 20.80m and 20.90m depth.		(1.50)	
22.40-23.90										Firm reddish brown silty CLAY with occasional bands of extremely weak closely fissured mudstone (possible differential weathering between MMGIVb and MMGII). (MERCIA MUDSTONE GROUP)	-16.42	22.40	
22.40-22.85	5	SPT	N=81							. . . between 20.90m and 22.40m depth recovered as sandstone.			
22.40		HP	c_u=50/45/50	87	0	0				Recovered as greyish black fine to coarse angular GRAVEL of weak greenish black siltstone with low content of cobble (possible intensely fractured zone). (MERCIA MUDSTONE GROUP)	-17.92	(1.50) 23.90	
										Borehole terminated at 23.90m depth.			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 205**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + RCoward**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC2A**
Contract Ref:	Start: **22.5.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **29.5.13**	**5.98**	**E:337819.1 N:154858.5**	**6** of **6**

BHC2A 17.90m to 20.90m

BHC2A 20.90m to 23.90m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 205**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + RCoward**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**28.5.13** End: **29.5.13**	**6.47**	**E:337864.8 N:154849.0**	**1** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
						Grass overlaying soft dark brown slightly sandy CLAY. (TOPSOIL)		(0.40)	
							6.07	0.40	
						Very soft brownish grey CLAY. (ALLUVIUM)			
1.00-1.20	1	B						(1.20)	
1.20-1.65	2	U	15 blows 30% recovery						
1.50-2.00	4	D					4.87	1.60	
1.65-1.85	3	D				Very soft brownish grey slightly sandy CLAY. (ALLUVIUM)			
2.00-2.45	5	SPT	N=1						
2.00-3.00	6	D							
3.00-3.45	7	U	15 blows 100% recovery						
	8								
3.00-4.00		D							
					29/05 08:00			(4.30)	
4.00-4.45	9	SPT	N=1						
4.00-5.00	10	D							
5.00-5.45	11	SPT	N=1		28/05 13:20				
					29/05 16:00				
5.50-6.50	12	D							
							0.57	5.90	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
28/05/13	13:00	9.50	9.50	150	9.50
28/05/13	13:20	9.50	9.50	150	5.20
28/05/13	16:00	14.50	14.00	150	7.10
29/05/13	08:00	14.50	14.00	150	3.80
29/05/13	16:00	18.70	18.10	150	5.50

Chiselling / Slow Progress

From	To	Duration (hh:mm)
18.00	18.70	00:30

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. 50mm diameter gas/groundwater sandpipe installed as shown on completion.
3. Location: Biddisham (River Axe).
4. SPT hammer EQU084-2012 (E_r = 67.22%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion	**Dando 2000**	**HA**	**WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**28.5.13** End: **29.5.13**	**6.47**	**E:337864.8 N:154849.0**	**2** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
						Description on next sheet Very soft bluish grey sandy CLAY. (ALLUVIUM) *(stratum text copied from layer at 5.90m depth from previous* sheet)			
6.50-6.95	13	U	35 blows 0% recovery						
					28/05 16:00				
7.00-7.45	14	SPT	N=1						
7.00-8.00	15	D						(3.40)	
8.00-8.45	16	SPT	N=2						
8.50-9.50	17	D					-2.83	9.30	
					1	Medium dense becoming dense light grey clayey SAND. (ALLUVIUM)			
9.50-9.95	18	SPT	N=21						
10.00-11.00	19	B							
11.00-11.45	20	SPT	N=28					(4.20)	
11.50-12.50	21	B							

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion	**Dando 2000**	**HA**	**WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**28.5.13**	**6.47**	**E:337864.8 N:154849.0**	**3** of **4**
	End: **29.5.13**			

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
						Medium dense becoming dense light grey clayey SAND. (ALLUVIUM) *(stratum text copied from layer at 9.30m depth from previous* sheet)			
12.50-12.95	22	SPT(c)	N=32						
13.00-14.00	23	D					-7.03	13.50	
						Plastic grey and dark brown CLAY and pseudo-fibrous PEAT. (ALLUVIUM)		(1.00)	
14.00-14.50	24	U	0 blows 0% recovery				-8.03	14.50	
14.50-14.95	25	SPT	N=16			Medium dense light bluish grey mottled brown very clayey SAND. (ALLUVIUM)			
15.50-16.50	26	B						(2.00)	
							-10.03	16.50	
16.50-16.95	27	SPT	N=5			Loose grey mottled light brown clayey SAND. (ALLUVIUM)			
16.50-17.50	28	B						(1.00)	
							-11.03	17.50	
17.50-18.00	29	B				Firm reddish brown slightly sandy gravelly CLAY. (ALLUVIUM)		(0.50)	
							-11.53	18.00	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion	**Dando 2000**	**HA**	**WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**28.5.13** End: **29.5.13**	**6.47**	**E:337864.8 N:154849.0**	**4** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
18.00-18.38 18.00-18.70	30 31	SPT B	N=67*			Extremely weak dark reddish brown mottled grey distinctly weathered MUDSTONE. (MERCIA MUDSTONE GROUP)		(0.70)	
							-12.23	18.70	
18.70-19.07	32	SPT	N=69*			Borehole terminated at 18.70m depth.			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion	**Dando 2000**	**HA**	**WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**18.3.13** End: **21.3.13**	**5.97**	**E:337865.7 N:154941.9**	**1** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
						Firm to stiff brown brown slightly sandy CLAY with frequent rootlets (<1mm diameter).	5.77	0.20	
0.20-1.20	1	B				(TOPSOIL)			
						(TOPSOIL)			
0.60		HP	c_u=75/100/100		1	Stiff very closely fissured grey brown mottled light grey and orange brown slightly sandy CLAY with occasional rootlets (<1mm diameter). (ALLUVIUM)			
1.00	1	B				. . . below 0.50m depth firm to stiff.		(1.70)	
1.20-1.65	2	SPT	N=9						
1.20-2.00	3	D							
1.60		HP	c_u=50				4.07	1.90	
2.00-2.45	4	U	15 blows			Firm grey CLAY with occasional black organic mottles (<1mm thick) and rare fragments of semi-decomposed plant matter (possible bark and reeds) (<20mm x 5mm diameter). (ALLUVIUM)			
	6		70% recovery						
2.00-3.00		D							
2.50	5	D							
3.00-3.45	7	SPT	N=4			. . . below 3.00m depth soft to firm occasionally locally firm.			
3.00	8	D			19/03 08:00			(3.05)	
4.00-4.50	10	D			20/03 08:00	. . . from 4.00 to 4.95m depth occasional pockets of soft dark brown clayey peat (<50mm diameter).			
4.00	11	D							
4.00-4.45	9	U	0 blows						
	9		30% recovery						
4.00-4.45		D							
4.40		HP	c_u=50/20/20		19/03 16:00		1.02	4.95	
5.00-5.45	12	SPT	N=8			Firm dark brown locally fibrous PEAT. Dry fibres possibly semi-decomposed wood fragments and reeds. (PEAT)			
5.00-6.00	13	D							
						. . . from 5.50 to 6.10m depth peat is clayey.		(1.15)	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
18/03/13	08:00	0.90	None	150	0.90
18/03/13	15:00	4.00	4.00	150	Dry
19/03/13	08:00	4.00	4.00	150	3.40
19/03/13	16:00	19.00	19.00	150	5.10
20/03/13	08:00	19.00	19.00	150	4.20

Chiselling / Slow Progress

From	To	Duration (hh:mm)
20.50	21.00	01:00

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. 50mm diameter gas/groundwater sandpipe installed as shown on completion.
3. Location: Webbington (River Axe).
4. SPT hammer EQU084-2012 (E_r = 67.22%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion	**Dando 2000**	**HA**	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**18.3.13** End: **21.3.13**	**5.97**	**E:337865.7 N:154941.9**	**2** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
							-0.13	6.10	
6.10-6.50	14	D				Soft to firm light grey occasionally mottled grey brown CLAY with occasional black organic mottles (<2mm thick) and inclusions of decomposed and semi-decomposed plant matter (<25mm x 5mm diameter). (ALLUVIUM)			
6.50-6.95	15	U	0 blows 20% recovery						
6.95	16	D							
7.00-8.00	17	D				. . . below 7.00m depth soft and with inclusions of very soft dark brown amorphous peat (<25mm diameter).		(2.40)	
8.00-8.45	18	SPT	N=4			. . . from 8.00 to 8.50m depth occasional pockets (<30mm diameter) of very soft dark brown clayey peat.			
8.00-8.45	18	D							
8.00-9.00	19	D					-2.53	8.50	
						Very soft to soft and soft grey CLAY with occasional inclusions of black decomposed organic plant matter (<25mm x 5mm diameter). (ALLUVIUM)			
9.50-9.95	20	U	0 blows 0% recovery						
9.50-10.00	22	D							
9.80		HP	c_u=25/20/25						
9.90	21	D							
10.00-10.45	23	SPT	N=2					(3.25)	
10.00-10.45	23	D							
11.50-11.95	24	U	0 blows 0% recovery				-5.78	11.75	
						Description on next sheet			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion	**Dando 2000**	**HA**	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**18.3.13** End: **21.3.13**	**5.97**	**E:337865.7 N:154941.9**	**3** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
12.00-12.45	25	SPT	N=4			Grey clayey very silty firm SAND. (ALLUVIUM) *(stratum text copied from layer at 11.75m depth from previous* sheet)	-6.73	(0.95) 12.70	
12.70-13.30	26	D				Firm dark brown to black locally fibrous PEAT. Dry fibres comprise semi-decomposed twigs and bark. (PEAT)	-7.33	(0.60) 13.30	
13.30-13.50	27	B				Very loose grey clayey very silty fine SAND. (ALLUVIUM)			
13.50-13.95	28	SPT	N=2						
13.50-14.50	29	B							
14.50-15.50	31	B						(3.20)	
15.00-15.45	30	SPT	N=5						
15.50-16.50	32	B					-10.53	16.50	
16.50-16.95	33	SPT	N=13			Firm dark brown locally fibrous PEAT with occasional interlaminations (2-10mm thick) of yellow-brown clayey silty fine sand and occasional gastropod shells (<8mm diameter) throughout. (PEAT)	-10.93	(0.40) 16.90	
16.50-17.50	34	B				Grey clayey silty SAND and very soft sandy CLAY with occasional pockets of firm dark brown clayey peat (<100mm diameter). (ALLUVIUM)	-11.53	(0.60) 17.50	
17.50-18.00	35	B				Cream slightly silty sandy GRAVEL. Gravel is angular to subangular fine to coarse probable calcareous concretions. Gravels display calcite growth layer occasionally around sandstone gravels with rough pitted surfaces.	-12.03	(0.50) 18.00	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion	**Dando 2000**	**HA**	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**18.3.13** End: **21.3.13**	**5.97**	**E:337865.7 N:154941.9**	**4** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
18.00-18.45	36	SPT	N=31			(ALLUVIUM)	-12.23	18.20	
18.20-19.50	37	B				Thinly to thickly laminated (2mm-6mm diameter) compact dark brown slightly sandy SILT and soft to firm slightly sandy clayey SILT. (ALLUVIUM)			
						Grey silty sandy GRAVEL. Gravel is angular to subrounded fine to coarse mixed lithologies including sandstone and quartzite. (MERCIA MUDSTONE GROUP)	-13.53	(1.30) 19.50	
19.50-19.73	38	SPT	N=100*			Recovered as light grey clayey sandy subangular fine to coarse extremely weak and very weak light grey mudstone GRAVEL. Probably in-situ weathered mudstone. (MERCIA MUDSTONE GROUP)	-13.73	19.70	
19.50-21.00	39	B				Recovered as grey slightly clayey slightly sandy angular to subangular fine to coarse extremely weak and very weak silty MUDSTONE and very weak to weak siltstone GRAVEL. Probably extremely weak and very weak extremely closely jointed grey silty mudstone thinly interlaminated with weak extremely closely jointed grey siltstone. (MERCIA MUDSTONE GROUP)	-15.03	(1.30) 21.00	
21.00-21.15	40	SPT	N=200*			Very weak and very weak to weak extremely closely jointed grey SILTSTONE. (MERCIA MUDSTONE GROUP)	-15.43	(0.40) 21.40	
						Extremely weak and very weak extremely closely jointed red brown silty MUDSTONE. (MERCIA MUDSTONE GROUP)	-15.48	21.45	
						Borehole terminated at 21.45m depth.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion	**Dando 2000**	**HA**	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2D**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**18.3.13** End: **21.3.13**	**6.58**	**E:337914.9 N:154928.8**	**1** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
						Firm to stiff brown slightly sandy CLAY with frequent rootlets (<1mm diameter). (TOPSOIL)	6.28	0.30	
0.30-1.20	1	B				(TOPSOIL)			
0.50		HP	c_u=75			Firm to stiff occasionally very closely fissured light brown slightly sandy CLAY with occasional rootlets (<1mm diameter). (ALLUVIUM)		(0.90)	
0.85		HP	c_u=150			. . . below 0.70m depth stiff. . . . below 0.80m depth occasionally locally silty and becoming very stiff.	5.38	1.20	
1.20-1.65	2	U	20 blows 40% recovery			Firm locally firm to stiff light grey brown occasionally speckled orange brown slightly sandy silty CLAY with occasional lenses of light grey silt (<1mm thick). (ALLUVIUM)		(0.60)	
1.65	3	D					4.78	1.80	
1.65		HP	c_u=50/75/50			Very soft grey CLAY. Weak natural organic odour. (ALLUVIUM)			
1.80-2.00	4	D							
2.00-2.45	5	SPT	N=4						
2.00-3.00	6	D							
3.00-3.45	7	U	25 blows 100% recovery			. . . below 3.00m depth locally very soft to soft.			
	8					. . . from 3.00 to 4.00m depth dark grey.			
3.00-4.00		D						(3.90)	
3.45		HP	c_u=10						
4.00-4.45	9	SPT	N=4		18/03 16:00	. . . from 4.00 to 4.45m depth occasional black organic mottles (<1mm thick).			
4.00-5.00	10	D							
5.00-5.45	11	U	25 blows 100% recovery						
					1	. . . at 5.45m depth base of U100 firm and brown.	0.88	5.70	
5.70	12	B				*Description on next sheet*			

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
14/03/13	08:00	6.50	6.00	150	Dry
15/03/13	08:00	6.50	6.00	150	5.50
18/03/13	16:00	18.50	17.00	150	4.30

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Casing broke at 6m depth - unable to retrieve.
3. Borehole terminated at 18.5m depth and backfilled - re-drilled as BHC2DA adjacent to original location.
4. Location: Webbington (River Axe).

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion	**Dando 2000**	**HA**	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2D**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**18.3.13** End: **21.3.13**	**6.58**	**E:337914.9 N:154928.8**	**2** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
						Firm becoming stiff locally very stiff friable dark brown locally fibrous PEAT with occasional cobbles of semi-decomposed wood (<150mm diameter). (PEAT)		(0.80)	
						(stratum text copied from layer at 5.70m depth from previous sheet)	0.08	6.50	
6.50-6.95	13	SPT	N=3			Very soft to soft occasionally very soft light grey CLAY with occasional inclusions of decomposed organic plant matter (<20mm x 5mm diameter). (ALLUVIUM)			
7.00-8.00	14	D							
8.00-8.45	15	U	10 blows 0% recovery						
8.50-8.95	16	SPT	N=4						
9.00-10.50	17	D						(6.20)	
10.50-10.95	18	SPT	N=2						
10.50-11.50	19	D							
11.50-12.50	21	D							

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

5. SPT hammer EQU084-2012 (E_r = 67.22%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion	**Dando 2000**	**HA**	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2D**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**18.3.13** End: **21.3.13**	**6.58**	**E:337914.9 N:154928.8**	**3** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
12.00-12.45	20	U	0 blows 0% recovery			Very soft to soft occasionally very soft light grey CLAY with occasional inclusions of decomposed organic plant matter (<20mm x 5mm diameter). (ALLUVIUM) *(stratum text copied from layer at 6.50m depth from previous sheet)*			
12.50-12.95	22	SPT	N=20				-6.12	12.70	
12.70-13.80	23	B				Medium dense grey silty fine SAND interlaminated with very soft grey CLAY. (ALLUVIUM)		(1.10)	
							-7.22	13.80	
13.80-14.50	24	D				Stiff (compact) dark brown locally fibrous PEAT. Fibres composed of semi-decomposed plant matter (possibly leaves and twigs). (PEAT)		(0.90)	
14.00-14.65	25	U	0 blows 0% recovery				-8.12	14.70	
14.70-15.50	26	B				Soft grey slightly sandy CLAY with occasional inclusions of decomposed organic plant matter (<5mm diameter). (ALLUVIUM)		(0.80)	
							-8.92	15.50	
15.50-15.95	27	SPT	N=5			Grey clayey very silty fine SAND. (ALLUVIUM)		(0.50)	
15.50-17.00	28	B					-9.42	16.00	
17.00-17.45	29	U	0 blows 0% recovery			Very soft and very soft to soft grey slightly sandy CLAY with frequent inclusions of decomposed organic plant matter (<10mm diameter). (ALLUVIUM)		(2.00)	
							-11.42	18.00	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion	**Dando 2000**	**HA**	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2D**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**18.3.13** End: **21.3.13**	**6.58**	**E:337914.9 N:154928.8**	**4** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Backfill	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
18.00-18.50	30	B				Stiff grey slightly sandy slightly gravelly CLAY with occasional black organic mottles (<2mm thick). Gravel is subangular to rounded fine to coarse mixed lithologies including sandstone and siltstone. (ALLUVIUM)	-11.92	(0.50) 18.50	
18.50-18.95	31	SPT	N=25			Borehole suspended at 18.50m depth. Casing string snapped.			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion	**Dando 2000**	**HA**	**WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2DA**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**7.5.13** End: **21.5.13**	**6.73**	**E:337915.1 N:154931.6**	**1** of **5**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
									20/05 08:00	Re-drill of BHC2D from ground level to 18.50m - no sampling or testing undertaken.			

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
08/05/13	16:00	19.30	19.30	150	9.20
20/05/13	08:00	19.50	19.20	150	1.90
21/05/13	08:45	21.30	20.70	150	1.70

Chiselling / Slow Progress

From	To	Duration (hh:mm)
18.50	19.30	01:15

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Re-drilling BHC2DA, logging continued from 18.50m depth.
3. Cable percussion borehole terminated in mudstone at 19.50m - rotary follow-on undertaken to completion depth.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2DA**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**7.5.13** End: **21.5.13**	**6.73**	**E:337915.1 N:154931.6**	**2** of **5**

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)						
									1	Re-drill of BHC2D from ground level to 18.50m - no sampling or testing undertaken. *(stratum text copied from layer at 0.00m* depth from previous sheet)		(18.50)	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

4. 50mm diameter gas/groundwater sandpipe installed as shown on completion.
5. Location: Webbington (River Axe).
6. SPT hammer EQU084-2012 (E_r = 67.22%) used.

