

NORTHSTOWE PHASE 2

Ground Investigation Report

April 2017

Incorporating

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Ground Investigation Report

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Report No UA008426-AFS-GLR-G001

Date April 2017

Version control

Version	Date	Author	Changes
00	April 2017	reg. 13	

This report dated March 2017 has been prepared for the Homes & Communities Agency (the “Client”) in accordance with the terms and conditions of appointment dated November 2016 (the “Appointment”) between the Client and **Arcadis Consulting (UK) Limited** (“Arcadis”) for the purposes specified in the Appointment. For avoidance of doubt, no other person(s) may use or rely upon this report or its contents, and Arcadis accepts no responsibility for any such use or reliance thereon by any other third party.

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1 INTRODUCTION

Arcadis Consulting (UK) Limited (Arcadis) was instructed by the Homes and Communities Agency, 'the Client', in November 2016 to undertake a ground investigation at Northstowe new town development. The purpose of the investigation was to confirm the below ground conditions and establish the soil's material properties to enable a suitable design for the new town development.

The scope of the ground investigation was determined by Arcadis Consulting (UK) Limited.

This ground investigation report provides a factual account of the fieldwork undertaken, the strata encountered, results of *in situ* testing and the subsequent geotechnical and geo-environmental laboratory testing undertaken on samples obtained.

1.1 Limitations

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It should be noted that ground conditions between exploratory holes may vary from those identified during this ground investigation; any design should take this into consideration. It should also be noted that groundwater levels may be subject to diurnal, tidal, seasonal, climatic variations and those recorded in this report are solely dependent on the time the ground investigation was carried out and the weather before and during the investigation.

1.2 Proposed Development

The proposed development at the site comprises approximately 10,000 new homes, a new town centre, schools, health centre and other supporting social infrastructure. The Northstowe joint development control committee received a grant for permission of planning for phase 2 comprising 3,500 homes, a secondary school, 2 primary schools, a town centre and sports hub. Further permission was also agreed for the Southern Access Road.

The ground investigation was designed to:

- Complement and extend the existing information from previous investigations;
- Inform the remediation strategy across the Phase 2 development areas; and,
- Inform the design of the infrastructure and earthworks across Phase 2 development and the access roads as detailed above and including sustainable drainage and the attenuation ponds on the eastern side of the development and the land raising required to the north. The investigation was also to inform outline design of development plots and general earthworks.

1.3 Existing Information

The following information relating to the site and the ground conditions was made available to Arcadis prior to mobilisation to the site:

- a. Invitation to Tender: Northstowe Phase 2 Geo-Environmental and Geotechnical Site Investigation and Reporting [1]; source the Client
- b. Northstowe Phase 2 Ground Investigation Specification [2]; source the Designer.

2 SITE DETAILS

2.1 Site Location and Description

The site was situated approximately 10 km northwest of Cambridge, east of Longstanton and north of Oakington within the South Cambridgeshire District, at approximately NGR TL 4084 6606. The area was bordered to the east by the route of the Cambridgeshire Guided Busway. Image 2-1 Site Location shows the site location.

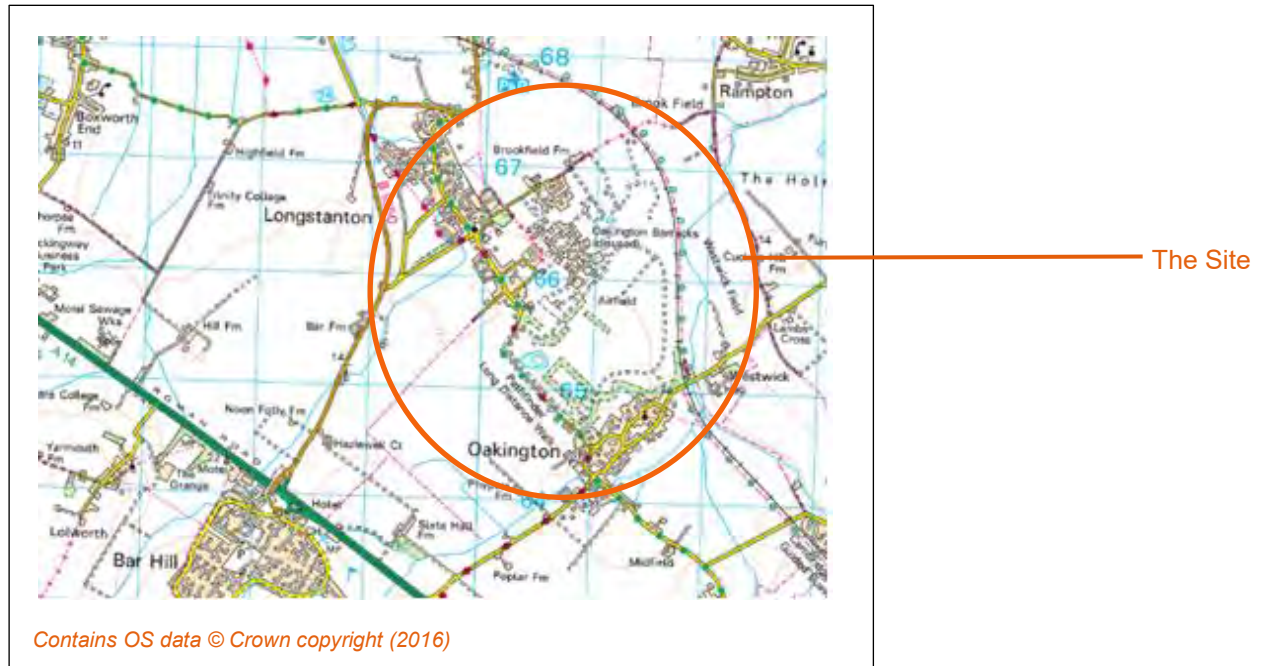


Image 2-1 Site Location

The main Phase 2 development area was approximately 165 ha and generally flat, with an elevation of around 10 m AOD. The area included the former Oakington Barracks, which comprised:

- Three buildings, with no current use;
- Remaining floor slabs from demolished buildings;
- Remaining facilities associated with the barracks including sports amenities and green space; and
- A water tower at NGR TL40789 66241 which was the tallest structure on the site and a visible feature in the wider landscape.

The existing settlement of Rampton Drift, which comprised of 92 properties, bounded the site to the north and was originally built as part of the barracks complex.

The wider main Phase 2 development area included areas of hardstanding and open space associated with the former airfield (currently occupied by agricultural tenants), farmland including Brookfield Farm and Larksfield Farm and a section of Rampton Road.

Historically, a sewage works was present in the north-eastern corner of the site and the open space between this and the settlement of Rampton Drift supported the former bomb storage and associated infrastructure. The area on the western side of the site was the location of the main barrack buildings including the former living quarters and associated welfare / training facilities / offices / vehicle maintenance garages and fuel storage areas. The northern part of this area was used as the Oakington Immigration Reception Centre.

There are groups of trees throughout the former Oakington Barracks, including avenues of mature trees around the barracks complex and leading to the station headquarter building. There are also groups of mature trees in the western corner of the site and around Rampton Drift.

To the south of the main Phase 2 development area, and through the proposed access route is located is land that is identified for future phase 3 of development of Northstowe. The area for the Southern Access Road (West) runs from the B1050 to the boundary of Northstowe, as shown on Image 2-2 Main Phase 2 Development and Southern Access Road West Plan. This area currently comprises arable fields and extends to approximately 51 hectares. Wilson's Road, a public right of way crosses the area, providing a link from Longstanton towards Bar Hill.

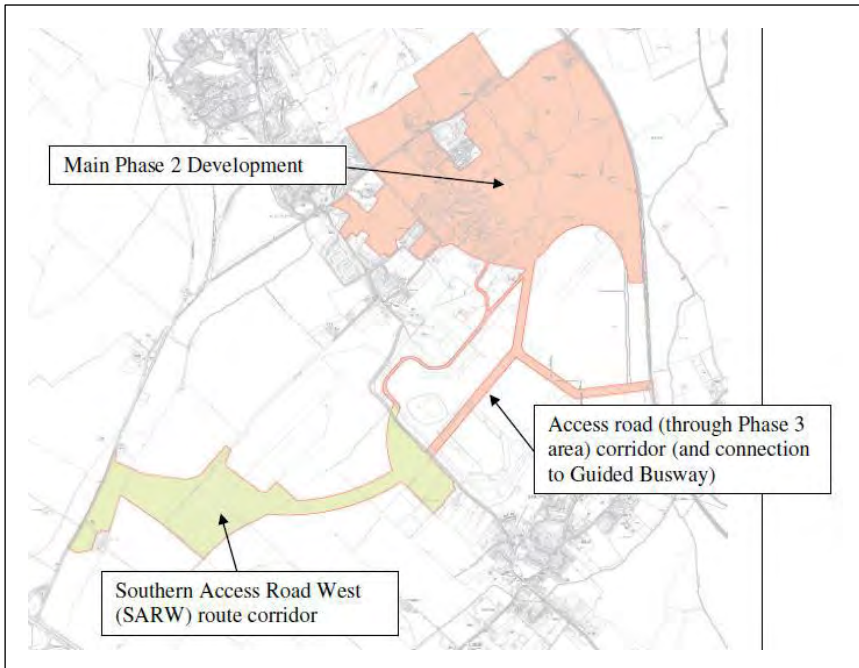


Image 2-2 Main Phase 2 Development and Southern Access Road West Plan

With reference to the Environment Agency (EA) 'What's in my backyard?' [20], there are no current or historical landfills located in the general vicinity of the site.

2.2 Geology

The published 1:50 000 scale British Geological Survey (BGS) map of the area incorporating the site, Sheet 188 [3], and the BGS online GeoIndex [19] indicate the site to be underlain by superficial deposits of River Terrace Deposits (sands and gravels). The underlying bedrock geology consists of mudstone from the Kimmeridge Clay Formation, the West Walton Formation and Amphill Clay Formation. The general distribution of the strata at the site is shown in Image 2-3 Geological Setting.

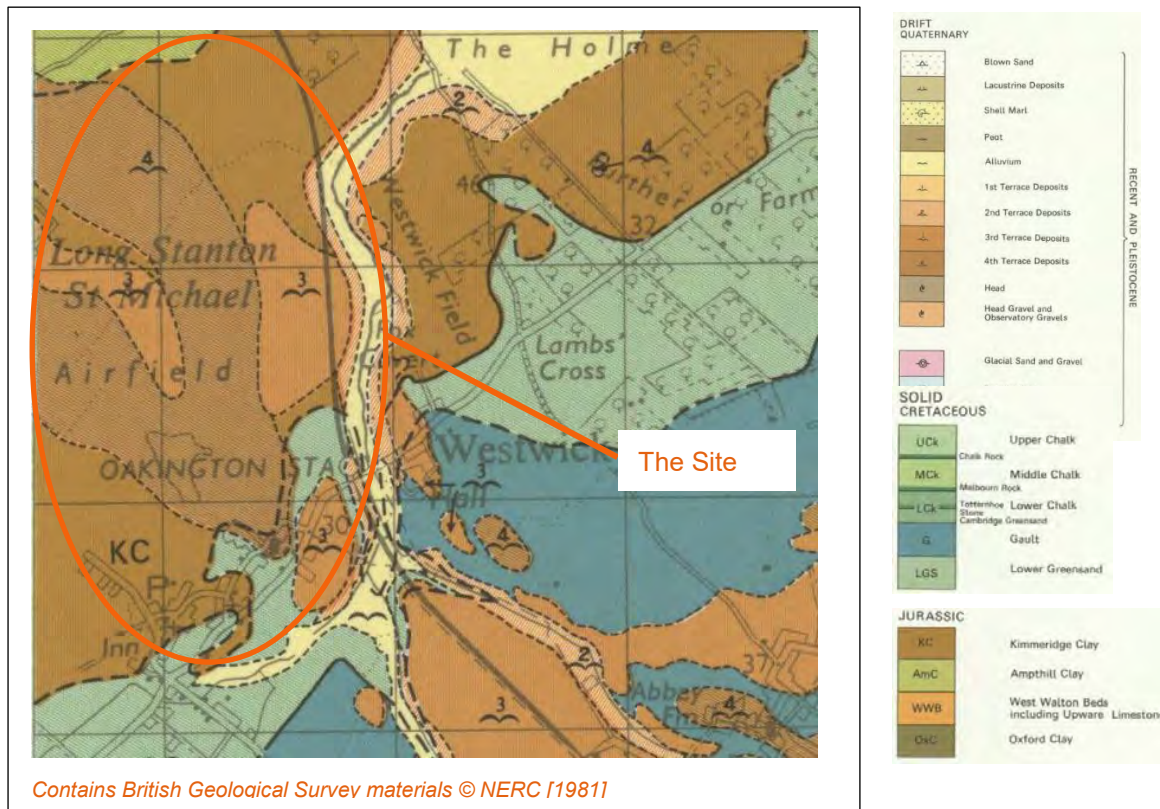


Image 2-3 Geological Setting

A summary of the anticipated geological sequence is shown in Table 2-1 Anticipated geological sequence.

Table 2-1 Anticipated geological sequence

Period	Formation	Description
Quaternary	River Terrace Deposits	Sand and gravel, locally with lenses of silt, clay or peat
Jurassic	Kimmeridge Clay Formation	Mudstone (calcareous or kerogen-rich or silty or sandy); thin siltstone and cement-stone beds; locally sands and silts.
	West Walton Formation and Amphill Clay Formation	Predominantly grey, marine mudstone and silty mudstone.

There are no faults located on the site, according to the BGS mapping.

The Coal Authority website [21] indicates that there is no evidence of coal outcrops or mining activities within the vicinity of the site.

Previous boreholes in the area indicate top soil is present to between 0.9 and 1.4 m bgl, with River Terrace deposits (very clayey gravelly sand), ranging from 0.3 to 2.3 m in thickness. The Kimmeridge Clay (dark grey with medium grey argillaceous limestone layers) was encountered at between 3.0 and 4.3 m bgl.

2.3 Hydrogeology and Hydrology

The superficial deposits (River Terrace Deposits) on the site are classified as a Secondary A aquifer by the Environment Agency (EA). Secondary A aquifers are defined as “*permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers*” [20].

The bedrock (Kimmeridge Clay Formation, West Walton Formation and Ampthill Clay Formation) are classified as Unproductive Strata. Unproductive Strata is defined as “*rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow*” [20].

The superficial deposits are also classified as being in a minor aquifer intermediate groundwater vulnerability zone.

The site is not situated within a groundwater source protection zone [20].

Flood risk zones, levels 3 are located to the immediate north, east and south of the site. Flood risk zones, level 2 are also located to the east, south and west of the site [20].

With reference to the Environment Agency (EA) ‘What’s in my backyard?’ [20], there is a small groundwater abstraction point located at Brookfield Farm in the northeast section of the Main Phase 2 Development. The groundwater is used by multiple sources for spray irrigation and agriculture purposes.

The closest surface water feature is an unnamed pond located in the southwest corner of the former Oakington Barracks. There is also Beck Brook, which is located approximately 150 m east of the site and two unnamed drains located approximately 210 west and 650 m southeast of the site respectively.

3 FIELDWORK

3.1 General

The site has been divided into Land Use (LU) areas, which relate to the area's history and the proposed development. There are 12 LU areas and the numbering of the exploratory holes relates to the LU (e.g. in LU02, exploratory holes are the 200 series, in LU03 the 300 series etc.). It is noted that there is no LU01, as the 100 series already exists from previous investigations.

Ground investigation works were scheduled to be carried out in the eastern part of LU02, all of LU06, LU07, LU09, LU10 and LU12 and specific locations in LU04, LU08 and LU11, between the 28th November 2016 and the 25th January 2017. The ground investigation scope, which was determined by Arcadis Consulting (UK) Limited, was set out in Northstowe Phase 2 Ground Investigation Specification [2] and comprised:

- Determination of location and condition of existing monitoring wells across the site (45 potential locations);
- 41 no. cable percussive boreholes with dual 50mm HDPE installations;
- 45 no. windowless sample holes with 50mm HDPE installations (as indicated) and SPT testing;
- 185 no. trial pits;
- 35 no. Cone Penetration Tests (CPTs);
- 28 no. Cone Penetration Tests (CPTs) with Laser Induced Fluorescence (LIF) probe;
- 49 no. BRE 365 Soakage test within nominated Trial pits;
- 25 no. TRL Dynamic Cone Penetrometer Tests;
- Gas, vapour and groundwater monitoring from existing wells and new exploratory holes; and,
- Sampling associated with gathering soil information for a Soil Management Plan to be completed by others.

The ground investigation methods were undertaken in general accordance with the principles set out in BS EN 1997-2:2005 [9] and with the general practice described in BS5930:2015 [10]. The geo-environmental aspects of the ground investigation complied with the general requirements of BS 10175:2011:2011+A1:2013 [11].

The investigation works were carried out under the supervision of a suitably experienced ground engineer who undertook the logging and reporting of the exploratory holes and in situ testing.

3.2 Exploratory Holes

3.2.1 Exploratory Hole Locations

The co-ordinates and elevations of the exploratory hole locations were obtained by the Arcadis supervising engineer using a Trimble VRS NOW GPRS system; allowing an accuracy of +/-50 mm.

Drawing UA008426-GLR-DWG-0001 presented in Appendix A displays the as-constructed exploratory hole locations while the co-ordinates and elevation of the ground surface at each exploratory hole location are given on the individual logs.

3.2.2 Investigation Methodology

The following methods and techniques were undertaken to construct the exploratory holes at the site. The completed scope of investigation is summarised in Summary of completed exploratory holes: cable percussive **Error! Reference source not found.** below.

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Details of the methods of investigation and associated standards adopted are presented in Appendix B; the exploratory hole records are presented in Appendix C, a key to the notation and symbols used on the logs is presented in Appendix B.

It is noted that ground investigation works could not be undertaken in LU02, due to land ownership issues, and LU07 due to archaeological excavation works.

Table 3-1 Summary of completed exploratory holes: cable percussive

Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
BH601	CP	07/12/2016	07/12/2016	10.00	No groundwater encountered	Target depth
BH602	CP	06/12/2016	06/12/2016	10.45	Groundwater seepage at 4.50 m	Target depth
BH603	CP	06/12/2016	06/12/2016	10.00	No groundwater encountered	Target depth
BH604	CP	12/12/2016	13/12/2016	10.45	Groundwater seepage at 1.10 m	Target depth
BH605	CP	12/12/2016	12/12/2016	10.45	No groundwater encountered	Target depth
BH606	CP	07/12/2016	07/12/2016	10.45	No groundwater encountered	Target depth
BH607	CP	08/12/2016	08/12/2016	10.45	No groundwater encountered	Target depth
BH608	CP	08/12/2016	08/12/2016	10.45	Groundwater encountered at 3.00 m, rose to 1.50 m	Target depth
BH609	CP	09/12/2016	09/12/2016	10.45	No groundwater encountered	Target depth
BH610	CP	12/12/2016	12/12/2016	10.45	No groundwater encountered	Target depth
BH611	CP	07/12/2016	07/12/2016	10.45	Groundwater encountered at 3.00 m and 4.00 m	Target depth
BH613	CP	07/12/2016	07/12/2016	10.00	No groundwater encountered	Target depth
BH1001	CP	09/12/2016	12/12/2016	15.45	Groundwater encountered at 1.32 m, rose to 1.30 m	Target depth
BH1002	CP	09/12/2016	09/12/2016	15.45	Groundwater encountered at 1.30m	Target depth
BH1003	CP	08/12/2016	09/12/2016	15.45	No groundwater encountered	Target depth

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Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
BH1004	CP	08/12/2016	08/12/2016	15.45	Groundwater encountered at 2.50 m, rose to 2.30 m	Target depth
BH1101	CP	06/12/2016	07/12/2016	15.45	Groundwater encountered at 4.30 m, rose to 1.50 m	Target depth
BH1102	CP	07/12/2016	08/12/2016	15.45	Groundwater encountered at 4.20 m, rose to 1.65 m	Target depth
BH1103	CP	12/12/2016	13/12/2016	15.45	Groundwater encountered at 3.00 m, rose to 2.40 m	Target depth
BH1107	CP	28/11/2016	29/11/2016	15.45	Groundwater encountered at 2.00 m and 4.70 m, rose to 3.90 m	Target depth
BH1108	CP	29/11/2016	30/11/2016	15.95	No groundwater encountered	Target depth
BH1109	CP	05/12/2016	05/12/2016	15.45	Groundwater encountered at 4.30 m, rose to 1.55 m	Target depth
BH1110	CP	08/12/2016	09/12/2016	15.45	Groundwater encountered at 2.00 m, rose to 1.60 m	Target depth
BH1111	CP	30/11/2016	01/12/2016	15.45	Groundwater encountered at 4.40 m, rose to 1.80 m	Target depth
BH1112	CP	02/12/2016	02/12/2016	15.45	Groundwater encountered at 3.00 m, rose to 2.00 m	Target depth
BH1201	CP	14/12/2016	15/12/2016	25.00	No groundwater encountered	Target depth
BH1202	CP	13/12/2016	14/12/2016	25.00	No groundwater encountered	Target depth
BH1203	CP	13/12/2016	13/12/2016	25.45	No groundwater encountered	Target depth
BH1204	CP	13/12/2016	14/12/2016	25.33	No groundwater encountered	Target depth
BH1205	CP	14/12/2016	15/12/2016	25.00	No groundwater encountered	Target depth
BH1206	CP	14/12/2016	15/12/2016	25.45	No groundwater encountered	Target depth

Notes: CP = cable percussive boring.

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Table 3-2 Summary of completed exploratory holes: dynamic sampling

Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
WS401	DS	15/12/2016	15/12/2016	1.65	No groundwater encountered	Terminated due to refusal
WS402	DS	15/12/2016	15/12/2016	3.45	Groundwater encountered at 2.00 m	Target depth
WS601	DS	06/12/2016	06/12/2016	1.58	No groundwater encountered	Terminated due to refusal
WS605	DS	06/12/2016	06/12/2016	3.23	No groundwater encountered	Terminated due to refusal
WS606	DS	07/12/2016	07/12/2016	2.93	No groundwater encountered	Terminated due to refusal
WS607	DS	07/12/2016	07/12/2016	3.45	No groundwater encountered	Target depth
WS608	DS	07/12/2016	07/12/2016	2.95	No groundwater encountered	Terminated due to refusal
WS609	DS	06/12/2016	06/12/2016	3.45	No groundwater encountered	Target depth
WS611	DS	05/12/2016	05/12/2016	2.16	No groundwater encountered	Terminated due to refusal
WS612	DS	06/12/2016	06/12/2016	2.75	No groundwater encountered	Terminated due to refusal
WS613	DS	05/12/2016	05/12/2016	2.12	No groundwater encountered	Terminated due to refusal
WS614	DS	06/12/2016	06/12/2016	3.08	No groundwater encountered	Terminated due to refusal
WS615	DS	07/12/2016	07/12/2016	3.45	Groundwater encountered at 1.40 m	Target depth
WS616	DS	08/12/2016	08/12/2016	3.45	Groundwater encountered at 1.00 m	Target depth
WS617	DS	08/12/2016	08/12/2016	3.45	No groundwater encountered	Target depth
WS618	DS	09/12/2016	09/12/2016	3.45	Groundwater encountered at 1.30 m	Target depth
WS619	DS	09/12/2016	09/12/2016	3.45	Groundwater encountered at 1.20 m	Target depth
WS620	DS	08/12/2016	08/12/2016	2.38	No groundwater encountered	Terminated due to refusal

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Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
WS621	DS	07/12/2016	08/12/2016	3.45	Groundwater encountered at 0.80 m	Target depth
WS701	DS	15/12/2016	15/12/2016	3.23	No groundwater encountered	Terminated due to refusal
WS901	DS	14/12/2016	14/12/2016	1.65	No groundwater encountered	Terminated due to refusal
WS902	DS	14/12/2016	14/12/2016	1.65	No groundwater encountered	Terminated due to refusal
WS903	DS	15/12/2016	15/12/2016	3.45	No groundwater encountered	Target depth
WS904	DS	13/12/2016	13/12/2016	3.45	Groundwater encountered at 1.10 m and 2.50 m	Target depth
WS905	DS	14/12/2016	15/12/2016	3.45	No groundwater encountered	Target depth
WS906	DS	13/12/2016	13/12/2016	3.45	No groundwater encountered	Target depth
WS1001	DS	14/12/2016	14/12/2016	3.45	No groundwater encountered	Target depth
WS1101	DS	13/12/2016	13/12/2016	3.45	Groundwater encountered at 1.90 m	Target depth
WS1102	DS	12/12/2016	12/12/2016	3.45	Groundwater encountered at 2.30 m	Target depth
WS1103	DS	12/12/2016	12/12/2016	3.45	Groundwater encountered at 1.70 m	Target depth

Notes: DS = dynamic sampling.

Table 3-3 Summary of completed exploratory holes: trial pitting

Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
TP601	TP	06/12/2016	06/12/2016	3.10	No groundwater encountered	Target depth
TP602	TP	07/12/2016	07/12/2016	3.00	No groundwater encountered	Target depth
TP603	TP	02/12/2016	02/12/2016	3.00	No groundwater encountered	Target depth
TP604	TP	06/12/2016	06/12/2016	3.00	No groundwater encountered	Target depth

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Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
TP605	TP	02/12/2016	02/12/2016	2.60	Rapid groundwater ingress at 0.90 m	Rapid groundwater ingress
TP606	TP	21/12/2016	21/12/2016	1.80	Rapid groundwater ingress at 1.63 m	Water strike and pit wall collapse
TP606A	TP	16/12/2016	16/12/2016	2.20	Rapid groundwater ingress at 1.63 m	Rapid groundwater ingress
TP607	TP	21/12/2016	21/12/2016	2.23	Groundwater encountered at 2.00 m	Water strike and pit wall collapse from 2.05 m
TP608	TP	11/01/2017	11/01/2017	3.00	No groundwater encountered	Target depth
TP609	TP	10/01/2017	10/01/2017	2.60	No groundwater encountered	Terminated on Siltstone
TP611	TP	14/12/2016	14/12/2016	3.00	Groundwater encountered at 3.00 m	Target depth
TP612	TP	07/12/2016	07/12/2016	3.00	No groundwater encountered	Target depth
TP613	TP	01/12/2016	01/12/2016	3.00	No groundwater encountered	Target depth
TP614	TP	07/12/2016	07/12/2016	3.00	Groundwater seepage at 1.10 m	Target depth
TP615	TP	14/12/2016	14/12/2016	3.10	Groundwater encountered at 1.30 m	Target depth
TP622	TP	11/01/2017	11/01/2017	3.10	No groundwater encountered	Target depth
TP623	TP	12/01/2017	12/01/2017	3.00	No groundwater encountered	Target depth
TP624	TP	21/12/2016	21/12/2016	2.20	Groundwater ingress at 1.60 m, slow to start then flow rate increased. Water level monitored for 20 minutes.	Groundwater ingress
TP625	TP	21/12/2016	21/12/2016	3.00	Due to water seepage from 0.60 m pit became unstable from 2.00 m shortly after completion of trial pit.	Target depth

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Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
TP626	TP	07/12/2016	07/12/2016	3.00	No groundwater encountered	Target depth
TP627	TP	05/12/2016	05/12/2016	3.00	No groundwater encountered	Target depth
TP629	TP	13/01/2017	13/01/2017	3.00	No groundwater encountered	Target depth
TP630	TP	13/01/2017	13/01/2017	3.00	No groundwater encountered No hand vane results obtained as no suitable blocks of clay excavated from pit	Target depth
TP631	TP	01/12/2016	01/12/2016	3.00	No groundwater encountered	Target depth
TP632	TP	02/12/2016	02/12/2016	3.00	Groundwater encountered at 0.90 m	Target depth
TP633	TP	12/01/2017	12/01/2017	3.20	No groundwater encountered	Target depth
TP634	TP	12/01/2017	12/01/2017	3.10	No groundwater encountered	Target depth
TP722	TP	28/11/2016	28/11/2016	3.00	Groundwater encountered at 2.40 m	Target depth
TP901	TP	19/12/2016	19/12/2016	3.20	Groundwater ingress at 1.80 m.	Target depth
TP902	TP	20/12/2016	20/12/2016	4.10	Groundwater encountered at 1.33 m	Target depth
TP906	TP	20/12/2016	20/12/2016	1.20	No groundwater encountered Pit relocated to TP906A.	Terminated due to land drain at 1.10 m
TP906A	TP	20/12/2016	20/12/2016	2.85	No groundwater encountered	Terminated on siltstone
TP907	TP	20/12/2016	20/12/2016	4.13	No groundwater encountered	Target depth
TP908	TP	20/12/2016	20/12/2016	3.00	No groundwater encountered	Target depth
TP912	TP	19/12/2016	19/12/2016	2.45	Groundwater encountered at 1.35 m	Pit wall instability from 1.35-2.00 m.