All dimensions in metres

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 205**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2DA**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**7.5.13** End: **21.5.13**	**6.73**	**E:337915.1 N:154931.6**	**3** of **5**

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)						
										Re-drill of BHC2D from ground level to 18.50m - no sampling or testing undertaken. *(stratum text copied from layer at 0.00m* depth from previous sheet)			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC2DA**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**7.5.13** End: **21.5.13**	**6.73**	**E:337915.1 N:154931.6**	**4** of **5**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										Re-drill of BHC2D from ground level to 18.50m - no sampling or testing undertaken. *(stratum text copied from layer at 0.00m depth from previous sheet)*	-11.77	18.50	
18.50-18.80 18.50-19.30	1 2	SPT B	N=100*							Firm grey mottled brown slightly gravelly silty CLAY. Gravel is angular to subangular fine to coarse of mudstone. (MERCIA MUDSTONE GROUP)		(1.00)	
19.30-19.43	3	SPT	N=273*							. . . becoming slightly silty gravelly clay at 19.30m depth.	-12.77	19.50	
19.50-20.50 19.50-19.95	3	SPT	N=48	40	0	0				Recovered as fine to coarse angular weak grey very clayey GRAVEL of siltstone (possible intensely fractured zone). (MERCIA MUDSTONE GROUP)		(1.00)	
20.50-21.00				70	0	0				Recovered as fine to coarse angular weak reddish brown GRAVEL of mudstone (possible intensely fractured zone). (MERCIA MUDSTONE GROUP)	-13.77 -14.27	20.50 (0.50) 21.00	
										Borehole terminated at 21.00m depth.			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC2DA**
Contract Ref:	Start: **7.5.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **21.5.13**	**6.73**	**E:337915.1 N:154931.6**	**5** of **5**

BHC2DA 19.50m to 21.00m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 205**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC3A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.3.13** End: **17.5.13**	**6.63**	**E:338023.3 N:155460.9**	**1** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00-0.50	1	B							17/05 07:00	Firm brown slightly sandy CLAY with frequent rootlets (<1mm diameter). (TOPSOIL)	6.08	(0.55) 0.55	
0.50-1.20	2	B							16/05 07:30	Stiff grey CLAY with rare black organic speckles (<2mm diameter). (ALLUVIUM)	5.43	(0.65) 1.20	
1.00	1	ES	1xT,1xJ+2xVoc										
1.20	3	U	10 blows 70% recovery							Firm grey locally slightly sandy CLAY with occasional inclusions of decomposed black organic plant matter (<10mm diameter). (ALLUVIUM)	4.63	(0.80) 2.00	
1.50-2.00	5	B											
1.60		HP	c_u=50										
1.65	4	D											
2.00-2.45	6	SPT	N=8							Firm red brown mottled light grey slightly sandy slightly gravelly CLAY with occasional inclusions of semi-decomposed organic plant matter/rootlets (up to 3mm x 15mm diameter). Gravel is subangular to subrounded mudstone and sandstone. (ALLUVIUM)	3.83	(0.80) 2.80	
2.00-3.00	7	B											
3.00-3.45	8	SPT	N=21							Stiff extremely closely fissured red brown speckled light green grey slightly sandy CLAY with occasional subangular to subrounded fine gravel size extremely weak and very weak mudstone lithorelicts. (ALLUVIUM) . . . at 2.80m depth stiff.	2.63	(1.20) 4.00	
3.00-4.00	9	B											
4.00-4.45	10	SPT	N=36							Very stiff extremely closely fissured red brown speckled light green grey slightly sandy CLAY locally tending to extremely weak occasionally very weak extremely closely jointed red brown speckled light green grey mudstone. (MERCIA MUDSTONE GROUP) . . . at 4.00m depth occasional white calcareous lenses (<1mm thick).	1.63	(1.00) 5.00	
4.00-5.00	11	B											
5.00-5.44	12	SPT	N=52*							Extremely weak and very weak extremely closely jointed red brown MUDSTONE locally very stiff extremely closely fissured red brown slightly sandy clay. (MERCIA MUDSTONE GROUP)	1.13	(0.50) 5.50	
5.50-6.50				0	0	0				*Description on next sheet*		(1.00)	ZCL

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
13/03/13	14:00	5.50	None	150	1.20
16/05/13	07:30	7.50	6.20	150	1.00
17/05/13	07:00	16.40	6.20	150	0.50

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Cable percussion borehole terminated in mudstone at 5.50m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC3A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.3.13** End: **17.5.13**	**6.63**	**E:338023.3 N:155460.9**	**2** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				0	0	0				Zone of no recovery (possible intensely fractured zone). No drop of barrel i.e. no voids present. (MERCIA MUDSTONE GROUP)	0.13	6.50	ZCL
6.50-7.50										*(stratum text copied from layer at 5.50m* depth from previous sheet)			
6.50-6.95	13	SPT	N=57	0	0	0				Zone of no recovery (possible intensely fractured zone). No drop of barrel i.e. no voids present. (MERCIA MUDSTONE GROUP)	-0.87	(1.00) 7.50	ZCL
7.50-8.50													
7.50-7.95	14	SPT	N=56	0	0	0				Zone of no recovery (possible intensely fractured zone). No drop of barrel i.e. no voids present. (MERCIA MUDSTONE GROUP)	-1.87	(1.00) 8.50	ZCL
8.50-9.50													
8.50-8.95	15	SPT	N=85	0	0	0				Zone of no recovery (possible intensely fractured zone). No drop of barrel i.e. no voids present. (MERCIA MUDSTONE GROUP)	-2.87	(1.00) 9.50	ZCL
9.50-10.50													
9.50-9.95	16	SPT	N=70	0	0	0				Zone of no recovery (possible intensely fractured zone). No drop of barrel i.e. no voids present. (MERCIA MUDSTONE GROUP)	-4.37	(1.50) 11.00	ZCL
11.00-11.20				100	0	0				Recovered as reddish brown very clayey fine to coarse angular GRAVEL of extremely weak MUDSTONE (possible intensely fractured zone). (MERCIA MUDSTONE GROUP)	-4.57	11.20	
11.20-11.90										*Description on next sheet*			
11.20-11.53	17	SPT	N=167*	100	0	0				*Description on next sheet*			
11.90-13.40										*Description on next sheet*			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

4. Location: Webbington Road.
5. SPT hammers EQU084-2012 (E_r = 67.22%) , EQU089-2012 (E_r = 61.46%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC3A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.3.13** End: **17.5.13**	**6.63**	**E:338023.3 N:155460.9**	**3** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
11.90-12.03	18	SPT	N=667*	93	0	0				. . . between 11.60m and 11.75m depth joint formed along gypsum vein is 65°. . . . between 11.80m and 11.87m depth mudstone becomes extremely weak (possible differential weathering). . . . between 11.90m and 13.40m depth mudstone is very weak extremely closely fissured/jointed breaks up/crumbles into fine to coarse angular blocks of mudstone. Very weak locally extremely weak thinly laminated extremely closely fissured/jointed reddish brown with occasional greenish grey mottling MUDSTONE. Breaks up /crumbles into fine to coarse very weak/extremely weak angular blocks of mudstone when handled. Bedding is 5° to 15°. (MERCIA MUDSTONE GROUP Zone II) *(stratum text copied from layer at 11.20m* depth from previous sheet)			
				93	0	0						(3.05)	
13.40-14.90													
13.40-13.46	19	SPT	N=857*										
				100	0	0					-7.62	14.25	
14.25		HP	c_u=15/12							Very soft reddish brown silty CLAY with frequent fine to coarse angular lithorelicts (up to 20mm) of extremely weak mudstone arranged in orderly manner. (MERCIA MUDSTONE GROUP Zone III)		(0.35)	
											-7.97	14.60	
14.90-16.40										Extremely weak becoming very weak thinly laminated extremely closely fissured/jointed reddish brown MUDSTONE crumbles/breaks up into fine to coarse angular blocks of red mudstone up to 30mm when handled. (MERCIA MUDSTONE GROUP)			
14.90-15.02	20	SPT	N=750*										
				93	0	0				. . . between 14.60m and 14.90m depth mudstone is extremely weak and crumbles into fine to coarse angular blocks . . . below 14.90m depth MMGII becomes extremely weak to very weak crumbles into fine to coarse very weak mudstone up to 30mm.		(3.10)	
16.40-17.90										. . . between 16.40 and 17.30m depth mudstone is very weak crumbles and breaks up into fine to coarse angular blocks of very weak mudstone.			
				97	0	0							
										. . . between 17.30m and 17.45m depth extremely to very closely spaced thickly laminated to very thinly bedded greenish grey extremely weak to very weak siltstone.	-11.07	17.70	
17.90-19.40										*Description on next sheet*		(0.38)	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC3A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.3.13** End: **17.5.13**	**6.63**	**E:338023.3 N:155460.9**	**4** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				93	0	0				Extremely weak thinly laminated greenish grey silty MUDSTONE crumbles into fine to medium extremely weak blocks of greenish grey mudstone. Bedding is 5° to 15°. (MERCIA MUDSTONE GROUP Zone II) *(stratum text copied from layer at 17.70m* depth from previous sheet)	-11.45	18.08	
				93	0	0				Very weak thinly laminated extremely closely fissured/jointed MUDSTONE with occasional greenish grey irregular pockets of siltstone with greenish grey black oxidation stains on fissures/joints. Bedding is 5° to 15°. (MERCIA MUDSTONE GROUP)		(2.22)	
19.40-20.30				100	23	11				. . . at 18.70m depth randomly orientated white gypsum veins. . . . between 19.55m and 19.64m depth and 19.72m and 19.82m depth MMGII becomes MMGI (possible differential logging).	-13.67	20.30	
										. . . between 19.80m and 19.85m depth joint is 5° planar rough tight. . . . between 19.82m and 20.20m depth mudstone is extremely weak to very weak and MMGII. . . . between 20.20m and 20.30m depth MMGII becomes MMGI (possible differential weathering). Borehole terminated at 20.30m depth.			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 205**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC3A**
Contract Ref:	Start: **13.3.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **17.5.13**	**6.63**	**E:338023.3 N:155460.9**	**5** of **6**

BHC3A 11.00m to 13.40m

BHC3A 13.40m to 16.40m

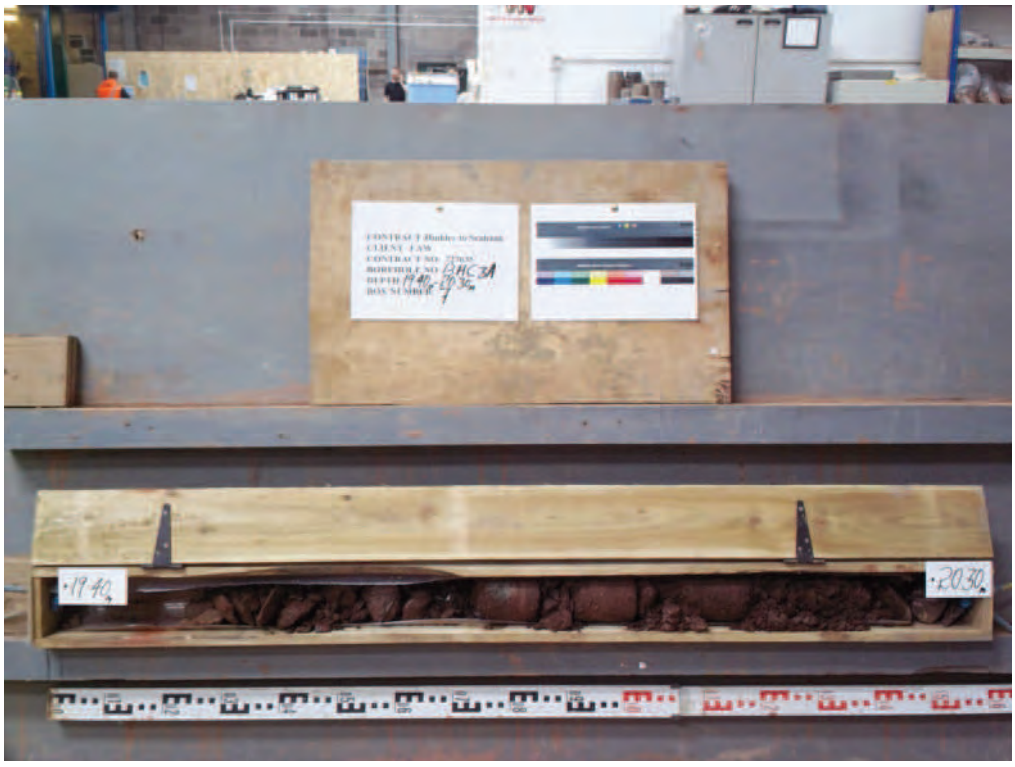
Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 205**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC3A**
Contract Ref:	Start: **13.3.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **17.5.13**	**6.63**	**E:338023.3 N:155460.9**	**6** of **6**

BHC3A 16.40m to 19.40m



BHC3A 19.40m to 20.30m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 205**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC3B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**14.3.13** End: **13.5.13**	**6.81**	**E:338061.7 N:155484.7**	**1** of **5**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00-0.60	1	B								Firm brown slightly sandy CLAY with frequent rootlets (<1mm diameter). (TOPSOIL)	6.51	0.30	
										Firm grey CLAY with occasional rootlets (<1mm diameter). (ALLUVIUM)	6.26	0.55	
0.60-0.80	2	B								Soft grey brown slightly sandy slightly gravelly peaty SILT with frequent inclusions of decomposed organic plant matter (bark etc) (<3mm x 30mm). Gravel is subangular to subrounded fine sandstone and siltstone. (ALLUVIUM)		(0.40)	
0.80-1.00	3	B							1		5.86	0.95	
1.20-1.65	4	U	10 blows									(0.75)	
	6		90% recovery										
1.20-2.00		B											
1.65	5	D								Firm and firm to stiff grey CLAY with occasional rootlets (<1mm diameter). (ALLUVIUM)	5.11	1.70	
1.65		HP	c_u=55										
2.00-2.45	7	SPT	N=48							Firm mottled red brown and light grey slightly sandy locally sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse mixed lithologies including mudstone, siltstone and sandstone. (MERCIA MUDSTONE GROUP)	4.81	2.00	
2.00-3.00	8	D										(1.00)	
										Very stiff to hard extremely closely fissured red brown speckled light green grey slightly sandy CLAY with occasional subangular fine gravel size extremely weak and very weak mudstone lithorelicts. (MERCIA MUDSTONE GROUP)	3.81	3.00	
3.00-3.35	9	SPT	N=75*										
3.00-4.00	10	D								Hard extremely closely fissured red brown speckled light green grey slightly sandy CLAY locally tending to extremely weak occasionally very weak red brown extremely closely jointed red brown speckled light green grey mudstone. (MERCIA MUDSTONE GROUP)		(1.00)	
4.00-4.38	11	SPT	N=65*								2.81	4.00	
										Extremely weak occasionally very weak extremely closely jointed red brown speckled light green grey MUDSTONE. (MERCIA MUDSTONE GROUP)		(0.50)	
4.50-5.50				80	0	0				MUDSTONE recovered as reddish brown very clayey fine to coarse angular blocks of extremely weak to very weak gravel. (MERCIA MUDSTONE GROUP Zone II) . . . between 5.00m and 6.20m depth MMGII crumbles into angular blocks of extremely weak mudstone.	2.31	4.50	
5.50-7.00												(1.70)	
5.50-5.95	5	SPT(c)	N=39	80	7	7							

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
14/03/13	09:30	1.20	None	150	1.20
14/03/13	14:00	4.00	1.50	150	3.80
13/05/13	11:45	8.50	4.50	150	1.00

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Cable percussion borehole terminated in mudstone at 4.50m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**HA + LH**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC3B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**14.3.13** End: **13.5.13**	**6.81**	**E:338061.7 N:155484.7**	**2** of **5**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
											0.61	6.20	
				80	7	7				Extremely weak to very weak thinly laminated extremely closely jointed reddish brown MUDSTONE with occasional greenish grey mottling of siltstone crumbles into fine to coarse angular blocks of red mudstone when handled. Bedding 10°. (MERCIA MUDSTONE GROUP Zone II)			
7.00-8.50 7.00-7.45	6	SPT(c)	N=49							. . . between 6.20m and 7.00m depth mudstone is very weak. . . . MMGII becomes MMGI between 6.40m and 6.50m depth (possible differential weathering).			
				93	27	0				. . . between 7.00m and 8.10m depth mudstone is extremely weak and crumbles into angular blocks along extremely closely spaced joints/fissures.			
8.10		HP	c_u=150/210							. . . at 7.60m, 7.68m and 7.80m depth greenish grey siltstone up to 40mm.			
8.50-10.00 8.50-8.95	8	SPT(c)	N=47							. . . between 8.10m and 8.30m depth mudstone becomes MMGIII with frequent lithorelicts up to 10mm in very stiff reddish clay.			
				27	0	0				. . . between 8.30m and 8.50m depth MMGIII back to MMGII (possible differential weathering). . . . between 8.50m and 10.00m depth becoming porous (40%) and mudstone crumbles into fine to coarse angular blocks of extremely weak red mudstone.			
10.00-11.00 10.00-10.45	2	SPT(c)	N=100							. . . at 10.00m depth MMGII becomes MMGIII with frequent fine to coarse angular lithorelicts.			
				90	0	0				. . . between 10.00m and 11.00m depth extremely closely jointed/fissured very weak mudstone crumbles into fine to coarse angular blocks of very weak locally extremely weak reddish brown mudstone.		(8.50)	
11.00-12.50 11.00-11.30	4	SPT(c)	N=195*							. . . at 10.70m depth occasional greenish grey mottling.			
				87	12	11				. . . between 11.40m and 11.60m depth MMGII becomes very weak MMGI with very closely spaced joint (possible differential weathering). *Description on next sheet*			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

4. Location: Webbington Road.
5. SPT hammers EQU084-2012 (E_r = 67.22%) , EQU089-2012 (E_r = 61.46%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**HA + LH**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC3B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**14.3.13** End: **13.5.13**	**6.81**	**E:338061.7 N:155484.7**	**3** of **5**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
12.50-14.00 12.50-12.81	6	SPT(c)	N=194*	87	12	11				. . . below 11.60m depth MMGI becomes MMGII with mudstone crumbles into fine to coarse angular very weak red mudstone. Extremely weak to very weak thinly laminated extremely closely jointed reddish brown MUDSTONE with occasional greenish grey mottling of siltstone crumbles into fine to coarse angular blocks of red mudstone when handled. Bedding 10°. (MERCIA MUDSTONE GROUP Zone II)			
				100	13	0				. . . between 6.20m and 7.00m depth mudstone is very weak. *(stratum text copied from layer at 6.20m depth from* previous sheet) . . . mudstone (MMGII) is extremely weak between 12.20m and 12.50m depth. . . . mudstone between 12.50m and 13.50m depth recovered as fine to coarse angular blocks of very weak reddish brown mudstone. . . . between 13.60m and 13.80m depth mudstone is between MMGI and MMGII with extremely to closely spaced joints.			
14.00-15.00				70	26	13	NI 40 130			. . . joints at 13.65m and 13.72m depth are 45° planar rough tight. . . . MMGI becomes MMGII below 13.82m depth which crumbles into fine to coarse extremely weak angular blocks along extremely closely spaced fissures/fractures.	-7.89	14.70	
										Very weak thinly laminated reddish brown MUDSTONE. Bedding fracture 10° very closely spaced undulating rough infilled with reddish brown clay (3mm). Joints 40° planar rough. (MERCIA MUDSTONE GROUP) . . . between 14.95m and 15.00m depth MMGI becomes very stiff weathered thinly laminated red clay (MMGIVb).	-8.19	15.00	
										Borehole terminated at 15.00m depth.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	**Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio MC300**	Drilled By:	**HA + LH**	Logged By:	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC3B**
Contract Ref:	Start: **14.3.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **13.5.13**	**6.81**	**E:338061.7 N:155484.7**	**4** of **5**

BHC3B 4.50m to 7.00m

BHC3B 7.00m to 10.00m

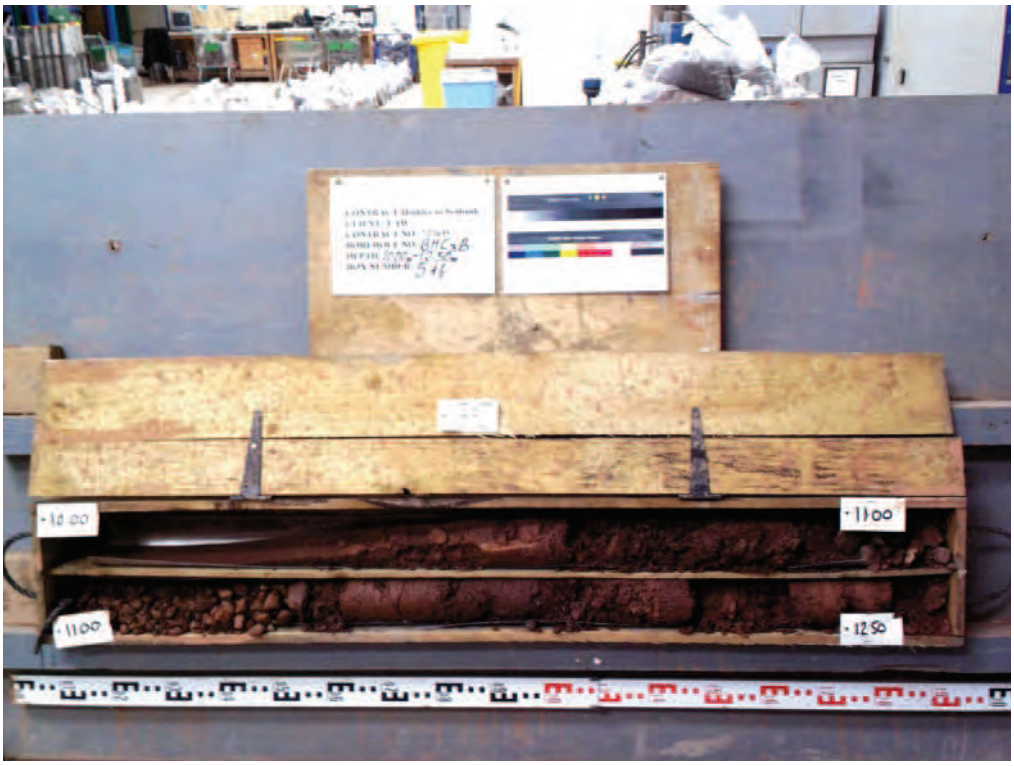
Method Used:	**Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio MC300**	Drilled By:	**HA + LH**	Logged By:	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC3B**
Contract Ref:	Start: **14.3.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **13.5.13**	**6.81**	**E:338061.7 N:155484.7**	**5** of **5**

BHC3B 10.00m to 12.50m



BHC3B 12.50m to 15.00m

Method Used:	**Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio MC300**	Drilled By:	**HA + LH**	Logged By:	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC3C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.3.13** End: **8.5.13**	**8.40**	**E:338043.5 N:155517.4**	**1** of **5**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00-0.45	1	B								MADE GROUND: Firm brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is subangular to rounded fine to coarse mixed lithologies. (MADE GROUND)	8.20	0.20	
0.30	7	ES	1xT,1xJ+2xVoc								8.00	0.40	
0.45-0.80	2	B								MADE GROUND: Firm friable dark brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse mixed lithologies including occasional coal fragments and rare ceramic plate fragments. (MADE GROUND)		(0.40)	
0.70	8	ES	1xT,1xJ+2xVoc								7.60	0.80	
0.80-1.20	3	B								Stiff to very stiff red brown slightly gravelly slightly sandy CLAY. Gravel is subangular to subrounded fine to coarse silty sandstone. (ALLUVIUM)		(2.00)	
1.20-1.45	4	SPT	N=86*										
1.20-2.00	5	B											
2.00-2.23	6	SPT	N=100*							Extremely weak locally very weak extremely closely jointed red brown speckled light green grey MUDSTONE. Joints randomly orientated. (MERCIA MUDSTONE GROUP) . . . from 1.20 to 1.65m depth light greeny grey and silty with occasional thin laminae of very weak light green grey silty fine sandy (<6mm thick).	5.60	2.80	
2.20-2.65	1	SPT	N=59										
2.80-3.80										Recovered as very weak subangular fine to coarse GRAVEL of brown mudstone. (MERCIA MUDSTONE GROUP Zone II) . . . at 3.50m depth with matrix of light green slightly sandy clay.		(1.00)	
2.80-3.25	2	SPT	N=28	65	30	15					4.60	3.80	
3.80-4.80										Extremely weak medium to coarse very thinly laminated fractured brown slightly silty slightly sandy MUDSTONE. (MERCIA MUDSTONE GROUP)		(0.70)	
3.80-4.06	3	SPT	N=203*	30	0	0					3.90	4.50	
4.50		HP	c_u=60/55/30/25							Firm to soft brown slightly silty slightly sandy CLAY. (MERCIA MUDSTONE GROUP Zone IVa)		(0.70)	
4.80-6.30											3.20	5.20	
4.80-5.07	4	SPT	N=171*	35	0	0				Recovered as very weak subangular fine to coarse GRAVEL of brown mudstone. (MERCIA MUDSTONE GROUP) . . . from 5.60m to 5.80m depth with matrix of brown slightly sandy clay. . . . from 5.60m to 6.10m depth probably		(0.90)	
5.80-6.05	5	SPT(c)	N=185*										

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/05/13	16:40	12.20	1.50	150	3.70
08/05/13	08:15	12.20	1.60	150	1.70

Chiselling / Slow Progress

From	To	Duration (hh:mm)
1.70	2.20	01:00

General Remarks

1. Location CAT scanned and inspection pit dug to 0.80m depth prior to drilling. Natural bedrock at 0.80m depth.
2. Cable percussion borehole terminated in mudstone at 2.80m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**HA + JP**	**ACEllis + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC3C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.3.13** End: **8.5.13**	**8.40**	**E:338043.5 N:155517.4**	**2** of **5**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				35	0	0				no matrix.	2.30	6.10	
6.20		HP	c_u=50							Firm to soft thinly laminated slightly sandy, slightly clayey subangular fine to medium GRAVEL of brown mudstone.	2.10	6.30	
6.30-7.80													
6.30-6.54	7	SPT(c)	N=194*							(MERCIA MUDSTONE GROUP Zone IVa)	1.95	6.45	
										Recovered as very weak subangular fine to coarse GRAVEL of brown mudstone. (MERCIA MUDSTONE GROUP Zone II)			
7.00		HP	c_u=40/40	90	10	0				Very weak thinly laminated extremely closely fractured brown MUDSTONE. (MERCIA MUDSTONE GROUP Zone I)		(1.35)	
										. . . between 7.00m and 7.50m depth possible soft very thinly laminated slightly gravelly CLAY with subangular medium to coarse gravel od mudstone.	0.60	7.80	
7.80-9.30													
7.80-8.19	8	SPT(c)	N=113*							Very weak thinly laminated very closely fractured brown MUDSTONE. (MERCIA MUDSTONE GROUP)			
										. . . recovered as very weak subangular fine to coarse GRAVEL of brown mudstone.			
				95	5	0				. . . recovered as very weak subangular fine to coarse GRAVEL of green mottled brown mudstone.			
										. . . becoming closely fractured.			
9.30-10.80													
9.30-9.69	9	SPT(c)	N=113*							. . . extremely weak between 9.30m and 9.70m depth.			
										. . . weak at 9.70m depth.		(4.20)	
				95	15	0							
10.80-12.30										. . . extremely weak at 10.80m depth.			
10.80-11.25	10	SPT(c)	N=102*										
				60	5	0							
											-3.60	12.00	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

installed as shown on completion.
4. Location: Webbington Road.
5. SPT hammers EQU083-2013 (E_r = 67.68%) , EQU084-2012 (E_r = 67.22%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**HA + JP**	**ACEllis + WAllwood**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC3C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.3.13** End: **8.5.13**	**8.40**	**E:338043.5 N:155517.4**	**3** of **5**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
12.10-13.60 12.10-12.55	11	SPT(c)	N=111*	60	5	0				. . . dark greenish grey band between 11.90 and 12.00m depth. Extremely weak thinly laminated reddish brown MUDSTONE crumbles/breaks up into fine to coarse angular blocks of extremely weak mudstone with some very off white gypsum and occasional pockets of completely weathered siltstone. Bedding is 10° to 20°. (MERCIA MUDSTONE GROUP Zone II) . . . between 12.30m and 12.40 mudstone is extremely weak MMGIII and MMGII (possible differential weathering). . . . between 12.60m and 12.70m depth mudstone is between extremely weak to very weak. . . . between 13.40m and 13.60m depth mudstone is between extremely weak and very weak.		(3.10)	
13.60-15.10 13.60-14.00	12	SPT(c)	N=117*	100	0	0				. . . at 14.30m depth pocket of greenish grey extremely weak siltstone up to 50mm. . . . between 14.60m and 14.75m depth mudstone is between extremely weak and very weak. . . . between 14.75m and 14.83m depth greenish grey extremely weak siltstone/mudstone.	-6.70	15.10	
				100	0	0				Borehole terminated at 15.10m depth.			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**HA + JP**	**ACEllis + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC3C**
Contract Ref:	Start: **13.3.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **8.5.13**	**8.40**	**E:338043.5 N:155517.4**	**4** of **5**

BHC3C 2.80m to 6.30m

BHC3C 6.30m to 9.30m

Method Used:	**Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio MC300**	Drilled By:	**HA + JP**	Logged By:	**ACEllis + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC3C**
Contract Ref:	Start: **13.3.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **8.5.13**	**8.40**	**E:338043.5 N:155517.4**	**5** of **5**

BHC3C 9.30m to 12.10m

BHC3C 12.10m to 15.10m

Method Used:	**Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio MC300**	Drilled By:	**HA + JP**	Logged By:	**ACEllis + WAllwood**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC3D**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.3.13** End: **19.3.13**	**7.75**	**E:338005.7 N:155499.0**	**1** of **8**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										MADE GROUND: Firm brown slightly sandy slightly gravelly CLAY with frequent rootlets. Gravel is subangular to rounded fine to coarse mixed lithologies. (MADE GROUND)	7.45	(0.30) 0.30	
0.50-0.80	1	B								POSSIBLE MADE GROUND: Firm locally stiff light grey and red brown slightly sandy slightly gravelly SILT. Gravel is subangular fine sandstone and siltstone. (MADE GROUND)	6.95	(0.50) 0.80	
0.80-1.20	2	B								Extremely weak and extremely weak to very weak extremely closely jointed light green grey occasionally red brown MUDSTONE. Joints randomly orientated with occasional dark brown speckles along planes. (MERCIA MUDSTONE GROUP)			
1.20-1.53	3	SPT	N=83*							. . . from 1.20 to 1.60m depth predominantly light green grey silty and calcareous.			
1.20-2.00	4	B								. . . from 1.20 to 2.00m depth rare bands of strong light grey dolomitised siltstone (<40mm thick).		(2.40)	
2.00-2.27	5	SPT	N=130*						20/03 09:00	. . . at 2.00m depth occasional white calcareous speckles (<2mm).			
2.20-3.20													
2.20-2.52	6	SPT	N=182*	40	7	0	NI 20 50						
										. . . between 3.00 and 3.20m depth recovered as fine to coarse very sandy angular fragments of red mudstone (possibly damaged by SPT).	4.55	3.20	
3.20-4.20											4.40	3.35	
3.20-3.39	7	SPT	N=158*	100	24	0	NI 70 90			Very weak reddish brown very thinly to thinly bedded reddish brown MUDSTONE. Bedding fractures are 5° very closely to closely spaced undulating rough open clean with reddish brown clay (<2mm). (MERCIA MUDSTONE GROUP Zone I)	4.00	(0.40) 3.75	
										. . . below 3.20m depth non-intact recovered as fine to coarse angular fragments of red mudstone.	3.45	(0.55) 4.30	
4.20-5.20													
4.20-4.25	8	SPT	N=600*	30	0	0				Very weak to weak very thinly bedded greenish grey SILTSTONE with extremely closely spaced thin/thick lamination of reddish brown mudstone. (MERCIA MUDSTONE GROUP Zone I) . . . fractures between 3.35 and 3.75m depth are closely spaced undulating planar clean with some red clay.			

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
20/03/13	09:00	9.30	2.20	146	2.20
19/03/13	07:00	0.00	0.00	146	0.00

Chiselling / Slow Progress

From	To	Duration (hh:mm)
1.70	2.20	01:00

General Remarks

1. Location CAT scanned and inspection pit dug to 0.80m depth prior to drilling. Natural bedrock at 0.80m depth.
2. Cable percussion borehole terminated in mudstone at 2.20m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Cable Percussion + Rotary Cored	**Dando 2000 + Beretta T44**	**HA + JP**	**BSaimen + WAllwood**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC3D**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.3.13** End: **19.3.13**	**7.75**	**E:338005.7 N:155499.0**	**2** of **8**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				30	0	0				. . . between 3.60 and 3.70m depth siltstone consisting of 30mm layering contains fine to coarse subangular to subrounded clast of brown siltstone and light brown mudstone (possible conglomerate).		(1.70)	
5.20-6.00 5.20-5.65	9	SPT	N=36	25	0	0				Very weak extremely closely to very closely jointed very thinly bedded reddish brown MUDSTONE recovered as fine to coarse angular fragments of very weak mudstone. (MERCIA MUDSTONE GROUP)	1.75	6.00	
6.00-6.30 6.00		HP	c_u=100/125/125	100	0	0				Extremely weak to very weak greenish grey weathered SILTSTONE recovered as fine to coarse angular gravel of greenish grey siltstone. (MERCIA MUDSTONE GROUP)	1.45	(0.30) 6.30	
6.30-7.80 6.30-6.35	10	SPT	N=429*	100	45	17	NI 60 130			. . . between 4.30 and 6.00m depth recovery is 30% (possibly non-intact nature due to weathering of siltstone). *(stratum text copied from layer at 4.30m* depth from previous sheet)		(0.80)	
										Stiff thinly jointed reddish brown slightly sandy CLAY with frequent fine to coarse angular lithorelicts up to 15mm in ordered manor. (MERCIA MUDSTONE GROUP Zone III)	0.65	7.10	
7.80-9.10				100	40	15	NI 50 130			Extremely weak extremely jointed reddish brown weathered MUDSTONE breaks up into fine to coarse angular blocks (up to 20mm) of red mudstone. Bedding is 5 to 10°. (MERCIA MUDSTONE GROUP Zone II) . . . at 6.95m depth conjugate joints of dipping at 50 and 70°.			
9.30-10.80 9.30-9.48	11	SPT	N=158*	93	60	40	NI 70 180			Extremely weak to very weak very thinly to thinly bedded reddish brown MUDSTONE with occasional white veins (up to 3mm) of gypsum. Bedding fractures 10° very closely to closely spaced undulating rough open to partly open infilled with silty clay (<1.5mm). Joints are 50 to 70° very closely to medium spaced planar rough partly open and clean with inclusions of silty clay (<1mm). (MERCIA MUDSTONE GROUP) . . . at 7.55m depth joint is 70° planar rough with smears of red silty clay. . . . at 9.00m depth Mercia Mudstone Group I becomes extremely weak Mercia Mudstone Group II. . . . at 9.10m depth joints are 50 to 70° planar rough with smear of red clay.		(3.70)	

Boring Progress and Water Observations						Chiselling / Slow Progress		
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)

General Remarks

installed as shown on completion.
4. Location: Webbington Road.
5. SPT hammers EQU084-2012 (E_r = 67.22%) , EQU089-2012 (E_r = 61.46%) used.

All dimensions in metres

Method Used:	**Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Beretta T44**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WAllwood**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC3D**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.3.13** End: **19.3.13**	**7.75**	**E:338005.7 N:155499.0**	**3** of **8**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				93	60	40	NI 70 180			. . . between 9.10 and 9.30m depth joint is 80°. . . . between 9.30 and 10.80m depth medium spaced thin veins of white gypsum (up to 3mm) dipping between 50 to 60°. . . . between 9.30 and 10.80m depth mudstone extremely closely very weak. . . . between 9.30 and 10.80m depth bedding fractures are closely spaced and joints are very closely to closely spaced. . . . between 9.60 and 10.00m depth joints are very closely spaced.	-3.05	10.80	
10.80-12.30 10.80-10.99	12	SPT	N=167*	90	35	15				Extremely weak extremely closely jointed reddish brown MUDSTONE breaks up into fine to coarse angular blocks of mudstone. (MERCIA MUDSTONE GROUP Zone II) . . . between 11.45 and 11.65m depth Mercia Mudstone Group II becomes Mercia Mudstone Group I with very closely spaced joints. . . . between 11.60 and 11.85m depth recovered as very clayey fine to coarse angular blocks of extremely weak fine to coarse mudstone.			
12.30-13.80 12.30-12.47	13	SPT	N=176*	90	53	13				. . . between 12.70 and 13.30m depth mudstone breaks up with fine to coarse angular blocks of extremely weak to very weak mudstone (Mercia Mudstone Group II (possibly due to differential weathering). . . . between 13.30 and 13.80m depth recovered as grey clayey gravely of angular limestone.			
13.80-15.30 13.80-13.94	14	SPT	N=333*	100	55	50	NI 140 250			. . . between 13.80 and 14.50m depth 5° closely to medium spaced.		(6.60)	
										Description on next sheet			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Cable Percussion + Rotary Cored	**Dando 2000 + Beretta T44**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC3D**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.3.13** End: **19.3.13**	**7.75**	**E:338005.7 N:155499.0**	**4** of **8**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				100	55	50	NI 140 250			. . . between 14.85 and 15.30m depth Mercia Mudstone Group I becomes Mercia Mudstone Group II (possibly differential weathering). Extremely weak extremely closely jointed reddish brown MUDSTONE breaks up into fine to coarse angular blocks of mudstone. (MERCIA MUDSTONE GROUP Zone II) *(stratum text copied from layer at 10.80m* depth from previous sheet)			
15.30-16.80 15.30-15.43	15	SPT	N=176*	70	20	17	NI 50 300			. . . between 16.30 and 16.80m depth recovered as fine to coarse angular blocks of very weak reddish brown Mercia Mudstone Group II (possibly differential weathering).			
16.80-18.30 16.80-16.83	16	SPT	N=1000*	67	47	9	NI 50 130			Very weak very thinly to thinly bedded reddish brown mottled greenish grey MUDSTONE. Bedding fractures are 5 to 15°. Joints are 30 to 90° extremely closely (20mm) to closely spaced undulating planar rough partly open clean with smears of red clay. (MERCIA MUDSTONE GROUP Zone I) . . . between 17.65 and 18.30m depth vertical joint (90°).	-9.65	17.40	
18.30-19.80 18.30-18.35	17	SPT	N=750*	67	27	23	NI 110 230			. . . below 18.30 and 19.20m depth recovered as fine to coarse angular gravel of very weak mudstone (possibly destroyed by SPT). . . . between 19.30 and 19.45m depth recovered as non-intact very weak fine to coarse angular gravel of mudstone. . . . at 19.53m depth bedding fracture is 15°. . . . at 19.67m depth thin vein of gypsum dipping at 50°.	-12.05	(2.40) 19.80	
										Borehole terminated at 19.80m depth.			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	**Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Beretta T44**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC3D**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.3.13** End: **19.3.13**	**7.75**	**E:338005.7 N:155499.0**	**5** of **8**

Depth (m)	Samples & Testing			Mechanical Log				Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
	No	Type	Results	TCR (%)	SCR (%)	RQD (%)	If (mm)						

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Cable Percussion + Rotary Cored	**Dando 2000 + Beretta T44**	**HA + JP**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC3D**
Contract Ref:	Start: **13.3.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **19.3.13**	**7.75**	**E:338005.7 N:155499.0**	**6** of **8**

BHC3D 2.20m to 6.30m

BHC3D 6.30m to 9.30m

Method Used:	**Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Beretta T44**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC3D**
Contract Ref:	Start: **13.3.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **19.3.13**	**7.75**	**E:338005.7 N:155499.0**	**7** of **8**

BHC3D 9.30m to 12.30m

BHC3D 12.30m to 15.30m

Method Used:	**Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Beretta T44**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC3D**
Contract Ref:	Start: **13.3.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **19.3.13**	**7.75**	**E:338005.7 N:155499.0**	**8** of **8**

BHC3D 15.30m to 18.30m

BHC3D 18.30m to 19.80m

Method Used:	**Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Beretta T44**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC4**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**12.3.13** End: **9.5.13**	**11.01**	**E:338021.4 N:156045.0**	**1** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										MADE GROUND: Firm brown slightly sandy slightly gravelly CLAY with occasional rootlets (<1mm diameter).	10.71	0.30	
0.30-0.70	1	B								Gravel is subangular to rounded fine of mixed lithologies. (MADE GROUND)	10.31	(0.40) 0.70	
0.70-1.20	2	B								Stiff locally very stiff red brown mottled light green grey slightly sandy slightly gravelly CLAY with occasional subangular sandstone cobbles (<200mm diameter). Gravel is subangular to subrounded fine to coarse sandstone. (MERCIA MUDSTONE GROUP)	9.71	(0.60) 1.30	
1.00	1	ES	1xT,1xJ+2xVoc										
1.20-1.58	3	SPT	N=79*										
1.60-2.00	4	D								Firm to stiff friable red brown slightly sandy CLAY. (MERCIA MUDSTONE GROUP)			
2.00-2.44	5	SPT	N=53*							Extremely weak extremely closely jointed red brown silty MUDSTONE. (MERCIA MUDSTONE GROUP) . . . below 2.00m depth locally very weak. . . . from 2.00 to 2.45m depth occasional white speckles (<2mm diameter).	8.01	(1.70) 3.00	
2.00-3.00	6	B											
3.00-3.60										Recovered as reddish brown gravelly slightly sandy CLAY (possibly extremely weak reddish brown MUDSTONE). Gravel is fine to coarse subangular extremely weak reddish brown mudstone. (MERCIA MUDSTONE GROUP)	7.41	(0.60) 3.60	
3.00-3.23	7	SPT	N=200*	100	10	0							
3.60-4.60										. . . below 3.00m depth light green grey. . . . between 3.43m and 3.55m depth extremely weak. . . . between 3.55m and 3.60m depth extremely weak to very weak greenish grey or grey siltstone or mudstone.		(1.00)	
3.60-4.05	8	SPT	N=32	50	0	0				Recovered as grey angular clayey fine to coarse GRAVEL of grey very weak thinly laminated siltstone/mudstone. (MERCIA MUDSTONE GROUP)	6.41	4.60	
4.60-6.10										Extremely weak thinly laminated extremely closely fissured/jointed reddish brown MUDSTONE with closely to medium spaced thin beds/thick laminations of greenish grey mudstone/siltstone. Bedding fracture is 5°. Breaks up into fine to coarse extremely weak angular blocks of mudstone. (MERCIA MUDSTONE GROUP Zone III)		(1.50)	
4.60-4.94	9	SPT	N=102*	100	0	0			1	. . . between 5.60m and 6.10m depth brown/grey mudstone/siltstone becomes			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
09/05/13	11:00	10.00	3.00	146	5.50
09/05/13	13:00	10.00	3.00	146	5.70

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Cable percussion borehole terminated in mudstone at 3.00m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**HA**	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC4**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**12.3.13** End: **9.5.13**	**11.01**	**E:338021.4 N:156045.0**	**2** of **4**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
6.10-7.60 6.10-6.29	10	SPT	N=333*	65	0	0				very weak. Very weak thinly laminated extremely closely jointed greenish grey SILTSTONE. (MERCIA MUDSTONE GROUP)	4.91	6.10 (1.90)	
7.60-9.10 7.60-7.88	11	SPT	N=188*	85	5	0				Weak thinly laminated very extremely closely fractured jointed brown MUDSTONE. (MERCIA MUDSTONE GROUP Zone II) . . . between8.20m to 8.30m depth very closely fractured. . . . between 8.45m and 8.70m depth thin beds (less than 15mm) of weak light greenish grey slightly sandy SILTSTONE.	3.01	8.00 (1.50)	
9.10-10.00 9.10-9.32	12	SPT	N=210*	95	60	45				Very weak thinly laminated closely fractured light brown MUDSTONE. (MERCIA MUDSTONE GROUP Zone I) . . . at 9.80m depth becomes very weak thinly laminated closely fractured greenish grey slightly sandy SILTSTONE. Borehole terminated at 10.00m depth.	1.51 1.01	9.50 (0.50) 10.00	

Boring Progress and Water Observations						Chiselling / Slow Progress		
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)

General Remarks

4. Location: Webbington Road.
5. SPT hammers EQU083-2013 (E_r = 67.68%) , EQU084-2012 (E_r = 67.22%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**HA**	**BSaimen + WAllwood**

GINT_LIBRARY_V8_04.GLB|Log COMPOSITE LOG | 727635_HINKLEY_TO_SEABANK.GPJ - v8_04 | 17/10/13 - 19:41 | AD.
Structural Soils Ltd, Head Office - Bristol: The Old School, Stillhouse Lane, Bedminster, Bristol, BS3 4EB. Tel: 0117-947-1000, Fax: 0117-947-1004, Web: www.soils.co.uk, Email: ask@soils.co.uk.