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Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
TP913	TP	19/12/2016	19/12/2016	2.95	No groundwater encountered	Target depth
TP915	TP	20/12/2016	20/12/2016	3.00	No groundwater encountered	Target depth
TP916	TP	19/12/2016	19/12/2016	3.00	Groundwater seepage at 1.60 m	Target depth
TP917	TP	19/12/2016	19/12/2016	3.10	Groundwater encountered at 1.30 m	Pit wall instability
TP918	TP	19/12/2016	19/12/2016	0.95	No groundwater encountered	Pit wall instability
TP919	TP	20/12/2016	20/12/2016	3.00	No groundwater encountered	Target depth
TP921	TP	19/12/2016	19/12/2016	2.27	Groundwater encountered at 2.05 m	Groundwater ingress and pit wall instability
TP923	TP	09/12/2016	09/12/2016	3.30	Groundwater seepage at 1.60 m 100 mm Dia. land drain at 0.80 m depth. Pit collapsed back to 2.20 m.	Pit wall instability
TP924	TP	13/12/2016	13/12/2016	3.00	Groundwater seepage at 1.10 m	Target depth
TP925	TP	14/12/2016	14/12/2016	2.70	Groundwater encountered at 1.00 m	Groundwater ingress and pit wall collapse
TP927	TP	14/12/2016	14/12/2016	3.00	Groundwater encountered at 1.70 m	Target depth
TP928	TP	14/12/2016	14/12/2016	3.00	No groundwater encountered	Target depth
TP929	TP	15/12/2016	15/12/2016	3.30	Groundwater encountered at 1.80 m	Target depth
TP930	TP	14/12/2016	14/12/2016	3.00	Groundwater seepage at 1.80 m	Target depth
TP931	TP	15/12/2016	15/12/2016	3.00	No groundwater encountered	Target depth
TP932	TP	15/12/2016	15/12/2016	3.00	No groundwater encountered	Target depth

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Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
TP1001	TP	16/12/2016	16/12/2016	3.00	Groundwater seepage at 0.70 m	Target depth
TP1003	TP	16/12/2016	16/12/2016	3.00	Groundwater encountered at 2.30 m	Target depth
TP1102	TP	01/12/2016	01/12/2016	2.20	Groundwater seepage at 2.20 m Hole backfilled itself to 2.10 m	Pit wall collapse
TP1106	TP	01/12/2016	01/12/2016	2.20	Hydrocarbon odour emitting from bottom strata – PID machine not picking anything up – 1.5 reading on bag and 0.9/1.3 reading on pot. Water encountered at 1.80 m – oily sheen on surface – sample taken. Sidewalls collapsed backfilling hole to 1.80 m	Groundwater ingress and risk of spreading hydrocarbons on surface.
TP1107	TP	30/11/2016	30/11/2016	3.00	Groundwater seepage at 2.80 m	Target depth
TP1108	TP	30/11/2016	30/11/2016	3.00	Groundwater seepage at 3.00 m	Target depth
TP1109	TP	01/12/2016	01/12/2016	3.00	No groundwater encountered	Target depth
TP1110	TP	30/11/2016	30/11/2016	3.00	Groundwater seepage at 3.00 m	Target depth
TP1112	TP	01/12/2016	01/12/2016	3.00	No groundwater encountered Hole started to backfill from 2.50 m, however target depth was achieved	Target depth
TP1114	TP	30/11/2016	30/11/2016	3.00	Groundwater seepage at 3.00 m Hand vane not possible at 2.90 m, material too soft	Target depth
TP1116	TP	29/11/2016	29/11/2016	3.00	Groundwater encountered at 2.10 m, rose to 2.00 m	Target depth
TP1117	TP	29/11/2016	29/11/2016	3.00	Groundwater seepage at 2.50 m Pit collapsed to 2.50 m No hand vanes taken as material unsuitable	Target depth

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Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
TP1117A	TP	29/11/2016	29/11/2016	0.60	No groundwater encountered	Cable warning tiles at 0.60m
TP1118	TP	29/11/2016	29/11/2016	3.00	Groundwater seepage at 2.00 m	Target depth
TP1119	TP	29/11/2016	29/11/2016	3.00	Groundwater encountered at 3.00 m, rose to 2.50 m	Target depth
TP1122	TP	30/11/2016	30/11/2016	3.00	Groundwater seepage at 2.50 m Hand vane not undertaken between 1.00 m and 2.70 m. No suitable samples obtained	Target depth
TP1123	TP	29/11/2016	29/11/2016	3.00	Groundwater seepage at 2.00 m and 2.40 m	Target depth
TP1201	TP	16/01/2017	16/01/2017	1.00	No groundwater encountered	Possible service
TP1201A	TP	16/01/2017	16/01/2017	3.00	No groundwater encountered	Target depth
TP1202	TP	23/01/2017	23/01/2017	2.40	Groundwater seepage at 2.40 m	Groundwater ingress
TP1203	TP	16/01/2017	16/01/2017	2.10	Groundwater seepage at 2.10 m (possible land drain) No hand vane results obtained as no suitable blocks of clay excavated from pit	Groundwater ingress and pit wall instability
TP1204	TP	20/01/2017	20/01/2017	3.00	Groundwater encountered at 1.60 m	Target depth
TP1205	TP	26/01/2017	26/01/2017	3.00	Groundwater encountered at 1.70 m	Target depth
TP1206	TP	26/01/2017	26/01/2017	3.00	No groundwater encountered	Target depth
TP1207	TP	17/01/2017	17/01/2017	3.00	No groundwater encountered	Target depth
TP1208	TP	09/01/2017	09/01/2017	3.00	No groundwater encountered	Target depth
TP1209	TP	05/01/2017	05/01/2017	3.00	No groundwater encountered	Target depth

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Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
TP1210A	TP	06/01/2017	06/01/2017	3.00	TP1210 cancelled due to relict cable at 0.40 m, moved to TP1210A No groundwater encountered	Target depth
TP1211	TP	06/01/2017	06/01/2017	3.00	No groundwater encountered	Target depth
TP1212	TP	09/01/2017	09/01/2017	3.00	Groundwater seepage at 2.00 m	Target depth
TP1213	TP	25/01/2017	25/01/2017	3.00	No groundwater encountered Soil management samples taken at 0.10 m (SMB1, SMD2) and 0.40 m (SMB3, SMD4)	Target depth
TP1214	TP	25/01/2017	25/01/2017	3.00	No groundwater encountered	Target depth
TP1215	TP	25/01/2017	25/01/2017	3.00	No groundwater encountered	Target depth
TP1216	TP	05/01/2017	05/01/2017	3.00	No groundwater encountered	Target depth
TP1217	TP	05/01/2017	05/01/2017	3.00	No groundwater encountered	Target depth
TP1218	TP	05/01/2017	05/01/2017	3.00	No groundwater encountered	Target depth
TP1219	TP	25/01/2017	25/01/2017	3.00	No groundwater encountered	Target depth
TP1220	TP	25/01/2017	25/01/2017	3.00	No groundwater encountered	Target depth
TP1221	TP	25/01/2017	25/01/2017	3.00	No groundwater encountered	Target depth
TP1222	TP	11/01/2017	11/01/2017	3.00	Groundwater seepage at 1.60 m	Target depth
TP1223	TP	13/01/2017	13/01/2017	1.90	Groundwater seepage at 1.70 m	Groundwater ingress and pit wall instability
TP1224	TP	10/01/2017	10/01/2017	3.00	Groundwater seepage at 0.90 m	Target depth
TP1225	TP	11/01/2017	11/01/2017	1.50	No groundwater encountered	Pit wall instability

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Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
TP1226	TP	12/01/2017	12/01/2017	3.10	No groundwater encountered	Target depth
TP1227	TP	11/01/2017	11/01/2017	1.80	No groundwater encountered	Pit wall instability
TP1228	TP	11/01/2017	11/01/2017	1.85	No groundwater encountered	Pit wall instability
TP1231	TP	20/01/2017	20/01/2017	3.00	No groundwater encountered	Target depth
TP1232	TP	13/01/2017	13/01/2017	3.00	No groundwater encountered	Target depth
TP1233	TP	13/01/2017	13/01/2017	2.50	Groundwater encountered at 1.60 m	Groundwater ingress
TP1234	TP	17/01/2017	17/01/2017	2.50	Groundwater seepage at 1.90 m	Groundwater ingress
TP1235	TP	17/01/2017	17/01/2017	3.00	No groundwater encountered	Target depth
TPBH612	TP	21/12/2016	21/12/2016	3.30	Groundwater seepage at 1.20 m	Target depth
TPC016A	TP	23/01/2017	23/01/2017	1.40	No groundwater encountered.	Drainage pipe encountered at 1.30 m.
TPC016B	TP	24/01/2017	24/01/2017	1.90	TPC016A extended to become TPC016B as original hole was obstructed by drainage pipe Groundwater seepage at 1.90 m	Pit wall instability
TPC019	TP	24/01/2017	24/01/2017	2.40	Groundwater encountered at 2.40 m	Groundwater ingress
TPC024A	TP	24/01/2017	24/01/2017	2.10	Groundwater encountered at 2.10 m	Pit wall collapse due to Groundwater ingress
TPC038	TP	24/01/2017	24/01/2017	2.70	Groundwater seepage at 2.40 m	Groundwater ingress and pit wall instability
TPC050B	TP	24/01/2017	24/01/2017	2.30	No groundwater encountered	Pit wall instability

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Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
TPC051	TP	24/01/2017	24/01/2017	3.00	No groundwater encountered	Target depth
TPSA407	TPSA	04/01/2017	04/01/2017	2.00	Groundwater encountered at 2.00 m	Pit wall collapse due to groundwater ingress
TPSA408	TPSA	04/01/2017	04/01/2017	2.80	Groundwater encountered at 1.74 m	Terminated due to pit wall instability
TPSA610	TPSA	11/01/2017	11/01/2017	3.00	No groundwater encountered	Target depth
TPSA616	TPSA	15/12/2016	15/12/2016	3.00	Groundwater encountered at 1.40 m	Target depth
TPSA618	TPSA	15/12/2016	15/12/2016	3.00	Groundwater encountered at 1.70 m	Target depth
TPSA618A	TPSA	15/12/2016	15/12/2016	1.40	No groundwater encountered	Target depth for soakaway test
TPSA620	TPSA	18/01/2017	18/01/2017	3.00	Groundwater seepage at 1.30 m	Target depth
TPSA801	TPSA	04/01/2017	04/01/2017	2.20	Groundwater encountered at 2.20 m	Pit wall collapse due to groundwater ingress
TPSA802	TPSA	04/01/2017	04/01/2017	2.65	Groundwater encountered at 1.90 m	Terminated due to pit wall instability
TPSA808	TPSA	05/01/2017	05/01/2017	3.00	Groundwater encountered at 1.20 m	Target depth
TPSA813	TPSA	17/01/2017	17/01/2017	2.00	Groundwater encountered at 2.00 m	Pit wall collapse due to groundwater ingress
TPSA814	TPSA	05/01/2017	05/01/2017	2.70	Groundwater encountered at 2.70 m	Pit wall collapse due to groundwater ingress
TPSA832	TPSA	05/01/2017	05/01/2017	2.00	Groundwater encountered at 2.00 m	Pit wall collapse due to groundwater ingress
TPSA847	TPSA	08/12/2016	08/12/2016	2.10	Groundwater encountered at 2.10 m	Pit wall collapse due to

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Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
						groundwater ingress
TPSA856	TPSA	19/01/2017	19/01/2017	1.70	Groundwater encountered at 1.70 m	Groundwater ingress
TPSA911	TPSA	18/01/2017	18/01/2017	3.00	No groundwater encountered	Target depth
TPSA920	TPSA	16/01/2017	16/01/2017	2.70	Groundwater encountered at 1.80 m	Groundwater ingress and pit wall collapse
TPSA926	TPSA	16/01/2017	16/01/2017	3.00	No groundwater encountered	Target depth
TPSA1002	TPSA	17/01/2017	17/01/2017	1.90	Groundwater encountered at 1.90 m	Groundwater ingress and pit wall collapse
TPSA1004	TPSA	17/01/2017	17/01/2017	3.00	Groundwater encountered at 2.20 m	Target depth
TPSA1101	TPSA	08/12/2016	08/12/2016	3.00	Groundwater encountered at 2.40 m	Target depth
TPSA1103	TPSA	10/01/2017	10/01/2017	2.30	Groundwater seepage at 2.30 m	Groundwater ingress
TPSA1105	TPSA	05/01/2017	05/01/2017	2.10	Groundwater encountered at 2.10 m	Groundwater ingress and pit wall collapse
TPSA1113	TPSA	06/01/2016	06/01/2016	2.30	Groundwater encountered at 2.30 m	Groundwater ingress and pit wall instability
TPSA1120	TPSA	06/01/2016	06/01/2016	2.10	Groundwater encountered at 2.10 m	Pit wall collapse due to groundwater ingress
TPSA1121	TPSA	06/01/2016	06/01/2016	2.10	Groundwater encountered at 2.10 m	Pit wall collapse due to groundwater ingress
TPWS611	TP	06/12/2016	06/12/2016	3.00	No groundwater encountered	Target depth
WSC012	TP	24/01/2017	24/01/2017	1.90	Groundwater encountered at 1.90 m	Groundwater ingress and pit wall instability
WSC027	TP	24/01/2017	24/01/2017	3.00	Groundwater encountered at 2.00 m	Target depth

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Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
WSC03	TP	23/01/2017	23/01/2017	2.80	Groundwater encountered at 2.60 m	Obstructed by brick wall beneath concrete. Hole extended to 4m in length to avoid brick wall.
WSC032A	TP	24/01/2017	24/01/2017	2.40	Groundwater seepage at 2.20 m	Pit wall collapse due to groundwater ingress
WSC033	TP	24/01/2017	24/01/2017	3.30	No groundwater observed.	Target Depth
WWC03	TP	24/01/2017	24/01/2017	2.00	Groundwater encountered at 2.00 m	Pit wall collapse due to groundwater ingress
ZBP1	TP	05/12/2016	05/12/2016	1.80	Groundwater encountered at 1.60 m	Terminated on instruction from UXO supervisor.
ZBP2	TP	05/12/2016	05/12/2016	1.10	No groundwater encountered	Terminated on instruction from UXO supervisor.
ZBP3	TP	05/12/2016	05/12/2016	1.40	Groundwater encountered at 1.00 m	Terminated on instruction from UXO supervisor.
ZBP4	TP	06/12/2016	06/12/2016	1.80	No groundwater encountered	Terminated on instruction from UXO supervisor.
ZBP4b	TP	06/12/2016	06/12/2016	1.20	ZPB4b located in same pit as ZBP4. Groundwater encountered at 0.90 m	Terminated on instruction from UXO supervisor.
ZTR1	TP	07/12/2016	07/12/2016	0.55	Cable encountered at 0.40 m, 0.70 m from the edge of the pit No groundwater encountered	Terminated on instruction from UXO supervisor.
ZTR10	TP	08/12/2016	08/12/2016	1.40	No groundwater encountered	Terminated on instruction from UXO supervisor.
ZTR11	TP	08/12/2016	08/12/2016	1.10	No groundwater encountered	Terminated on instruction from UXO supervisor.

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Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
ZTR12	TP	08/12/2016	08/12/2016	0.65	No groundwater encountered.	Terminated on instruction from UXO supervisor.
ZTR2	TP	07/12/2016	07/12/2016	0.60	Earthing rod located in centre of pit. No groundwater encountered	Terminated on instruction from UXO supervisor.
ZTR3	TP	07/12/2016	07/12/2016	0.60	No groundwater encountered	Terminated on instruction from UXO supervisor.
ZTR4a	TP	07/12/2016	07/12/2016	0.60	ZTR4b located in same pit. No groundwater encountered.	Terminated on instruction from UXO supervisor.
ZTR4b	TP	07/12/2016	07/12/2016	0.60	No groundwater encountered	Terminated on instruction from UXO supervisor.
ZTR5	TP	07/12/2016	07/12/2016	0.70	No groundwater encountered	Terminated on instruction from UXO supervisor.
ZTR6	TP	07/12/2016	07/12/2016	0.75	No groundwater encountered	Terminated on instruction from UXO supervisor.
ZTR7A	TP	06/12/2016	06/12/2016	1.10	No groundwater encountered	Terminated on instruction from UXO supervisor.
ZTR7B	TP	06/12/2016	06/12/2016	0.70	No groundwater encountered	Terminated on instruction from UXO supervisor.
ZTR8	TP	08/12/2016	08/12/2016	1.10	No groundwater encountered	Terminated on instruction from UXO supervisor.
ZTR8b	TP	08/12/2016	08/12/2016	1.40	No groundwater encountered	Terminated on instruction from UXO supervisor.
ZTR9	TP	06/12/2016	06/12/2016	0.70	No groundwater encountered	Terminated on instruction from UXO supervisor.
ZTR9b	TP	06/12/2016	06/12/2016	0.85	No groundwater encountered	Terminated on instruction from UXO supervisor.

Notes: TP = trial pitting, TPSA = trial pitting for soak away test.

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Table 3-4 Summary of completed exploratory holes: cone penetration testing

Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
CPT601	CPT	19/12/2016	19/12/2016	3.75	Cone used: 15CFIIP.1032	Test refused on total pressure
CPT601A	CPT	20/12/2016	20/12/2016	11.39	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT602	CPT	20/12/2016	20/12/2016	0.24	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT602A	CPT	20/12/2016	20/12/2016	2.47	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT602B	CPT	20/12/2016	20/12/2016	2.59	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT603	CPT	20/12/2016	20/12/2016	2.26	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT603A	CPT	20/12/2016	20/12/2016	1.79	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT604	CPT	20/12/2016	20/12/2016	1.11	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT606	CPT	20/12/2016	20/12/2016	3.06	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT607	CPT	20/12/2016	20/12/2016	2.14	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT608	CPT	21/12/2016	21/12/2016	2.49	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT609	IP	16/12/2016	16/12/2016	1.20	No groundwater encountered.	Target depth
	CPT	20/12/2016	20/12/2016	12.66	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT610	CPT	21/12/2016	21/12/2016	12.36	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT611	CPT	21/12/2016	21/12/2016	11.25	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT612	CPT	21/12/2016	21/12/2016	11.28	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT613	CPT	21/12/2016	21/12/2016	10.92	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT614	CPT	21/12/2016	21/12/2016	11.48	Cone used: 15CFIIP.1458	Test refused on total pressure

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CPT615	CPT	21/12/2016	21/12/2016	11.11	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT616	IP	16/12/2016	16/12/2016	1.20	No groundwater encountered.	Target depth
	CPT	20/12/2016	20/12/2016	11.38	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT617	CPT	21/12/2016	21/12/2016	2.80	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT1203	CPT	23/12/2016	23/12/2016	5.65	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT1204	CPT	22/12/2016	22/12/2016	6.92	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT1205	CPT	22/12/2016	22/12/2016	8.56	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT1206	CPT	22/12/2016	22/12/2016	6.26	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT1207	CPT	22/12/2016	22/12/2016	8.18	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT1208	CPT	22/12/2016	22/12/2016	8.44	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT1209	CPT	22/12/2016	22/12/2016	7.74	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT1210	CPT	22/12/2016	22/12/2016	9.09	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT1211	CPT	22/12/2016	22/12/2016	8.64	Cone used: 15CFIIP.1458	Test refused on total pressure
CPT1212	CPT	22/12/2016	22/12/2016	8.68	Cone used: 15CFIIP.1458	Test refused on total pressure

Notes: IP = inspection pit, CPT = cone penetration test.

Table 3-5 Summary of completed exploratory holes: laser induced fluorescence probe

Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
LIF601	LIF	14/12/2016	14/12/2016	10.01		Target depth
LIF602	LIF	14/12/2016	14/12/2016	10.05		Target depth
LIF603	LIF	14/12/2016	14/12/2016	10.01		Target depth

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Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
LIF604	IP	13/12/2016	13/12/2016	1.00	No groundwater encountered.	Terminated due to refusal
	LIF	14/12/2016	14/12/2016	10.02		Target depth
LIF605	LIF	14/12/2016	14/12/2016	10.04		Target depth
LIF1001	IP	13/12/2016	13/12/2016	1.20	No groundwater encountered.	Target depth
	LIF	13/12/2016	13/12/2016	3.50		
LIF1002	IP	12/12/2016	12/12/2016	1.20	No groundwater encountered.	Target depth
	LIF	13/12/2016	13/12/2016	4.58		
LIF1003	IP	13/12/2016	13/12/2016	1.20	No groundwater encountered.	Target depth
	LIF	13/12/2016	13/12/2016	3.71		
LIF1004	IP	13/12/2016	13/12/2016	0.80	No groundwater encountered.	Terminated due to refusal
	LIF	13/12/2016	13/12/2016	3.15		
LIF1101	IP	12/12/2016	12/12/2016	1.20	No groundwater encountered.	Target depth
	LIF	13/12/2016	13/12/2016	10.06		Target depth
LIF1102	IP	12/12/2016	12/12/2016	1.20	No groundwater encountered.	Target depth
	LIF	12/12/2016	12/12/2016	3.69		
LIF1103	IP	13/12/2016	13/12/2016	0.50	No groundwater encountered.	Terminated due to refusal
	LIF	14/12/2016	14/12/2016	6.85		
LIF1104	LIF	15/12/2016	15/12/2016	6.25		
LIF1105	IP	12/12/2016	12/12/2016	1.20	No groundwater encountered.	Target depth
	LIF	14/12/2016	14/12/2016	4.61		

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Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
LIF1108	LIF	14/12/2016	14/12/2016	4.75		
LIF1117	LIF	15/12/2016	15/12/2016	4.93		
LIF1301	IP	16/12/2016	16/12/2016	1.20	No groundwater encountered.	Target depth
	LIF	12/01/2017	12/01/2017	5.42		
LIF1302	IP	16/12/2016	16/12/2016	1.20	No groundwater encountered.	Target depth
	LIF	12/01/2017	12/01/2017	7.04		
LIF1303	IP	16/12/2016	16/12/2016	1.20	No groundwater encountered.	Target depth
	LIF	12/01/2017	12/01/2017	4.94		
LIF1304	IP	16/12/2016	16/12/2016	1.20	No groundwater encountered.	Target depth
	LIF	12/01/2017	12/01/2017	6.57		
LIF1305	IP	16/12/2016	16/12/2016	1.20	No groundwater encountered.	Target depth
	LIF	15/12/2016	15/12/2016	3.87		
LIF1306	IP	16/12/2016	16/12/2016	1.20	No groundwater encountered.	Target depth
	LIF	15/12/2016	15/12/2016	3.75		
LIF1307	IP	16/12/2016	16/12/2016	1.20	No groundwater encountered.	Target depth
	LIF	15/12/2016	15/12/2016	3.78		
LIF1308	IP	16/12/2016	16/12/2016	1.20	No groundwater encountered.	Target depth
	LIF	15/12/2016	15/12/2016	3.46		
LIF8002	IP	12/12/2016	12/12/2016	1.20	No groundwater encountered.	Target depth
	LIF	15/12/2016	15/12/2016	1.15		

Location ID	Hole Type	Start Date	End Date	Final depth (m)	Comment	Termination Reason
LIF 8002A	LIF	13/12/2016	13/12/2016	1.18		
LIF WWC003	LIF	14/12/2016	14/12/2016	3.72		

Notes: IP = inspection pit, LIF = laser induced fluorescence probe.

3.2.3 Cable Percussive Boring

Cable percussive boring was completed using a Dando D2000 drilling rig equipped with 200 mm and 150 mm casing and tools to undertake boreholes up to 25 m bgl.

Samples of the material recovered in the boreholes were taken to enable representative laboratory testing. Generally small disturbed samples were taken at each change in stratum and at 0.5 m intervals thereafter in clay soils; and bulk samples were taken at 1 m intervals where the sand and gravel content of the soil was significant.

Where specified by Arcadis Consulting (UK) Limited, UT100 open drive tube samples were taken using thin-walled sampling apparatus from the relatively undisturbed material at the base of the borehole.

Standard penetration tests (SPT) were generally undertaken at 1.0 m until the termination depth of the hole. Where cohesive soils were encountered, the SPT interval became 1.5m and UT100 samples were taken from 0.5 m below the lower end of the SPT.

In addition, sampling requirements for contamination testing - consisting of 1 No. 1 litre plastic tub, 1 glass jar and 2 glass vials - typically comprised for each sample location as:

- 1 sample from the topsoil (if present), taken as close to the surface as possible i.e. just below the grass root zone for example at 0.05-0.25 m within the hand dug inspection pit;
- 2 samples from the top 1.0 m within Made Ground;
- 1 sample per metre of Made Ground thereafter or change in strata;
- 1 sample in each natural stratum; and,
- 1 sample of materials that may be of particular interest e.g. where there is strong visual or olfactory evidence of contamination.

3.2.4 Dynamic Sampling

Dynamic sampling was completed using a track-mounted sampling rig capable of driving windowless sampling tubes using a mechanical hammer dropped repeatedly from a self-governed height. The choice of method was largely dictated by access conditions at the site.

The time to drive the sampling tubes (or number of blows for the mechanical hammer) was recorded together with a description of the recovered materials by the supervising engineer and the lead driller.