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC4**
Contract Ref:	Start: **12.3.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **9.5.13**	**11.01**	**E:338021.4 N:156045.0**	**3** of **4**

BHC4 3.00m to 6.10m

BHC4 6.10m to 9.10m

Method Used:	**Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio MC300**	Drilled By:	**HA**	Logged By:	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC4**
Contract Ref:	Start: **12.3.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **9.5.13**	**11.01**	**E:338021.4 N:156045.0**	**4** of **4**

BHC4 9.10m to 10.00m

Method Used:	**Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio MC300**	Drilled By:	**HA**	Logged By:	**BSaimen + WAllwood**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC5**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**30.5.13** End: **3.6.13**	**10.92**	**E:338330.0 N:156471.5**	**1** of **5**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.10-0.60	1	B								Grass over red brown slightly sandy locally sandy CLAY (TOPSOIL). (TOPSOIL)	10.32	(0.60) 0.60	
0.60-1.20	2	B								Firm red brown mottled grey locally fissured slightly sandy slightly gravelly SILT. (MERCIA MUDSTONE GROUP)	9.42	(0.90) 1.50	
1.20-1.65	3	SPT	N=6										
1.20-2.00	4	D											
2.00-2.45	5	SPT	N=28							Stiff red brown mottled grey closely fissured slightly silty slightly gravelly SILT. Gravel is angular to subangular fine to medium of mudstone. (MERCIA MUDSTONE GROUP Zone IVb)	7.42	(2.00) 3.50	
2.00-3.00	6	D											
3.00-3.32	7	SPT	N=64*										
3.00-4.00	8	D											
4.00-5.00										MUDSTONE recovered as dense to very dense red brown slightly clayey GRAVEL of angular to subangular fine to coarse mudstone. (MERCIA MUDSTONE GROUP Zone II)	6.92	(0.50) 4.00	
4.00-4.35	9	SPT	N=75*	70	9	0				*Description on next sheet*		(0.90)	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
03/06/13	09:55	4.00	4.00	146	Dry
03/06/13	09:55	4.00	4.00	146	Dry

Chiselling / Slow Progress

From	To	Duration (hh:mm)
3.70	4.00	00:30

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Cable percussion borehole terminated in mudstone at 4.00m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Unknown**	**HA + JP**	**BSaimen + RCoward**

GINT_LIBRARY_V8_04.GLB|Log COMPOSITE LOG | 727635_HINKLEY_TO_SEABANK.GPJ - v8_04 | 21/10/13 - 08:34 | AD.
Structural Soils Ltd, Head Office - Bristol: The Old School, Stillhouse Lane, Bedminster, Bristol, BS3 4EB. Tel: 0117-947-1000, Fax: 0117-947-1004, Web: www.soils.co.uk, Email: ask@soils.co.uk.

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC5**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**30.5.13** End: **3.6.13**	**10.92**	**E:338330.0 N:156471.5**	**2** of **5**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				70	9	0				Extremely weak to very weak thinly laminated extremely closely fissured/jointed reddish brown silty MUDSTONE crumbles into fine to coarse angular blocks of very weak mudstone. Bedding is 5°. (MERCIA MUDSTONE GROUP Zone II)	6.02	4.90	
5.00-6.00 5.00-5.45	10	SPT(c)	N=97	100	10	0				. . . between 4.00m and 4.40m depth non-intact recovered as fine to coarse angular blocks of very weak mudstone. *(stratum text copied from layer at 4.00m* depth from previous sheet) . . . between 4.65m and 4.90m depth non-intact recovered as fine to coarse angular blocks of very weak mudstone.	5.57	(0.45) 5.35	
										Very weak thinly laminated reddish brown silty MUDSTONE. (MERCIA MUDSTONE GROUP Zone I) . . . joint at 4.98m depth 45° planar rough with smearings of red clay. . . . extremely closely fine to coarse closely spaced joints between 5.23m and 5.30m depth are dipping at 45°.	4.92	(0.65) 6.00	
6.00-7.00 6.00-6.45	11	SPT(c)	N=89	100	36	0	NI 30 70			Extremely weak to very weak thinly laminated extremely closely jointed reddish brown MUDSTONE crumbles into fine to coarse angular blocks of very weak mudstone. Bedding is 10° to 15°. (MERCIA MUDSTONE GROUP Zone II) . . . mudstone becomes MMGI between 5.95m and 6.00m depth and contains planar joint dipping at 80°.	3.92	(1.00) 7.00	
7.00-8.50 7.00-7.26	12	SPT(c)	N=171*	67	15	7				Very weak thinly laminated reddish brown silty MUDSTONE. Bedding fracture is 5° to 15° very closely spaced undulating rough with brown oxidation discolouration/infilled with clayey fine to coarse gravel. (MERCIA MUDSTONE GROUP Zone I) . . . between 6.02m and 6.20m depth non-intact gravelly red clay. (Possible differential weathering to MMGII). . . . between 6.35m and 6.50m depth becoming MMGII and recovered as fine to coarse angular blocks of very weak mudstone. . . . between 6.85m and 7.00m depth mudstone contains very closely to extremely closely spaced joints and recovered as fine to coarse angular gravel with brown discolouration on fracture surface (possibly between MMGI and MMGII).		(1.78)	
8.50-10.00 8.50-8.78	13	SPT(c)	N=158*	100	0	0					2.14	8.78	

Boring Progress and Water Observations						Chiselling / Slow Progress		
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)

General Remarks

4. Location: Lox Yeo Valley (Mendips).
5. SPT hammer EQU084-2012 (E_r = 67.22%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Unknown**	**HA + JP**	**BSaimen + RCoward**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC5**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**30.5.13** End: **3.6.13**	**10.92**	**E:338330.0 N:156471.5**	**3** of **5**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				100	0	0				Extremely weak to very weak thinly laminated extremely closely fissured /jointed reddish brown silty MUDSTONE crumbles into fine to coarse angular very weak/extremely weak angular blocks of mudstone. (MERCIA MUDSTONE GROUP Zone II) . . . between 7.30m and 7.60m depth mudstone is extremely weak to very weak. . . . between 8.40m and 8.78m depth mudstone is very weak and between MMGI and MMGII. . . . mudstone below 8.50m and 8.78m depth contains occasional greenish grey mottling.	0.92	(1.22)	
10.00-10.20	14	SPT(c)	N=182*							Extremely weak thinly laminated reddish brown MUDSTONE crumbles into fine to coarse angular extremely weak mudstone. Bedding dips at 10° to 15°. (MERCIA MUDSTONE GROUP) *(stratum text copied from layer at 8.78m* depth from previous sheet) . . . at 9.70m depth becomes very weak. . . . at 10.00m depth MMGII becomes very weak. Borehole terminated at 10.00m depth.	10.00		

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Unknown**	**HA + JP**	**BSaimen + RCoward**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC5**
Contract Ref:	Start: **30.5.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **3.6.13**	**10.92**	**E:338330.0 N:156471.5**	**4** of **5**

BHC5 4.00m to 6.00m

BHC5 6.00m to 8.50m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Unknown**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + RCoward**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC5**
Contract Ref:	Start: **30.5.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **3.6.13**	**10.92**	**E:338330.0 N:156471.5**	**5** of **5**

BHC5 8.50m 10.00m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Unknown**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + RCoward**

GINT_LIBRARY_V8_04.GLB|Log COMPOSITE LOG | 727635_HINKLEY_TO_SEABANK.GPJ - v8_04 | 17/10/13 - 19:44 | AD.
Structural Soils Ltd, Head Office - Bristol: The Old School, Stillhouse Lane, Bedminster, Bristol, BS3 4EB. Tel: 0117-947-1000, Fax: 0117-947-1004, Web: www.soils.co.uk, Email: ask@soils.co.uk.

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC6**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**4.6.13** End: **5.6.13**	**12.09**	**E:339047.9 N:156948.7**	**1** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.10-0.20	1	B								Grass over soft to firm brown sandy CLAY (TOPSOIL)	11.89	0.20	
0.20-1.20	2	B								Reddish brown slightly gravelly sandy CLAY. (MERCIA MUDSTONE GROUP)		(1.30)	
1.20-1.65	3	SPT	N=6								10.59	1.50	
1.50-2.00	4	B								Firm becoming stiff reddish brown slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to medium mudstone. (MERCIA MUDSTONE GROUP Zone IVa)			
2.00-2.45	5	U	30 blows										
2.00-3.00	6	D	100% recovery									(1.50)	
3.00-3.45	7	SPT	N=45								9.09	3.00	
3.00-4.00	8	D								Dense reddish brown gravelly clayey SAND. (MERCIA MUDSTONE GROUP Zone IVa)			
4.00-4.45	9	SPT	N=40						04/06				
4.00-5.00	10	D										(4.00)	
5.00-5.45	11	SPT	N=43										
5.00-6.00	12	D											

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
04/06/13		5.00	1.50	150	5.00
04/06/13		6.00	1.50	150	3.90
05/06/13		6.00	None	150	Dry

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Cable percussion borehole terminated in mudstone at 6.00m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WDixon**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC6**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**4.6.13** End: **5.6.13**	**12.09**	**E:339047.9 N:156948.7**	**2** of **3**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
6.00-6.42	13	SPT	N=57*							Dense reddish brown gravelly clayey SAND. (MERCIA MUDSTONE GROUP Zone IVa) *(stratum text copied from layer at 3.00m* depth from previous sheet)	5.09	7.00	
7.00-8.00													
7.00-7.27	14	SPT(c)	N=162*	55	0	0				Extremely weak extremely closely fissured/jointed reddish brown mottled greenish grey MUDSTONE crumbles/breaks up into fine to coarse angular blocks of extremely weak mudstone. (MERCIA MUDSTONE GROUP Zone III) . . . between 7.00m and 7.90m depth recovered as fine to coarse angular gravel of extremely weak reddish brown mudstone with only 50% recovery.	4.09	(1.00) 8.00	
8.00-9.00													
8.00-8.40	15	SPT(c)	N=122*	0	0	0				No recovery (possible intensely fractured zone) (MERCIA MUDSTONE GROUP) . . . MMGII becoming MMGI and MMGII approaching 8.00m depth.	3.09	(1.00) 9.00	ZCL
9.00-10.50													
9.00-9.45	16	SPT(c)	N=82	77	8	0				Extremely weak extremely closely fissured/jointed reddish brown MUDSTONE crumbles/breaks up into fine to coarse angular blocks of extremely weak mudstone. (MERCIA MUDSTONE GROUP Zone I-II)	2.29	(0.80) 9.80	
										. . . between 9.00m and 9.30m depth recovered as fine reddish brown clay with occasional fine to coarse angular lithorelicts of very weak/extremely weak mudstone (MMGIVa).		(0.70)	
										. . . between 9.30m and 9.50m depth recovered as fine to coarse angular blocks of extremely weak mudstone.	1.59	10.50	
10.50-10.95	17	SPT(c)	N=98							Very weak thinly laminated greenish grey SILTSTONE. Bedding fractures are 15° undulating rough. (MERCIA MUDSTONE GROUP Zone I) . . . between 9.80m and 9.90m depth siltstone is between extremely weak and very weak and becomes MMGII.			

Boring Progress and Water Observations						Chiselling / Slow Progress		
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)

General Remarks

4. Location: Lox Yeo Valley (Mendips).
5. SPT hammers EQU084 - 2013 (E_r = 67.22%) , EQU089-2012 (E_r = 61.46%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC6**
Contract Ref:	Start: **4.6.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **5.6.13**	**12.09**	**E:339047.9 N:156948.7**	**3** of **3**

BHC6 7.00m to 10.00m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 205**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC7**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**30.5.13** End: **31.5.13**	**15.03**	**E:339581.7 N:157349.1**	**1** of **5**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.10-1.00	1	B								Grass over firm light grey mottled red brown slightly sandy slightly gravelly CLAY (TOPSOIL). Gravel is angular to subangular fine to coarse of mudstone and sandstone. (TOPSOIL)	14.63	(0.40) 0.40	
1.00	1	ES								Firm becoming stiff red brown slightly gravelly slightly sandy silty CLAY. Gravel is angular to subangular fine to coarse of mudstone. (MERCIA MUDSTONE GROUP Zone IVa)			
1.00-1.45	2	SPT	N=11										
1.00	3	B										(2.30)	
2.00-2.45	4	SPT	N=23										
2.00	5	D							1		12.33	2.70	
3.00-3.45	6	SPT	N=58							Dense to very dense red brown mottled light grey slightly clayey GRAVEL of angular to subangular fine to coarse mudstone. (MERCIA MUDSTONE GROUP Zone II)		(0.60)	
3.30-4.30				90	36	17				Weak to very weak thinly laminated greenish grey and reddish brown silty MUDSTONE. Bedding is 5°. (MERCIA MUDSTONE GROUP)	11.73	3.30	
4.30-5.30				100	10	0				. . . joint between 3.80m and 3.90m depth 65° planar rough brown oxidisation discolouration joint. . . . between 4.00m and 4.08 m depth non intact recovered as fine to coarse angular gravel of greenish grey and reddish brown thinly laminated mudstone between 4.10m and 4.30m depth. . . . between 4.50m and 4.70m depth non-intact recovered as fine to coarse angular blocks of greenish grey brown siltstone. *Description on next sheet*	10.23	(1.50) 4.80	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
31/05/13	09:00	4.30	3.30	150	2.60

Chiselling / Slow Progress

From	To	Duration (hh:mm)
2.60	3.00	00:30

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Cable percussion borehole terminated in mudstone at 3.00m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + RCoward**

GINT_LIBRARY_V8_04.GLB|Log COMPOSITE LOG | 727635_HINKLEY_TO_SEABANK.GPJ - v8_04 | 17/10/13 - 19:46 | AD.
Structural Soils Ltd, Head Office - Bristol: The Old School, Stillhouse Lane, Bedminster, Bristol, BS3 4EB. Tel: 0117-947-1000, Fax: 0117-947-1004, Web: www.soils.co.uk, Email: ask@soils.co.uk.

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC7**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**30.5.13** End: **31.5.13**	**15.03**	**E:339581.7 N:157349.1**	**2** of **5**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				100	10	0				. . . between 4.70m and 4.90m depth bedding fractures are extremely closely to very closely spaced and siltstone becomes MMGII. . . . joint between 4.70m and 4.92m depth is 85° planar rough with brown discolouration joint.			
5.30-6.20 5.30-5.75	7	SPT(c)	N=65									(1.30)	
				100	22	0				Extremely weak to very weak thinly laminated reddish brown and greenish grey silty MUDSTONE crumbles/breaks up into fine to coarse angular blocks of very weak mudstone. Bedding dips at 5°. (MERCIA MUDSTONE GROUP Zone II)	8.93	6.10	
6.20-7.40 6.20-6.60	8	SPT(c)	N=89							. . . between 4.80m and 5.30m depth mudstone becomes MMGII and breaks up/crumbles into fine to coarse angular blocks of mudstone. *(stratum text copied from layer at 4.80m depth from previous* sheet)	8.73	6.30	
				100	38	12				Weak very thinly laminated reddish brown gravelly silty MUDSTONE. Bedding is 5°. (MERCIA MUDSTONE GROUP Zone I) . . . between 6.10m and 6.20m depth joint is subvertical undulating rough with brown discolouration.	7.63	(1.10) 7.40	
7.40-8.90 7.40-7.73	9	SPT(c)	N=125*							Very weak becoming extremely weak greenish grey and reddish brown MUDSTONE crumbles/breaks up into fine to coarse blocks of angular very weak to extremely weak mudstone. Bedding fracture is 5° undulating rough. (MERCIA MUDSTONE GROUP Zone II)		(1.40)	
				87	7	7				. . . between 6.30m and 6.45m depth red mudstone is very weak crumbles into fine to coarse angular blocks of red mudstone (MMGII). . . . mudstone between 6.55m and 6.70m depth is between MMG and MMGII. . . . between 6.70m and 6.82m depth very reddish brown mudstone crumbles into fine to coarse angular blocks of mudstone.	6.23	8.80	
8.90-10.10 8.90-9.11	10	SPT(c)	N=171*							. . . between 6.90m and 7.15m depth greenish grey mudstone crumbles into very weak to extremely weak greenish grey mudstone (MMGII). . . . between 7.15m and 7.40m depth recovered as fine to coarse angular blocks of greenish grey mudstone (MMGII).		(1.30)	
				100	72	58				Very weak to weak thinly to thickly laminated extremely closely jointed reddish brown and greenish grey silty MUDSTONE crumbles into fine to coarse angular blocks of red mudstone.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

4. Location: Lox Yeo Valley (Mendips).
5. SPT hammers EQU084 - 2013 (E_r = 67.22%) , EQU089-2012 (E_r = 61.46%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + RCoward**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC7**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**30.5.13** End: **31.5.13**	**15.03**	**E:339581.7 N:157349.1**	**3** of **5**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				▼	▼	▼				(MERCIA MUDSTONE GROUP Zone II)	4.93	10.10	
10.10-10.23	11	SPT(c)	N=286*							. . . joints between 8.20m and 8.30m depth is 70°undulating rough open with brown discolouration. . . . between 8.40m and 8.50m depth very weak greenish grey mudstone (MMGII). . . . between 8.65m and 8.80m depth joint is 85° undulating rough open with brown discolouration. . . . between 8.90m and 9.18m depth non intact recovered as fine to coarse angular blocks of mudstone. . . . between 9.17m and 9.30m depth greenish grey siltstone. . . . between 9.30m and 9.60m depth reddish brown mudstone contains lenticular clast of greenish grey siltstone. . . . between 9.50m and 9.85m depth siltstone. Very weak thinly laminated reddish brown silty MUDSTONE with closely to medium spaced very weak greenish grey siltstone. Bedding fractures are 5° to 15° very closely to closely spaced undulating rough open infilled with greenish grey fine to medium gravel. (MERCIA MUDSTONE GROUP) *(stratum text copied from layer at 8.80m* depth from previous sheet)			
										Borehole terminated at 10.10m depth.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + RCoward**

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC7**
Contract Ref:	Start: **30.5.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **31.5.13**	**15.03**	**E:339581.7 N:157349.1**	**4** of **5**

BHC7 3.30m to 6.20m

BHC7 6.20m to 7.40m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 205**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + RCoward**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC7**
Contract Ref:	Start: **30.5.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **31.5.13**	**15.03**	**E:339581.7 N:157349.1**	**5** of **5**