Due to the method of investigation, the materials recovered within the sampler apparatus were generally disturbed and were assessed as complying with Class 3 to Class 5 of BS EN 22475-2. Sub-samples of the material recovered in the liners were taken to enable representative laboratory testing. Generally small disturbed samples were taken at each change in stratum and at 0.5 m intervals thereafter in clay soils; and small bulk samples were taken at 1 m intervals where the sand and gravel content of the soil was significant.

Standard penetration tests (SPT) were undertaken using the track mounted rig at 1.0 m until the termination depth of the hole. Where cohesive soils were encountered, the SPT interval became 1.5m and UT100 samples were taken from 0.5 m below the lower end of the SPT.

In addition, sampling requirements for contamination testing was the same as the schedule outlined in the cable percussive boring section.

3.2.5 Trial Pitting

Trial pits were undertaken using a mechanical excavator.

For the machine excavated pits, a type of plant e.g. JCB 3CX backhoe wheeled excavator was used and pits were entirely logged from the surface and arisings obtained from the trial pits.

Samples of the material recovered in the trial pits were taken to enable representative laboratory testing. Generally small disturbed samples were taken at each change in stratum and at 0.5 m intervals thereafter in clay soils; and bulk samples were taken at 1 m intervals where the sand and gravel content of the soil was assessed as significant.

In addition, sampling requirements for contamination testing was the same as the schedule outlined in the cable percussive boring section.

Photographic records of the trial pit elevation and arisings were taken and are presented with the associated trial pit log.

3.3 In situ Testing

3.3.1 General

In situ testing was carried out within the relevant exploratory hole or at a specified test location. Where tests were undertaken within or associated with a specific borehole or trial pit, the test data is presented on the relevant exploratory hole log or as additional sheets to that log. As such, the location details will be the same as the associated hole and its position will be the same as the exploratory hole with which it is associated.

Where in situ tests were carried at standalone location not directly associated with other exploratory holes, the tests results are presented as individual records and they are summarised within Summary of completed exploratory holes: cable percussive **Error! Reference source not found.** as such; their as-constructed locations are given on the test records and their positions are shown on drawing UA008426-GLR-DWG-0001.

3.3.2 Penetration Testing

3.3.2.1 Standard Penetration Tests

Standard penetration tests (SPT) were carried out as required in the investigation scope and in accordance with the methods given in the standard procedures presented within Appendix B. Generally tests were undertaken at regular intervals throughout the borehole to provide a profile of the soil's resistance with depth and a disturbed soil samples was recovered from the SPT split-spoon tool or a disturbed sample was taken over the range of the test interval.

The N-values as determined in the field are presented on the borehole logs as uncorrected values that do not take into account the energy losses or efficiency of the automatic trip hammer used to drive the test tool into the ground. The calibration certification for the test devices used in the investigation is presented in Appendix D and a summary of the SPT equipment used at each location is presented in Table 3-1 Test Hammer Calibrations

Table 3-1 Test Hammer Calibrations

Location ID	SPT Hammer Reference No.	Energy Efficiency Ratio, E _r %	Comment
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All WS locations	365	74.75	Calibration due November 2017
BH1101-BH1103, BH1107-1112 BH1203, BH1205	PB14	81	Calibration due December 2016
BH610, BH1001, BH1003, BH1204, BH1206	CJ08	79.75	Calibration due July 2017
BH608, BH611	BS8	64	Calibration due December 2016
BH601 – BH603, BH613, BH1002, BH1004	BS10	60	Calibration due December 2016
BH604 – BH607, BH609, BH1201- BH1201	BS13	69	Calibration due December 2016

3.3.2.2 TRL Dynamic Cone Penetrometer Test

The penetration resistance of the ground was determined by the TRL dynamic cone penetrometer at the locations specified in the ground investigation scope. Generally, the tests were undertaken adjacent to or as an extension of other exploratory holes to provide additional investigation depth or to provide a subjective record of the ground profile and therefore test results are presented with the associated exploratory hole record in Appendix C.

The TRL dynamic penetrometer is a hand-held test apparatus that uses a lightweight (8 kg) free-fall hammer to drive a 20 mm diameter 60° cone into the ground. The penetration of the cone is recorded after a set number of blows as millimetres per blow. The tests were undertaken in accordance with PR IN 277-04 [4], and the results have been assessed in terms of the CBR-value using the relationship proposed by Jones and Rolt [5] given as:

$$\text{Log (CBR)} = 2.48 - 1.057 \cdot \text{Log} \left(\frac{\text{mm}}{\text{blow}} \right)$$

3.3.2.3 Electrical cone and Piezocone Penetration Testing

Static cone penetration testing (CPT) was carried out as required by the ground investigation scope. The tests were undertaken by specialist subcontractor, In Situ Site Investigation. Tests were undertaken following the methods and techniques given in their technical report for the site work that is presented as Appendix C and provides the test results for each location together with an interpretation of the soil type where this has been assessed. Details of the cone type(s) used and the calibration certification of the test apparatus are also given.

The test locations are shown in drawing UA008426-GLR-DWG-0001.

3.3.2.4 Laser Induced Fluorescence Testing

Laser induced fluorescence (LIF) testing was carried out at selected locations as advised by the investigation supervisor. Testing was undertaken in LU06, LU11 and LU13 to determine the extent of hydrocarbon contamination that had been encountered during previous investigations. The tests were undertaken by specialist subcontractor, In Situ Site Investigation utilising Arcadis' LIF, following the methods and techniques given in their technical report for the site work that is presented as Appendix C and provides the test results for each location together with an interpretation of the soil type where this has been assessed. Details of the cone type(s) used and the calibration certification of the test apparatus are also given.

3.3.3 Strength and Deformation Testing

3.3.3.1 Determination of undrained shear strength using Hand Vane apparatus

Hand shear vane tests were carried out using a Pilcon hand shear vane with a cruciform vane of 19 mm or 33 mm diameter, depending on the strength of the materials. The tests were made at 0.5 m and 1 m intervals in cohesive undisturbed strata within inspection pits, at 1 m intervals or change of stratum within the sides of trial pits and within large block type bucket samples beyond 1.2 m in non-shored trial pits.

The test was performed in general accordance with the manufacturer's instructions and the vane was inserted a minimum distance of 70 mm below the surface tested. The vane head was rotated slowly at a speed not greater than 1 revolution per minute until the soil has failed in shear or the maximum reading of the device was achieved. For valid tests, the remoulded strength of the failed soil was determined by rapidly rotating the vane head for five complete rotations and allowing a minimum rest period of 3 minutes before reapplying torque to the vane.

The undrained soil strength was read directly from the calibrated vane head in kPa. It should be noted that these values are based on an empirical relationship derived by Pilcon from undrained triaxial compression tests on samples of London Clay.

Where possible, four tests were made to provide an average value, however, it should be noted that where natural fissures or discontinuities are present the minimum values may provide a better representation of the mass consistency of the soil and may be significant.

Due to the nature of the samples tested, the results are indicative for assistance in determining soil consistency for logging purposes only and should not be used to classify soil strength.

The hand vane shear strength results are presented on the relevant exploratory holes logs within Appendix C.

3.3.4 Hydraulic Tests

3.3.4.1 Soakaway Tests

The soil infiltration rate was determined by conducting a soakaway tests in accordance with the methodology described in BRE 365 [6]. The tests were conducted in trial pits excavated to the anticipated soakaway depth. Summary information of the tests is presented Table 3-2 Summary of trial pit soakage tests while detailed test sheets are presented with the relevant trial pit log in Appendix C.

Table 3-2 Summary of trial pit soakage tests

Location ID	Depth of pit (m)	Time empty to	Soil Infiltration Rate f (ms^{-1})	Comment/limitations
TPSA407	1.21	-	1.09×10^{-4}	Test terminated due to time constraints
TPSA408	1.24	-	2.52×10^{-5}	Test terminated due to reaching 25% ESD
	1.24	-	8.41×10^{-6}	Test terminated due to time constraints
TPSA610	1.70	-	6.02×10^{-15}	Test terminated due to time constraints
TPSA617	1.50	-	1.22×10^{-12}	Test terminated due to time constraints

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TPSA620	1.20	-	No valid data	Test terminated due to time constraints
TPSA801	2.50	-	1.09×10^{-8}	Test terminated due to time constraints
TPSA802	1.60	-	1.59×10^{-6}	Test terminated due to time constraints
TPSA808	1.00	-	No valid data	Test terminated due to time constraints
TPSA813	1.30	90	5.33×10^{-5}	Test terminated due to emptying of pit
	1.30	50	1.14×10^{-4}	Test terminated due to emptying of pit
	1.30	-	5.29×10^{-5}	Test terminated due to reaching 25% ESD
TPSA814	1.80	150	1.33×10^{-4}	Test terminated due to emptying of pit
TPSA829	1.30	-	2.66×10^{-6}	Test terminated due to time constraints
TPSA832	1.60	-	9.86×10^{-9}	Test terminated due to time constraints
TPSA856	1.20	180	1.12×10^{-5}	Test terminated due to emptying of pit
TPSA905	2.00	-	No valid data	Test terminated due to time constraints
TPSA911	1.10	-	1.36×10^{-9}	Test terminated due to time constraints
TPSA914	1.30	-	No valid data	Test terminated due to time constraints
TPSA920	1.60	-	No valid data	Test terminated due to time constraints
TPSA922	1.10	-	2.13×10^{-7}	Test terminated due to time constraints
TPSA926	1.30	-	2.26×10^{-10}	Test terminated due to time constraints
TPSA933	1.20	-	4.20×10^{-21}	Test terminated due to time constraints
TPSA1002	1.30	-	1.06×10^{-5}	Test terminated due to time constraints

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	1.30	-	6.70×10^{-6}	Test terminated due to time constraints
TPSA1004	1.70	-	2.83×10^{-9}	Test terminated due to time constraints
TPSA1005	2.00	-	2.86×10^{-11}	Test terminated due to time constraints
TPSA1103	1.80	-	3.10×10^{-5}	Test terminated due to time constraints
	1.60	-	4.18×10^{-5}	Test terminated due to reaching 25% ESD
	1.60	120	4.07×10^{-5}	Test terminated due to emptying of pit
TPSA1105	1.40	-	1.92×10^{-7}	Test terminated due to time constraints
TPSA1113	1.80	-	3.17×10^{-9}	Test terminated due to time constraints
TPSA1120	1.50	-	1.91×10^{-8}	Test terminated due to time constraints
TPSA1121	1.50	-	1.34×10^{-6}	Test terminated due to time constraints

3.3.5 VOC Head Space Screening

The presence of Volatile Organic Compounds (VOC) within the ground was estimated using a photoionization detector (PID) to detect the 'headspace' vapours emitted by the compounds. The method is applicable to a wide range of compounds that have sufficiently high volatility to be effected liberated from the soil or water matrix in normal temperature and pressure ranges.

The headspace test was undertaken on the freshly extracted soil core sample at regular intervals of 0.5 m by placing a small amount of material into a screw-top glass jar so that the jar was not more than half-full. The jar opening was covered with an aluminium foil sheet and the lid screwed on to form an air-tight seal. The sample and jar were then shaken for about 15 seconds to break-up and disperse the soil before resting the sample for about 5 minutes.

To assess the headspace vapour, the jar lid was removed and the PID probe was inserted through the foil into the headspace area. The PID reading recorded was the highest response observed in the first 10 seconds. The screening results are presented on the relevant exploratory holes logs within Appendix C.

The testing was undertaken using a Mini RAE 3000 PID with a 10.6 eV lamp.

The PID instrument was calibrated regularly throughout the day using Balance Air and Isobutylene Mixture reference gas concentrations.

3.4 Installations and Post-fieldwork Monitoring

3.4.1 Installations

Installations to enable long term monitoring of the site were made in those boreholes selected by Arcadis Consulting (UK) Limited and the details are summarised in Table 3-3 Summary exploratory hole installations and are also provided on the relevant exploratory hole logs.

Table 3-3 Summary exploratory hole installations

Location ID	Installation Type	Response Zone Top m bgl	Response Zone Base m bgl	Comment/limitations
BH601	SP50	3.00	4.50	Flush cover set in 0.30 m concrete. 2.70 m bentonite pellet seal to top of first response zone.
	SP50	7.00	10.00	Borehole backfilled with bentonite pellets from 4.50 m to 7.00 m (top of second response zone).
BH602	SP50	3.20	5.00	Flush cover set in 0.30 m concrete. 2.90 m bentonite pellet seal to top of first response zone.
	SP50	7.00	10.00	Borehole backfilled with bentonite pellets from 5.00 m to 7.00 m (top of second response zone). Borehole backfilled with bentonite pellets from 10.00 m to 15.45 m.
BH603	SP50	2.00	3.00	Flush cover set in 0.50 m concrete. 1.50 m bentonite pellet seal to top of first response zone.
	SP50	7.00	10.00	Borehole backfilled with bentonite pellets from 3.00 m to 7.00 m (top of second response zone). Borehole backfilled with bentonite pellets from 10.00 m to 15.45 m.
BH604	SP50	2.00	3.00	Flush cover set in 0.30 m concrete. 1.70 m bentonite pellet seal to top of response zone. Borehole backfilled with bentonite pellets from 3.00 m to 7.00 m (top of second response zone).
	SPIE	7.20	7.50	Pluviated sand filter pack from 7.00 m to 8.00 m. Borehole backfilled with bentonite pellets from 8.00 m to 10.45 m.
BH605	SP50	2.00	4.50	Flush cover set in 0.30 concrete. 1.70 m bentonite pellet seal to top of first response zone.
	SP50	7.00	10.00	Borehole backfilled with bentonite pellets from 4.50 m to 7.00 m (top of second response zone).

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				Borehole backfilled with bentonite pellets from 10.00 m to 10.45 m.
BH606	SP50	1.50	2.20	Flush cover set in 0.30 concrete. 1.20 m bentonite pellet seal to top of first response zone.
	SP50	3.50	5.00	Borehole backfilled with bentonite pellets from 2.20 m to 3.50 m (top of second response zone). Borehole backfilled with bentonite pellets from 5.00 m to 10.45 m.
BH607	SP50	1.00	4.00	Flush cover set in 0.30 concrete. 0.70 m bentonite pellet seal to top of first response zone.
	SP50	7.00	10.00	Borehole backfilled with bentonite pellets from 4.00 m to 7.00 m (top of second response zone). Borehole backfilled with bentonite pellets from 10.00 m to 10.45 m.
BH608	SP50	1.00	4.00	Flush cover set in 0.30 concrete. 0.70 m bentonite pellet seal to top of first response zone.
	SP50	6.00	9.00	Borehole backfilled with bentonite pellets from 4.00 m to 6.00 m (top of second response zone). Borehole backfilled with bentonite pellets from 9.00 m to 10.45 m.
BH609	SP50	1.50	4.50	Flush cover set in 0.30 concrete. 1.20 m bentonite pellet seal to top of first response zone.
	SP50	6.00	9.00	Borehole backfilled with bentonite pellets from 4.50 m to 6.00 m (top of second response zone). Borehole backfilled with bentonite pellets from 9.00 m to 10.45 m.
BH610	SP50	3.00	5.00	Flush cover set in 0.30 concrete. 1.60 m bentonite pellet seal to top of first response zone.
	SP50	6.00	8.00	Borehole backfilled with bentonite pellets from 5.00 m to 5.90 m (top of second response zone). Borehole backfilled with bentonite pellets from 8.00 m to 10.45 m.
BH611	SP50	4.00	4.90	Flush cover set in 0.30 concrete. 3.70 m bentonite pellet seal to top of first response zone.
	SP50	7.00	10.00	Borehole backfilled with bentonite pellets from 4.90 m to 7.00 m (top of second response zone). Borehole backfilled with bentonite pellets from 10.00 m to 10.45 m.

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BH613	GMP	1.00	3.00	<p>Flush cover set in 0.50 concrete.</p> <p>0.50 m bentonite pellet seal to top of first response zone.</p> <p>Borehole backfilled with bentonite pellets from 3.00 m to 10.45 m.</p>
BH1001	SP50	1.00	2.80	<p>Flush cover set in 0.30 m concrete.</p> <p>0.60 m bentonite pellet seal to top of first response zone.</p>
	SP50	5.00	8.00	<p>Borehole backfilled with bentonite pellets from 2.80 m to 4.90 m (top of second response zone).</p> <p>Borehole backfilled with bentonite pellets from 8.00 m to 15.45 m.</p>
BH1002	SP50	1.00	3.00	<p>Flush cover set in 0.50 m concrete.</p> <p>0.50 m bentonite pellet seal to top of first response zone.</p>
	SP50	6.00	9.00	<p>Borehole backfilled with bentonite pellets from 3.00 m to 6.00 m (top of second response zone).</p> <p>Borehole backfilled with bentonite pellets from 9.00 m to 15.45 m.</p>
BH1003	SP50	1.00	3.60	<p>Flush cover set in 0.30 m concrete.</p> <p>0.60 m bentonite pellet seal to top of first response zone.</p>
	SP50	6.00	9.00	<p>Borehole backfilled with bentonite pellets from 3.60 m to 5.90 m (top of second response zone).</p> <p>Borehole backfilled with bentonite pellets from 9.00 m to 15.45 m.</p>
BH1004	SP50	1.00	3.00	<p>Flush cover set in 0.50 m concrete.</p> <p>0.50 m bentonite pellet seal to top of first response zone.</p>
	SP50	6.00	8.00	<p>Borehole backfilled with bentonite pellets from 3.00 m to 6.00 m (top of second response zone).</p> <p>Borehole backfilled with bentonite pellets from 8.00 m to 15.45 m.</p>
BH1101	SP50	4.30	5.20	<p>Flush cover set in 0.30 m concrete.</p> <p>4.00 m bentonite pellet seal to top of response zone.</p> <p>Borehole backfilled with bentonite pellets from 5.20 m to 15.45 m.</p>
BH1102	SP50	2.00	3.20	<p>Flush cover set in 0.30 m concrete.</p> <p>1.70 m bentonite pellet seal to top of first response zone.</p>

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	SP50	4.20	5.00	Borehole backfilled with bentonite pellets from 3.20 m to 4.20 m (top of second response zone). Borehole backfilled with bentonite pellets from 5.00 m to 15.45 m.
BH1103	SP50	2.00	5.00	Flush cover set in 0.30 m concrete. 2.00 m bentonite pellet seal to top of first response zone.
	SP50	7.50	9.50	Borehole backfilled with bentonite pellets from 5.00 m to 7.50 m (top of second response zone). Borehole backfilled with bentonite pellets from 9.50 m to 15.45 m.
BH1107	SP50	1.00	3.00	Flush cover set in 0.30 m concrete. 0.70 m bentonite pellet seal to top of first response zone.
	SP50	4.50	4.90	Borehole backfilled with bentonite pellets from 3.00 m to 4.50 m (top of second response zone). Borehole backfilled with bentonite pellets from 4.90 m to 15.45 m.
BH1108	SP50	4.80	6.00	Flush cover set in 0.30 m concrete. 4.50 m bentonite pellet seal to top of response zone. Borehole backfilled with bentonite pellets from 6.00 m to 15.95 m.
BH1109	SP50	4.30	5.20	Flush cover set in 0.30 m concrete. 4.00 m bentonite pellet seal to top of response zone. Borehole backfilled with bentonite pellets from 5.20 m to 15.00 m.
BH1110	SP50	1.90	3.90	Flush cover set in 0.30 m concrete. 1.60 m bentonite pellet seal to top of first response zone.
	SP50	7.50	9.50	Borehole backfilled with bentonite pellets from 3.90 m to 7.50 m (top of second response zone). Borehole backfilled with bentonite pellets from 9.50 m to 15.00 m.
BH1111	SP50	4.40	5.50	Flush cover set in 0.30 m concrete. 4.10 m bentonite pellet seal to top of first response zone.
	SP50	7.00	9.00	Borehole backfilled with bentonite pellets from 5.50 m to 7.00 m (top of second response zone). Borehole backfilled with bentonite pellets from 9.00 m to 15.45 m.

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BH1112	SP50	2.00	6.00	Flush cover set in 0.30 m concrete. 1.70 m bentonite pellet seal to top of first response zone.
	SP50	8.00	10.00	Borehole backfilled with bentonite pellets from 6.00 m to 8.00 m (top of second response zone). Borehole backfilled with bentonite pellets from 10.00 m to 15.45 m.
BH1201	SPIE	12.70	13.00	Flush cover set in 0.50 concrete. 11.50 m bentonite pellet seal to top of response zone. Pluviated sand filter pack from 12.00m to 14.00 m. Borehole backfilled with bentonite pellets from 14.00 m to 25.00 m.
BH1202	SPIE	6.00	10.00	Flush cover set in 0.50 concrete. 5.50 m bentonite pellet seal to top of response zone. Borehole backfilled with bentonite pellets from 10.00 m to 25.00 m.
BH1203	SP50	1.00	2.00	Flush cover set in 0.30 concrete. 0.70 m bentonite pellet seal to top of first response zone.
	SP50	5.00	10.00	Borehole backfilled with bentonite pellets from 2.00 5.00 m (top of second response zone). Borehole backfilled with bentonite pellets from 10.00 m to 25.00 m.
BH1204	SP50	1.00	2.00	Flush cover set in 0.30 concrete. 0.70 m bentonite pellet seal to top of first response zone.
	SP50	10.00	15.00	Borehole backfilled with bentonite pellets from 2.00 10.00 m (top of second response zone). Borehole backfilled with bentonite pellets from 15.00 m to 25.33 m.
BH1205	SP50	2.00	4.00	Flush cover set in 0.30 concrete. 1.70 m bentonite pellet seal to top of first response zone.
	SP50	15.00	20.00	Borehole backfilled with bentonite pellets from 4.00 to 15.00 m (top of second response zone). Borehole backfilled with bentonite pellets from 20.00 m to 25.00 m.
BH1206	SP50	2.00	3.50	Flush cover set in 0.30 concrete.

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	SP50	10.00	15.00	<p>1.70 m bentonite pellet seal to top of first response zone.</p> <p>Borehole backfilled with bentonite pellets from 3.50 to 10.00 m (top of second response zone).</p> <p>Borehole backfilled with bentonite pellets from 15.00 m to 25.45 m.</p>
WS402	SP50	1.80	2.40	<p>Flush cover set in 0.10 concrete.</p> <p>0.90 m arising seal over 0.80 m bentonite pellet seal to top of response zone.</p> <p>Borehole backfilled with arisings from 2.40 m to 3.00 m.</p>
WS701	SP50	1.70	2.00	<p>Flush cover set in 0.10 concrete.</p> <p>0.90 m arising seal over 0.70 m bentonite pellet seal to top of response zone.</p> <p>Borehole backfilled with arisings from 2.00 m to 3.23 m.</p>
WS901	SP50	0.50	1.30	<p>Flush cover set in 0.10 concrete.</p> <p>0.40 m arising seal to top of response zone.</p> <p>Borehole backfilled with arisings from 1.30 m to 1.65 m.</p>
WS902	SP50	0.60	1.20	<p>Flush cover set in 0.10 concrete.</p> <p>0.50 m arising seal to top of response zone.</p> <p>Borehole backfilled with arisings from 1.20 m to 1.65 m.</p>
WS903	SP50	1.00	1.50	<p>Flush cover set in 0.10 concrete.</p> <p>0.90 m arising seal to top of response zone.</p> <p>Borehole backfilled with arisings from 1.50 m to 3.45 m.</p>
WS904	SP50	1.00	2.50	<p>Flush cover set in 0.10 concrete.</p> <p>0.70 m arising seal over 0.20 m bentonite pellet seal to top of response zone.</p> <p>Borehole backfilled with arisings from 2.50 m to 3.45 m.</p>
WS905	SP50	0.50	2.50	<p>Flush cover set in 0.10 concrete.</p> <p>0.40 m arising seal to top of response zone.</p> <p>Borehole backfilled with bentonite pellets from 2.50 m to 3.45 m.</p>
WS906	SP50	0.50	1.50	<p>Flush cover set in 0.10 concrete.</p> <p>0.40 m arising seal to top of response zone.</p> <p>Borehole backfilled with bentonite pellets from 1.50 m to 3.45 m.</p>

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WS1001	SP50	0.50	1.50	<p>Flush cover set in 0.10 concrete.</p> <p>0.40 m arising seal to top of response zone.</p> <p>Borehole backfilled with bentonite pellets from 1.50 m to 3.45 m.</p>
WS1101	SP50	1.00	1.50	<p>Flush cover set in 0.10 concrete.</p> <p>0.70 m arising seal over 0.20 m bentonite pellet seal to top of response zone.</p> <p>Borehole backfilled with arisings from 1.50 m to 3.45 m.</p>
WS1102	SP50	1.00	3.00	<p>Flush cover set in 0.10 concrete.</p> <p>0.70 m arising seal over 0.20 m bentonite pellet seal to top of response zone.</p> <p>Borehole backfilled with arisings from 3.00 m to 3.45 m.</p>
WS1103	SP50	1.00	2.20	<p>Flush cover set in 0.10 concrete.</p> <p>0.70 m arising seal over 0.20 m bentonite pellet seal to top of response zone.</p> <p>Borehole backfilled with arisings from 2.20 m to 3.45 m.</p>

Notes: SP50 = 50 mm ID standpipe, SPIE = 19 mm Standpipe piezometer, GMP = Gas monitoring point

3.4.2 Post-fieldwork Monitoring

Post-field work monitoring was undertaken on separate visits on the 13th – 17th February 2017, 8th – 10th March 2017 and 6-7th April 2017. In all, three visits to the site were made to record land gas emissions and groundwater levels. During the first monitoring visit, after completion of the land gas emission monitoring, the well was purged by removing three well volumes of groundwater and in situ groundwater monitoring and sampling was undertaken. Where installations were purged dry, monitoring and sampling was conducted on groundwater recovered following recharging of groundwater in installations.

The results of the groundwater monitoring are presented within Appendix E.

4 LABORATORY TESTING

4.1 General

Geotechnical and geo-environmental chemical testing was undertaken on selected samples obtained from the exploratory holes. The testing was scheduled by the geotechnical and/or geo-environmental engineer and the testing was undertaken by an Arcadis approved testing laboratory.

4.2 Geotechnical Laboratory Testing

The geotechnical tests detailed in Table 4-1 were carried out in accordance with either BS1377:1990: Parts 1 to 8 [16]; BS EN ISO 17892: Parts 1 to 12 [17]; BRE SD 1:2005 [7]; or other methods as listed in Table 4-1. The complete results of the geotechnical laboratory testing are presented in Appendix F.