BHC7 7.40m to 10.10m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 205**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + RCoward**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.5.13** End: **5.6.13**	**13.25**	**E:340066.8 N:158036.5**	**1** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00-0.60	1	B								MADE GROUND: Dark brown slightly gravelly SAND. Gravel is subrounded to angular fine to medium flint and brick with rare rootlets. (MADE GROUND)	12.95	(0.30) 0.30	
0.60-1.20	2	B								MADE GROUND: Reddish brown slightly sandy slightly gravelly CLAY. Gravel is subangular fine flint and brick. Cobbles are subangular sandstone. (MADE GROUND)	12.05	(0.90) 1.20	
1.20-1.65 1.20-2.00	3 4	SPT B	N=14							Firm to stiff dark brownish red slightly sandy silty CLAY. (MERCIA MUDSTONE GROUP)			
2.00-2.45 2.00-3.00	5 6	SPT D	N=14									(1.80)	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
13/05/13	15:00	5.00	1.50	150	5.00
04/06/13	07:15	5.50	None	150	4.90
05/06/13	07:00	17.80	5.50	146	14.10

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Cable percussion borehole terminated in mudstone at 5.20m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.5.13** End: **5.6.13**	**13.25**	**E:340066.8 N:158036.5**	**2** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										Firm to stiff dark brownish red slightly sandy silty CLAY. (MERCIA MUDSTONE GROUP) *(stratum text copied from layer at 1.20m* depth from previous sheet)	10.25	3.00	
3.00-3.45 3.00-4.00	7 8	SPT D	N=35							Extremely weak dark reddish brown mottled grey MUDSTONE. (MERCIA MUDSTONE GROUP)			
4.00-4.35 4.00-5.00	9 10	SPT D	N=75*									(2.50)	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

4. Location: Sandford (Max Mills Lane).
5. SPT hammers EQU084-2012 (E_r = 67.22%) , EQU089-2012 (E_r = 61.46%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.5.13** End: **5.6.13**	**13.25**	**E:340066.8 N:158036.5**	**3** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
5.00-5.43	11	SPT	N=54*							Extremely weak dark reddish brown mottled grey MUDSTONE. (MERCIA MUDSTONE GROUP) *(stratum text copied from layer at 3.00m* depth from previous sheet)			
5.20-5.65	1	SPT	N=41								7.75	5.50	
5.50-6.20				43	0	0				Recovered as medium to coarse angular blocks of very weak reddish brown mottled green MUDSTONE. (MERCIA MUDSTONE GROUP Zone II)		(0.70)	
6.20-7.30											7.05	6.20	
6.20-6.65	2	SPT	N=75	100	0	0				Very weak extremely closely fissured/jointed reddish brown mottled green MUDSTONE crumbles/breaks up into fine to coarse angular blocks of very weak mudstone. Bedding is 5° to 10°. (MERCIA MUDSTONE GROUP) . . . between 6.20m and 6.70m depth non intact fine to coarse angular blocks of very weak red mudstone (possible SPT damage to structure). . . . below 6.80m depth mudstone is very weak to extremely weak. . . . joint between 6.80m and 7.00m depth is 70° planar rough partly open.		(1.10)	
7.30-8.80											5.95	7.30	
7.30-7.75	3	SPT	N=87	100	10	10				*Description on next sheet*			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.5.13**	**13.25**	**E:340066.8 N:158036.5**	**4** of **10**
	End: **5.6.13**			

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										Extremely weak extremely closely fissured reddish brown mottled greenish grey silty MUDSTONE crumbles/breaks up into pieces. (MERCIA MUDSTONE GROUP) . . . between 7.30m and 7.50m depth extremely weak to very weak greenish grey siltstone crumbles into fine to coarse angular blocks of extremely weak greenish grey siltstone (MMGII). *(stratum text copied from layer at 7.30m depth from* previous sheet)		(1.35)	
				100	10	10				. . . between 8.15m and 8.20m depth firm red clay contains occasional lithorelicts of extremely weak red mudstone (possible differential weathering between MMGII and MMGIVb). . . . extremely weak greenish grey pocket of siltstone with gypsum bands between 8.20m and 8.30m depth. . . . between 8.30m and 8.40m depth mudstone becomes very weak. . . . between 8.40m and 8.50m depth firm reddish brown clay with occasional fine to coarse angular lithorelicts of extremely weak mudstone (possible differential weathering between MMGII and MMGIVb). . . . mudstone becomes very weak to weak 8.50m to 8.65m depth (possible differential weathering).	4.60	8.65	
8.80-10.30 8.80-9.19	4	SPT	N=107							Extremely weak to very weak extremely closely fissured greenish grey SILTSTONE with closely spaced thin beds of reddish brown silty mudstone crumbles/breaks up into fine to coarse angular blocks of siltstone and mudstone upon handling. Bedding is 5° to 10°. (MERCIA MUDSTONE GROUP Zone II)			
				87	0	0				. . . between 8.80m and 9.10m depth non intact recovered as fine to coarse angular very weak greenish grey siltstone (possibly damaged by SPT action). . . . between 9.10m and 9.15m depth reddish brown mudstone. . . . between 9.10m and 9.25m depth vein of gypsum up to 3mm, dip at 70°. . . . thin bed of extremely weak to very weak reddish brown mudstone between 9.45m and 9.54m depth crumbles into fine to coarse angular blocks (MMGII). . . . between 9.65m and 9.88m depth extremely weak thin bed of reddish brown		(2.00)	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.5.13** End: **5.6.13**	**13.25**	**E:340066.8 N:158036.5**	**5** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				87	0	0				mudstone with lenses of greenish grey siltstone. Extremely weak to very weak extremely closely fissured greenish grey SILTSTONE with closely spaced thin beds of reddish brown silty mudstone crumbles/breaks up into fine to coarse angular blocks of siltstone and mudstone upon handling. Bedding is 5° to 10°. (MERCIA MUDSTONE GROUP Zone II) *(stratum text copied from layer at 8.65m* depth from previous sheet) . . . between 10.15m and 10.30m depth mudstone is weathered into IVa with alternate band of completely weathered mudstone and band of lithorelicts of extremely weak mudstone. . . . between 10.30m and 10.65m depth extremely weak to very weak greenish grey siltstone (between MMGI and MMGII).	2.60	10.65	
10.30-11.80 / 10.30-10.57	5	SPT	N=167*										
				83	0	0				Extremely weak to very weak extremely closely fissured reddish brown mottled greenish grey MUDSTONE breaks up/crumbles into fine to coarse angular blocks of extremely to very weak mudstone. (MERCIA MUDSTONE GROUP Zone II) . . . between 10.65m and 10.78m depth recovered/crumbles into angular blocks of extremely weak/very weak mudstone. . . . between 10.80m and 10.98m depth mudstone is between MMGII and MMGIII. . . . between 11.15m and 11.65m depth MMGII contains alternate bands of very stiff/stiff red clay bands completely weathered red mudstone (possible differential weathering).			
11.80-13.30 / 11.80-12.20	6	SPT	N=122*							. . . between 11.80m and 11.90m depth greenish grey very weak siltstone and the weathering grade is MMGI.		(2.57)	
				87	0	0							

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.5.13** End: **5.6.13**	**13.25**	**E:340066.8 N:158036.5**	**6** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										Extremely weak to very weak extremely closely fissured reddish brown mottled greenish grey MUDSTONE breaks up/crumbles into fine to coarse angular blocks of extremely to very weak mudstone. (MERCIA MUDSTONE GROUP Zone II)			
				87	0	0				. . . between 10.65m and 10.78m depth recovered/crumbles into angular blocks of extremely weak/very weak mudstone. *(stratum text copied from layer at 10.65m* depth from previous sheet)			
										. . . between 12.50m and 13.00m depth mudstone becomes extremely weak to very weak.	0.03	13.22	
13.30-14.80 13.30-13.56 13.30	7	SPT HP	N=171* c_u=>225							. . . between 13.00m and 13.30m depth mudstone is between MMGII and MMGIII. . . . between 13.20m and 13.25m depth greenish grey siltstone of MMGIII.	-0.15	(0.18) 13.40	
										Very stiff thinly laminated reddish brown silty CLAY with occasional fine to medium lithorelicts of extremely weak mudstone. (MERCIA MUDSTONE GROUP Zone IVa)			
										Extremely weak to very weak extremely closely fissured/jointed silty MUDSTONE crumbles/breaks up into fine to coarse angular blocks of very weak mudstone. Bedding is 5° to 10°. (MERCIA MUDSTONE GROUP Zone II)		(0.70)	
				100	38	10				. . . between 13.75m and 13.90m depth mudstone becomes MMGI with tight vertical joint with brown discolouration. . . . between 13.90m and 14.10m depth recovered as non-intact fine to coarse angular blocks of very weak mudstone.	-0.85	14.10	
							NI 60 90			Very weak thinly laminated greenish grey SILTSTONE. Bedding fracture is 5° to 10° very closely to closely spaced. Joints at 14.45m 40° planar rough with brown discolouration. (MERCIA MUDSTONE GROUP) . . . joint at 14.50m depth is 55° planar rough open with greenish grey clay.	-1.40	(0.55) 14.65	
							40 90 150			. . . between 14.60m and 14.65m depth ? recovered as fine to coarse weak gravel of greenish grey siltstone.		(0.28)	
14.80-16.30 14.80-14.99 14.93	8	SPT HP	N=182* c_u=150/160	93	41	34				Weak very thinly to thinly laminated bedded reddish brown MUDSTONE. Bedding fracture is 10° open infilled with locally completely weathered clay. (MERCIA MUDSTONE GROUP Zone I)	-1.68	14.93	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.5.13** End: **5.6.13**	**13.25**	**E:340066.8 N:158036.5**	**7** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
15.07		HP	c_u=30/12							. . . joint at 14.65m depth is 60° undulating rough open with brown discolouration in the fracture. Stiff becoming soft reddish brown silty CLAY with occasional fine to coarse lithorelicts of red mudstone in ordered way. (MERCIA MUDSTONE GROUP Zone IVa) *(stratum text copied from layer at 14.93m* depth from previous sheet) . . . becomes MMGII between 15.45m and 15.52m depth.	-2.37	(0.69) 15.62	
				93	41	34	NI 40 380			Extremely weak medium bed of reddish brown silty MUDSTONE. (MERCIA MUDSTONE GROUP Zone I) . . . non intact between 16.00m and 16.06m depth. . . . joint between 16.06m and 16.15m depth is 65° open with black discolouration.	-2.91	(0.54) 16.16	
16.30-17.80										Very weak very thinly to thinly bedded silty MUDSTONE. Bedding is 5°. Joints 20° to 65° closely spaced planar rough with black staining. (MERCIA MUDSTONE GROUP) . . . at 16.20m depth joint is 20° planar rough open with black discolouration.	-3.05	16.30	
16.30-16.55	9	SPT	N=178*										
16.50		HP	c_u=100/110										
16.60		HP	c_u=20/15/20							Extremely weak to very weak extremely closely jointed/fissured silty MUDSTONE crumbles into fine to coarse gravel of extremely to very weak mudstone with stiff to soft reddish brown silty clay with occasional lithorelicts in arranged manner. (MERCIA MUDSTONE GROUP Zone II) . . . between 16.80m and 17.20m depth extremely weak to very weak greenish grey siltstone with thin laminations of red mudstone and it crumbles into extremely weak to very angular blocks when handled (MMGII). . . . non intact recovered fine to coarse angular blocks of red mudstone between 17.20m and 17.40m depth.	-4.15	(1.10) 17.40	
				100	27	27							
										Description on next sheet			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	

All dimensions in metres

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 205**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.5.13**	**13.25**	**E:340066.8 N:158036.5**	**8** of **10**
	End: **5.6.13**			

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				100	27	27	NI 150 170			Extremely weak thinly laminated reddish brown silty MUDSTONE. (MERCIA MUDSTONE GROUP Zone I) . . . between 17.40m and 17.52m depth vertical joint with black discolouration on the joint. *(stratum text copied from layer at* 17.40m depth from previous sheet) . . . between 17.80m and 17.90m depth extremely weak reddish brown mudstone crumbles into angular blocks of mudstone (MMGII) (due to differential weathering). . . . possible differential weathering between17.80m and 18.70m possibly depth due to poor ground condition.		(1.25)	
17.80-19.30 17.80-17.92	10	SPT	N=750*										
				100	41	41				. . . MMGIVa grades into MMGI with extremely weak reddish brown with laminations greenish grey siltstone between 18.45m and 18.65m depth with joint at 18.60m dipping 70°.	-5.40	18.65	
											-5.45	18.70	
							NI 140 260			Soft reddish brown and green grey silty CLAY with frequent lithorelicts of extremely weak red mudstone and greenish grey siltstone. (MERCIA MUDSTONE GROUP Zone III)	-5.55	18.80	
										Extremely weak becoming very weak thinly bedded reddish brown mottled greenish grey silty MUDSTONE. Bedding fractures at 19.13m in undulating rough open completely with red clay with weathering continued down along the fracture. (MERCIA MUDSTONE GROUP)	-6.05	(0.50) 19.30	
19.30-19.35	11	SPT(c)	N=750*							Very soft reddish brown silty CLAY with occasional angular lithorelicts up to 5mm. (MERCIA MUDSTONE GROUP Zone IVa) . . . weakened upper wall rock up to 40mm at 19.13m depth due to prolonged weathering along the fracture. Borehole terminated at 19.30m depth.			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WDixon**

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC8A**
Contract Ref:	Start: **13.5.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **5.6.13**	**13.25**	**E:340066.8 N:158036.5**	**9** of **10**

BHC8A 5.50m to 10.30m

BHC8A 10.30m to 13.30m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 205**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC8A**
Contract Ref:	Start: **13.5.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **5.6.13**	**13.25**	**E:340066.8 N:158036.5**	**10** of **10**

BHC8A 13.30m to 19.30m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 205**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**10.5.13** End: **16.5.13**	**12.02**	**E:340094.1 N:158003.4**	**1** of **9**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00-0.25	1	B								Brown slightly gravelly SAND. Gravel is medium subrounded to angular flint with rootlets. (TOPSOIL)	11.52	(0.50) 0.50	
0.50-1.20	2	B								Soft brown sandy slightly slightly gravelly CLAY. Gravel is medium to coarse subangular flint and mudstone with dead plant rootlets. (MERCIA MUDSTONE GROUP)	10.82	(0.70) 1.20	
1.20-1.65	3	SPT	N=5						15/05 12:30 ~~16/05 08:15~~ 17/05 08:30	Soft to firm reddish brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium subangular mudstone. (MERCIA MUDSTONE GROUP)			
1.50-2.00	4	B											
2.00-2.45	5	SPT	N=8										
2.00-3.00	6	B									9.02	(1.80) 3.00	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
10/05/13	12:00	3.00	1.50	150	3.00
10/05/13	14:00	5.00	1.50	150	5.00
15/05/13	12:30	5.50	None	150	1.30
15/05/13	17:00	12.20	5.50	146	5.80
16/05/13	08:15	12.20	5.50	146	1.30
17/05/13	08:30	16.20	5.50	146	1.30
15/05/13	12:30	5.50	None	N/R	1.30
15/05/13	17:00	12.20	5.50	N/R	5.80

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Cable percussion borehole terminated in mudstone at 5.00m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**HA + LH**	**BSaimen + WDixon**

GINT_LIBRARY_V8_04.GLB|Log COMPOSITE LOG | 727635_HINKLEY_TO_SEABANK.GPJ - v8_04 | 17/10/13 - 19:50 | AD.
Structural Soils Ltd, Head Office - Bristol: The Old School, Stillhouse Lane, Bedminster, Bristol, BS3 4EB. Tel: 0117-947-1000, Fax: 0117-947-1004, Web: www.soils.co.uk, Email: ask@soils.co.uk.

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**10.5.13** End: **16.5.13**	**12.02**	**E:340094.1 N:158003.4**	**2** of **9**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
3.00-4.00 3.00-3.45	5 7	B SPT	N=24							Stiff dark brownish red mottled grey CLAY / weathered MUDSTONE. (MERCIA MUDSTONE GROUP)			
4.00-4.45 4.00-5.00	9 10	SPT B	N=40									(2.00)	
5.00-5.41	11	SPT	N=58*								7.02	5.00	
										Hard to extremely weak dark brownish red mottled grey MUDSTONE. (MERCIA MUDSTONE GROUP)		(0.70)	
5.70-7.20				73	40	33	NI 60 280		15/05 17:00	*Description on next sheet*	6.32	5.70	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
16/05/13	08:15	12.20	5.50	N/R	1.30
17/05/13	08:30	16.20	5.50	N/R	1.30

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

4. Location: Sandford (Max Mills Lane).
5. SPT hammers EQU083-2013 (E_r = 67.68%) , EQU084 - 2013 (E_r = 67.22%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**HA + LH**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**10.5.13** End: **16.5.13**	**12.02**	**E:340094.1 N:158003.4**	**3** of **9**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				73	40	33	NI 60 280			Extremely weak to very weak thinly laminated reddish brown MUDSTONE with occasional greenish grey mottling and some gypsum bands. Bedding is 5° to 10°. Bedding fractures are 5° to 10° closely to medium spaced undulating infilled with red clay/fine to coarse gravel up to 50mm. (MERCIA MUDSTONE GROUP Zone I) *(stratum text copied from layer at 5.70m* depth from previous sheet) . . . at 6.45m and 6.55m depth bedding fractures infilled with fine to coarse gravel of mudstone.		(1.20)	
7.20-8.70 7.20-7.47	12	SPT	N=256*								5.12	6.90	
				93	27	21				Extremely weak to very weak thinly laminated extremely closely fissured/jointed reddish brown MUDSTONE breaks up/crumbles into fine to coarse angular extremely weak/very weak mudstone blocks. (MERCIA MUDSTONE GROUP Zone II) . . . between 7.70m and 7.82m depth extremely weak greenish grey bed siltstone/mudstone. . . . between 7.90m and 8.05m depth mudstone is very weak and intact (MMGI). . . . between 8.05m and 8.20m depth mudstone weathers back to MMGIVa with stiff reddish brown clay with occasional fine to coarse lithorelicts of reddish brown extremely weak to very weak mudstone (differential weathering).		(2.20)	
8.70-10.20 8.70-8.95	13	SPT(c)	N=200*	93	17	13	NI 30 190			. . . between 8.50m and 8.70m depth MMGIVa back to extremely weak/very weak MMGI to MMGII (possible differential weathering).			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**HA + LH**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**10.5.13** End: **16.5.13**	**12.02**	**E:340094.1 N:158003.4**	**4** of **9**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
											2.92	9.10	
										Very stiff thinly laminated reddish brown CLAY with occasional fine to medium extremely weak lithorelicts of mudstone. (MERCIA MUDSTONE GROUP Zone IVb) . . . at 9.12m and 9.13m depth multiple possible planar slip surface dipping at 60°.	2.47	(0.45) 9.55	
				93	17	13	NI 30 190			Very weak thinly laminated reddish brown MUDSTONE. Joints are extremely closely to very closely spaced with brown stains on the joint face. (MERCIA MUDSTONE GROUP Zone I) . . . bedding fracture at 9.55m depth undulating rough/open. . . . between 9.90m and 10.20m depth mudstone is between MMGI and MMGII.	1.82	(0.65) 10.20	
10.20-11.70 10.20-10.43	14	SPT(c)	N=190*							Extremely weak to very weak thinly laminated extremely and very closely fissured reddish brown MUDSTONE breaks up/crumbles into fine to coarse angular blocks of extremely to very weak mudstone. Bedding is 15°. (MERCIA MUDSTONE GROUP Zone II) . . . greenish grey very weak siltstone/mudstone between 10.35m and 10.65m depth. . . . between 10.60m and 10.75m depth vein white fibrous gypsum (3mm) dipping at 70°. . . . bedding fracture at 10.70m depth is 15° undulating rough. . . . between 10.75m and 11.00m depth mudstone is very weak extremely closely jointed and is between MMGI and MMGII. . . . at 11.25m depth greenish grey bed of extremely weak/very weak siltstone up to 35mm.		(2.00)	
				100	37	33				. . . greenish grey extremely weak/very weak siltstone bed at 11.55m depth.			
11.70-12.20 11.70-12.06	15	SPT(c)	N=115*	80	0	0							