Table 4-1 Summary of scheduled geotechnical test data

Test	Method	No of Determinations	Comment
Moisture content	BS1377 Pt2-3.2	264	
4-point liquid and plastic limit	BS 1377 Pt2-4.3 & 5.3	264	
Particle Size Distribution - Wet sieving	BS1377 Pt2-9.2	53	
Particle Size Distribution - Sedimentation	BS1377 Pt2-9.4	49	
Water Soluble Sulphate 2:1 extract		4	
BRE Suite Total Sulphate, Aqueous Sulphate, Total Sulphur, Aqueous Nitrate, Aqueous Magnesium, Chloride	BRE SD1 preferred methods	17	
BRE Suite B Greenfield Ph, SO4 2:1, Acid Sol, total Sulphur		14	
BRE Suite D Ph Total Sulphate Aqueous Sulphate, Total Sulphur, Aqueous Nitrate, Aqueous Magnesium, Chloride		5	
Density (2.5 kg Rammer Method 1 Litre Mould)		25	
Density (4.5 kg Rammer Method 1 Litre Mould)		22	
MCV		28	
MCV/Moisture Content Relation		38	
CBR: Remoulded Specimen		33	
Max/Min Density Cohesionless Soil		20	
One-Dimensional Consolidation		15	
Shear Strength by Hand Vane		5	

Ground Investigation Report

Quick Undrained Triaxial Compression	BS1377 Pt7-8/9	13	
Consolidated Undrained Triaxial (100 mm)		22	
Consolidate Drained Triaxial (100 mm)		8	
Quick undrained Shear Box 60mm Suitable sands only		5	

4.3 Geo-Environmental Laboratory Testing

Geo-environmental tests were undertaken on soil, groundwater and prepared leachate specimens obtained from the samples collected from the site. Testing was carried out for the contaminants detailed in

Table 4-2, Table 4-3 and Table 4-4. The results of the chemical laboratory testing are presented in Appendix G. Details of the test methodology is presented with the test results.

Table 4-2 Summary of geo-environmental test data – soil matrix

Test type	Method	No of Determinations
pH, Cyanide Free & Total, Organic Matter, Sulphates	Induced Coupled Plasma Optical Emission Spectroscopy (ICP-OES)	281
Metals (As, B, Cr, Cd, Cu, Pb, Hg, Ni, Se, Zn),	Induced Coupled Plasma Optical Emission Spectroscopy (ICP-OES)	270
Total Phenols		266
Speciated Polycyclic Aromatic Hydrocarbon compounds (PAH)	Gas Chromatography –Mass Spectrometry (GC-MS)	266
Total PAH		266
Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX)	GC-MS	210
Total Petroleum Hydrocarbon Criteria Working Group (TPH CWG)	Gas Chromatography – Flame Ionisation Detector (GC-FID)	210
VOCs, SVOCs		13

Table 4-3 Summary of geo-environmental test data – groundwater matrix

Test type	Method	No of Determinations
pH, Cyanide Free & Total, Sulphate, Total Sulphur, Sulphide, Ammoniacal Nitrogen, TOC, Alkalinity	ICP-OES	33

Ground Investigation Report

Total Phenols	GC-MS	33
Total and Speciated PAH	GC-FID	33
Metals (As, Cr, Cd, Cu, Pb, Hg, Ni, Se, V, Zn)	ICP-OES	33
Benzene, Toluene, Ethylbenzene, p & m-xylene, o-xylene, MTBE	GC-MS	33
Petroleum Hydrocarbons: TPH-CWG	GC-MS	33

Table 4-4 Summary of geo-environmental testing data - leachate

Test type	No of Determinations
Metals (Arsenic, Boron, Cadmium, Chromium (total), Chromium (VI) , Copper, Lead, Mercury, Nickel, Selenium, Zinc)	27
Cyanide (free)	27
Cyanide (total)	27
PAH (16 speciated)	27
Total PAH	27
pH	27
Total Phenols	27
Water soluble sulphate	27
Total Organic Carbon (TOC)	27

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APPENDIX A

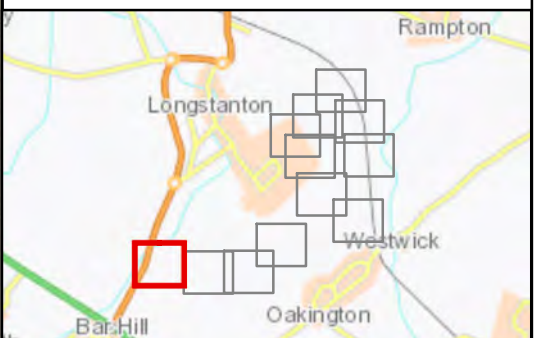
DRAWINGS

**Drawing UA008426-GLR-EHP-0001: Exploratory Hole
Location Plan**



Legend:

☒ Trial Pit



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Site
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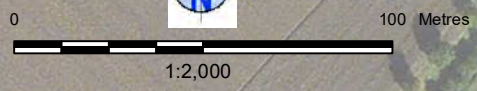
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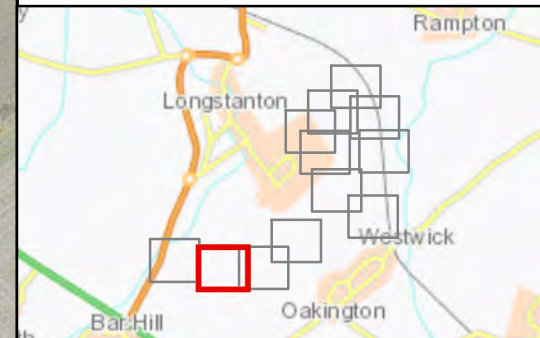
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-  Cable Percussion Borehole
-  Cone Penetration Test
-  Trial Pit



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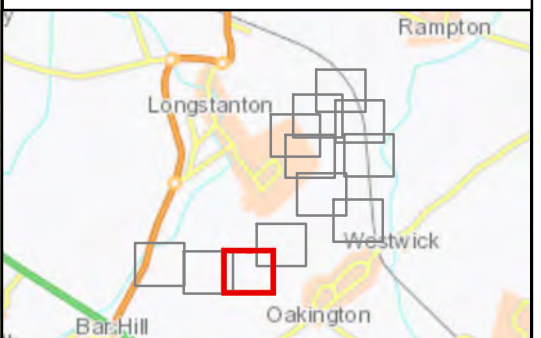
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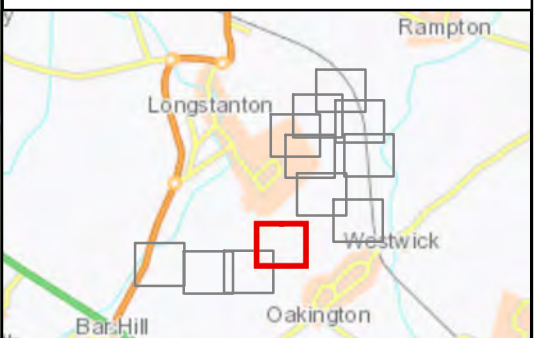
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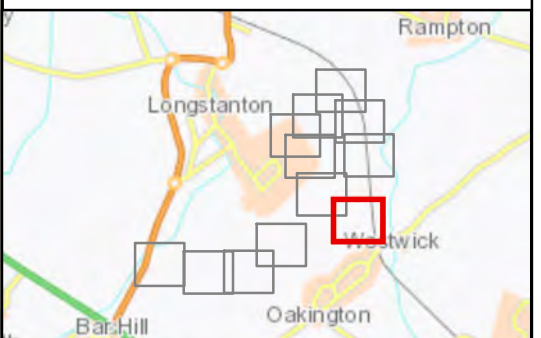
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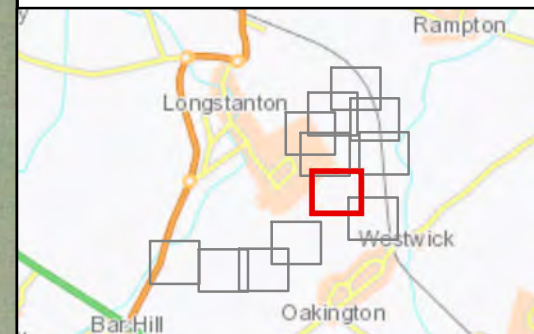
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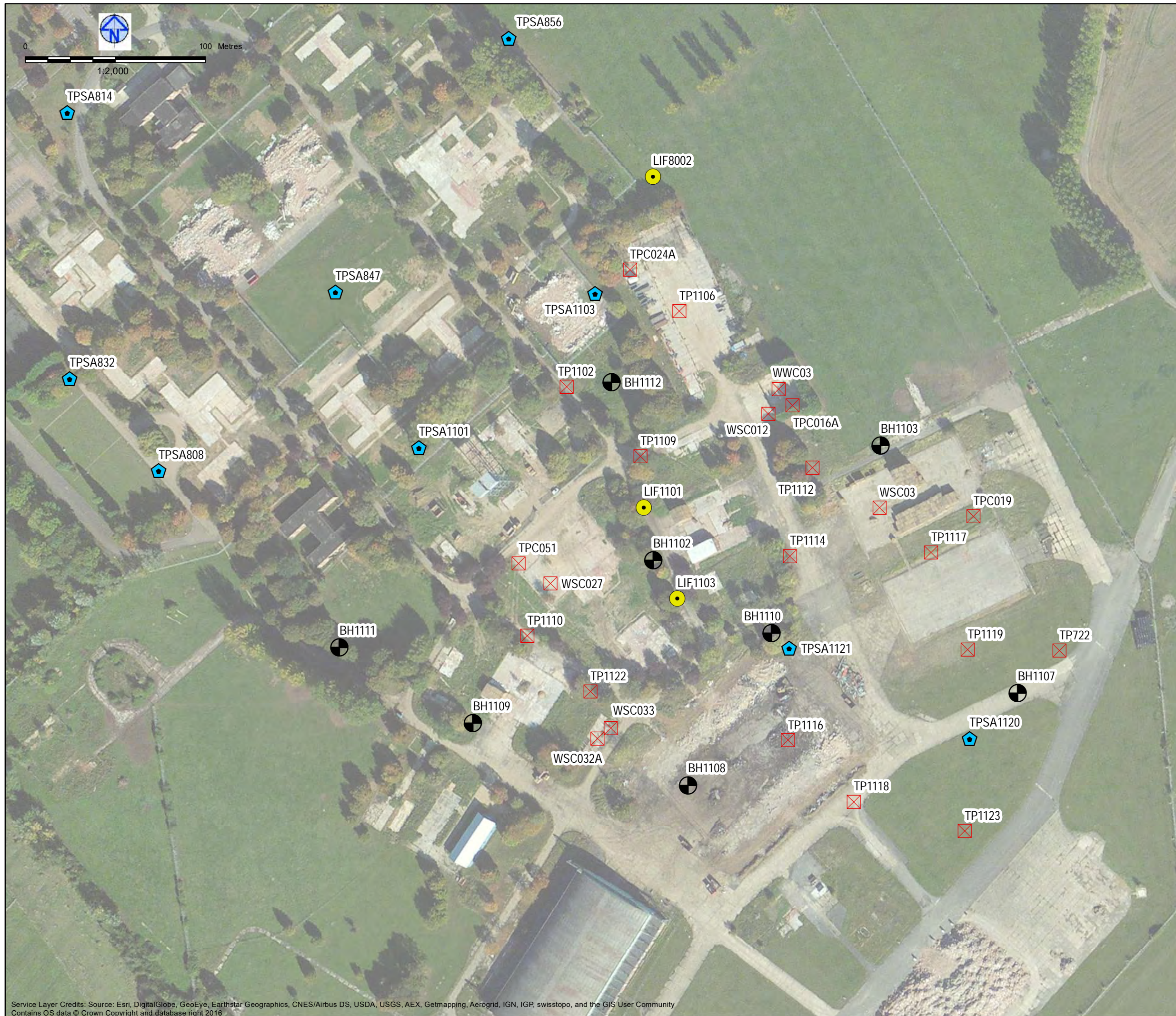
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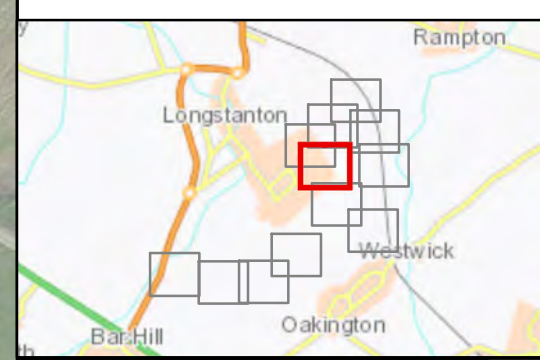
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- Cable Percussion Borehole
- LIF
- Trial Pit
- Trial Pit with soakway



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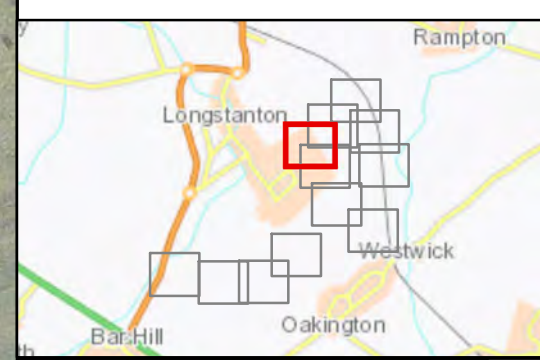
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- LIF
- Trial Pit
- Trial Pit with soakway
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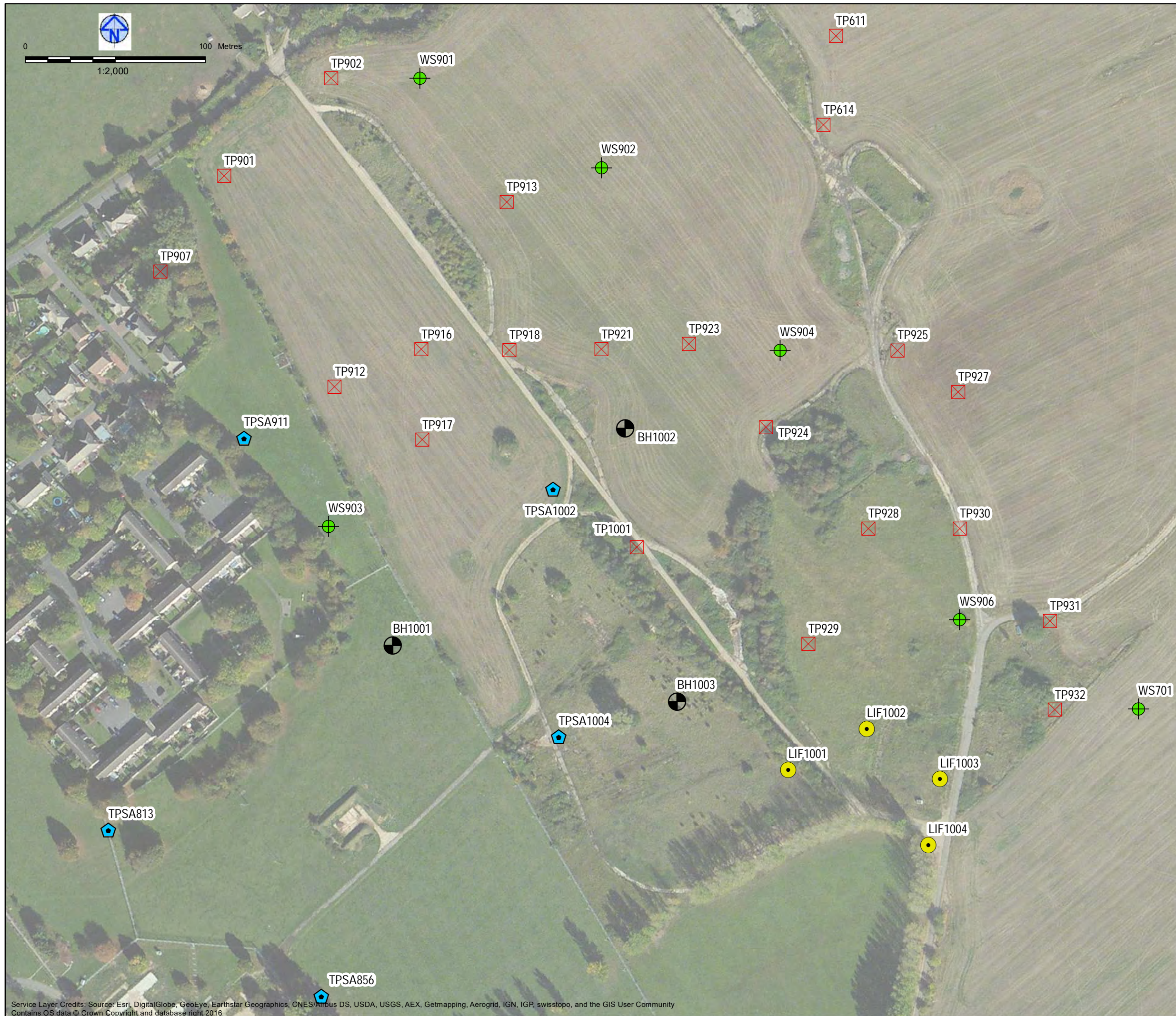
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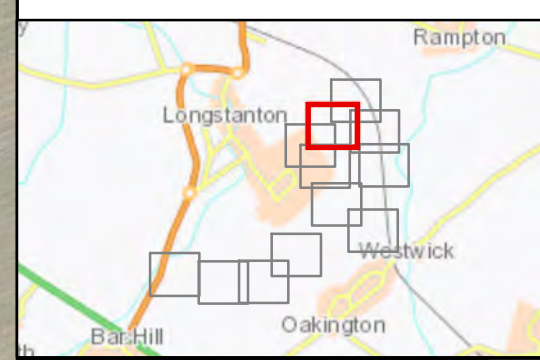
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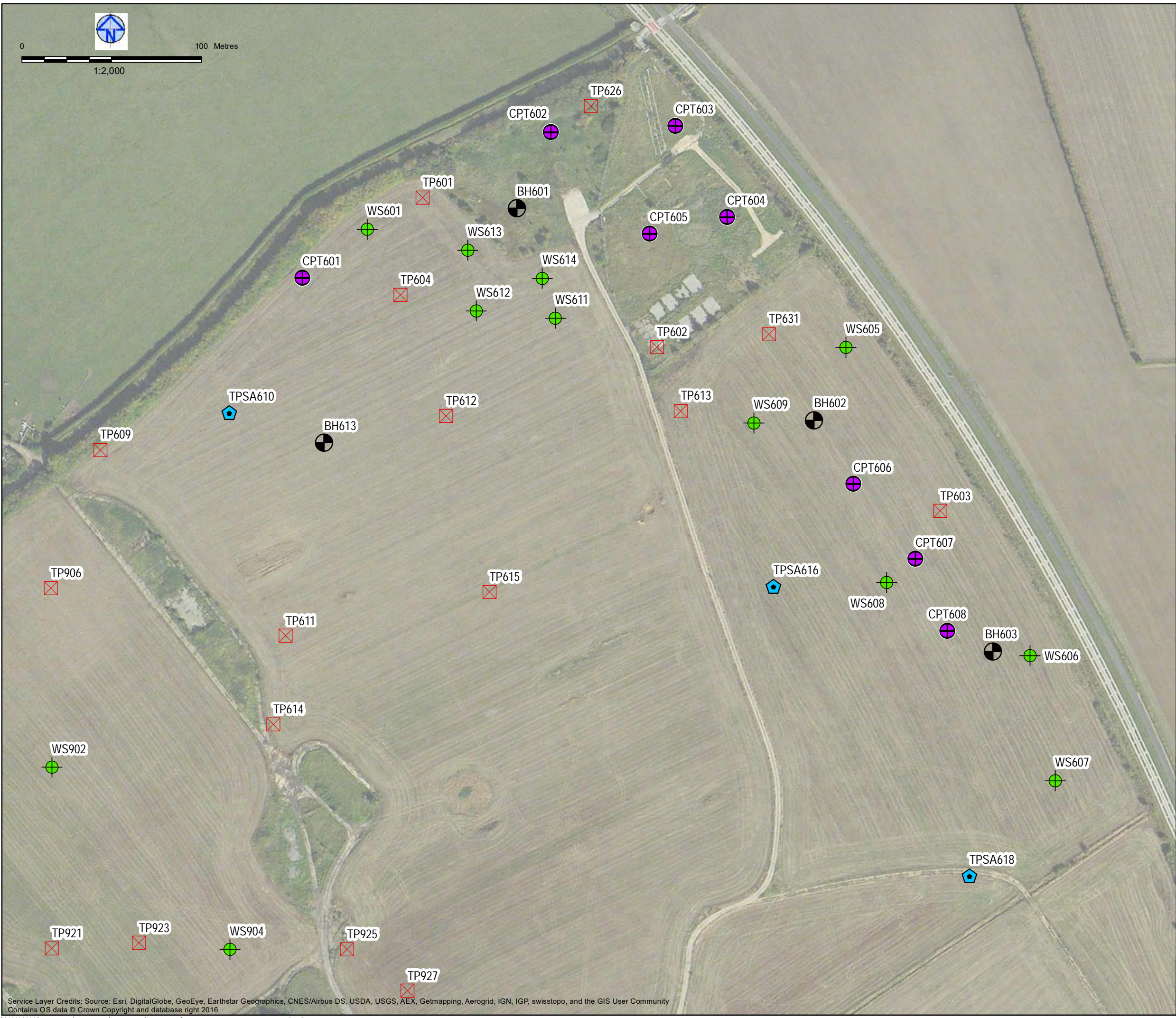
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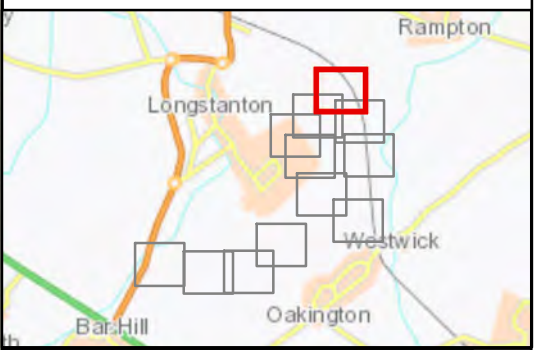
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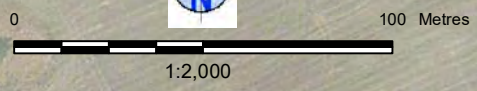
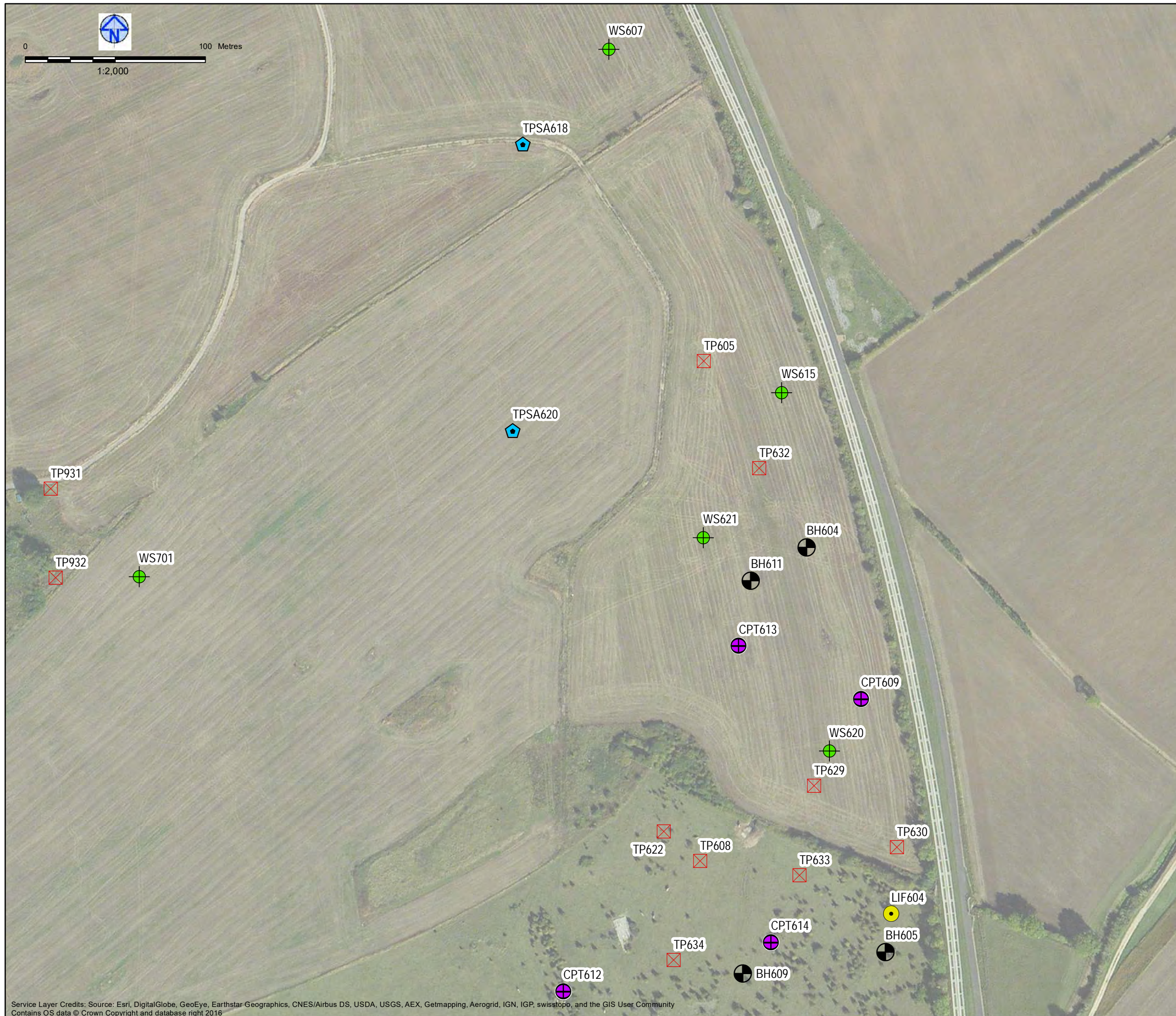
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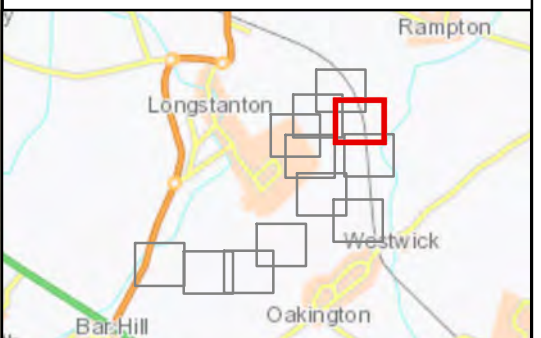
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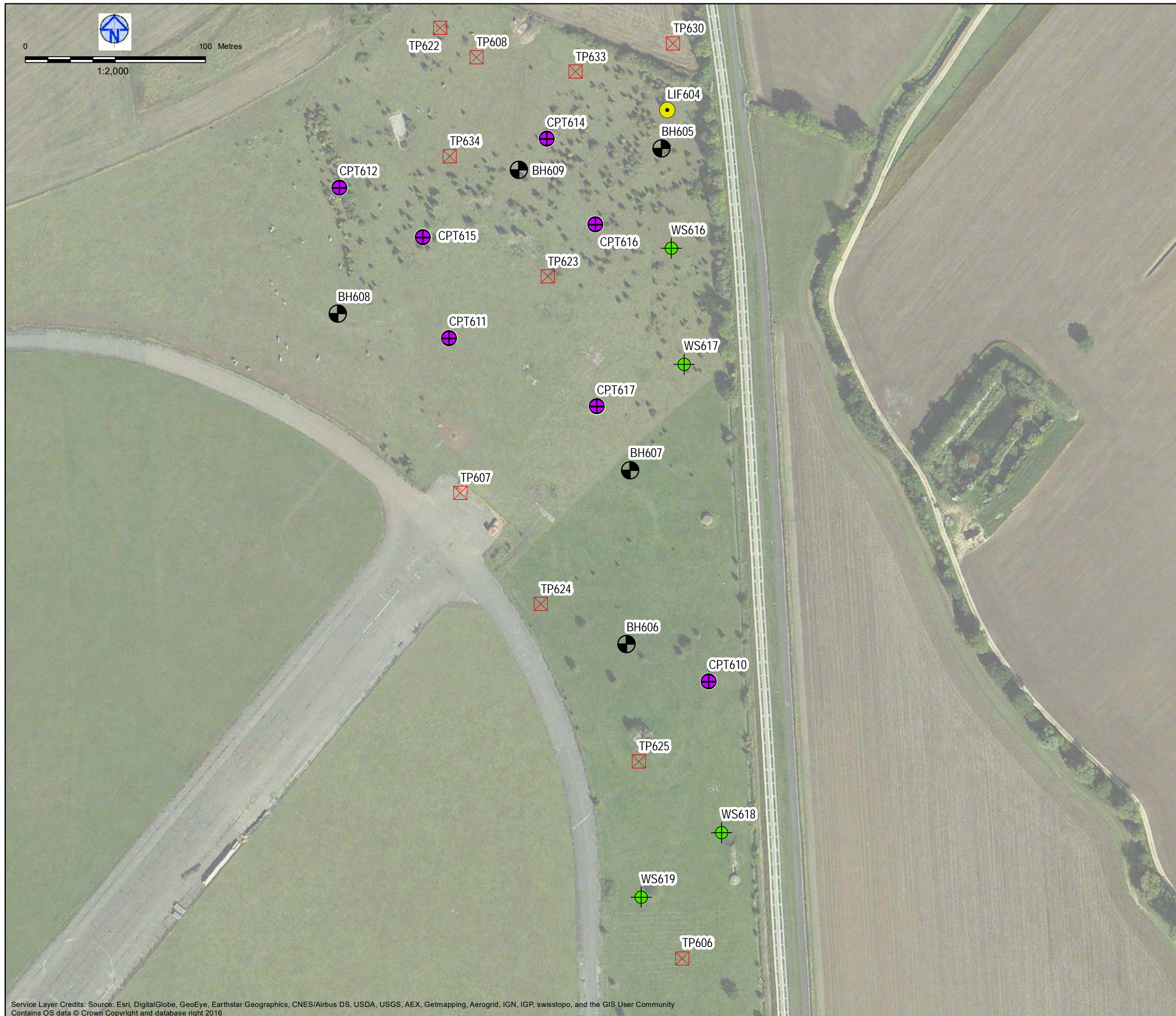
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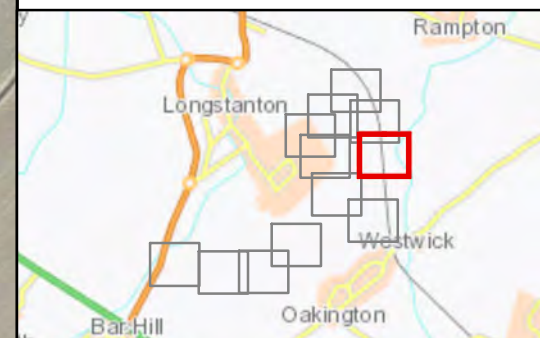
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- Cone Penetration Test
- LIF
- Trial Pit
- Windowless Sample



Rev	Date	Description	Drawn	Check	Approv
01	19/04/2017	First draft	JRG		

Client

Homes & Communities Agency

PROJECT: Northstowe Phase 2

Site: Northstowe, Cambridgeshire

Client: Homes and Communities Agency
 Fry Building, 2 Marsham Street
 London - SW1P 4DF
 Phone: +44 0300 1234 500
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TITLE:

Exploratory Hole Location Plan
 Page 12 of 12

Designed	reg. 13	Date: 19APR17	Signed
Drawn	reg. 13	Date: 19APR17	Signed
Checked	reg. 13	Date: 19APR17	Signed
Approved	reg. 13	Date: 19APR17	Signed
Scale:	1:2,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	S2	Project Number:	UA008426

For information

Drawing Number: UA008426-07-13-GLR-EHP-0001

Revision: 01

APPENDIX B

STANDARD PROCEDURES

B0 General Principles

This ground investigation was undertaken in general accordance with the principles of BS EN 1997-1 [1] and BS EN 1997-2 [2] and the advice given in BS5930:2015 [8], which, provides complimentary guidance on the application of the primary standards. Where the requirements of the ground investigation specification differ from these primary standards, the investigation methodology was adapted as required and specific notes regarding methods and techniques employed were made in the appropriate report sections.

B1 Buried Services

Service clearance was undertaken in accordance with Arcadis' common operating practice COP SA1. This document details the methods and safe working practices used to undertake excavations safely. Prior to breaking ground, services plans were consulted and the area scanned using a Cable Avoidance Tool (CAT) with detected signals marked on the ground. For all investigation positions, other than for machine excavated trial pits, hand excavated inspection pits are completed to 1.20 m bgl prior to the use of drilling and boring plant.

B2 Sampling requirements

The selection of sample types and sampling techniques has been chosen to take account of the soil fabric, size and quality of sample required based on whether the soils mass properties or the intact material properties of the ground are to be determined in subsequent laboratory tests. BS EN ISO 22475-1 [4] describes three generic sample groups that are:

- a. Sampling by drilling. Generally a disturbed sample recovered from the drilling tool or digging equipment, typically meeting Class 3 to Class 5 requirements, with the recovered material being stored in bulk bags or sealed jar or tub containers.
- b. Sampling by sampler. Typically referred to as open tube or drive sampling in which a tube with a sharp cutting edge is driven into the ground either by static thrust or dynamically driven to give a relatively undisturbed sample of Class 1 or Class 2 but may result in a Class 3 sample.
- c. Block sampling. Cylindrical large diameter samples or cuboid hand-cut samples usually relatively undisturbed Class 1 and Class 2.

The open-tube sampling equipment used on the site was of a type and design that conformed to BS EN ISO 22475-1. For the purpose of this ground investigation block sampling was not required.

Generally samples were assessed on site and any unexpected deterioration in sample quality was reported to the ground engineer by the lead drilling technician.

Sufficient and representative samples were taken to allow the geo-mechanical properties of the ground to be adequately characterised and to enable the sequence of soil strata to be described by an engineering geologist or geotechnical engineer.

Where samples have been taken for chemical tests the drilling method attempted to adopt dry drilling over the sampling range that generally was achieved by the use of drill casing to separate and isolate the upper soil layers and exclude groundwater. Cross-contamination was further reduced by regular cleaning of sampling tools. Sample integrity was maintained by sealing samples immediately on collection and storing the samples in a temperature controlled cool box. Samples were despatched from the site at the end of the shift on which they were collected or as

required in the project specification. Details of best practice storage, preservation and decontamination measures undertaken are given below:

Task	Soil	Groundwater	Ground Gas
Storage	Glass jars and vials supplied by the laboratory were used for the collection of soil samples to be analysed for volatile compounds. Plastic one-litre tubs were used to collect soil samples for metals analysis.	Glass vials supplied by the laboratory were used for the collection of samples to be analysed for volatile compounds. Samples to be analysed for lower volatility compounds were stored in laboratory prepared glass bottles.	1.4L Canisters supplied by the laboratory.
Preservation	Filling of sample containers as far as practicable to minimise headspace and low storage temperature to minimise the potential for volatilisation and biodegradation of petroleum hydrocarbon compounds prior to analysis.		Not required.
Decontamination	Disposable gloves were worn and changed between sample collection to prevent cross-contamination.	Groundwater samples were collected using dedicated disposable tubing / bailers, that were changed between monitoring well locations in order to prevent cross-contamination.	Disposable gloves were worn and changed between sample collection to prevent cross-contamination.
Transport	Samples stored in dedicated sample boxes provided by the laboratory. Sample details and analytical requests were recorded on the laboratory chain of custody form included with samples, prior to dispatching to laboratory for analysis. Samples were dispatched to the laboratory on the day of sampling.		

B3 Sample description

Sample description was undertaken by the Arcadis site geologist in accordance with BS 5930: 2015. The descriptions of the individual samples were used to identify the sequence of strata at the exploratory hole location and from which representative exploratory hole logs were drawn.

B4 In situ testing

In situ geotechnical tests were undertaken taking account of the investigation scope and requirement to attain the appropriate parameters required in the geotechnical design. The tests were undertaken in accordance with the requirements of the relevant parts of BS EN ISO 22476 [5, 6, 7] and other methods as follows:

Dynamic probing

Dynamic probes were undertaken in general accordance with BS EN ISO 22476-2, BS EN 1997-2 and the national annex to BS EN 1997. The tests were generally made using the super-heavy DPSH-B configuration of the apparatus, however, it should be noted that the basis for selection of the type of dynamic probe should be a consideration of the driving energy in relation to the type of ground conditions anticipated at the site.

Where adequate correlation with borehole data is available an interpretation of the estimated soil type may be made, however, it should be noted that probing can give unreliable results in mixed soils.

Standard penetration testing

Standard penetration tests were carried out in accordance with BS EN ISO 22476-3, BS EN 1997-2 and the national Annex to BS EN 1997-2. The test records are presented on the borehole logs as blow counts for each increment with the N-value as the total number of blows of the four main test increments.

Where the N-value exceeds a total of 50 blows, the test reports the penetration in millimetres for the last test increment recorded, and the N value is indicated as greater than 50,

e.g. 4,5/12,14,18, 6 for 10 mm

indicates that the seating blows (4 and 5) were completed and that the test terminated in the 4th increment after penetrating 10 mm.

Where the seating blows exceeded 25 blows for less than 150 mm; the test was stopped and the rods remarked after which, the main drive was continued. The test is then reported as the number of blows in each seating drive for the recorded penetration with the results of the main drive given as above,

e.g. 14/11 for 45 mm/12,14,16, 8 for 10 mm.

In certain circumstances where groundwater in-flow may affect the test, particularly in fine sand or silt, low SPT blow counts may be recorded. Where the SPT blow count was very low, N values of 5 or less, the test was, at the discretion of the site engineer, continued for a further 300 mm, recording blows for each 75 mm increment. **This is not** a standard penetration test value, it does however give an indication of potential disturbance to the ground.

California Bearing Ratio

In situ California Bearing Ratio (CBR) tests were carried out in general accordance with the requirements of BS 1977-9:1990, 4.3 [10]. The CBR is a strength test that is generally concerned with pavement design and the control of pavement sub grade construction, as such it is a test that is most suited to soils with a maximum particle size not exceeding 20 mm.

TRL Dynamic cone penetrometer

The TRL DCP is a device developed by the TRL to assess the California Bearing Ratio of road sub-base by correlation. As such the device was developed for use in a limited range of soil types. The test has no formal standard the test methodology and its use is discussed in TRL report PR IN 277-04 [11].

B5 Data transfer format

The data collated during the ground investigation has been organised and managed using the "AGS data format" that allows data transfer between different disciplines and organisations in accordance with BS 8574 [9].

B6 References

1. BS EN 1997-1. 2004. Eurocode 7: Geotechnical Design. Part 1 General Rules. British Standards Institution, 2013 (revised text).
2. BS EN 1997-2. 2007. Eurocode 7: Geotechnical Design. Part 2 Ground Investigation and testing. British Standards Institution, 2010 (revised text).
3. BS EN ISO 22282-1:2012. Geotechnical investigation and testing – Geohydraulic testing. Part 1: General Rules. British Standards Institution.
4. BS EN ISO 22475-1. Geotechnical investigation and testing – Sampling methods and groundwater measurements – Part 1 Technical principles for execution.
5. BS EN ISO 22476-1:2015. Geotechnical investigation and testing – Field testing – Part 1: Electrical cone and piezocone test. British Standards Institution
6. BS EN ISO 22476-2. Geotechnical investigation and testing – Field testing – Part 2: Dynamic Probing. British Standards Institution
7. BS EN ISO 22476-3 2005. Geotechnical investigation and testing – Field testing – Part 3: Standard penetration test. British Standards Institution
8. BS 5930: 2015. Code of practice for ground investigation. British Standards Institution.
9. BS 8574. Code of practice for the management of geotechnical data for ground engineering projects.
10. BS 1377-9. 1990. Methods of test for soils for civil engineering purposes. Part 9: In-situ tests. British Standards Institution.
11. TRL. 2004. Dynamic cone penetrometer tests and analysis. TRL Technical Report PR IN 277-04. Transport Research Laboratory, Crowthorne, England.

B7 Exploratory Hole Key

Key to Exploratory Hole Symbols and Abbreviations

SAMPLE TYPES

B	Bulk disturbed sample	ES	Environmental soil sample	U	Undisturbed sample
C	Core sample	EW	Environmental water sample	UT	Undisturbed thin wall sample
CBR-D	Disturbed sample from CBR test area	G	Gas sample	W	Water sample
CBR-U	Undisturbed sample from CBR test area	L	Liner sample		
D	Small disturbed sample	SPT	SPT split spoon sample		

IN-SITU TESTING

SPTs	Standard Penetration Test (using a split spoon sampler)
SPTc	Standard Penetration Test (using a solid 60 degree cone)
N	Recorded SPT 'N' Value *
-/-	Blows/Penetration (mm) after seating blows totalling 150 mm
MX	Mexi Probe Test (records CBR as %)
HV	Hand Shear Vane Test (undrained shear strength quoted in kPa)
PP	Pocket Penetrometer Test (kg/m ³)
()	Denotes residual test value
PID	Photo Ionisation Detector (ppm) *
Kf/Kr	Permeability Test (f = falling head, r = rising head quoted in ms ⁻¹)
HPD	High Pressure Dilatometer Test (pressure meter)
PKR	Packer / Lugeon Permeability Test
CBR	California Bearing Ratio Test

ROTARY CORE DETAILS

TCR	Total Core Recovery, %
SCR	Solid Core Recovery, %
RQD	Rock Quality Designation (% of intact core >100 mm)
FI	Fracture Spacing (average fracture spacing; in mm, over indicated length of core) **
NI	Non-Intact Core
AZCL	Assumed Zone of Core Loss

GROUNDWATER

	Groundwater strike
	Standing water level after 20 minutes; 1st, 2nd etc (number denotes level order)

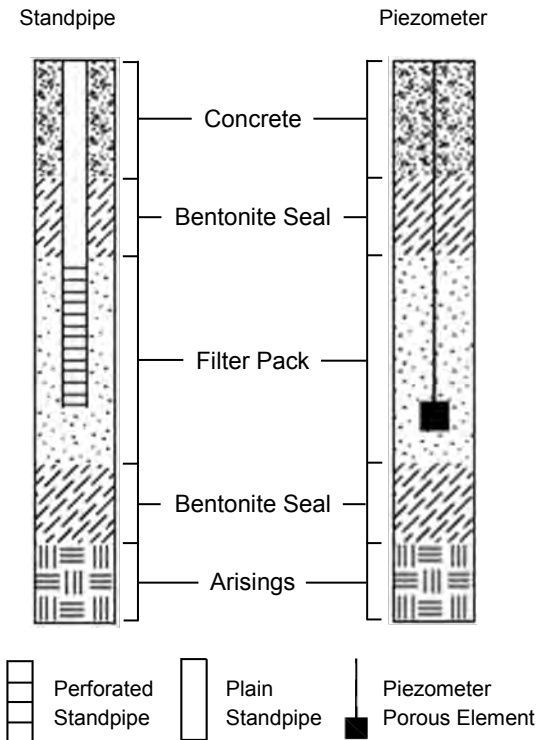
STRATA LEGENDS - Note: Composite strata types are shown by combining symbols

	Made Ground		Silt		Peat		Limestone
	Concrete		Sand		Void		Chalk
	Bituminous Bound Materials		Gravel		Mudstone		Coal
	Topsoil		Cobbles		Siltstone		Metamorphic Rock
	Clay		Boulders		Sandstone		Fine Grained Igneous Rock

* Where a single value is quoted this is the uncorrected 'N' value for a full 300 mm test drive following a seating drive of 150mm. Where the full test drive penetration is not achieved the number of blows is quoted for the penetration below the test total of 300mm, e.g.: 50/75.

** The minimum, average and maximum are shown e.g. 5/45/125.

INSTALLATION & BACKFILL DETAILS



STRATUM BOUNDARIES

	Unit boundary
--	---------------

APPENDIX C

EXPLORATORY HOLE LOGS

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540834.37

Ground Level (mAOD)
9.10
Northing (OS mN)
266684.59

Start Date
09/12/2016
End Date
12/12/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.10 - 0.40	ES B1					09/12/2016 09:00	0.00	Grass over orangish brown, slightly sandy slightly gravelly CLAY with rootlets and roots (<1cm in width). Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint and sandstone.		(0.40)	8.70		
0.10 - 0.40	ES14							[TOP SOIL]					
0.50 - 1.20	B2							Firm, orangish brown, slightly gravelly sandy CLAY with occasional pockets of dark brown clay. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse of mixed lithologies.		(0.80)			
0.70 - 1.00	ES15							[RIVER TERRACE DEPOSITS]					
1.20 - 1.65	D3	1.20	SPT(C)	N=12 (2,3/3,3,3,3)				Medium dense, orangish brown, clayey gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded, fine to coarse of mixed lithologies.		(0.80)			
1.50 - 1.70	ES16							[RIVER TERRACE DEPOSITS]					
2.00	B4	2.00	SPT(C)	N=13 (3,4/3,4,3,3)	1.80			Medium dense, yellowish brown, slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of mixed lithologies.		(0.80)	7.10		
2.00	EW1							[RIVER TERRACE DEPOSITS]					
2.00 - 2.45	D4												
2.40	ES												
2.40 - 2.60	ES17												
3.00 - 3.45	D20	3.00	SPT(S)	N=10 (3,3/2,2,3,3)	1.80			Firm to stiff, bluish grey silty CLAY. [KIMMERIDGE CLAY FORMATION]			6.30		
3.50 - 3.70	ES18												
4.00	B23												
4.00 - 4.45	UT6												
4.00 - 5.00	B31												
4.45	D21												
5.00 - 5.45	D22	5.00	SPT(S)	N=21 (7,9/9,5,4,3)	1.80								
5.50 - 6.50	B7												
6.50 - 6.95	UT23									(7.20)			
6.95	D31												
7.00 - 8.00	B8												
8.00 - 8.45	D25	8.00	SPT(S)	N=20 (3,3/4,5,5,6)	1.80								
8.50 - 9.50	B9												
9.50 - 9.95	UT26												
9.95	D31												
10.00 - 11.00	B10												

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion				09/12/2016 10:00	1.32	20	1.30	1.65	3.15	300 200 50	1.20 15.00 15.45	200	3.15			

Remarks
 UT6 (4.00-4.45) - 100% recovery, 39 blows.
 UT23 (6.50-6.95) - 100% recovery, 66 blows.
 UT26 (9.50-9.95) - 100% recovery, 62 blows.
 UT27 (12.50-12.95) - 100% recovery, 73 blows.

Termination Depth:
15.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540834.37

Ground Level (mAOD)
9.10
Northing (OS mN)
266684.59

Start Date
09/12/2016
End Date
12/12/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA				Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend					
11.00 - 11.45	D28	11.00	SPT(S)	N=26 (4,5/6,6,7,7)	1.80			Stiff to very stiff, dark grey CLAY with occasional shell fragments, up to 1cm in width. [KIMMERIDGE CLAY FORMATION]			(5.45)			
11.50 - 12.50	B25													
12.50 - 12.95	UT27													
12.95 - 13.00	D27													
13.00 - 14.00	B28													
14.00 - 14.45	D29	14.00	SPT(S)	N=28 (4,5/6,6,8,8)	1.80									
14.00 - 15.00	B30													
15.00 - 15.45	D31	15.00	SPT(S)	N=30 (5,5/6,7,7,10)	1.80	12/12/2016 17:00	3.15					15.45	-6.35	
							1.30							

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS						HOLE/CASING DIAMETER				WATER ADDED		
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion				09/12/2016 10:00	1.32	20	1.30	1.65	3.15	300	1.20	200	3.15			
	15.45											200	15.00					
												50	15.45					

Remarks
 UT6 (4.00-4.45) - 100% recovery, 39 blows.
 UT23 (6.50-6.95) - 100% recovery, 66 blows.
 UT26 (9.50-9.95) - 100% recovery, 62 blows.
 UT27 (12.50-12.95) - 100% recovery, 73 blows.

Termination Depth:
15.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540963.63

Ground Level (mAOD)
9.29
Northing (OS mN)
266805.40

Start Date
09/12/2016
End Date
09/12/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.00	ES					09/12/2016 09:00	0.00	Grass over soft, brown silty CLAY with frequent roots and rootlets.		(0.30)			
0.00 - 0.30	B1							[TOP SOIL]		0.30	8.99		
0.30	ES1							Orangish brown, slightly clayey gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded, fine to coarse of flint.					
0.30 - 0.50	D19							[RIVER TERRACE DEPOSITS]					
0.50	ES												
0.50 - 0.70	ES2												
0.50 - 1.00	B3												
1.00	D20												
1.20	D21												
1.50 - 2.00	B4	1.50	SPT(C)	N=22 (3,3/5,6,5,6)	1.00								
1.80	EW1												
2.00	D22												
2.00	EW2												
2.50 - 3.00	B5												
3.00	D23	3.00	SPT(C)	N=24 (3,4/5,6,7,6)	2.00								
3.30	D24												
3.30 - 3.70	B6							Stiff, orangish brown mottled greenish grey, slightly sandy silty slightly gravelly CLAY with sandy pockets. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of mixed lithologies.		3.30	5.99		
3.40 - 3.60	ES3							[RIVER TERRACE DEPOSITS]		(0.40)			
3.70	D25												
3.70 - 4.50	B7							Stiff to very stiff, grey, slightly silty CLAY with occasional shell fragments (up to 1mm in width) and occasional bands of weak, grey mudstone.		3.70	5.59		
3.80 - 4.00	ES4							[KIMMERIDGE CLAY FORMATION]					
4.00	D26												
4.50 - 4.95	UT41												
4.50 - 5.00	B8												
5.00	D27												
5.50 - 6.00	B9												
6.00	D28	6.00	SPT(S)	N=39 (2,3/9,10,10,10)									
6.50 - 7.00	B10												
7.00	D29												
7.50 - 8.00	B11	7.50	SPT(S)	N=36 (4,4/8,8,10,10)									
8.00	D30												
8.50 - 9.00	B12												
9.00	D31												
9.00 - 9.33	UT42												
9.50	D32												
9.50 - 10.00	B13												
10.00	D33												

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit	4.00	4.20	00:30	09/12/2016 10:00	1.30	20	1.30	1.70		300	1.20	200	3.00			
1.20	15.45	Cable Percussion	6.70	6.90	00:30							200	15.00	200				
												50	15.45					

Remarks
 UT41 (4.50-4.95) - No recovery, 100 blows.
 UT42 (9.00-9.33) - 75% recovery, 83 blows.
 UT43 (12.00-12.45) - 100% recovery, 100 blows.
 UT44 (15.00-15.45) - 100% recovery, 95 blows.

Termination Depth:
15.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540963.63

Ground Level (mAOD)
9.29
Northing (OS mN)
266805.40

Start Date
09/12/2016
End Date
09/12/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA				Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description			Legend			
10.50 - 11.00	B14	10.50	SPT(S)	N=38 (4,5/8,10,10,10)	10.00			Stiff to very stiff, grey, slightly silty CLAY with occasional shell fragments (up to 1mm in width) and occasional bands of weak, grey mudstone. [KIMMERIDGE CLAY FORMATION]						
11.00	D34													
11.50 - 12.00	B18													
12.00 - 12.45	D35 UT43													
12.50 - 13.00	D36 B19													
13.00	D37													
13.50 - 14.00	B21	13.50	SPT(S)	N=37 (4,4/8,9,10,10)	10.00									
14.00	D38													
14.50 - 15.00	B20													
15.00 - 15.45	D39 UT44													
15.45	D40													
					09/12/2016 17:00	3.00 1.30						15.45	-6.16	

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER				WATER ADDED			
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	4.00	4.20	00:30	09/12/2016 10:00	1.30	20	1.30	1.70		300	1.20	200	3.00			
1.20	15.45		6.70	6.90	00:30							200	15.00					
												50	15.45					

Remarks
 UT41 (4.50-4.95) - No recovery, 100 blows.
 UT42 (9.00-9.33) - 75% recovery, 83 blows.
 UT43 (12.00-12.45) - 100% recovery, 100 blows.
 UT44 (15.00-15.45) - 100% recovery, 95 blows.

Termination Depth:
15.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540992.31

Ground Level (mAOD)
9.16
Northing (OS mN)
266653.44

Start Date
08/12/2016
End Date
09/12/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.10 - 0.30	B5 B6 ES1				08/12/2016 08:00	0.00	Soft, brown, slightly sandy CLAY with frequent roots and rootlets. [TOP SOIL]			(0.40)	8.76		
0.50	B6						Soft to firm, orangish brown, slightly sandy slightly gravelly CLAY with frequent roots and rootlets. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]			(1.40)			
1.00 - 1.20	ES2	1.20	SPT(S)	N=11 (1,2/2,3,3,3)						(1.80)	7.36		
1.20 - 1.65	D7 EW2												
1.80	B8												
2.00 - 2.20	ES3	2.00	SPT(S)	N=12 (2,2/2,3,3,4)			Firm, brownish grey, slightly sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]			(1.80)			
2.00 - 2.45	D9												
2.00 - 3.00	B10												
2.40	EW1												
3.00 - 3.31	UT11												
3.00 - 4.00	B12												
3.45	D13												
4.00 - 4.45	D14	4.00	SPT(S)	N=13 (6,3/2,3,3,5)			Firm to stiff, bluish grey gravelly CLAY. Gravel is sub-angular to sub-rounded, fine to coarse of mudstone. [KIMMERIDGE CLAY FORMATION]			3.60	5.56		
4.00 - 5.00	B15						Grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]			3.70 (0.20)	5.46		
4.10 - 4.30	ES4						Stiff to very stiff, bluish grey silty gravelly CLAY. Gravel is sub-angular to sub-rounded, fine to coarse of mudstone. [KIMMERIDGE CLAY FORMATION]			3.90	5.26		
5.00 - 5.45	UT16												
5.45	D17												
5.50 - 6.50	B18												
6.50 - 6.95	D19	6.50	SPT(S)	N=37 (4,10/7,8,11,11)						(5.20)			
7.00 - 8.00	B20												
8.00 - 8.45	UT21												
8.45	D22												
8.50 - 9.50	B23												
9.50 - 9.95	D24	9.50	SPT(S)	N=24 (4,4/5,6,6,7)			Grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]			9.10 (0.20)	0.06		
							Stiff to very stiff, bluish grey silty gravelly CLAY. Gravel is sub-angular to sub-rounded, fine to coarse of mudstone. [KIMMERIDGE CLAY FORMATION]			9.30	-0.14		
10.00 - 11.00	B25									(0.90)			

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	3.70	3.90	00:50							300	1.20	200	1.65			
1.20	15.45		9.10	9.30								200	15.00	200				
												50	15.45					

Remarks
No groundwater encountered.
UT11 (3.00-3.31) - 70% recovery, 36 blows.
UT16 (5.00-5.45) - 100% recovery, 91 blows.
UT21 (8.00-8.45) - 100% recovery, 62 blows.
UT22 (11.00-11.45) - 100% recovery, 79 blows.
UT33 (14.00-14.45) - 100% recovery, 92 blows.