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**HA + LH**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**10.5.13** End: **16.5.13**	**12.02**	**E:340094.1 N:158003.4**	**5** of **9**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				80	0	0					-0.18	12.20	
12.20-13.20				75	50	50				Very weak thinly laminated reddish brown MUDSTONE interbedded with very weak greenish grey thinly laminated SILTSTONE. Bedding is 10° to 15°. (MERCIA MUDSTONE GROUP Zone I) . . . between 12.20m and 12.80m depth possible very weak greenish grey siltstone with reddish brown laminations of mudstone (damaged by possible SPT action).		(1.75)	
13.20-14.70 13.20-13.49	16	SPT(c)	N=150*	100	87	70	NI 150 500			. . . greenish grey very weak siltstone with thin laminations of reddish brown mudstone between 13.20m and 13.35m depth. . . . between 13.50m and 13.65m depth MMGI becomes MMGII with thin bands of MMGIVa (possible bedding fracture at 13.57m depth). . . . at 13.75m and 13.90m depth bedding fracture with mudstone weathered into MMGIVb on either side of bedding fracture up to 60mm.	-1.93	13.95	
										Very weak thinly laminated greenish grey SILTSTONE with occasional discontinuous/continuous thin laminations of reddish brown mudstone (MMGI). Bedding is 5° to 10°. (MERCIA MUDSTONE GROUP) . . . bedding fracture at 14.45m depth is 5° undulating rough infilled with greenish grey silty clay.	-2.68	(0.75) 14.70	
14.70-16.20 14.70-14.80	17	SPT(c)	N=1071*	87	53	37				*Description on next sheet*			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**HA + LH**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**10.5.13** End: **16.5.13**	**12.02**	**E:340094.1 N:158003.4**	**6** of **9**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				87	53	37				Very weak thinly laminated reddish brown MUDSTONE with occasional greenish grey mottling/irregular pockets/bands of greenish grey thinly laminated siltstone. Bedding fractures 5° to 15° very closely to medium spaced undulating rough clean/infilled with reddish brown clay. (MERCIA MUDSTONE GROUP) *(stratum text copied from layer at 14.70m* depth from previous sheet) . . . bedding fractures at 15.18m, 15.22m, 15.52m and 15.60m depth are dipping between 5° and 15° undulating rough clean. . . . between 15.50m and 15.60m depth very weak greenish grey siltstone. . . . between 15.60m and 15.90m depth MMGI becomes MMGII (possible differential weathering).		(1.50)	
											-4.18	16.20	
16.20-17.70 16.20-16.41	18	SPT(c)	N=222*	33	7	7	NI 150 500 NI 90 280 NI 90 280			Very clayey fine to coarse angular GRAVEL of very weak red mudstone (possible intensely fractured zone). (MERCIA MUDSTONE GROUP)		(1.40)	
											-5.58	17.60	
17.70-19.20 17.70-17.94	19	SPT(c)	N=199*	93	53	33	NI 140 300			Extremely weak to very weak thinly laminated reddish brown MUDSTONE. Bedding fracture 5° to 20° very closely to closely spaced undulating rough infilled with red clay. (MERCIA MUDSTONE GROUP) *Description on next sheet*			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**HA + LH**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**10.5.13** End: **16.5.13**	**12.02**	**E:340094.1 N:158003.4**	**7** of **9**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				93	53	33	NI 140 300			. . . weathering of mudstone more obvious either side of the bedding fractures/joints between 17.70m and 18.70m depth. Extremely weak to very weak thinly laminated reddish brown MUDSTONE. Bedding fracture 5° to 20° very closely to closely spaced undulating rough infilled with red clay. (MERCIA MUDSTONE GROUP) *(stratum text copied from layer at 17.60m* depth from previous sheet) . . . at 18.08m depth bedding fracture is 5° undulating rough with mudstone weathering back to . . . at 18.25m depth bedding fracture is 15° undulating rough infilled with slightly gravelly clay up to 3mm. . . . mudstone (MMGI) weathers back to MMGII between 18.45m and 18.55m depth. . . . bedding fracture at 18.70m depth is 20° undulating rough with mudstone weathered back to extremely weak MMGII on either side of the bedding fracture up to 100mm. . . . mudstone is extremely weak and MMGI between 18.80m and 19.20m depth. . . . at 18.90m depth bedding fracture is 15° undulating rough tight. . . . occasionally randomly orientated thin veins of white gypsum between 19.10m and 19.20m depth. . . . between 19.20m and 19.42m depth mudstone very weak and MMGI grade. . . . bedding fracture at 19.47m depth is 10° undulating rough open infilled with red clay with mudstone weathered back to		(2.40)	
19.20-20.00 19.20-19.54	20	SPT(c)	N=133*	100	81	75					-7.98	20.00	
										MMGII on either side of the fracture up to 150mm. . . . below 19.66m depth mudstone is very weak and between MMGI and MMGII. . . . at 19.66m depth joint is 30° planar rough with some red clay. . . . between 19.70m and 20.00m depth irregular veins of white gypsum up to 3mm. Borehole terminated at 20.00m depth.			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio MC300**	Drilled By:	**HA + LH**	Logged By:	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC8B**
Contract Ref:	Start: **10.5.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **16.5.13**	**12.02**	**E:340094.1 N:158003.4**	**8** of **9**

BHC8B 5.70m to 10.20m

BHC8B 10.20m to 14.70m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio MC300**	Drilled By:	**HA + LH**	Logged By:	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC8B**
Contract Ref:	Start: **10.5.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **16.5.13**	**12.02**	**E:340094.1 N:158003.4**	**9** of **9**

BHC8B 14.70m to 17.70m

BHC8B 17.70m to 20.00m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio MC300**	Drilled By:	**HA + LH**	Logged By:	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**29.4.13** End: **14.5.13**	**13.08**	**E:340077.8 N:158051.7**	**1** of **7**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00-0.65	1	B								Soft reddish brown sandy CLAY. (TOPSOIL)	12.43	(0.65) 0.65	
0.65-0.70	2	B								Firm becoming stiff reddish brown mottled grey slightly sandy slightly gravelly CLAY. (MERCIA MUDSTONE GROUP Zone IVa)	11.88	(0.55) 1.20	
0.70-1.20	3	B											
1.20-1.65	4	SPT	N=17							Stiff becoming stiff reddish brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is subangular fine mudstone. (MERCIA MUDSTONE GROUP Zone IVa)			
1.20-2.00	5	B							14/05 08:30				
2.00-2.45	6	SPT	N=20								10.08	(1.80) 3.00	
2.00-3.00	7	D											
3.00-3.45	8	SPT	N=50							Hard to extremely weak dark brownish red mottled grey weathered MUDSTONE. (MERCIA MUDSTONE GROUP)			
3.00-4.00	9	D										(1.40)	
4.00-4.38	10	SPT	N=65*								8.68	4.40	
4.40-5.90				93	0	0				Extremely weak to very weak thinly laminated reddish brown MUDSTONE breaks up/crumbles into fine to coarse angular blocks of extremely weak to very weak reddish brown mudstone along extremely closely spaced joints. Bedding fractures are 5° to 10° very closely to closely spaced undulating rough infilled with reddish fine to coarse gravel limestone. Joints are extremely closely spaced tight. (MERCIA MUDSTONE GROUP) . . . joints at 4.92m depth 50° undulating rough tight.			
5.90-6.26	1	SPT(c)	N=135*										

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
13/05/13	16:30	11.90	4.50	146	2.00
14/05/13	08:30	11.90	4.50	146	2.00

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Cable percussion borehole terminated in mudstone at 4.40m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**HA + LH**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**29.4.13** End: **14.5.13**	**13.08**	**E:340077.8 N:158051.7**	**2** of **7**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										. . . bedding fractures at 5.00m, 5.30m, 5.37m and 5.46m depth are 5° to 10° infilled with red clay. . . . between 5.25m and 5.34m depth greenish grey extremely weak to very weak mudstone/siltstone. . . . joint at 5.30m depth is 45° planar rough tight. . . . between 5.54m and 5.63m depth vertical vein of white gypsum.		(3.70)	
7.40-8.90 7.40-7.82	2	SPT	N=113*	97	13	10				Extremely weak to very weak thinly laminated reddish brown MUDSTONE breaks up/crumbles into fine to coarse angular blocks of extremely weak to very weak reddish brown mudstone along extremely closely spaced joints. Bedding fractures are 5° to 10° very closely to closely spaced undulating rough infilled with reddish fine to coarse gravel limestone. Joints are extremely closely spaced tight.	4.98	8.10	
8.90-10.40 8.90-9.07	3	SPT	N=316*	87	0	0				(MERCIA MUDSTONE GROUP) *(stratum text copied from layer at 4.40m* depth from previous sheet) . . . occasional white gypsum veins between 6.50m and 6.80m depth. Mudstone is very weak and crumbles into angular blocks of very weak mudstone when handled (MMGII). . . . joint at 7.00m depth 60° undulating rough infilled with reddish brown gravelly clay up to 2.5mm. Extremely weak to very weak thinly laminated greenish grey SILTSTONE. Joints/fissures are randomly orientated and extremely closely spaced tight. (MERCIA MUDSTONE GROUP Zone II) . . . between 8.40m and 8.60m depth green siltstone becomes very weak and MMGI. . . . siltstone crumbles into angular block of extremely/very weak siltstone between 8.60m and 8.85m depth (MMGII). . . . joint at 8.65m depth 45° undulating rough tight. . . . below 8.85m depth siltstone is intact. . . . between 8.90m and 10.20m depth mudstone breaks up into fine to coarse angular blocks of extremely weak red mudstone (MMGII). . . . greenish grey siltstone between 9.70m and 9.85m depth. . . . band of red MMGIII between 10.20m and 10.30m depth (possible differential weathering).		(3.00)	
10.40-11.90 10.40-10.82	4	SPT	N=112*	100	43	17					1.98	11.10	
11.90-13.40										*Description on next sheet*	1.78	11.30	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

4. Location: Sandford (Max Mills Lane).
5. SPT hammers EQU083-2013 (E_r = 67.68%) , EQU084-2012 (E_r = 67.22%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**HA + LH**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**29.4.13** End: **14.5.13**	**13.08**	**E:340077.8 N:158051.7**	**3** of **7**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
11.90-12.16	5	SPT	N=160*	100	33	20				Very weak thinly laminated greenish grey SILTSTONE. Bedding is 5° to 10°. (MERCIA MUDSTONE GROUP)			
				100	33	20	NI 80 230			. . . between 11.55m to 11.58m depth mudstone becomes MMGIII with occasional fine to medium lithorelicts of extremely weak angular blocks of red mudstone. Very weak thinly laminated reddish brown MUDSTONE with extremely weak thin bands of greenish grey siltstone. Bedding fractures are 5° to 15° very closely to medium spaced planar rough infilled with reddish brown clay (less than 2mm). (MERCIA MUDSTONE GROUP Zone I) *(stratum text copied from layer at 11.30m* depth from previous sheet) . . . between 12.10m and 12.30m depth occasional angular white veins of gypsum. . . . bedding fractures at 12.44m, 12.73m and 12.80m depth are 5° to 8° open closely to medium spaced. . . . joint between 12.45m and 12.53m depth planar rough tight. Occasional mottling of greenish grey.		(3.40)	
13.40-14.70													
13.40-13.70	6	SPT(c)	N=134*	85	46	46							
										. . . between 12.73m and 12.80m depth becomes extremely weak and crumbles into angular block of mudstone (MMGII).	-1.62	14.70	
14.70-16.20													
14.70-14.89	7	SPT(c)	N=286*	93	68	9	NI 60 240			. . . joint between 12.95m and 13.05m depth is 50° tight. . . . mudstone is between MMGI and MMGII from 13.10m to 13.40m depth. . . . recovered as firm reddish brown clay between 13.40m and 13.90m depth (probably damaged by SPT action). . . . at 13.90m depth weathering progress along the bedding fracture. . . . between 13.90m and 14.30m depth very weak greenish grey siltstone/mudstone. . . . bedding fracture at 14.10m depth 15° planar rough infilled with greenish grey clay. . . . mudstone becomes very weak between 14.40m and 14.60m depth.		(3.10)	
16.20-17.70													
16.20-16.48	8	SPT(c)	N=132*	100	53	26	NI 90 220			Very weak thinly laminated reddish brown MUDSTONE with occasional greenish grey mottling. Bedding fractures 5° to 10° are closely to medium spaced undulating rough infilled with clay fine to medium gravel of mudstone. Joints are 30° to 75° closely to medium spaced undulating rough/planar rough infilled with clay/clean. Joints at 15.15m and 15.28m depth are 30° undulating rough infilled			
17.70-19.20											-4.72	17.80	
17.70-18.04	9	SPT(c)	N=133*	93	80	60	NI 150			with red clay up to 3mm.			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio MC300**	**HA + LH**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**29.4.13** End: **14.5.13**	**13.08**	**E:340077.8 N:158051.7**	**4** of **7**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
							350			(MERCIA MUDSTONE GROUP) . . . joint at 15.45m and 15.62m depth is 70° planar rough clean. . . . mudstone becomes extremely weak to very weak below 15.78m and 16.00m depth. . . . joint at 15.94m depth is 40° undulating rough infilled with red clay up to 2mm. . . . between 16.00m and 16.40m depth occasional green grey mottling/bands of siltstone. . . . incipient joint at 16.30m depth is 70° planar rough with brown oxidation stains on fracture surface. . . . between 16.65m and 16.80m depth mudstone becomes extremely weak. . . . between 17.00m and 17.30m depth MMGI becomes MMGIII (stiff reddish clay with frequent lithorelicts). . . . at 17.45m depth joint is 60° planar rough infilled with reddish clay up to 2mm. . . . red mudstone between 17.90m and 18.40m depth contains frequent greenish grey mottling. Extremely weak reddish brown mottled greenish grey MUDSTONE. Joints are 50° to 70° closely to medium spaced undulating rough/planar rough tight/open filled with red clay/clean. (MERCIA MUDSTONE GROUP Zone II) *(stratum text copied from layer at 17.80m* depth from previous sheet) . . . joint at 18.90m depth is 70° planar rough open infilled with red clay up to 2mm. . . . at 19.20m depth possibly MMGIII with frequent lithorelicts of very weak mudstone.			
				93	80	60	NI 150 350					(1.90)	
19.20-19.70 19.20-19.61	10	SPT(c)	N=115*	90	0	0					-6.62	19.70	
										Borehole terminated at 19.70m depth.			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio MC300**	Drilled By:	**HA + LH**	Logged By:	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC8C**
Contract Ref:	Start: **29.4.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **14.5.13**	**13.08**	**E:340077.8 N:158051.7**	**5** of **7**

BHC8C 4.40m to 8.90m

BHC8C 8.90m to 11.90m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio MC300**	Drilled By:	**HA + LH**	Logged By:	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC8C**
Contract Ref:	Start: **29.4.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **14.5.13**	**13.08**	**E:340077.8 N:158051.7**	**6** of **7**

BHC8C 11.90m to 14.70m

BHC8C 14.70m to 17.70m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio MC300**	Drilled By:	**HA + LH**	Logged By:	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC8C**
Contract Ref:	Start: **29.4.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **14.5.13**	**13.08**	**E:340077.8 N:158051.7**	**7** of **7**

BHC8C 17.70m TO 19.70m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio MC300**	Drilled By:	**HA + LH**	Logged By:	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8D**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**7.5.13** End: **13.5.13**	**12.22**	**E:340114.5 N:158024.2**	**1** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00-0.50	1	B								Dark brown SAND with rootlets. (TOPSOIL)	11.72	(0.50) 0.50	
0.50-1.20	2	B								Soft brown sandy slightly gravelly CLAY. Gravel is subrounded medium to coarse flint and dead plant rootlets. (MERCIA MUDSTONE GROUP)	11.02	(0.70) 1.20	
1.20-1.65	3	SPT	N=6							Firm reddish brown slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to medium mudstone. (MERCIA MUDSTONE GROUP Zone IVa)	10.22	(0.80) 2.00	
1.40-2.00	4	B							1				
2.00-3.00	6	D								Stiff becoming very stiff reddish brown slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to medium mudstone. (MERCIA MUDSTONE GROUP Zone III)	7.72	(2.50) 4.50	
2.00-2.45	7	SPT	N=35						1				
3.00-3.44	7	SPT	N=53*										
3.00-4.00	8	D							1				
4.00-4.45	9	SPT	N=50										
4.50-5.50										*Description on next sheet*			
4.50-4.95	1	SPT	N=42	100	0	0							

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/05/13	13:00	3.00	1.50	150	3.00
10/05/13	16:30	13.30	4.50	146	1.60
13/05/13	08:30	13.30	4.50	146	1.60

Chiselling / Slow Progress

From	To	Duration (hh:mm)

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Cable percussion borehole terminated in mudstone at 4.50m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 3000 + Comacchio MC300**	**HA + LH**	**BSaimen + WDixon**

GINT_LIBRARY_V8_04.GLB|Log COMPOSITE LOG | 727635_HINKLEY_TO_SEABANK.GPJ - v8_04 | 17/10/13 - 19:57 | AD.
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8D**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**7.5.13** End: **13.5.13**	**12.22**	**E:340114.5 N:158024.2**	**2** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				100	0	0				Extremely weak thinly laminated extremely closely fissured/jointed grey silty distinctly weathered MUDSTONE breaking into angular blocks of extremely weak grey mudstone. Joints/fissures are extremely closely spaced. (MERCIA MUDSTONE GROUP) . . . between 4.50m and 4.90m depth grey mudstone breaks up into angular blocks of extremely weak mudstone. *(stratum text copied from layer at 4.50m depth from* previous sheet)		(1.50)	
5.50-7.00 5.50-5.95	2	SPT	N=101								6.22	6.00	
				80	0	0				. . . becomes reddish brown mudstone between 5.40m and 5.45m depth. . . . between 5.50m and 6.00m depth damaged by SPT action. Extremely weak to very weak thinly laminated reddish brown mottled greenish grey MUDSTONE breaks up into fine to coarse angular blocks of extremely weak/very weak mudstone when handled. Joints/fissures are extremely closely spaced very tight. Bedding is 10°. Bedding fractures are not clear. (MERCIA MUDSTONE GROUP Zone II)			
7.00-8.00 7.00-7.41	3	SPT	N=118*	100	0	0				. . . reddish brown mudstone between 6.20m and 7.00m depth contains frequent greenish grey mottling/greenish grey siltstone. . . . between 7.10m and 7.20m depth becomes MMG III with frequent fine to medium extremely weak angular lithorelicts of mudstone.			
8.00-8.80 8.00-8.10	4	SPT	N=1200*	100	0	0				. . . becomes MMGII with extremely weak angular blocks of red mudstone between 7.20m and 8.00m depth. . . . between 7.60m and 7.90m depth bed of extremely weak greenish grey siltstone(MMGIII). . . . between 7.90m and 8.00m depth recovered as fine to coarse angular gravel of extremely weak reddish brown and greenish mudstone.		(4.10)	
8.80-10.30 8.80-9.04	5	SPT	N=164*	100	13	13				. . . extremely weak grey siltstone between 8.23m and 8.30m depth. . . . between 8.50m and 8.80m depth recovered as fine to coarse angular blocks of extremely weak angular mudstone. . . . at 9.20m depth occasional greenish grey mottled greenish grey siltstone. . . . between 9.20m and 10.10m depth mudstone is extremely weak breaks up into angular blocks when handled.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

4. Location: Sandford (Max Mills Lane).
5. SPT hammers EQU083-2013 (E_r = 67.68%) , EQU084-2012 (E_r = 67.22%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 3000 + Comacchio MC300**	**HA + LH**	**BSaimen + WDixon**