Termination Depth:
15.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540992.31

Ground Level (mAOD)
9.16
Northing (OS mN)
266653.44

Start Date
08/12/2016
End Date
09/12/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
11.00 - 11.45	UT22						Stiff to very stiff, bluish grey silty gravelly CLAY. Gravel is sub-angular to sub-rounded, fine to coarse of mudstone. [KIMMERIDGE CLAY FORMATION] Stiff to very stiff, dark grey silty CLAY. [KIMMERIDGE CLAY FORMATION]		10.20	-1.04			
11.45	D23												
11.50 - 12.50	B24												
12.50 - 12.95	D25	12.50	SPT(S)	N=30 (6,6/7,7,8,8)									
13.00 - 14.00	B26												
14.00 - 14.45	UT33						09/12/2016 16:30	1.65	15.45	-6.29			
14.00 - 15.00	B27												
15.00 - 15.45	D28	15.00	SPT(S)	N=35 (6,6/7,8,10,10)									

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	3.70	3.90	00:50							300	1.20	200	1.65			
1.20	15.45		9.10	9.30	00:50							200	15.00	200	15.45			

Remarks
No groundwater encountered.
UT11 (3.00-3.31) - 70% recovery, 36 blows.
UT16 (5.00-5.45) - 100% recovery, 91 blows.
UT21 (8.00-8.45) - 100% recovery, 62 blows.
UT22 (11.00-11.45) - 100% recovery, 79 blows.
UT33 (14.00-14.45) - 100% recovery, 92 blows.

Termination Depth:
15.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541168.85

Ground Level (mAOD)
266601.52
Northing (OS mN)

Start Date
08/12/2016
End Date
08/12/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.20	B27					08/12/2016 09:00	0.00	Soft, brown, slightly sandy slightly gravelly silty CLAY with frequent roots and rootlets. Sand is fine to coarse. Gravel is sub-angular to rounded, fine to coarse of flint.			(0.40)		
0.20 - 0.40	ES1							[TOP SOIL]			0.40		
0.30	D5							Orangish brown, clayey gravelly fine to coarse SAND. Gravel is sub-angular to rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]					
0.40	B28												
0.50	D6												
1.00	B29												
1.00	D7												
1.00	ES												
1.00 - 1.20	ES2	1.50	SPT(C)	N=10 (2,2/2,3,2,3)							(2.80)		
1.20	EW2												
2.00	B30												
2.00	D8												
2.80	EW1												
3.00	D9	3.00	SPT(C)	N=18 (2,2/4,4,5,5)									
3.20	B31												
3.30 - 3.50	ES3							Stiff, greenish grey mottled brown, slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]			3.20		
4.00	B32												
4.00	D10												
4.40	D11							Weak, grey MUDSTONE. [KIMMERIDGE CLAY FORMATION]			4.30 (0.20)		
4.50 - 4.84	UT23							Stiff, greenish grey mottled brown silty CLAY. [KIMMERIDGE CLAY FORMATION]			4.50		
5.00	B33												
5.00	D12												
5.00 - 5.20	ES4												
6.00	B34	6.00	SPT(C)	N>50 (10,10/20,20,10 for 5mm)				Stiff to very stiff, grey mottled orangish brown silty CLAY. [KIMMERIDGE CLAY FORMATION]			5.50		
6.00	D13							Weak, grey MUDSTONE. [KIMMERIDGE CLAY FORMATION]			6.00		
7.00	B23												
7.00	D14							Stiff to very stiff, grey to dark grey silty CLAY with occasional shell fragments. [KIMMERIDGE CLAY FORMATION]			6.70		
7.50 - 7.95	UT24												
8.00	B24												
8.00	D15												
9.00	B25	9.00	SPT(S)	N=17 (2,3/4,4,4,5)									
9.00	D16												
10.00	B26												
10.00	D17												

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER				WATER ADDED			
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	4.30	4.50	00:30	08/12/2016 12:30	2.50	20	2.20	1.50		300	1.20	200	15.00			
1.20	15.45		6.00	6.20	00:30							50	15.45					

Remarks
 UT23 (4.50-4.84) - 75% recovery, 55 blows.
 UT24 (7.50-7.95) - 100% recovery, 85 blows.
 UT25 (10.50-10.95) - 100% recovery, 85 blows.
 UT26 (13.50-13.95) - No recovery, 100 blows.

Termination Depth:
15.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541168.85

Ground Level (mAOD)
266601.52
Northing (OS mN)
266601.52

Start Date
08/12/2016
End Date
08/12/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA				Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend					
10.50 - 10.95	UT25						Stiff to very stiff, grey to dark grey silty CLAY with occasional shell fragments. [KIMMERIDGE CLAY FORMATION]			(8.75)				
11.00	B13													
11.00	D11													
11.00	D18													
12.00	B14	12.00	SPT(S)	N=26 (3,4/4,6,8,8)										
12.00	D19													
13.00	B15													
13.00	D20													
13.50 - 13.95	UT26													
14.00	B16													
14.00	D21													
15.00	B17	15.00	SPT(S)	N=40 (5,5/10,10,10,10)	08/12/2016 17:00	1.50								
15.00	D22					2.2								

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS						HOLE/CASING DIAMETER				WATER ADDED		
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	4.30	4.50	00:30	08/12/2016 12:30	2.50	20	2.20	1.50		300	1.20	200	1.50			
1.20	15.45		6.00	6.20	00:30							200	15.00					
												50	15.45					

Remarks
 UT23 (4.50-4.84) - 75% recovery, 55 blows.
 UT24 (7.50-7.95) - 100% recovery, 85 blows.
 UT25 (10.50-10.95) - 100% recovery, 85 blows.
 UT26 (13.50-13.95) - No recovery, 100 blows.

Termination Depth:
15.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540778.32

Ground Level (mAOD)
266197.28

Start Date
06/12/2016
End Date
07/12/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.00 - 1.00	B1					06/12/2016 13:00	0.00	Soft to firm, yellowish brown, slightly sandy CLAY with frequent roots and rootlets. Sand is fine to coarse. [TOP SOIL]			0.70		
0.10 - 0.20	ES2										0.70		
0.20 - 0.20	D3												
0.20 - 0.20	D7												
0.70 - 0.70	D4												
0.90 - 1.20	ES5												
1.00 - 1.00	B9												
1.00 - 1.00	B9.00												
1.00 - 1.50	B6												
1.40 - 1.40	EWW1	1.50	SPT(S)	N=13 (1,2/3,3,3,4)							1.60		
1.50 - 1.50	B10												
1.50 - 1.95	B7												
2.00 - 2.00	B11												
2.00 - 2.50	B8												
2.30 - 2.30	D9												
2.50 - 2.80	ES11												
2.50 - 3.00	B10												
3.00 - 3.45	UT12												
3.50 - 3.50	D13												
3.50 - 4.00	B14												
3.60 - 3.80	ES15												
4.30 - 4.30	D16												
4.30 - 4.50	B18	4.50	SPT(S)	N=14 (2,3/3,4,3,4)									
4.50 - 4.95	B17												
4.70 - 4.70	ES												
4.70 - 4.90	ES18												
5.20 - 5.20	D19												
5.50 - 6.00	B20					06/12/2016 16:30	5.50						
6.00 - 6.45	B21	6.00	SPT(S)	N=23 (3,4/5,5,6,7)		07/12/2016 08:00	4.5 5.50 5.5						
6.50 - 7.00	B22												
7.20 - 7.20	D23												
7.50 - 7.50	D24												
7.50 - 7.95	UT25												
8.00 - 8.00	D26												
8.00 - 8.50	B27												
9.00 - 9.45	B28	9.00	SPT(S)	N=26 (3,4/5,6,7,8)									
10.00 - 10.50	B29												

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER				WATER ADDED			
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion				06/12/2016 15:00	4.30	20	1.70	4.00	5.00	300 200 50	1.20 15.00 15.45	200	7.50			

Remarks
 UT12 (3.00-3.45) - 100% recovery, 17 blows.
 UT25 (7.50-7.95) - 100% recovery, 40 blows.
 UT30 (10.50-10.95) - 100% recovery, 65 blows.
 UT35 (13.50-13.95) - 100% recovery, 73 blows.

Termination Depth:
15.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540778.32

Ground Level (mAOD)

Northing (OS mN)
266197.28

Start Date
06/12/2016
End Date
07/12/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA				Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend					
10.50 - 10.95	UT30						Stiff, bluish grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]							
11.00	D31													
11.00 - 11.50	B32													
12.00 - 12.45	B33	12.00	SPT(S)	N=28 (4,4/5,7,8,8)							(7.00)			
13.00 - 13.50	B34													
13.50 - 13.95	UT35													
14.00	D36													
14.00 - 14.50	B37													
14.50	D38													
15.00 - 15.45	D39	15.00	SPT(S)	N>50 (8 for 0mm/10 for 0mm)		07/12/2016 15:00	7.50 15	Weak to medium strong, grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]			14.50 (0.40)			
								Stiff to very stiff, bluish grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]			14.90 (0.55)			
											15.45			

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS						HOLE/CASING DIAMETER				WATER ADDED		
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion				06/12/2016 15:00	4.30	20	1.70	4.00	5.00	300 200 50	1.20 15.00 15.45	200	7.50			

Remarks

UT12 (3.00-3.45) - 100% recovery, 17 blows.
 UT25 (7.50-7.95) - 100% recovery, 40 blows.
 UT30 (10.50-10.95) - 100% recovery, 65 blows.
 UT35 (13.50-13.95) - 100% recovery, 73 blows.

Termination Depth:
15.45m



Unless otherwise stated:
 Depth (m), Diameter (mm), Time (hhmm),
 Thickness (m), Level (mOD).

Equipment Used
Dando 2000

Contractor
Arcadis Consulting (UK) Ltd.

Logged By
SC

Checked By
AM

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540875.06

Ground Level (mAOD)
9.57
Northing (OS mN)
266199.51

Start Date
07/12/2016
End Date
08/12/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.00 - 0.30	D2 ES					07/12/2016 13:00	0.00	MADE GROUND: Grass over CONCRETE fill.		(0.30)	9.27		
0.30 - 0.50	ES3							Soft to firm, orangish brown, slightly silty CLAY with occasional roots and rootlets [POSSIBLE MADE GROUND].		(0.70)			
0.50 - 1.00	B1												
1.00 - 1.50	B4							Firm, light orangish brown mottled grey, slightly sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(1.00)	8.57		
1.20 - 1.30	EW1 EW2												
1.50 - 1.88	UT5												
2.00 - 2.20	D6 B7 ES8							Orangish brown, slightly clayey to clayey very gravelly fine to coarse SAND. Gravel is sub-angular to rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		(0.60)	7.57		
2.20 - 2.40													
2.60 - 2.90	D9 D10 B11	3.00	SPT(S)	N=2 (1,0/0,1,0,1)				Soft, grey to dark brown, slightly silty CLAY. [RIVER TERRACE DEPOSITS]		(0.60)	6.97		
3.00 - 3.45													
3.20 - 3.40	D13 ES12							Very soft to soft, dark brown, clayey fibrous PEAT. [RIVER TERRACE DEPOSITS]		(0.50)	6.37		
3.40 - 3.70	D14												
3.70 - 4.00	D14							Soft, grey, slightly gravelly slightly silty CLAY. Gravel is sub-angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		(0.50)	5.87		
4.00 - 4.20	ES16 B15 D17												
4.20 - 4.50													
4.50 - 4.95	B18	4.50	SPT(S)	N=12 (2,2/3,2,3,4)				Medium dense, brown to black, slightly sandy GRAVEL with high cobble content. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint. Cobbles are sub-angular to rounded of flint. [RIVER TERRACE DEPOSITS]		(0.80)	5.37		
4.95 - 5.00													
5.00 - 5.50	D20 ES19 B21							Firm, brownish grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]		(1.00)	4.57		
5.50 - 6.00													
6.00 - 6.45	B22	6.00	SPT(S)	N=23 (4,3/5,5,6,7)		07/12/2016 16:00 08/12/2016 08:00	6.00 6.00	Stiff to very stiff, bluish grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]			3.57		
6.45 - 7.00	B23												
7.00 - 7.50													
7.50 - 7.95	UT24												
7.95 - 8.00													
8.00 - 8.50	D25 B26												
8.50 - 9.00													
9.00 - 9.95	B27	9.00	SPT(S)	N=26 (3,4/5,6,7,8)									
9.95 - 10.00													
10.00 - 10.50	B28												

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER				WATER ADDED			
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion				07/12/2016 14:30	4.20	20	1.65	4.00	5.00	300 200 50	1.20 15.00 15.45	200	15.00			

Remarks
 UT5 (1.50-1.88) - 85% recovery, 34 blows.
 UT24 (7.50-7.95) - 100% recovery, 53 blows.
 UT29 (10.50-10.95) - 100% recovery, 53 blows.
 UT35 (13.50-13.95) - 100% recovery, 65 blows.

Termination Depth:
15.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540875.06

Ground Level (mAOD)
9.57
Northing (OS mN)
266199.51

Start Date
07/12/2016
End Date
08/12/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
10.50 - 10.95	UT29							Stiff to very stiff, bluish grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]					
11.00	D30												
11.00	D33												
11.00 - 11.50	B31												
12.00 - 12.45	B32	12.00	SPT(S)	N=28 (4,4/5,7,8,8)							(8.70)		
13.00	B20												
13.00 - 13.50	B33												
13.50 - 13.95	UT34												
14.00	D35												
14.00	D38												
14.00 - 14.50	B36												
14.50	D37												
14.50	D40												
15.00 - 15.45	D38	15.00	SPT(S)	N=45 (8,8/10,11,12,12)	08/12/2016 15:00	7.50	Weathered, grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]	x x x x x		14.70	-5.13		
							Very stiff, bluish grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]	x		15.00	-5.43		
								x		15.45	-5.88		

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER			WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion				07/12/2016 14:30	4.20	20	1.65	4.00	5.00	300 200 50	1.20 15.00 15.45	200	15.00			

Remarks
 UT5 (1.50-1.88) - 85% recovery, 34 blows.
 UT24 (7.50-7.95) - 100% recovery, 53 blows.
 UT29 (10.50-10.95) - 100% recovery, 53 blows.
 UT35 (13.50-13.95) - 100% recovery, 65 blows.

Termination Depth:
15.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541001.35

Ground Level (mAOD)
9.42
Northing (OS mN)
266263.30

Start Date
12/12/2016
End Date
13/12/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.00	ES					12/12/2016	0.00	MADE GROUND: CONCRETE.		0.10	9.32		
0.10 - 0.30	ES1					08:00		MADE GROUND: Soft, light brown, slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of sandstone, flint and mudstone.		(0.30)			
0.10 - 1.00	B5							Firm, orangish brown, slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is sub-angular to rounded, fine to coarse of flint and sandstone. [RIVER TERRACE DEPOSITS]		0.40	9.02		
1.00 - 1.20	ES2									(1.20)			
1.00 - 1.50	B6												
1.50 - 1.82	UT7												
1.90	ES									1.60	7.82		
2.00	B9.00							Medium dense, becoming dense, yellowish brown, clayey gravelly fine to coarse SAND. Gravel is angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]					
2.00	D8							Tending to clayey gravelly sand.					
2.00 - 2.50	B9												
3.00	ES	3.00	SPT(C)	N=13 (2,2/2,3,3,5)									
3.00 - 3.20	ES3									(3.40)			
3.00 - 3.45	B10												
4.00 - 4.50	B11												
4.50 - 4.95	B12	4.50	SPT(C)	N=35 (6,7/8,8,9,10)									
5.00 - 5.20	ES4									5.00	4.42		
5.00 - 5.50	B13							Medium dense, yellowish brown, gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]					
6.00 - 6.45	B14	6.00	SPT(C)	N=25 (3,4/5,6,7,7)						(1.80)			
6.80	D15									6.80	2.62		
7.00 - 7.50	B16							Firm to stiff, bluish grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]					
7.50 - 7.95	UT17												
8.00	D18												
8.00 - 8.50	B19												
9.00 - 9.45	B20	9.00	SPT(C)	N=19 (3,4/4,5,5,5)									
10.00 - 10.50	B21												

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion				12/12/2016 10:00	3.00	20	2.4	3.00	6.80	300	1.20	200	7.50			
												200	15.00					
												50	15.45					

Remarks
 UT7 (1.50-1.82) - 70% recovery, 37 blows.
 UT17 (7.50-7.95) - 100% recovery, 39 blows.
 UT22 (10.50-10.95) - 100% recovery, 64 blows.
 UT27 (13.50-13.95) - 100% recovery, 88 blows.

Termination Depth:
15.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541001.35

Ground Level (mAOD)
9.42
Northing (OS mN)
266263.30

Start Date
12/12/2016
End Date
13/12/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
10.50 - 10.95	UT22						Firm to stiff, bluish grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]						
11.00	D23												
11.00 - 11.45	B24												
12.00 - 12.45	B25	12.00	SPT(C)	N=20 (3,4/4,5,5,6)							(8.20)		
13.00 - 13.50	B26												
13.50 - 13.95	UT27												
14.00	D28												
14.00 - 14.50	B29												
14.50 - 15.00	B30												
15.00 - 15.45	D31	15.00	SPT(C)	N>50 (25 for 30mm/50 for 50mm)	15.00	12/12/2016 16:30	7.50	Weathered grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]			15.00 (0.45)	-5.58 -6.03	

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER			WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion				12/12/2016 10:00	3.00	20	2.4	3.00	6.80	300 200 50	1.20 15.00 15.45	200	7.50			

Remarks
 UT7 (1.50-1.82) - 70% recovery, 37 blows.
 UT17 (7.50-7.95) - 100% recovery, 39 blows.
 UT22 (10.50-10.95) - 100% recovery, 64 blows.
 UT27 (13.50-13.95) - 100% recovery, 88 blows.

Termination Depth:
15.45m



Unless otherwise stated:
 Depth (m), Diameter (mm), Time (hhmm),
 Thickness (m), Level (mOD).

Equipment Used
Dando 2000

Contractor
Arcadis Consulting (UK) Ltd.

Logged By
SC

Checked By
AM

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541077.58

Ground Level (mAOD)
9.30
Northing (OS mN)
266125.61

Start Date
28/11/2016
End Date
29/11/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.00 - 0.00	ES B3					28/11/2016 13:00	0.00	Grass over dark brown to black, slightly clayey slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded, fine of mixed lithologies. Occasional rootlets up to 2mm wide. [TOPSOIL]		(0.52)			
0.00 - 0.52	ES1												
0.50 - 1.20	B4							Medium dense, yellowish brown, gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded, fine to medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		0.52	8.78		
0.52 - 1.20	ES2												
1.20 - 1.65	D20	1.20	SPT(S)	N=22 (2,3/4,5,6,7)	1.20					(1.38)			
1.70	EW1												
1.90	ES B6							Medium dense, yellowish brown, slightly clayey sandy GRAVEL with a low cobble content. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse of mixed lithologies. [RIVER TERRACE DEPOSITS]		1.90	7.40		
1.90 - 2.50	ES5												
3.00 - 3.45	D19	3.00	SPT(C)	N=13 (3,3/3,3,3,4)	3.00					(1.90)			
3.50	EW2												
3.80	D21							Firm to stiff, light to dark bluish grey, slightly gravelly CLAY. Gravel is sub-angular to sub-rounded, fine of mixed lithologies. [KIMMERIDGE CLAY FORMATION]		3.80	5.50		
3.80 - 4.50	B8												
3.80 - 4.50	ES7									(0.70)			
4.00 - 4.45	B22												
4.50 - 4.73	UT23							Strong, grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]		4.50	4.80		
4.50 - 4.73	UT23									(0.45)			
5.00	D24							Firm to stiff, light to dark bluish grey, slightly silty CLAY. [KIMMERIDGE CLAY FORMATION]		4.95	4.35		
5.00	D25												
5.50 - 6.00	B10												
5.50 - 6.00	ES9												
6.00 - 6.45	D26	6.00	SPT(S)	N=23 (3,4/5,5,6,7)	5.10					(2.05)			
7.00 - 7.50	B11												
7.50 - 7.95	UT27												
8.00 - 8.50	B12												
9.00 - 9.45	D28	9.00	SPT(S)	N=23 (3,4/5,5,6,7)									
9.00 - 9.50	B13												
10.00 - 10.50	B14												

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER				WATER ADDED			
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit				28/11/2016 10:00	2.00	20	2.00	2.00		300	1.20	200	7.50			
1.20	15.45	Cable Percussion				29/11/2016 12:00	4.70	20	3.90	4.50	5.10	200	15.00	200	15.45			

Remarks
 UT23 (4.50-4.73) - 50% recovery, 64 blows.
 UT27 (7.50-7.95) - 100% recovery, 42 blows.
 UT29 (10.50-10.82) - 70% recovery, 62 blows.
 UT31 (13.50-13.77) - 60% recovery, 67 blows.

Termination Depth:
15.45m



Unless otherwise stated:
 Depth (m), Diameter (mm), Time (hhmm),
 Thickness (m), Level (mOD).

Equipment Used
Dando 2000

Contractor
Arcadis Consulting (UK) Ltd.

Logged By
VP

Checked By
AM

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541077.58

Ground Level (mAOD)
9.30
Northing (OS mN)
266125.61

Start Date
28/11/2016
End Date
29/11/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
10.50 - 10.82	UT29						Stiff, dark bluish grey, slightly silty CLAY. [KIMMERIDGE CLAY FORMATION]						
11.00 - 11.50	D30 B15												
12.00 - 12.45	D34 B16	12.00	SPT(S)	N=27 (4,5/6,6,7,8)									
13.00 - 13.50	B17												
13.50 - 13.77	UT31												
14.00 - 14.50	D32 B18												
15.00 - 15.45	B33 D10	15.00	SPT(S)	N=27 (3,4/6,6,7,8)	29/11/2016 13:00	7.50 15							

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER			WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion				28/11/2016 10:00	2.00	20	2.00	2.00		300	1.20	200	7.50			
1.20	15.45					29/11/2016 12:00	4.70	20	3.90	4.50	5.10	200	15.00	200	15.45			

Remarks
 UT23 (4.50-4.73) - 50% recovery, 64 blows.
 UT27 (7.50-7.95) - 100% recovery, 42 blows.
 UT29 (10.50-10.82) - 70% recovery, 62 blows.
 UT31 (13.50-13.77) - 60% recovery, 67 blows.

Termination Depth:
15.45m



Unless otherwise stated:
 Depth (m), Diameter (mm), Time (hhmm),
 Thickness (m), Level (mOD).

Equipment Used
Dando 2000

Contractor
Arcadis Consulting (UK) Ltd.

Logged By
VP

Checked By
AM

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540894.25

Ground Level (mAOD)
9.85
Northing (OS mN)
266074.59

Start Date
29/11/2016
End Date
30/11/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.10	ES					29/11/2016	0.00	MADE GROUND: CONCRETE.		0.10	9.75		
0.10 - 0.20	ES1					09:00		MADE GROUND: Soft, orangish brown, slightly sandy slightly gravelly CLAY with a low cobble content. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, coarse of mixed lithologies.					
0.10 - 1.00	B3												
0.10 - 1.00	ES2												
0.20	D20												
0.20	D21												
0.60	D21												
0.60	D22												
1.00	B22												
1.15	EW1												
1.50 - 1.95	B4	1.50	SPT(S)	N=13 (2,2/3,3,4)					Firm, reddish brown, slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is sub-angular to sub-rounded, medium to coarse of mixed lithologies. Occasional light grey, silty clay bands, up to 1cm in width. [RIVER TERRACE DEPOSITS]		1.50	8.35	
1.50 - 1.95	B5												
1.50 - 1.95	D23												
1.50 - 1.95	ES4												
1.50 - 1.95	ES5												
2.00	D24												
2.40	D25							Soft, brownish grey, slightly silty CLAY. [RIVER TERRACE DEPOSITS]		2.40	7.45		
3.00 - 3.45	UT26												
3.50	D27												
3.50 - 4.00	B6							Medium dense, yellow, slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of mixed lithologies.. Low cobble content of subrounded mixed lithologies. [RIVER TERRACE DEPOSITS]					
3.50 - 4.00	B7												
3.50 - 4.00	ES6												
3.50 - 4.00	ES7												
4.50	D28	4.50	SPT(S)	N=11 (1,1/2,2,3,4)	2.70						4.80	5.05	
4.50 - 4.95	B8												
5.00	D29							Stiff, bluish grey silty CLAY with occasional sub-angular to sub-rounded gravel of siltstone, up to 1-2cm wide. [KIMMERIDGE CLAY FORMATION]					
5.00 - 5.50	B9												
6.00 - 6.45	ES10	6.00	SPT(S)	N=20 (2,3/4,5,5,6)	6.00						6.10	3.75	
6.10	D30												
7.00	D31												
7.00 - 7.45	B11												
7.50 - 7.95	B12	7.50	SPT(S)	N=30 (0,5/7,7,8,8)									
9.00 - 9.45	B13												
9.00 - 9.45	UT32												
9.50	D33												
10.00 - 10.45	B14												

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit	15.10	15.30	00:30							300	1.20	200	7.50			
1.20	15.95	Cable Percussion										200	15.50					
												50	15.95					

Remarks
No groundwater encountered.
UT26 (3.00-3.45) - 100% recovery, 12 blows.
UT32 (9.00-9.45) - 100% recovery, 54 blows.
UT36 (12.00-12.45) - 100% recovery, 48 blows.
UT40 (15.00-15.45) - No recovery (broken), 100 blows.