GINT_LIBRARY_V8_04.GLB|Log COMPOSITE LOG | 727635_HINKLEY_TO_SEABANK.GPJ - v8_04 | 17/10/13 - 19:57 | AD.
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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8D**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**7.5.13** End: **13.5.13**	**12.22**	**E:340114.5 N:158024.2**	**3** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
											2.12	10.10	
				100	13	13				Very weak thinly laminated reddish brown and greenish grey MUDSTONE. Joint is 50° to 80° undulating rough/planar rough open with smears of red clay and brown oxidation staining. (MERCIA MUDSTONE GROUP Zone I) . . . between 10.60m and 10.85m depth very weak/weak greenish grey thinly laminated siltstone.		(1.00)	
10.30-11.80													
10.30-10.64	6	SPT	N=160*								1.12	11.10	
				100	36	31				Extremely weak/very weak thinly laminated reddish brown MUDSTONE breaks up into fine to coarse angular blocks of mudstone when handled. (MERCIA MUDSTONE GROUP Zone II)		(0.30)	
11.40		HP	c_u=>90								0.82	11.40	
11.45		HP	c_u=200/200/210										
										Very stiff thinly laminated reddish brown slightly sandy CLAY. (MERCIA MUDSTONE GROUP Zone IVa)	0.52	11.70	
11.80-13.30												(0.30)	
11.80-12.05	7	SPT	N=169*								0.22	12.00	
										Extremely weak to very weak thinly laminated reddish brown MUDSTONE breaks up into angular blocks of extremely/very weak mudstone when handled. (MERCIA MUDSTONE GROUP) . . . MMGIVb becomes MMG-II below 11.70m depth (possible differential weathering).	0.02	12.20	
				87	10	7							
										Very weak thinly bedded reddish brown MUDSTONE. Bedding is 5° closely spaced planar rough tight jointed 12.00m depth is 5° and at 12.13m depth is 60° and are closely spaced planar rough. (MERCIA MUDSTONE GROUP Zone I) . . . different weathering below MMG-II and MMG occurs at 12.00m depth.		(1.40)	
13.30-14.80													
13.30-13.57	8	SPT	N=198*								-1.38	13.60	
				100	13	13				Very weak locally extremely weak thinly laminated extremely closely fissured/jointed reddish brown MUDSTONE breaks up into fine to coarse angular blocks of very weak/extremely weak red mudstone. (MERCIA MUDSTONE GROUP Zone II) . . . between 12.80m and 12.90m depth recovered as clayey angular gravel of very weak mudstone.		(0.80)	
											-2.18	14.40	
										. . . between 13.10m and 13.15m depth tabular greenish grey siltstone with red mudstone.		(0.40)	
14.70		HP	c_u=162/160								-2.58	14.80	
										Very weak thinly laminated reddish brown MUDSTONE. Bedding fracture is 3°			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 3000 + Comacchio MC300**	**HA + LH**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC8D**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**7.5.13** End: **13.5.13**	**12.22**	**E:340114.5 N:158024.2**	**4** of **6**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										undulating rough infilled with brown clay (less than 3mm). Joints at 13.70m depth are 60° planar rough tight. (MERCIA MUDSTONE GROUP Zone I) . . . MMG-I becomes MMG_II between 14.00m and 14.40m depth where mudstone is extremely closely jointed/fissured. . . . joints at 14.15m and 14.37m depth are 60° undulating rough infilled with reddish brown clay (less than 2mm).			
										Very stiff reddish brown silty CLAY with occasional fine to coarse lithorelicts of extremely weak red mudstone up to 10mm diameter and greenish grey mottling. (MERCIA MUDSTONE GROUP Zone IVa)			
										Borehole terminated at 14.80m depth.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 3000 + Comacchio MC300**	**HA + LH**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC8D**
Contract Ref:	Start: **7.5.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **13.5.13**	**12.22**	**E:340114.5 N:158024.2**	**5** of **6**

BHC8D 4.50m to 7.00m

BHC8D 7.00m to 8.80m

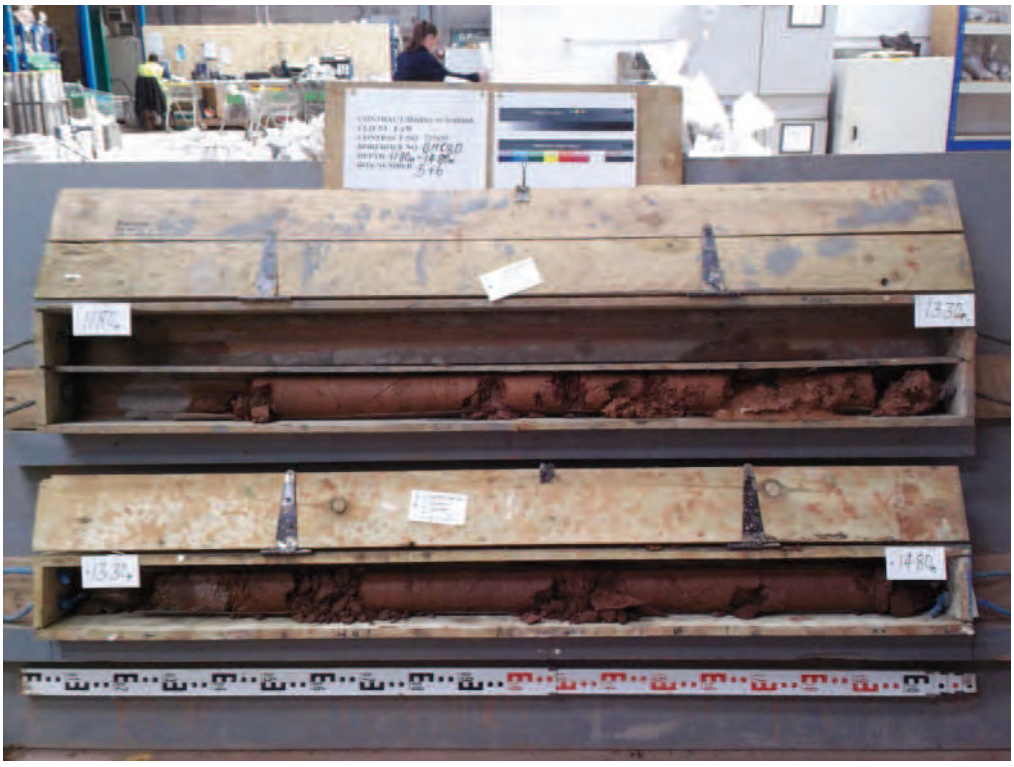
Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 3000 + Comacchio MC300**	Drilled By:	**HA + LH**	Logged By:	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC8D**
Contract Ref:	Start: **7.5.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **13.5.13**	**12.22**	**E:340114.5 N:158024.2**	**6** of **6**

BHC8D 8.80m to 11.80m



BHC8D 11.80m to 14.80m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 3000 + Comacchio MC300**	Drilled By:	**HA + LH**	Logged By:	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC9A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**15.5.13** End: **12.6.13**	**21.14**	**E:340798.8 N:158463.6**	**1** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.00-0.50	1	B								MADE GROUND: Grass overlying dark brown gravelly SAND. Gravel is subrounded to angular fine to coarse flint, brick and sandstone with rootlets. (MADE GROUND)	20.64	(0.50) 0.50	
0.50-1.20	2	B								Firm reddish brown slightly sandy slightly gravelly CLAY. (MERCIA MUDSTONE GROUP)	19.94	(0.70) 1.20	
1.20-1.65	3	U	20 blows 100% recovery							Soft dark brownish red slightly sandy slightly gravelly CLAY. (MERCIA MUDSTONE GROUP)	19.14	(0.80) 2.00	
1.60-2.00	5	D											
1.65-1.85	4	D											
2.00-2.45	6	SPT	N=29							Stiff dark brownish red slightly sandy slightly gravelly CLAY. Gravel is subangular fine to medium of mudstone. (MERCIA MUDSTONE GROUP Zone IVa)		(2.00)	
2.00-3.00	7	D											

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
14/05/13	12:00	3.00	1.50	150	3.00
14/05/13	13:00	3.80	3.00	150	3.80
14/05/13	14:30	4.70	4.20	150	2.20
10/06/13	09:30	6.30	4.40	150	2.00
11/06/13	07:00	11.20	11.20	146	2.90

Chiselling / Slow Progress

From	To	Duration (hh:mm)
4.30	4.70	00:30

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Cable percussion borehole terminated in mudstone at 4.40m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 250**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC9A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**15.5.13** End: **12.6.13**	**21.14**	**E:340798.8 N:158463.6**	**2** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
3.00-3.45 3.00-4.00	8 9	SPT D	N=27							Stiff dark brownish red slightly sandy slightly gravelly CLAY. Gravel is subangular fine to medium of mudstone. (MERCIA MUDSTONE GROUP Zone IVa) *(stratum text copied from layer at 2.00m* depth from previous sheet)			
									1		17.14	4.00	
4.00-4.30	10	SPT	N=66*							Hard to extremely weak dark brownish red mottled grey MUDSTONE recovered as subangular GRAVEL. (MERCIA MUDSTONE GROUP Zone II)		(0.40)	
											16.74	4.40	
4.40-5.30										Medium strong very thinly to thinly bedded reddish brown mottled greenish grey silty MUDSTONE. Bedding is 5°. (MERCIA MUDSTONE GROUP Zone I) . . . between 4.40m and 5.30m depth most of the fractures are randomly orientated. Extremely to very closely spaced with fine to medium gravel infilled in the fractures. (possible intensely fractured zone).			
4.70-4.80	11	SPT	N=750*	89	20	0	NI 40 60			. . . between 4.85m and 5.00m depth non intact (possible intensely fractured zone).		(1.25)	
										. . . between 5.04m and 5.17m depth joint is 80° planar rough with non intact upper wall rock.			
5.30-6.30 5.30-5.72	21	SPT	N=111*	100	40	14	NI 80 140			. . . between 5.30m and 5.45m depth non intact breaking along randomly orientated fractures with some iron staining along the fractures in places. . . . between 5.56m and 5.65m depth joint is 60° planar rough clean.	15.49	5.65	
										Extremely weak becoming very weak thinly laminated green grey mottled reddish brown SILTSTONE with pockets of red mudstone. Bedding is 5° to 10°. (MERCIA MUDSTONE GROUP Zone I)		(0.65)	

Boring Progress and Water Observations						Chiselling / Slow Progress		
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)

General Remarks

4. Location: Sandford (A371).
5. SPT hammers EQU084-2012 (E_r = 67.22%) , EQU089-2012 (E_r = 61.46%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 250**	**HA + JP**	**BSaimen + WDixon**

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STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC9A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**15.5.13** End: **12.6.13**	**21.14**	**E:340798.8 N:158463.6**	**3** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				100	40	14	NI 80 140			. . . at 5.70m depth joint is 30° with greenish grey clay on the joint. . . . at 5.90m depth joint is 45° planar with non intact wall rock. Extremely weak becoming very weak thinly laminated green grey mottled reddish brown SILTSTONE with pockets of red mudstone. Bedding is 5° to 10°. (MERCIA MUDSTONE GROUP Zone I) *(stratum text copied from layer at 5.65m* depth from previous sheet) . . . non intact between 6.15m and 6.30m depth fractured along randomly orientated fractures.	14.84	6.30	
6.30-7.80 6.30-6.63	21	SPT	N=167*	90	43	12	NI 50 80 NI 80 180			Very weak thickly laminated to very thinly bedded reddish brown MUDSTONE interbedded with greenish grey thickly laminated to very thinly bedded SILTSTONE. Bedding fractures are 15° very closely to closely spaced infilled with fine to medium gravel of siltstone and mudstone. (MERCIA MUDSTONE GROUP Zone I) . . . at 6.65m depth subangular brown inclusions of quartzite. . . . between6.75m and 6.85m depth non intact along the fracture.	14.29 14.04	(0.55) 6.85 (0.25) 7.10	
7.80-9.30 7.80-8.19	12	SPT	N=125*	100	45	25	NI 100 180			Extremely weak reddish brown mottled green mottled silty MUDSTONE crumbles into fine to coarse angular blocks of extremely weak mudstone. Bedding dipping at 10° to 15°. (MERCIA MUDSTONE GROUP Zone II) . . . joint between 6.95m and 7.15m depth dipping at 85°. Very weak thinly to thinly bedded reddish brown MUDSTONE. (MERCIA MUDSTONE GROUP Zone I) . . . weathering penetrates along the fracture at 7.52m depth causing the wall rock to weaken. . . . between 7.6 m and 7.80m depth extremely weak mudstone crumbles into fine to coarse angular blocks of extremely weak mudstone (possible differential weathering MMGII). Very weak very closely jointed greenish grey SILTSTONE with black spots on joints. (MERCIA MUDSTONE GROUP Zone I) . . . between 8.00m and 8.17m depth non intact recovered as fine to coarse angular siltstone blocks. . . . joint between 8.38m and 8.50m depth is 65° planar with non intact wall rock.	13.34 12.99	(0.70) 7.80 (0.35) 8.15	

Description on next sheet

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 250**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC9A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**15.5.13** End: **12.6.13**	**21.14**	**E:340798.8 N:158463.6**	**4** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
9.30-10.80 9.30-9.49	13	SPT	N=273*	100	45	25	NI 100 180			Very weak to weak thinly to medium bedded reddish brown mottled green silty MUDSTONE. fractures (both bedding and joint induced) 10° to 20° very closely to medium spaced undulating rough infilled with fine gravel of mudstone. (MERCIA MUDSTONE GROUP Zone I) *(stratum text copied from layer at 8.15m* depth from previous sheet) . . . non intact up to 80mm (possible slight movement along the fracture at 9.10m depth. . . . between 9.30m and 10.80m depth contains fractures formed along random direction and non intact zones in places. . . . between 9.45m and 9.63m depth non intact recovered as fine to coarse fragments of mudstone. . . . between 9.65m and 9.95m depth fractures are 10° to 15° undulating rough and very closely to closely spaced. . . . between 9.95 m and 10.40m depth non intact broken up along random direction. . . . at 10.40m depth fractures into red weak mudstone are faint inclined along the direction of bedding one very closely to closely spaced.		(2.65)	
				100	39	14	NI 40 110				10.34	10.80	
10.80-12.30 10.80-10.91	14	SPT	N=306*	20	0	0				Non intact recovered as fine to coarse cobbles and gravel of weak greenish grey SILTSTONE. (MERCIA MUDSTONE GROUP) . . . percentage of recovery between 10.80m and 12.30m depth is 20%.		(1.50)	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 250**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC9A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**15.5.13** End: **12.6.13**	**21.14**	**E:340798.8 N:158463.6**	**5** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				20	0	0					8.84	12.30	
12.30-13.10				88	0	0				Non intact recovered as fine to coarse greenish grey very clayey angular GRAVEL of extremely weak to very weak SILTSTONE with a low cobble content (possible intensely fractured zone). (MERCIA MUDSTONE GROUP) . . . between 12.30m and 12.50m depth cobble and gravel of greenish grey siltstone. . . . recovery between 12.30m and 13.10m depth is 88%.	8.04	(0.80) 13.10	
13.10-14.60 13.10-13.30	15	SPT	N=286*	87	8	8				Weak very thinly bedded greenish grey SILTSTONE. (MERCIA MUDSTONE GROUP Zone I) . . . non intact between 13.10m and 13.40m depth recovered as fine to coarse angular gravel with weathering penetrating along the fracture along wall rocks to disintegrate. . . . bedding fractures at 13.45m and 13.60m depth are closely spaced with weathering downward along the fracture causing wall rocks to disintegrate.	7.54	(0.50) 13.60	
										Extremely weak very thinly to thinly bedded greenish grey and reddish brown silty MUDSTONE crumbles/breaks up into fine to coarse angular blocks of extremely weal silty mudstone. Bedding if 5° to 10°. (MERCIA MUDSTONE GROUP Zone III) . . . between 13.60m and 13.70m depth soft greenish grey silty clay with occasional fine to coarse lithorelicts of weak siltstone (MMGIII), (possible weakening of wall rock along fracture at 13.60m depth).	6.54	(1.00) 14.60	
14.60-16.10 14.60-14.93	16	SPT	N=166*	97	27	0				Weak reddish brown silty MUDSTONE recovered orientated with random fractures. (MERCIA MUDSTONE GROUP Zone I)		(0.45)	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 250**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC9A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**15.5.13** End: **12.6.13**	**21.14**	**E:340798.8 N:158463.6**	**6** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
											6.09	15.05	
							NI 50 90			Very weak to weak thinly to thickly laminated greenish grey SILTSTONE. Bedding is 5° to 10°. Fractures and bedding fractures 5° to 10° very closely to closely spaced undulating rough infilled with fine to coarse gravel of siltstone up to 20mm. (MERCIA MUDSTONE GROUP Zone I) . . . at 15.14m, 15.25m and 15.40m depth non intact wall rocks.		(0.45)	
				97	27	0	NI 40 100				5.64	15.50	
16.10-17.30 16.10-16.55	17	SPT	N=96							Very weak reddish brown mottled greenish grey silty MUDSTONE. (MERCIA MUDSTONE GROUP Zone I) . . . between 15.50m and 17.20m depth non intact zones of fine to coarse gravel of mudstone and siltstone. . . . between 15.60m and 15.78m depth non intact recovered as fine to coarse angular fragments of red very weak to weak (possible intensely fractured zone). . . . between 15.90m and 16.04m depth red mudstone is very weak with many randomly orientated fractures. . . . non intact below 16.04m to 16.10m depth. . . . between 16.10m and 16.65m depth non intact recovered as fine to coarse angular fragments of red mudstone.		(2.10)	
				75	7	0				. . . at 16.60m depth joint is 50° planar rough with brown discolouration at joint. . . . between 16.65m and 17.30m depth non intact and extremely weak to very weak fragments of red mudstone and greenish grey siltstone (possible intensely fractured zone).			
17.30-18.80 17.30-17.55	18	SPT	N=179*							. . . weak greenish grey silt between 17.30m and 17.40m depth with a joint formed along gypsum vein.			
				93	24	8	NI 40 120				3.54	17.60	
										Very weak reddish brown silty MUDSTONE with occasional thin beds of greenish grey very weak and extremely weak siltstone. Bedding is 10° to 20°. (MERCIA MUDSTONE GROUP Zone I) . . . at 17.74m depth lenticular bed of greenish grey siltstone.			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 250**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC9A**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**15.5.13** End: **12.6.13**	**21.14**	**E:340798.8 N:158463.6**	**7** of **10**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										. . . between 17.75m and 18.15m depth mudstone grades into MMGII which crumbles into fine to coarse angular blocks (possibly due to prolonged weathering). Very weak reddish brown silty MUDSTONE with occasional thin beds of greenish grey very weak and extremely weak siltstone. Bedding is 10° to 20°. (MERCIA MUDSTONE GROUP Zone I) *(stratum text copied from layer at 17.60m* depth from previous sheet) . . . at 18.15m depth bed of fibrous gypsum. . . . between 18.25m and 18.28m depth greenish grey lenticular greenish grey siltstone.		(1.30)	
18.80-20.30 18.80-18.95	19	SPT	N=261*	93	24	8	NI 40 120			. . . at 18.30m depth fracture 10° with 15mm of greenish grey silty clay (possible movement). . . . between 18.30m and 18.42m depth greenish grey siltstone. . . . between 18.50m and 18.65m to 18.60m to 18.70m depth joints are 75° planar with brown discolouration on fracture. . . . bedding fracture between 18.50m and 18.80m depth very closely spaced planar clean. Mudstone between 18.50m and 18.80m depth grades between MMGI and MMGII.	2.24	18.90	
												(0.25)	
											1.99	19.15	
				100	35	19	NI 80 180			Very weak very thinly bedded greenish grey SILTSTONE. (MERCIA MUDSTONE GROUP Zone I) . . . joint between 18.90m and 19.10m depth 65° planar rough with brown strong/non intact wall rocks.		(1.15)	
20.30-20.44	20	SPT	N=300*							Very weak very thinly to thinly bedded reddish brown silty MUDSTONE with occasional pockets of white gypsum. Bedding is 15°. Fractures and bedding fractures are 15° to 70° very closely to closely spaced with fine to medium gravel with clay along apertures. Fracture planes occasionally non intact. (MERCIA MUDSTONE GROUP Zone I) . . . between 19.60m and 19.90m depth occasional fine to coarse gravel size cavities formed by the discolouration of white gypsum. . . . between 19.67m and 19.73m depth bedding fractures are 10° closely spaced with non intact wall rocks. . . . at 19.92m depth bedding fracture is 5° with non intact lower wall rock (possible movement).	0.84	20.30	
										Borehole terminated at 20.30m depth.			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 250**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC9A**
Contract Ref:	Start: **15.5.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **12.6.13**	**21.14**	**E:340798.8 N:158463.6**	**8** of **10**

BHC9A 4.40m to 6.30m

BHC9A 6.30m to 9.30m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 250**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC9A**
Contract Ref:	Start: **15.5.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **12.6.13**	**21.14**	**E:340798.8 N:158463.6**	**9** of **10**

BHC9A 9.30m to13.10m

BHC9A 13.10m to 16.10m

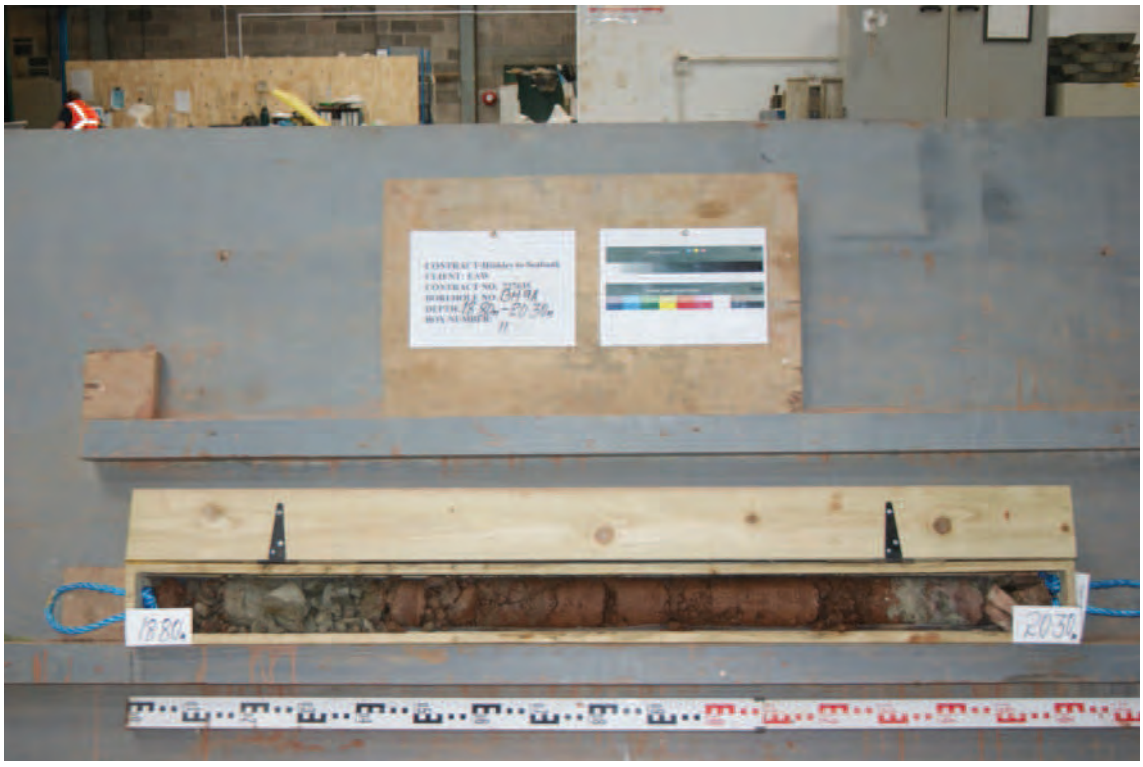
Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 250**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC9A**
Contract Ref:	Start: **15.5.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **12.6.13**	**21.14**	**E:340798.8 N:158463.6**	**10** of **10**