Termination Depth:
15.95m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540894.25

Ground Level (mAOD)
9.85
Northing (OS mN)
266074.59

Start Date
29/11/2016
End Date
30/11/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
10.50 10.50 - 10.95	D34 B15	10.50	SPT(S)	N=23 (3,4/5,5,6,7)			Stiff, bluish grey silty CLAY with occasional sub-angular to sub-rounded gravel of siltstone, up to 1-2cm wide. [KIMMERIDGE CLAY FORMATION]						
12.00 12.00 - 12.45 12.00 - 12.45	D35 B16 UT36										(9.00)		
13.00 - 13.45	B17												
13.50 - 13.95 13.50 - 13.95	B18 D37	13.50	SPT(S)	N=28 (4,5/6,7,7,8)									
14.00 - 14.45	B19												
15.00 15.00 - 15.45 15.10	B38 UT40 D39						Weathered, grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]			15.10 (0.20)	-5.25		
15.50 - 15.95	D41	15.50	SPT(S)	N=31 (5,6/7,7,8,9)	15.50		Very stiff, bluish grey CLAY. [KIMMERIDGE CLAY FORMATION]			15.30	-5.45		
					30/11/2016	7.50					(0.65)		
					17:00	15.5					15.95	-6.10	

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	15.10	15.30	00:30							300	1.20	200	7.50			
1.20	15.95											200	15.50	200				
												50	15.95					

Remarks
No groundwater encountered.
UT26 (3.00-3.45) - 100% recovery, 12 blows.
UT32 (9.00-9.45) - 100% recovery, 54 blows.
UT36 (12.00-12.45) - 100% recovery, 48 blows.
UT40 (15.00-15.45) - No recovery (broken), 100 blows.

Termination Depth:
15.95m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540774.76

Ground Level (mAOD)
9.43
Northing (OS mN)
266109.05

Start Date
05/12/2016
End Date
06/12/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.20	D19					05/12/2016 15:30	0.00	MADE GROUND: CONCRETE.		(0.30)			
0.30	D20							MADE GROUND: Soft to firm, orangish brown, slightly gravelly slightly silty sandy CLAY. Sand is fine. Gravel is angular to sub-rounded, fine to medium of mixed lithologies and red brick.		0.30	9.13		
0.30	ES									(1.00)			
0.30 - 1.00	B1							Soft to firm, light grey, silty CLAY with occasional pockets of organic material (up to 1cm thick) and frequent bands of orange, fine to medium sand (up to 1cm thick). [RIVER TERRACE DEPOSITS]		1.30	8.13		
0.30 - 1.00	ES2									(2.40)			
1.10	EW1							Soft to firm, dark grey, silty CLAY with frequent pockets of organic material (up to 1cm thick). [RIVER TERRACE DEPOSITS]		3.70	5.73		
1.50 - 1.95	D29	1.50	SPT(S)	N=11 (1,2/2,3,3,3)						(0.60)			
2.00	ES							Medium dense, grey, slightly clayey GRAVEL. Gravel is sub-angular to sub-rounded, fine to coarse of mixed lithologies. [RIVER TERRACE DEPOSITS]		4.30	5.13		
2.00 - 2.45	B3									(1.00)			
2.00 - 2.45	ES4							Tending to slightly clayey sandy gravel.		5.30	4.13		
2.70	D21									(9.20)			
3.00 - 3.45	UT3							Stiff, dark bluish grey CLAY. [KIMMERIDGE CLAY FORMATION]					
3.00 - 4.00	B30												
3.50	D22							Stiff, dark bluish grey CLAY. [KIMMERIDGE CLAY FORMATION]					
4.00 - 4.45	ES7												
4.00 - 4.50	B6							Stiff, dark bluish grey CLAY. [KIMMERIDGE CLAY FORMATION]					
4.30	D23												
4.50 - 4.95	ES8	4.50	SPT(C)	N=10 (1,2/2,2,3,3)	4.30			Stiff, dark bluish grey CLAY. [KIMMERIDGE CLAY FORMATION]					
5.00 - 6.00	B10												
5.30	D24							Stiff, dark bluish grey CLAY. [KIMMERIDGE CLAY FORMATION]					
5.65 - 6.00	ES11												
6.00 - 6.45	D25	6.00	SPT(S)	N=19 (3,4/4,4,5,6)	2.30			Stiff, dark bluish grey CLAY. [KIMMERIDGE CLAY FORMATION]					
7.00 - 7.50	B13												
7.50 - 7.95	UT14							Stiff, dark bluish grey CLAY. [KIMMERIDGE CLAY FORMATION]					
8.00 - 8.50	B15												
9.00 - 9.45	D27	9.00	SPT(S)	N=18 (3,3/4,4,5,5)				Stiff, dark bluish grey CLAY. [KIMMERIDGE CLAY FORMATION]					
10.00 - 10.50	B17												

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER				WATER ADDED			
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion				05/12/2016 15:00	4.30	20	1.55	3.00		300 200 50	1.20 15.00 15.45	200	7.50			

Remarks
 UT3 (3.00-3.45) - 100% recovery, 16 blows.
 UT14 (7.50-7.95) - No recovery, 52 blows.
 UT28 (10.50-10.95) - 100% recovery, 46 blows.
 UT31 (13.50-13.95) - 100% recovery, 54 blows.

Termination Depth:
15.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540774.76

Ground Level (mAOD)
9.43
Northing (OS mN)
266109.05

Start Date
05/12/2016
End Date
06/12/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA				Depth (Thickness)	Level	Install/ Backfill				
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend									
10.50 - 10.95	UT28						Tending to slightly sandy slightly gravelly clay.											
11.00 - 11.50	D29 B18																	
12.00 - 12.45	D30	12.00	SPT(S)	N=24 (3,4/5,6,6,7)														
13.00 - 13.50	B27																	
13.50 - 13.95	UT31																	
14.00 - 14.50	B28																	
14.50	D32																	
14.70 - 15.00	B29						Weathered, grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]	x x x x x x x x x x x x x x x		14.50 (0.20)	-5.07							
15.00 - 15.45	D33	15.00	SPT(S)	N=46 (9,9/9,11,13,13)	15.00		Very stiff, dark bluish grey CLAY. [KIMMERIDGE CLAY FORMATION]			14.70 (0.75)	-5.27							
						06/12/2016 17:00				15.45	-6.02							
DRILLING TECHNIQUE		CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED					
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion				05/12/2016 15:00	4.30	20	1.55	3.00		300 200 50	1.20 15.00 15.45	200	7.50			
Remarks																		
UT3 (3.00-3.45) - 100% recovery, 16 blows. UT14 (7.50-7.95) - No recovery, 52 blows. UT28 (10.50-10.95) - 100% recovery, 46 blows. UT31 (13.50-13.95) - 100% recovery, 54 blows.																		
																Termination Depth: 15.45m		



Unless otherwise stated:
Depth (m), Diameter (mm), Time (hhmm),
Thickness (m), Level (mOD).

Equipment Used
Dando 2000

Contractor
Arcadis Consulting (UK) Ltd.

Logged By
VP

Checked By
AM

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540940.77

Ground Level (mAOD)
9.64
Northing (OS mN)
266158.99

Start Date
08/12/2016
End Date
09/12/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.00 - 1.00	B1					08/12/2016	0.00	Grass over soft, silty sandy CLAY with frequent root and rootlets.		(0.20)	9.44		
0.10	D3					11:00		[TOP SOIL]		0.20			
0.20	D4							Soft to firm, orangish brown, sandy slightly gravelly CLAY with occasional roots and rootlets. Gravel is sub-angular to sub-rounded, fine to coarse of sandstone.					
0.20 - 0.40	ES							[RIVER TERRACE DEPOSITS]					
	ES2												
1.00	B20									(1.70)			
1.00 - 1.50	B												
1.50 - 1.73	UT5												
2.00	B							Loose, orangish brown, sandy GRAVEL. Sand is fine to coarse. Gravel is sub-angular to rounded, fine to coarse of flint and sandstone.		1.90	7.74		
2.00	D6							[RIVER TERRACE DEPOSITS]					
2.00 - 2.20	ES8												
2.00 - 2.50	B7												
2.40	EW2												
3.00 - 3.45	B9	3.00	SPT(S)	N=9 (1,1/2,2,2,3)						(2.00)			
3.20	ES												
3.20 - 3.40	ES10												
3.50 - 4.00	B11							Tending to slightly clayey very sandy gravel.					
3.60	EW1												
3.90	D12									3.90	5.74		
4.00 - 4.50	B14							Soft, orangish grey, slightly sandy slightly silty gravelly CLAY.		(0.30)			
4.20	D13							[RIVER TERRACE DEPOSITS]		4.20	5.44		
4.30 - 4.50	ES15							Very soft to soft, greyish brown, slightly silty CLAY.		(0.80)			
4.50 - 4.95	B16	4.50	SPT(S)	N=4 (1,0/1,1,1,1)				[RIVER TERRACE DEPOSITS]					
5.00	D17									5.00	4.64		
5.00 - 5.50	B18							Stiff, dark grey, silty CLAY.					
5.10 - 5.30	ES19							[KIMMERIDGE CLAY FORMATION]					
6.00 - 6.45	B20	6.00	SPT(S)	N=21 (2,3/5,5,5,6)						(2.60)			
7.00 - 7.50	B21												
7.50 - 7.95	UT22												
7.60	D23									7.60	2.04		
8.00 - 8.50	B24					08/12/2016	7.50	Weak, grey SILTSTONE.		(0.30)			
						16:30	7.50	Stiff, dark bluish grey, silty CLAY.		7.90	1.74		
						09/12/2016	8	[KIMMERIDGE CLAY FORMATION]					
						08:00							
9.00 - 9.45	B25	9.00	SPT(S)	N=24 (4,4/5,6,6,7)									
10.00 - 10.50	B26												

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER			WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion				08/12/2016 12:30	2.00	20	1.60	1.50	5.00	300 200 50	1.20 15.00 15.45	200	7.50			

Remarks
 UT5 (1.50-1.73) - 50% recovery, 21 blows.
 UT22 (7.50-7.95) - No recovery, 100 blows.
 UT27 (10.50-10.95) - 100% recovery, 53 blows.
 UT32 (13.50-13.95) - 100% recovery, 65 blows.

Termination Depth:
15.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540940.77

Ground Level (mAOD)
9.64
Northing (OS mN)
266158.99

Start Date
08/12/2016
End Date
09/12/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
10.50 - 10.95	UT27						Stiff, dark bluish grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]						
11.00	D28												
11.00 - 11.50	B29												
12.00 - 12.45	D30	12.00	SPT(S)	N=24 (4,5/5,6,6,7)									
13.00 - 13.50	B31												
13.50 - 13.95	UT32												
14.00	D33												
14.50 - 15.00	B34												
15.00 - 15.45	D35	15.00	SPT(S)	N>50 (25 for 65mm/0 for 0mm)	09/12/2016 16:00	7.50 15	Weathered, grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]						

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER			WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion				08/12/2016 12:30	2.00	20	1.60	1.50	5.00	300 200 50	1.20 15.00 15.45	200	7.50			

Remarks
 UT5 (1.50-1.73) - 50% recovery, 21 blows.
 UT22 (7.50-7.95) - No recovery, 100 blows.
 UT27 (10.50-10.95) - 100% recovery, 53 blows.
 UT32 (13.50-13.95) - 100% recovery, 65 blows.

Termination Depth:
15.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540700.56

Ground Level (mAOD)
9.48
Northing (OS mN)
266151.06

Start Date
30/11/2016
End Date
01/12/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.20	D1					30/11/2016 13:00	0.00	Grass over stiff, brown, sandy CLAY with roots and rootlets. Sand is fine to coarse.		(0.20)	9.28		
0.20	ES							[TOPSOIL]		0.20			
0.20 - 0.30	ES1							Firm to stiff, light to dark brown, slightly sandy gravelly CLAY with occasional roots. Sand is fine to coarse. Gravel is sub-angular, fine to coarse of flint.					
0.40	D2							[RIVER TERRACE DEPOSITS]					
1.00	B3									(1.50)			
1.00	ES												
1.00 - 1.10	ES2												
1.20	EW2												
1.50 - 1.95	D4	1.50	SPT(S)	N=18 (3,4/4,4,5,5)									
1.70	D6							Soft, light grey, silty CLAY.		1.70	7.78		
								[RIVER TERRACE DEPOSITS]					
2.00 - 2.10	ES3									(0.70)			
2.00 - 2.40	B7												
2.40	D8							Soft to firm, brownish grey, silty CLAY.		2.40	7.08		
2.50	EW1							[RIVER TERRACE DEPOSITS]					
3.00	B9					01/12/2016 09:00	3.00						
3.00 - 3.41	UT10					30/11/2016 17:00	3.5			(2.00)			
3.50	D11												
3.90	D12												
4.00	D13												
4.40	D14	4.50	SPT(C)	N=14 (2,3/3,3,4,4)				Medium dense, grey, clayey sandy GRAVEL. Sand is fine to coarse. Gravel is sub-angular, fine to coarse of flint.		4.40	5.08		
4.50 - 4.60	ES4							[RIVER TERRACE DEPOSITS]					
4.50 - 4.95	B15									(1.30)			
5.00 - 5.70	B16												
5.70	D17							Stiff, dark grey, silty CLAY.		5.70	3.78		
								[KIMMERIDGE CLAY FORMATION]					
6.00 - 6.10	ES5	6.00	SPT(S)	N=27 (2,4/5,7,7,8)	5.70								
6.00 - 6.45	D18												
7.00 - 7.50	B20												
7.50 - 7.95	UT21												
8.00	D22												
8.00 - 9.00	B23												
9.00 - 9.45	D24	9.00	SPT(S)	N=18 (3,4/4,4,5,5)									
10.00	D26												

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion				01/12/2016 10:00	4.40	20	1.80	4.00	5.20	300 200 50	1.20 15.00 15.45	200	6.00			

Remarks
 UT10 (3.00-3.41) - 90% recovery, 30 blows.
 UT21 (7.50-7.95) - 100% recovery, 32 blows.
 UT27 (10.50-10.95) - 100% recovery, 37 blows.
 UT33 (13.50-13.95) - 100% recovery, 49 blows.

Termination Depth:
15.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540700.56

Ground Level (mAOD)
9.48
Northing (OS mN)
266151.06

Start Date
30/11/2016
End Date
01/12/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
10.50 - 10.95	UT27						Stiff, dark grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]						
11.00	D28												
11.00 - 12.00	B29												
12.00 - 12.45	D30	12.00	SPT(S)	N=29 (4,5/6,7,8,8)							(9.00)		
13.00 - 13.50	B32												
13.50 - 13.95	UT33												
14.00	D34												
14.00 - 14.70	B35												
14.70	D36												
15.00	B37	15.00	SPT(S)	N=38 (6,7/8,9,10,11)			Very weak, light grey, weathered SILTSTONE. [KIMMERIDGE CLAY FORMATION]				14.70 (0.30)	-5.22	
15.00 - 15.45	D38						Very stiff, dark bluish grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]				15.00 (0.45)	-5.52	
					01/12/2016 17:00	6.00 15.00					15.45	-5.97	

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER				WATER ADDED			
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion				01/12/2016 10:00	4.40	20	1.80	4.00	5.20	300 200 50	1.20 15.00 15.45	200	6.00			

Remarks
 UT10 (3.00-3.41) - 90% recovery, 30 blows.
 UT21 (7.50-7.95) - 100% recovery, 32 blows.
 UT27 (10.50-10.95) - 100% recovery, 37 blows.
 UT33 (13.50-13.95) - 100% recovery, 49 blows.

Termination Depth:
15.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540851.75

Ground Level (mAOD)
9.24
Northing (OS mN)
266298.65

Start Date
02/12/2016
End Date
02/12/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.00	ES						Grass over brown, slightly clayey slightly gravelly SAND with occasional rootlets (up to 2mm thick). Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of mixed lithologies.				(0.50)		
0.00 - 1.00	B1						[TOP SOIL]				0.50	8.74	
0.00 - 1.00	ES2						Brown, slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of mixed lithologies.				(1.00)		
0.20	D19						[RIVER TERRACE DEPOSITS]						
0.30	D20												
1.50	ES	1.50	SPT(C)	N=27 (6,7/7,6,7,7)	1.20						1.50	7.74	
1.50 - 1.95	B3						Medium dense, becoming loose, orangish brown, slightly sandy slightly silty GRAVEL. Sand is fine to coarse . Gravel is sub-angular to sub-rounded, fine to coarse of mixed lithologies.						
1.50 - 1.95	D21						[RIVER TERRACE DEPOSITS]						
1.50 - 1.95	ES4												
3.00	EWW1	3.00	SPT(C)	N=12 (2,2/3,3,3,3)	1.20								
3.00 - 3.45	B5						Tending to clayey very gravelly sand.						
3.00 - 3.45	D22												
3.10	EWW2												
4.00 - 4.45	B6										(5.30)		
4.50 - 4.95	D23	4.50	SPT(C)	N=9 (1,1/2,2,2,3)	1.20								
5.00 - 5.45	B7												
6.00 - 6.45	B8	6.00	SPT(C)	N=16 (3,3/3,4,4,5)	1.20								
6.00 - 6.45	D24						Blowing sand from 6.00m, rising to 2.00m. Becoming grey, sandy gravel with occasional sub-angular to sub-rounded cobbles of siltstone.						
6.80	D25										6.80	2.44	
7.00 - 7.45	B9						Stiff, dark bluish grey, silty CLAY with occasional gravel of fine siltstone (up to 3cm in width).						
7.00 - 7.45	ES10						[KIMMERIDGE CLAY FORMATION]						
7.50 - 7.95	UT26												
8.00	D27												
8.00	D28												
8.00 - 8.45	B11												
9.00 - 9.45	B12	9.00	SPT(S)	N=19 (2,3/4,4,5,6)									
9.00 - 9.45	D29												
10.00 - 10.45	B13												

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	14.10	14.30	00:15	02/12/2016 13:00	3.00	20	2.00	3.00		300 200 50	1.20 15.00 15.45	200	7.50	1.20	3.00	70

Remarks
 UT26 (7.50-7.95) - 100% recovery, 47 blows.
 UT30 (10.50-10.95) - 100% recovery, 51 blows.
 UT33 (13.50-13.95) - 100% recovery, 66 blows.

Termination Depth:
15.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540851.75

Ground Level (mAOD)
9.24
Northing (OS mN)
266298.65

Start Date
02/12/2016
End Date
02/12/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
10.50 - 10.95	UT30						Stiff, dark bluish grey, silty CLAY with occasional gravel of fine siltstone (up to 3cm in width). [KIMMERIDGE CLAY FORMATION]						
11.00	D31												
11.00 - 11.45	B14												
12.00 - 12.45	B15	12.00	SPT(S)	N=25 (4,5/5,6,7,7)						(7.30)			
12.00 - 12.45	D32												
13.00 - 13.45	B16												
13.50 - 13.95	UT33												
14.00	D34												
14.00 - 14.45	B17						Weathered, grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]			14.10 (0.30)	-4.86		
							Very stiff, dark bluish grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]			14.40	-5.16		
15.00	D35	15.00	SPT(S)	N=30 (4,6/6,7,8,9)						(1.05)			
15.00 - 15.45	B18												
15.45	D36									15.45	-6.21		

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS						HOLE/CASING DIAMETER				WATER ADDED		
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	14.10	14.30	00:15	02/12/2016 13:00	3.00	20	2.00	3.00		300 200 50	1.20 15.00 15.45	200	7.50	1.20	3.00	70

Remarks
 UT26 (7.50-7.95) - 100% recovery, 47 blows.
 UT30 (10.50-10.95) - 100% recovery, 51 blows.
 UT33 (13.50-13.95) - 100% recovery, 66 blows.

Termination Depth:
15.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539243.29

Ground Level (mAOD)
14.87
Northing (OS mN)
264744.41

Start Date
14/12/2016
End Date
15/12/2016

Scale
1:50
Sheet 1 of 3

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.00	ES				14/12/2016	0.00	Grass and turf over soft to firm, brown, slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is rounded, fine to medium of flint.			(0.40)	14.47		
0.00 - 0.40	B4				13:00								
0.10 - 0.40	ES1												
0.40 - 0.90	B5												
0.50	D13												
0.60 - 0.80	ES2												
1.00 - 1.20	B6												
1.00 - 1.20	ES3	1.20	SPT(S)	N=9 (1,2/2,2,2,3)									
1.20	D14												
1.20	UT10												
1.20 - 1.40	B10												
1.20 - 1.40	ES7												
1.40 - 2.00	B11												
1.60 - 1.80	ES8												
2.00	D15												
2.50 - 3.00	B12												
3.00	U1				14/12/2016	2.50							
3.00 - 3.45	UT1				17:00	2.50							
					15/12/2016								
					09:00								
3.50	D4												
3.60 - 4.00	B7												
3.70 - 3.90	ES9												
4.50	D5	4.50	SPT(S)	N=10 (1,2/2,2,3,3)									
4.50 - 5.00	B8												
5.50	D6												
5.50 - 6.00	B9												
6.00 - 6.45	UT2												
6.50	D7												
6.50 - 7.00	B10												
7.50	D8	7.50	SPT(S)	N>50 (5,20 for 25mm/50 for 35mm)									
7.60 - 7.90	B11												
8.50 - 8.70	B12												
8.80	D9												
9.00	U3												
9.00 - 9.45	UT3												
9.50	D10												
9.50 - 10.00	B13												

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit	7.60	7.90	00:30							300	1.20	200	3.00			
1.20	25.00	Cable Percussion	8.50	8.70	00:30							200	25.00					
			16.10	16.40	00:30													
			19.80	20.20	00:45													

Remarks
No groundwater encountered.
Standpipe piezometer installed to 13.00m bgl (base of tip). Pluviated sand response zone from 12.00m to 14.00m bgl.
UT1 (3.00-3.45) - 100% recovery, 38 blows. UT2 (6.00-6.45) - 100% recovery, 68 blows. UT3 (9.00-9.45) - 100% recovery, 100 blows. UT4 (12.00-12.45) - 100% recovery, 100 blows. UT5 (15.00-15.45) - 100% recovery, 100 blows. UT6 (18.00-18.45) - 100% recovery, 100 blows. UT7 (21.00-21.45) - 100% recovery, 100 blows. UT8 (24.00-24.45) - 100% recovery, 100 blows.

Termination Depth:
25.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539243.29

Ground Level (mAOD)
14.87
Northing (OS mN)
264744.41

Start Date
14/12/2016
End Date
15/12/2016

Scale
1:50
Sheet 2 of 3

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
10.50 10.50 - 11.00	D11 B14	10.50	SPT(S)	N=25 (4,4/5,6,7,7)			Stiff to very stiff, grey, fissured, silty CLAY with occasional gravel of siltstone. [KIMMERIDGE CLAY FORMATION]						
11.50 11.50 - 12.00	D12 B15												
12.00 - 12.45	UT4												
12.50 12.50 - 13.00	D13 B16												
13.50 13.50 - 14.00	D14 B17	13.50	SPT(S)	N=37 (4,8/8,9,10,10)									
14.50 14.50 - 15.00	D15 B18												
15.00 15.00 - 15.45	U5 UT5												
15.50 15.50 - 16.00	D16 B19												
16.10 - 16.40	B20						Grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]			16.10 (0.30)	-1.23		
16.50 16.50 - 17.00	D17 B21	16.50	SPT(S)	N=41 (4,8/7,9,11,14)			Very stiff, grey, fissured, silty CLAY with occasional gravel of siltstone. [KIMMERIDGE CLAY FORMATION]			16.40	-1.53		
17.50 17.50 - 18.00	D18 B22												
18.00 - 18.45	UT6												
18.50 18.50 - 19.00	D19 B23												
19.50 19.50 - 19.80	D20 B24	19.50	SPT(S)	N>50 (8,12/13,13,14,10 for 45mm)									
19.80 - 20.20	B25						Grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]			19.80 (0.40)	-4.93		
										20.20	-5.33		

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	7.60	7.90	00:30							300	1.20	200	3.00			
1.20	25.00		8.50	8.70	00:30								200	25.00				
			16.10	16.40	00:30													
			19.80	20.20	00:45													

Remarks
No groundwater encountered.
Standpipe piezometer installed to 13.00m bgl (base of tip). Pluviated sand response zone from 12.00m to 14.00m bgl.
UT1 (3.00-3.45) - 100% recovery, 38 blows. UT2 (6.00-6.45) - 100% recovery, 68 blows. UT3 (9.00-9.45) - 100% recovery, 100 blows. UT4 (12.00-12.45) - 100% recovery, 100 blows. UT5 (15.00-15.45) - 100% recovery, 100 blows. UT6 (18.00-18.45) - 100% recovery, 100 blows. UT7 (21.00-21.45) - 100% recovery, 100 blows. UT8 (24.00-24.45) - 100% recovery, 100 blows.

Termination Depth:
25.00m



Unless otherwise stated:
Depth (m), Diameter (mm), Time (hhmm),
Thickness (m), Level (mOD).

Equipment Used
Pilcon 2000

Contractor
Arcadis Consulting (UK) Ltd.

Logged By
VP

Checked By
AM

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539243.29

Ground Level (mAOD)
14.87
Northing (OS mN)
264744.41

Start Date
14/12/2016
End Date
15/12/2016

Scale
1:50
Sheet 3 of 3

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA				Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend					
20.50	D21						Very stiff, grey, fissured, silty CLAY with occasional gravel of siltstone. [KIMMERIDGE CLAY FORMATION]			(4.80)				
21.00 - 21.45	UT7													
21.50	D22													
21.50 - 22.00	B26													
22.50	D23	22.50	SPT(S)	N>50 (7,7/10,13,13,14 for 60mm)										
22.50 - 23.00	B27													
23.50	D24													
23.50 - 24.00	B28													
24.00	U8													
24.00 - 24.45	UT8													
24.50	D25	24.50	SPT(S)	N=55 (8,12/10,14,14,17)	15/12/2016 17:00	3.00				25.00	-10.13			

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit	7.60	7.90	00:30							300	1.20	200	3.00			
1.20	25.00	Cable Percussion	8.50	8.70	00:30							200	25.00					
			16.10	16.40	00:30													
			19.80	20.20	00:45													

Remarks
No groundwater encountered.
Standpipe piezometer installed to 13.00m bgl (base of tip). Pluviated sand response zone from 12.00m to 14.00m bgl.
UT1 (3.00-3.45) - 100% recovery, 38 blows. UT2 (6.00-6.45) - 100% recovery, 68 blows. UT3 (9.00-9.45) - 100% recovery, 100 blows. UT4 (12.00-12.45) - 100% recovery, 100 blows. UT5 (15.00-15.45) - 100% recovery, 100 blows. UT6 (18.00-18.45) - 100% recovery, 100 blows. UT7 (21.00-21.45) - 100% recovery, 100 blows. UT8 (24.00-24.45) - 100% recovery, 100 blows.