BHC9A 16.10m to 18.80m



BHC9A 18.80m to 20.30m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 250**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC9B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.5.13** End: **6.6.13**	**20.73**	**E:340828.2 N:158434.9**	**1** of **5**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										Grass overlying dark brown slightly clayey SAND. (TOPSOIL)	20.53	0.20	
0.20-1.20	1	B								Soft dark brownish red slightly sandy slightly gravelly CLAY. (MERCIA MUDSTONE GROUP)		(1.00)	
1.20-1.65	2	SPT	N=4								19.53	1.20	
1.60-2.00	3	D								Stiff brownish red slightly sandy slightly gravelly CLAY. Gravel is subangular fine to medium of mudstone. (MERCIA MUDSTONE GROUP Zone IVa)			
2.00-2.45	4	SPT	N=28						13/05 15:00			(1.80)	
2.00-3.00	5	D							13/05 12:20				
									1		17.73	3.00	
3.00-3.45	6	SPT	N=42							Very stiff slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone. (MERCIA MUDSTONE GROUP)			
3.00-3.50	7	D											
3.50-3.95	8	SPT	N=43									(1.50)	
3.50-4.50	9	D											

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
13/05/13	12:00	3.00	1.50	150	3.00
13/05/13	12:20	3.00	1.50	150	2.70
13/05/13	15:00	5.20	4.20	150	2.40

Chiselling / Slow Progress

From	To	Duration (hh:mm)
3.00	3.50	00:45
4.50	5.20	00:30

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Cable percussion borehole terminated in mudstone at 5.20m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC9B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.5.13** End: **6.6.13**	**20.73**	**E:340828.2 N:158434.9**	**2** of **5**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										Very stiff slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to coarse of mudstone. (MERCIA MUDSTONE GROUP) *(stratum text copied from layer at 3.00m* depth from previous sheet)	16.23	4.50	
4.50-4.80 4.50-5.20	10 11	SPT D	N=100*							Hard to extremely weak red brown MUDSTONE recovered as slightly clayey angular GRAVEL. (MERCIA MUDSTONE GROUP)		(0.80)	
5.20-5.33	12	SPT	N=300*								15.43	5.30	
5.30-5.90				100	17	17				Very weak to weak reddish brown silty MUDSTONE with occasional greenish grey mottling. Recovered as fine to coarse angular blocks of intact rock (possible intensely fractured zone). (MERCIA MUDSTONE GROUP Zone I) . . . between 5.42m and 5.55m depth core with full diameter where as 5.55m and 5.90m depth mudstone recovered as fine to coarse angular blocks of intact MMGI mudstone. . . . between 5.90m and 6.40m depth non intact recovered as weak fine to coarse angular blocks of weak mudstone broken along randomly orientated fractures.			
5.90-6.90 5.90-6.11	1	SPT	N=316*	80	30	10	NI 40 100			. . . between 6.40m and 6.60m depth fractures are 10° are very closely to closely spaced.		(2.60)	
6.90-7.90 6.90-7.09	2	SPT	N=316*	90	22	10	NI 30 100			. . . between 6.70m and 6.90m depth non intact recovered as extremely weak to very weak fine to coarse angular gravel of red mudstone (possibly weakened by prolonged percolation of water and subsequent weathering). . . . between 6.90m and 7.45m depth non intact recovered as fine to coarse weak angular fragments of silty mudstone. . . . between 7.42m and 7.52m depth mudstone non intact and very weak. . . . between 7.55m and 7.65m depth recovered as fine to coarse angular fragments of extremely weak to weak mudstone..	12.83	7.90	
7.90-9.20				38	0	0				*Description on next sheet*			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

4. Location: Sandford (A371).
5. SPT hammers EQU084-2012 (E_r = 67.22%) , EQU089-2012 (E_r = 61.46%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC9B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.5.13** End: **6.6.13**	**20.73**	**E:340828.2 N:158434.9**	**3** of **5**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
7.90-8.16	3	SPT	N=200*	38	0	0				. . . between 7.60m and 7.70m depth vertical vein of white fibrous gypsum. . . . between 7.80m and 7.90m depth medium strong greenish grey siltstone. Firm reddish brown silty CLAY formed by the complete weathering of mudstone (possible intensely fractured zone undergone prolonged weathering). (MERCIA MUDSTONE GROUP Zone IVb) *(stratum text copied from layer at 7.90m* depth from previous sheet)	11.83	(1.00) 8.90	
										Extremely weak extremely closely fissured/jointed reddish brown MUDSTONE crumbles/breaks up into fine to coarse angular blocks of extremely weak mudstone (possible intensely fractured zone undergone prolonged weathering). (MERCIA MUDSTONE GROUP Zone II)	11.58	(0.25) 9.15	
9.20-10.70 9.20-9.65	4	SPT	N=97	93	23	17	NI 80 140			Very weak to extremely weak very thinly to thinly bedded greenish grey SILTSTONE with very closely to closely spaced reddish brown extremely/very weak reddish brown mudstone. (MERCIA MUDSTONE GROUP Zone I) . . . between 9.20m and 9.35m depth red brown mudstone recovered non intact. . . . between 9.20m and 10.05m depth non intact (possible intensely fractured zone) and weakened. . . . between 9.90m and 10.05m depth red mudstone recovered non intact. . . . siltstone between 9.95m and 10.30m depth bedding fractures are closely spaced. . . . bedding fracture at 10.15m depth wall rock on either side of the fracture is weakened and disintegrated due to prolonged weathering along the fracture. . . . between 10.30m and 10.50m depth red mudstone becomes very weak.	10.03	(1.55) 10.70	
10.70-12.20 10.70-11.02	5	SPT	N=182*	100	33	17	NI 30 160			Extremely weak very thinly to medium spaced reddish brown and greenish MUDSTONE crumbles into fine to coarse angular blocks of extremely weak mudstone. Bedding is 25°. (MERCIA MUDSTONE GROUP Zone II) . . . between 10.82m and 10.97m depth possible bedding fracture. *Description on next sheet* Non intact between 11.60m and 11.74m depth. *Description on next sheet*	9.43	(0.60) 11.30	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC9B**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**13.5.13** End: **6.6.13**	**20.73**	**E:340828.2 N:158434.9**	**4** of **5**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				100	33	17				. . . at 11.90m and 12.00m depth joint is planar rough clean with brown discolouration. Very weak to weak very thinly to medium bedded reddish brown silty MUDSTONE with occasional thin/medium bedded greenish grey siltstone. Bedding fractures are 15° to 28° planar rough with smears of clay. Fractures (both bedding fractures and joints) are very closely to closely spaced. (MERCIA MUDSTONE GROUP Zone I) *(stratum text copied from layer at 11.30m* depth from previous sheet) . . . between 12.20m and 12.60m depth weak grey siltstone. . . . between 12.37m and 12.54m depth recovered as fine to coarse angular open of greenish grey siltstone. . . . between 12.60m and 12.85m depth non intact probably due to intense fracturing. . . . joint as 13.00m depth is 45° planar rough with brown discolouration.		(2.45)	
12.20-13.70 12.20-12.33	6	SPT	N=316*	97	23	0	NI 90 140						
13.70-14.70				100	0	0				. . . between 13.15m and 13.25m depth weak greenish grey siltstone and is non intact. . . . fracture at 13.25m depth infilled with fine to medium gravel of green siltstone and red mudstone. . . . bedding fracture at 13.40m depth is 20° planar rough open. . . . non intact bedding between 13.42m and 13.53m depth. Extremely weak thinly laminated greenish grey MUDSTONE crumbles or breaks into fine to coarse extremely weak greenish grey siltstone. Bedding is 15° to 20°. (MERCIA MUDSTONE GROUP Zone II) . . . bed of weak grey mudstone at 14.55m depth up to 60mm. . . . non intact and extremely weak below 14.55m depth. Borehole terminated at 14.70m depth.	6.98	13.75	
											6.03	14.70	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Comacchio GEO 205**	**HA + JP**	**BSaimen + WDixon**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC9B**
Contract Ref:	Start: **13.5.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	End: **6.6.13**	**20.73**	**E:340828.2 N:158434.9**	**5** of **5**

BHC9B 5.30m to 10.70m

BHC9B 10.70m to 14.70m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Comacchio GEO 205**	Drilled By:	**HA + JP**	Logged By:	**BSaimen + WDixon**

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GINT_LIBRARY_V8_04.GLB|Log COMPOSITE LOG | 727635_HINKLEY_TO_SEABANK.GPJ - v8_04 | 17/10/13 - 21:02 | AD.

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC9C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**31.5.13** End: **14.6.13**	**21.08**	**E:340827.6 N:158483.5**	**1** of **7**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
0.10-0.60	1	B								Grass over firm brown slightly sandy CLAY. (TOPSOIL)	20.78	(0.30) 0.30	
0.60-1.20	2	B								Stiff red brown locally fissured slightly gravelly sandy CLAY with medium content of black silty clay lenses. (MERCIA MUDSTONE GROUP Zone IVb)			
1.00	1	ES										(1.70)	
1.20-1.65	3	SPT	N=7										
1.20-2.00	4	D									19.08	2.00	
2.00-2.39	5	SPT	N=64*							Firm red brown slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to medium of mudstone. (MERCIA MUDSTONE GROUP Zone IVa)		(0.50)	
2.00-3.00	6	D									18.58	2.50	
										MUDSTONE recovered as dense to very dense red brown mottled grey slightly clayey GRAVEL of angular to subangular fine to coarse mudstone. (MERCIA MUDSTONE GROUP Zone II)		(1.00)	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)
2.60	3.00	00:30

General Remarks

1. Location CAT scanned and inspection pit dug to 1.20m depth prior to drilling.
2. Cable percussion borehole terminated in mudstone at 3.00m - rotary follow-on undertaken to completion depth.
3. 50mm diameter gas/groundwater sandpipe installed as shown on completion.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Beretta T41**	**HA + NR**	**BSaimen + RCoward**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC9C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**31.5.13** End: **14.6.13**	**21.08**	**E:340827.6 N:158483.5**	**2** of **7**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
3.00-3.23	7	SPT	N=100*							MUDSTONE recovered as dense to very dense red brown mottled grey slightly clayey GRAVEL of angular to subangular fine to coarse mudstone. (MERCIA MUDSTONE GROUP Zone II) *(stratum text copied from layer at 2.50m* depth from previous sheet)	17.58	3.50	
3.50-4.50				70	0	0				Weak reddish brown mottled green grey MUDSTONE recovered non intact (possible intensely fractured zone). Bedding dipping between 15° and 20°. (MERCIA MUDSTONE GROUP) . . . between 3.50m and 4.05m depth recovered as angular fine to coarse weak mudstone. . . . between 4.10m and 4.20m depth recovered as fine to coarse angular weak mudstone.	16.88	(0.70) 4.20	
4.50-5.30										Extremely weak reddish brown MUDSTONE crumbles/breaks up into fine to coarse extremely weak angular blocks of mudstone. (MERCIA MUDSTONE GROUP Zone II)	16.58	(0.30) 4.50	
4.50-4.79	8	SPT(c)	N=214*	75	0	0				. . . between 4.40m and 4.50m depth recovered as greenish brown gravelly clay. Stiff reddish brown mottled bluish grey silty CLAY with occasional fine to coarse lithorelicts/alternate bands of unweathered extremely weak mudstone (possible differential weathering). (MERCIA MUDSTONE GROUP Zone IVa)	16.08	(0.50) 5.00	
5.00		HP	c_u=175/150/175							Very weak to extremely weak extremely closely jointed reddish brown MUDSTONE crumbles into fine to coarse angular blocks of very weak to extremely weak mudstone. (MERCIA MUDSTONE GROUP Zone II)	15.88	(0.20) 5.20	
5.30-6.40										. . . between 5.03m and 5.07m depth joint is 40° planar rough. . . . between 5.15m and 5.20m depth planar rough partly open.			
5.30-5.55	9	SPT(c)	N=300*	82	27	0				Weak very thinly bedded reddish brown silty MUDSTONE with occasional green grey mottling. Fractures are 5° to 15° undulating rough clean. (MERCIA MUDSTONE GROUP) . . . between 5.70m and 6.10m depth joint is 80° planar rough with black	15.08	(0.80) 6.00	

Boring Progress and Water Observations						Chiselling / Slow Progress		
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)

General Remarks

4. Location: Sandford (A371).
5. SPT hammers EQU 442 (E_r = 60.15%) , EQU084 - 2013 (E_r = 67.22%) used.

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Beretta T41**	**HA + NR**	**BSaimen + RCoward**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC9C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**31.5.13** End: **14.6.13**	**21.08**	**E:340827.6 N:158483.5**	**3** of **7**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
										discolouration on joint.			
				82	27	0				Weak greenish grey SILTSTONE. (MERCIA MUDSTONE GROUP Zone I) . . . siltstone between 6.00m and 6.10m depth fractured randomly due to possible intense fracturing.		(0.30)	
											14.78	6.30	
6.40-6.90 6.40-6.79	10	SPT(c)	N=125*							. . . between 6.10m and 6.22m depth green grey siltstone highly weathered into firm green grey silty clay with occasional fine to coarse angular lithorelicts (MMGIVa, possible differential weathering due to prolonged percolation of water).			
				80	14	0				Weak reddish brown mottled greenish grey silty MUDSTONE recovered as fine to coarse angular gravel of weak red mudstone with pocket of red clay (possible intensely fractured zone). (MERCIA MUDSTONE GROUP Zone I)			
6.90-8.40										. . . between 6.30m and 6.40m depth very weak to extremely weak reddish brown mudstone crumbles into fine to coarse angular blocks (MMGII) of very weak to extremely weak mudstone (possible differential weathering).			
										. . . between 6.90m and 8.00m depth recovered as low (up to 41%) recovered as cobble and angular gravel of red mudstone with irregular fracture surfaces.		(2.10)	
				60	13	0							
										. . . between 8.00m and 8.40m depth recovered as very stiff/stiff reddish brown silty clay with occasional lithorelicts (possible MMGIVa as a result of differential weathering).			
											12.68	8.40	
8.40-9.90 8.40-8.52	11	SPT(c)	N=667*							Weak very thinly to thinly bedded reddish brown mottled green silty MUDSTONE with randomly orientated irregular fractures (possible intensely fractured zone). Bedding is 25°. Bedding fractures are 25° planar partly open/open fractures are randomly orientated extremely closely spaced clean with infilling of fine to medium gravel of siltstone. (MERCIA MUDSTONE GROUP Zone I)			
				93	35	0	NI 30 60			*Description on next sheet*			

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Beretta T41**	**HA + NR**	**BSaimen + RCoward**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC9C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
727635	**31.5.13** End: **14.6.13**	**21.08**	**E:340827.6 N:158483.5**	**4** of **7**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				93	35	0	NI 30 60			. . . joint between 8.53m and 8.65m depth is 65° planar rough with black spots. . . . 30mm cavity containing gypsum crystals (possibly formed by dissolution) at 8.65m depth. Weak very thinly to thinly bedded reddish brown mottled green silty MUDSTONE with randomly orientated irregular fractures (possible intensely fractured zone). Bedding is 25°. Bedding fractures are 25° planar partly open/open fractures are randomly orientated extremely closely spaced clean with infilling of fine to medium gravel of siltstone. (MERCIA MUDSTONE GROUP Zone I) *(stratum text copied from layer at 8.40m* depth from previous sheet)		(2.35)	
9.90-11.40 9.90-10.05	12	SPT(c)	N=429*							. . . between 9.90m and 10.10m depth fractures.			
				93	48	16	NI 35 50			. . . between 10.25m and 10.70m depth vein of (15mm) fibrous gypsum vein dipping almost vertically.	10.33	10.75	
							NI 50 140			Weak thinly jointed greenish grey MUDSTONE interlaminated with thin laminations of brown oolitic limestone. Bedding fracture is 5° very closely to closely spaced undulating rough clean/infilled with greenish clay. (MERCIA MUDSTONE GROUP)	9.98	(0.35) 11.10	
							40 100 220			. . . non intact between 11.00m and 11.90m depth.			
11.40-12.90 11.40-11.56	13	SPT(c)	N=353*	33	4	0				Medium strong grey fine to coarse CONGLOMERATE. Conglomerate contains fine to coarse subrounded limestone/siltstone and quartz clasts. Matrix is grey. (MERCIA MUDSTONE GROUP) . . . joint between 11.10m and 11.40m depth planar rough 75° clean.	9.68	(0.30) 11.40	
										Description on next sheet			

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Beretta T41**	**HA + NR**	**BSaimen + RCoward**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:	Client:	Borehole:
Hinkley to Seabank 400kV Connection	**Electricity Alliance West**	**BHC9C**

Contract Ref:	Start:	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
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Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Reduced Level	Depth (Thickness)	Material Graphic Legend
				33	4	0				Recovered as reddish brown very clayey fine to coarse angular GRAVEL of extremely weak mudstone with cobble of medium sub angular greenish grey and reddish brown siltstone (possible intensely fractured zone). (MERCIA MUDSTONE GROUP) *(stratum text copied from layer at 11.40m* depth from previous sheet)	8.18	(1.50) 12.90	
12.90-14.40 12.90-13.06	14	SPT(c)	N=375*	53	17	0	NI 50 90			Recovered as fine to coarse angular GRAVEL of reddish brown weak mudstone with pockets of very clayey angular gravel of red mudstone. (MERCIA MUDSTONE GROUP) . . . between 12.90m and 13.80m depth recovery is only 25% (possible intensely fractured zone).	7.23	(0.95) 13.85	
14.40-14.58	15	SPT(c)	N=200*							Weak thinly laminated to very thinly bedded greenish grey slightly weathered SILTSTONE. Fractures are 5° to 85° very closely spaced undulating rough infilled with fine to medium gravel of siltstone non intact mudstone. (MERCIA MUDSTONE GROUP) . . . joint between 13.87m and 13.96m depth is 85° planar rough clean. . . . between 14.02m and 14.12m depth non intact (possible intensely fractured zone). . . . bed of (20mm) of reddish brown very weak mudstone at 14.20m depth. . . . at 14.40m depth bedding fracture is 5° undulating rough infilled with fine to coarse gravel of green siltstone. Borehole terminated at 14.40m depth.	6.68	(0.55) 14.40	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	
									All dimensions in metres

Method Used:	Plant Used:	Drilled By:	Logged By:
Inspection pit + Cable Percussion + Rotary Cored	**Dando 2000 + Beretta T41**	**HA + NR**	**BSaimen + RCoward**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC9C**
Contract Ref:	Start: **31.5.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
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BHC9C 3.50m to 6.90m

BHC9C 6.90m to 12.90m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Beretta T41**	Drilled By:	**HA + NR**	Logged By:	**BSaimen + RCoward**

STRUCTURAL SOILS

BOREHOLE LOG

Contract:		Client:		Borehole:
Hinkley to Seabank 400kV Connection		**Electricity Alliance West**		**BHC9C**
Contract Ref:	Start: **31.5.13**	Ground Level (m AOD):	National Grid Co-ordinate:	Sheet:
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BHC9C 12.90m to 14.40m

Method Used:	**Inspection pit + Cable Percussion + Rotary Cored**	Plant Used:	**Dando 2000 + Beretta T41**	Drilled By:	**HA + NR**	Logged By:	**BSaimen + RCoward**