Termination Depth:
25.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539238.34

Ground Level (mAOD)
264696.65
Northing (OS mN)
264696.65

Start Date
14/12/2016
End Date
15/12/2016

Scale
1:50
Sheet 1 of 3

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.00 - 1.00	B1						MADE GROUND: Firm, brown mottled grey, slightly gravelly CLAY. Gravel is sub-angular to sub-rounded, fine to medium of flint.				(0.40)		
0.10	ES				14/12/2016	0.00							
0.20	D2				13:00								
0.40	D3						Firm, light brown mottled grey, slightly gravelly silty CLAY. Gravel is sub-angular to sub-rounded, fine to medium of flint. [RIVER TERRACE DEPOSITS]				(0.40)		
1.00 - 1.50	B4												
1.10	D5												
1.50 - 1.95	D6	1.50	SPT(C)	N=23 (3,4/5,6,6,6)							(0.90)		
2.00	D7												
2.00	EW2												
2.00 - 2.50	B8												
2.50 - 3.00	B9												
2.80	EW1												
3.00 - 3.36	UT10										(2.00)		
3.50	D11				14/12/2016	3.00							
					17:00	3.00							
					15/12/2016	3.5							
					09:00								
4.00 - 4.50	B12												
4.50 - 4.95	D13	4.50	SPT(S)	N=19 (3,4/4,5,5,5)			Stiff dark bluish grey, slightly silty CLAY. [KIMMERIDGE CLAY FORMATION]				4.00		
5.00 - 5.50	B14												
6.00 - 6.45	B16												
6.00 - 6.45	UT15												
7.00 - 7.50	B17												
7.30	D18												
7.50 - 7.95	D19	7.50	SPT(S)	N>50 (25 for 70mm, 27/25 for 55mm)			Weathered, grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]				7.30		
8.00 - 8.50	B20						Very stiff, dark bluish grey, slightly silty CLAY with siltstone bands. [KIMMERIDGE CLAY FORMATION]				(0.30)		
9.00	D19												
9.00 - 9.45	D21	9.00	SPT(S)	N=30 (5,5/6,7,8,9)									
10.00 - 10.50	B22												

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit										300	1.20	200	4.50			
0.00	1.20	Cable Percussion										200	25.00	200				

Remarks
No groundwater encountered.
UT10 (3.00-3.36) - 80% recovery, 35 blows. UT15 (6.00-6.45) - No recovery, 34 blows. UT26 (12.00-12.45) - 100% recovery, 57 blows. UT31 (15.00-15.45) - 100% recovery, 61 blows. UT36 (18.00-18.45) - 100% recovery, 65 blows.

Termination Depth:
25.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539238.34

Ground Level (mAOD)

Northing (OS mN)
264696.65

Start Date
14/12/2016
End Date
15/12/2016

Scale
1:50
Sheet 2 of 3

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA				Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend					
10.50 - 10.95	D23						Very stiff, dark bluish grey, slightly silty CLAY with siltstone bands. [KIMMERIDGE CLAY FORMATION]							
10.60	D22													
10.60	D24													
11.00 - 11.50	B25													
12.00 - 12.45	UT26													
12.50	D27													
12.50 - 13.00	B28													
13.50	D27	13.50	SPT(S)	N=26 (5,5/6,6,7,7)										
13.50 - 13.95	D29													
14.50 - 15.00	B30													
15.00 - 15.45	UT31													
15.50	D32													
15.50 - 16.00	B33													
16.50	D32	16.50	SPT(S)	N>50 (25 for 20mm/50 for 20mm)										
16.50 - 16.95	D34													
17.50 - 18.00	B35													
18.00 - 18.45	UT36													
18.50	D37													
18.50 - 19.00	B38													
19.50	D37	19.50	SPT(S)	N=51 (8,10/10,12,14,15)										
19.50 - 19.95	D39													

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER				WATER ADDED			
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit										300	1.20	200	4.50			
0.00	25.00	Cable Percussion										200	25.00	200	4.50			

Remarks
No groundwater encountered.
UT10 (3.00-3.36) - 80% recovery, 35 blows. UT15 (6.00-6.45) - No recovery, 34 blows. UT26 (12.00-12.45) - 100% recovery, 57 blows. UT31 (15.00-15.45) - 100% recovery, 61 blows. UT36 (18.00-18.45) - 100% recovery, 65 blows.

Termination Depth:
25.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539238.34

Ground Level (mAOD)
264696.65
Northing (OS mN)
264696.65

Start Date
14/12/2016
End Date
15/12/2016

Scale
1:50
Sheet 3 of 3

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA				Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend					
-20.50 - 21.00	B40						Very stiff, dark bluish grey, slightly silty CLAY with siltstone bands. [KIMMERIDGE CLAY FORMATION]							
-21.00 - 21.45	D41	21.00	SPT(S)	N>50 (10,10/12,22,16 for 30mm)										
-22.00 - 22.50	B42													
22.50	D41	22.50	SPT(S)	N>50										
-22.50 - 22.95	D43			(10,10/12,12,13,13 for 70mm)										
-23.00 - 23.50	B44													
24.00	D43	24.00	SPT(S)	N=50										
-24.00 - 24.45	D45			(8,10/11,12,13,14)										
-24.50 - 25.00	B46													
					15/12/2016 17:00	4.50 25								

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER				WATER ADDED			
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit										300	1.20	200	4.50			
0.00	25.00	Cable Percussion										200	25.00	200	4.50			

Remarks
No groundwater encountered.
UT10 (3.00-3.36) - 80% recovery, 35 blows. UT15 (6.00-6.45) - No recovery, 34 blows. UT26 (12.00-12.45) - 100% recovery, 57 blows. UT31 (15.00-15.45) - 100% recovery, 61 blows. UT36 (18.00-18.45) - 100% recovery, 65 blows.

Termination Depth:
25.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539275.73

Ground Level (mAOD)
264653.94
Northing (OS mN)
264653.94

Start Date
13/12/2016
End Date
14/12/2016

Scale
1:50
Sheet 1 of 3

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA				Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend					
0.10	ES				13/12/2016	0.00	Grass over firm, brown, slightly sandy CLAY with thin rootlets. Sand is fine to medium.				(0.40)			
0.10 - 0.30	B1				09:00		[TOP SOIL]				0.40			
0.10 - 0.30	ES5						Firm to stiff, orangish brown, sandy CLAY with pockets of fine to coarse sand and occasional fine rootlets.				(1.10)			
0.30	EW2						[RIVER TERRACE DEPOSITS]							
0.40 - 1.20	B2													
0.60 - 0.80	ES6													
		1.20	SPT(C)	N=9 (3,2/2,2,3,2)										
1.50 - 2.00	B3													
1.70 - 1.90	ES7						Firm, bluish grey mottled brown, slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse of siltstone and gypsum.				1.50			
							[RIVER TERRACE DEPOSITS]							
2.00	B10	2.00	SPT(S)	N=10 (1,1/2,2,3,3)										
2.00	D9													
2.00 - 3.00	B4										(2.50)			
3.00 - 3.45	UT11													
3.30	EW1													
3.45	D12													
4.00	B13	4.00	SPT(S)	N=15 (2,2/3,3,4,5)										
4.00	D14													
4.00	D4													
4.20 - 4.40	ES8						Firm to stiff, dark bluish grey silty CLAY with frequent shell fragments.				4.00			
							[KIMMERIDGE CLAY FORMATION]							
5.00 - 5.45	UT15													
5.45	D16													
5.50	B17													
											(3.90)			
6.50	D17	6.50	SPT(S)	N=20 (2,3/4,4,6,6)										
6.50	D18													
7.00	B19													
8.00	D20	8.00	SPT(S)	N=29 (17,8/10,7,7,5)			Dark grey SILTSTONE.				7.90			
							[KIMMERIDGE CLAY FORMATION]				(0.30)			
							Stiff to very stiff, dark bluish grey silty CLAY with frequent gravel of siltstone.				8.20			
							[KIMMERIDGE CLAY FORMATION]							
8.60	B21													
9.50	D21	9.50	SPT(S)	N=50 (6,7/18,13,10,9)										
9.50	D22													
10.00	B23										(2.50)			

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	17.70	17.90	00:40							300	1.20	200	1.65			
1.20	25.33		23.70	23.90								200	25.00					
												50	25.33					

Remarks
No groundwater encountered.
UT11 (3.00-3.45) - 100% recovery, 28 blows. UT15 (5.00-5.45) - 100% recovery, 35 blows. UT24 (11.00-11.45) - 100% recovery, 50 blows. UT29 (14.00-14.45) - 100% recovery, 74 blows. UT34 (17.00-17.10) - 25% recovery, 100 blows. UT37 (19.00-19.45) - 100% recovery, 110 blows. UT42 (24.00-24.40) - 90% recovery, 115 blows.

Termination Depth:
25.33m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539275.73

Ground Level (mAOD)
264653.94
Northing (OS mN)
264653.94

Start Date
13/12/2016
End Date
14/12/2016

Scale
1:50
Sheet 2 of 3

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
11.00 11.00 - 11.45	U23 UT24						Stiff to very stiff, dark bluish grey silty CLAY with frequent gravel of siltstone. [KIMMERIDGE CLAY FORMATION]				10.70 (0.20) 10.90		
11.45 11.50	D25 B26						Grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]						
							Very stiff, dark bluish grey silty CLAY with frequent gravel of siltstone. [KIMMERIDGE CLAY FORMATION]						
12.50	D27	12.50	SPT(S)	N=42 (6,7,9,10,13)									
13.00	B28				13/12/2016 17:00	1.65							
					14/12/2016 09:00	1.65							
14.00 - 14.45	UT29										6.10		
14.45 14.45 14.50	D29 D30 B31												
15.50	D32	15.50	SPT(S)	N=50 (6,9/11,13,14,12)									
16.00	B33												
17.00 - 17.10	UT34										17.00		
17.50	D35	17.50	SPT(S)	N>50 (14,11 for 40mm/29,16,5 for 5mm)			Grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]						
18.00	B36												
18.00							Very stiff, dark bluish grey silty CLAY with frequent gravel of siltstone. [KIMMERIDGE CLAY FORMATION]						
19.00 - 19.45	UT37												
19.45 19.45 19.50	D37 D38 B39												

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	17.70	17.90	00:40							300	1.20	200	1.65			
	25.33		23.70	23.90								200	25.00					
												50	25.33					

Remarks
No groundwater encountered.
UT11 (3.00-3.45) - 100% recovery, 28 blows. UT15 (5.00-5.45) - 100% recovery, 35 blows. UT24 (11.00-11.45) - 100% recovery, 50 blows. UT29 (14.00-14.45) - 100% recovery, 74 blows. UT34 (17.00-17.10) - 25% recovery, 100 blows. UT37 (19.00-19.45) - 100% recovery, 110 blows. UT42 (24.00-24.40) - 90% recovery, 115 blows.

Termination Depth:
25.33m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539275.73

Ground Level (mAOD)
264653.94
Northing (OS mN)
264653.94

Start Date
13/12/2016
End Date
14/12/2016

Scale
1:50
Sheet 3 of 3

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA				Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend					
20.50	D40	20.50	SPT(S)	N=50 (8,9/10,16,20,4)			Very stiff, dark bluish grey silty CLAY with frequent gravel of siltstone. [KIMMERIDGE CLAY FORMATION]			(7.33)				
21.00	B41													
22.00 - 22.40	UT42													
22.45	D42													
22.45	D43													
22.50	B44													
23.50	D45	23.50	SPT(S)	N>50 (25.0 for 0mm/38,12 for 35mm)										
24.00	B46													
25.00	D46	25.00	SPT(S)	N>50 (14,11/19,21,10.0 for 0mm)										
25.00 - 25.33	D47				14/12/2016 17:00	1.65								

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	17.70	17.90	00:40							300	1.20	200	1.65			
1.20	25.33		23.70	23.90	00:40							200	25.00	200	25.33			

Remarks
No groundwater encountered.
UT11 (3.00-3.45) - 100% recovery, 28 blows. UT15 (5.00-5.45) - 100% recovery, 35 blows. UT24 (11.00-11.45) - 100% recovery, 50 blows. UT29 (14.00-14.45) - 100% recovery, 74 blows. UT34 (17.00-17.10) - 25% recovery, 100 blows. UT37 (19.00-19.45) - 100% recovery, 110 blows. UT42 (24.00-24.40) - 90% recovery, 115 blows.

Termination Depth:
25.33m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539232.81

Ground Level (mAOD)
264657.32
Northing (OS mN)

Start Date
13/12/2016
End Date
13/12/2016

Scale
1:50
Sheet 1 of 3

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.00 - 1.00	B4						Soft, brown, slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse of flint and mudstone.				0.30		
0.10	ES				13/12/2016	0.00	[TOP SOIL]				0.30		
0.10 - 0.30	ES1				12:30		Medium dense, orange mottled brown, slightly gravelly clayey SAND. Sand is fine to coarse. Gravel is sub-angular to rounded, fine to coarse of flint and mudstone.						
0.20	D5						[RIVER TERRACE DEPOSITS]						
0.30	D6												
1.00 - 1.50	B7												
1.10 - 1.30	ES2												
1.50 - 1.70	UT8												
2.00	D9												
2.00 - 2.50	B10						Soft to firm, brown mottled orange, slightly sandy gravelly CLAY with low cobble content. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint and mudstone.				2.00		
2.55	EW1						Cobbles are sub-angular of flint.						
2.60	D11						[RIVER TERRACE DEPOSITS]						
2.60 - 3.00	B12						Firm to stiff, bluish grey, silty CLAY with occasional shell fragments.				2.60		
2.80 - 3.00	ES3						[KIMMERIDGE CLAY FORMATION]						
3.00 - 3.40	UT13												
3.50	D14						Tending to slightly sandy slightly gravelly clay.						
3.50 - 4.00	B15												
4.50 - 4.95	B16	4.50	SPT(S)	N=15 (3,3/3,4,4,4)									
5.50 - 6.00	B17												
6.00 - 6.45	UT18												
6.50	D19												
6.50 - 7.00	B20												
7.50 - 7.95	B21	7.50	SPT(S)	N>50 (6,8/29,21 for 20mm)									
7.60	D22						Weathered, grey SILTSTONE.				7.60		
8.00 - 8.50	B23						[KIMMERIDGE CLAY FORMATION]						
8.00	D24						Stiff, bluish grey, silty CLAY with occasional gravel of siltstone.						
9.00 - 9.45	B25	9.00	SPT(C)	N>50 (25 for 40mm/50 for 70mm)			[KIMMERIDGE CLAY FORMATION]						
8.80	D24						Weathered, grey SILTSTONE.				8.60		
9.00 - 9.45	B25						[KIMMERIDGE CLAY FORMATION]						
9.20	D24						Stiff to very stiff, bluish grey, silty CLAY.				9.20		
10.00 - 10.50	B26						[KIMMERIDGE CLAY FORMATION]						

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit										300	1.20	200	4.50			
1.20	25.45	Cable Percussion										200	25.00	200				
												50	25.45					

Remarks
No groundwater encountered.
UT8 (1.50-1.70) - 50% recovery, 52 blows. UT13 (3.00-3.40) - 90% recovery, 27 blows. UT18 (6.00-6.45) - 100% recovery, 38 blows. UT29 (12.00-12.45) - 100% recovery, 43 blows. UT34 (15.00-15.45) - 100% recovery, 38 blows. UT39 (18.00-18.45) - 100% recovery, 45 blows.

Termination Depth:
25.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539232.81

Ground Level (mAOD)

Northing (OS mN)
264657.32

Start Date
13/12/2016
End Date
13/12/2016

Scale
1:50
Sheet 2 of 3

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
10.50	B27	10.50	SPT(S)	N=26 (4,5/6,6,7,7)			Stiff to very stiff, bluish grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]						
-11.50 - 12.00	B28												
-12.00 - 12.45	UT29				13/12/2016 17:00	4.50							
12.50	D30				14/12/2016 08:30	11.00							
-13.50 - 13.95	B32	13.50	SPT(S)	N=30 (5,6/7,7,8,8)									
-13.50 - 13.95	D31												
-14.00 - 14.50	B33												
-15.00 - 15.45	UT34												
15.50	D35												
-15.50 - 16.00	B36												
-16.50 - 16.95	B37	16.50	SPT(S)	N=27 (4,5/6,6,7,8)									
-17.50 - 18.00	B38												
-18.00 - 18.45	UT39												
18.50	D40												
-19.00 - 19.50	B41												
-19.50 - 19.95	B42	19.50	SPT(S)	N>50 (11,11/13,13,14,10 for 55mm)									

(13.20)

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER				WATER ADDED			
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion										300	1.20	200	4.50			
	25.45											200	25.00					
												50	25.45					

Remarks
No groundwater encountered.
UT8 (1.50-1.70) - 50% recovery, 52 blows. UT13 (3.00-3.40) - 90% recovery, 27 blows. UT18 (6.00-6.45) - 100% recovery, 38 blows. UT29 (12.00-12.45) - 100% recovery, 43 blows. UT34 (15.00-15.45) - 100% recovery, 38 blows. UT39 (18.00-18.45) - 100% recovery, 45 blows.

Termination Depth:
25.45m



Unless otherwise stated:
Depth (m), Diameter (mm), Time (hhmm),
Thickness (m), Level (mOD).

Equipment Used
Dando 2000

Contractor
Arcadis Consulting (UK) Ltd.

Logged By
SC/VP

Checked By
AM

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539232.81

Ground Level (mAOD)
264657.32
Northing (OS mN)
264657.32

Start Date
13/12/2016
End Date
13/12/2016

Scale
1:50
Sheet 3 of 3

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
-20.50 - 21.00	B43						Stiff to very stiff, bluish grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]						
-21.00 - 21.45	B44	21.00	SPT(S)	N=40 (6,8/8,10,11,11)									
-22.00 - 22.50	B45												
22.40	D46										22.40		
-22.50 - 22.95	B47	22.50	SPT(C)	N>50 (25 for 40mm/50 for 65mm)			Weathered, grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]				22.70		
-23.00 - 23.50	B48						Very stiff, bluish grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]						
-24.00 - 24.45	B49	24.00	SPT(S)	N>50 (10,11/12,12,14,12 for 70mm)							(2.75)		
-24.50 - 25.00	B50												
-25.00 - 25.45	D51	25.00	SPT(S)	N=48 (9,10/11,12,12,13)		14/12/2016 15:00					25.45		

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER				WATER ADDED			
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion										300 200 50	1.20 25.00 25.45	200	4.50			

Remarks
No groundwater encountered.
UT8 (1.50-1.70) - 50% recovery, 52 blows. UT13 (3.00-3.40) - 90% recovery, 27 blows. UT18 (6.00-6.45) - 100% recovery, 38 blows. UT29 (12.00-12.45) - 100% recovery, 43 blows. UT34 (15.00-15.45) - 100% recovery, 38 blows. UT39 (18.00-18.45) - 100% recovery, 45 blows.

Termination Depth:
25.45m



Unless otherwise stated:
Depth (m), Diameter (mm), Time (hhmm),
Thickness (m), Level (mOD).

Equipment Used
Dando 2000

Contractor
Arcadis Consulting (UK) Ltd.

Logged By
SC/VP

Checked By
AM

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539286.48

Ground Level (mAOD)
264751.56
Northing (OS mN)

Start Date
13/12/2016
End Date
14/12/2016

Scale
1:50
Sheet 1 of 3

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.00 - 0.30	B5				13/12/2016	0.00	Turf over soft to firm, dark brown mottled orange grey, slightly sandy CLAY with frequent rootlets.			(0.30)			
0.10 - 0.30	ES1				09:00		[TOP SOIL]			0.30			
0.30 - 0.80	B6						Soft to firm, orangish brown mottled grey, slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint. Occasional rootlets.			(0.50)			
0.40	ES						[RIVER TERRACE DEPOSITS]			0.80			
0.40 - 0.60	ES2						Soft to firm, grey mottled orangish brown, slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint.			(1.20)			
0.50	D29						[RIVER TERRACE DEPOSITS]			2.00			
0.80 - 1.20	B7						Firm, dark grey mottled yellow CLAY with occasional fragments of gypsum crystals.			(1.50)			
1.00	D30	1.20	SPT(S)	N=7 (1,2/1,2,2,2)			[RIVER TERRACE DEPOSITS]			3.50			
1.20	D31						Firm to stiff, fissured, grey silty CLAY with occasional fine shell fragments, up to 1cm in width.			(2.80)			
1.20 - 1.40	ES3						[RIVER TERRACE DEPOSITS]			5.50			
1.20 - 1.70	B8						Firm, dark grey mottled yellow CLAY with occasional fragments of gypsum crystals.			(6.30)			
							[RIVER TERRACE DEPOSITS]			6.80			
2.00	D32						Stiff, fissured, grey silty CLAY with occasional fine shell fragments, up to 1cm in width.			(7.50)			
2.00 - 2.50	B9						[KIMMERIDGE CLAY FORMATION]			7.70			
2.30 - 2.50	ES4						Stiff, fissured, grey silty CLAY with occasional fine shell fragments, up to 1cm in width.			(1.60)			
							[KIMMERIDGE CLAY FORMATION]			9.30			
3.00 - 3.45	UT6						Grey SILTSTONE.			(0.60)			
3.23	EW1						[KIMMERIDGE CLAY FORMATION]			9.90			
3.50	D33						Stiff, fissured, grey silty CLAY with occasional fine shell fragments, up to 1cm in width.						
3.50 - 4.00	B10						[KIMMERIDGE CLAY FORMATION]						
							Grey SILTSTONE.						
4.50	D34	4.50	SPT(S)	N=11 (1,2/2,3,3,3)			[KIMMERIDGE CLAY FORMATION]						
4.50 - 5.00	B11						Stiff, fissured, grey silty CLAY with occasional fine shell fragments, up to 1cm in width.						
							[KIMMERIDGE CLAY FORMATION]						
5.50	D35						Grey SILTSTONE.						
5.50 - 6.00	B12						[KIMMERIDGE CLAY FORMATION]						
							Stiff, fissured, grey silty CLAY with occasional fine shell fragments, up to 1cm in width.						
6.00 - 6.30	UT7						[KIMMERIDGE CLAY FORMATION]						
6.30	D36						Grey SILTSTONE.						
6.30 - 6.80	B13						[KIMMERIDGE CLAY FORMATION]						
							Stiff, fissured, grey silty CLAY with occasional fine shell fragments, up to 1cm in width.						
7.00	D37	7.50	SPT(S)	N>50 (25 for 30mm/50 for 35mm)			[KIMMERIDGE CLAY FORMATION]						
7.00 - 7.50	B14						Stiff, fissured, grey silty CLAY with occasional fine shell fragments, up to 1cm in width.						
							[KIMMERIDGE CLAY FORMATION]						
7.50	D38						Grey SILTSTONE.						
7.50 - 7.80	B15						[KIMMERIDGE CLAY FORMATION]						
							Stiff, fissured, grey silty CLAY with occasional fine shell fragments, up to 1cm in width.						
8.50	D39						[KIMMERIDGE CLAY FORMATION]						
8.50 - 9.00	B16						Stiff, fissured, grey silty CLAY with occasional fine shell fragments, up to 1cm in width.						
							[KIMMERIDGE CLAY FORMATION]						
9.00 - 9.30	UT8						Grey SILTSTONE.						
9.30	D40						[KIMMERIDGE CLAY FORMATION]						
9.30 - 9.90	B17						Stiff, fissured, grey silty CLAY with occasional fine shell fragments, up to 1cm in width.						
							[KIMMERIDGE CLAY FORMATION]						

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit	6.30	6.80	00:45							300	1.20	200	3.00			
1.20	25.00	Cable Percussion	7.50	7.70	00:30							200	25.00					
			9.30	9.90	00:45													
			15.80	16.30	00:45													

Remarks
UT6 (3.00-3.45) - 100% recovery, 40 blows. UT7 (6.00-6.30) - 67% recovery, 100 blows. UT8 (9.00-9.30) - 67% recovery, 100 blows. UT52 (12.00-12.45) - 100% recovery, 100 blows. UT53 (15.00-15.45) - 100% recovery, 100 blows. UT54 (18.00-18.45) - 100% recovery, 100 blows. UT55 (21.00-21.45) - 100% recovery, 100 blows. UT56 (24.00-24.45) - 100% recovery, 100 blows.

Termination Depth:
25.00m



Unless otherwise stated:
Depth (m), Diameter (mm), Time (hhmm),
Thickness (m), Level (mOD).

Equipment Used
Dando 2000

Contractor
Arcadis Consulting (UK) Ltd.

Logged By
VP

Checked By
AM

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539286.48

Ground Level (mAOD)

Northing (OS mN)
264751.56

Start Date
13/12/2016
End Date
14/12/2016

Scale
1:50
Sheet 2 of 3

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
10.50 - 11.00	D41 B18	10.50	SPT(S)	N=23 (3,3/5,5,6,7)		13/12/2016 17:00 14/12/2016 09:00	3.00 3.00 10.4	fragments, up to 1cm in width. [KIMMERIDGE CLAY FORMATION]	(Symbolic representation)	(5.90)			
11.50 - 12.00	D42 B19												
12.00 - 12.45	UT52												
12.50 - 13.00	D43 B20												
13.50 - 14.00	D44 B21	13.50	SPT(S)	N=26 (4,5/6,6,6,8)									
14.50 - 15.00	D45 B22									15.80 (0.50)			
15.80 - 16.30	B23							Grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]	(Symbolic representation)				
16.50 - 17.00	D47 B24	16.50	SPT(S)	N=37 (6,7/7,9,9,12)				Very stiff, fissured, dark grey silty CLAY with occasional fine shell fragments, up to 1cm in width. [KIMMERIDGE CLAY FORMATION]	(Symbolic representation)	16.30 (3.70)			
17.50 - 18.00	B25												
18.00 - 18.45	UT54												
18.50 - 19.00	D48 B26									20.00 (0.30)			
19.50 - 20.00	D49 B27	19.50	SPT(S)	N=36 (6,7/7,8,10,11)									
20.00 - 20.30	B28							Grey SILTSTONE.	(Symbolic representation)				

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit	6.30	6.80	00:45							300	1.20	200	3.00			
1.20	25.00	Cable Percussion	7.50	7.70	00:30							200	25.00	200				
			9.30	9.90	00:45													
			15.80	16.30	00:45													

Remarks
 UT6 (3.00-3.45) - 100% recovery, 40 blows. UT7 (6.00-6.30) - 67% recovery, 100 blows. UT8 (9.00-9.30) - 67% recovery, 100 blows. UT52 (12.00-12.45) - 100% recovery, 100 blows. UT53 (15.00-15.45) - 100% recovery, 100 blows. UT54 (18.00-18.45) - 100% recovery, 100 blows. UT55 (21.00-21.45) - 100% recovery, 100 blows. UT56 (24.00-24.45) - 100% recovery, 100 blows.

Termination Depth:
25.00m



Unless otherwise stated:
 Depth (m), Diameter (mm), Time (hhmm),
 Thickness (m), Level (mOD).

Equipment Used
Dando 2000

Contractor
Arcadis Consulting (UK) Ltd.

Logged By
VP

Checked By
AM

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539286.48

Ground Level (mAOD)
264751.56
Northing (OS mN)
264751.56

Start Date
13/12/2016
End Date
14/12/2016

Scale
1:50
Sheet 3 of 3

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
21.00 - 21.45	UT55						[KIMMERIDGE CLAY FORMATION] Very stiff, fissured, dark grey silty CLAY with occasional fine shell fragments, up to 1cm in width. [KIMMERIDGE CLAY FORMATION]	x x x x x	20.30				
21.50	D50												
21.50 - 22.00	B57												
22.50	D51	22.50	SPT(S)	N=42 (6,6/8,10,11,13)									
22.50 - 23.00	B58								(4.70)				
23.50 - 24.00	B59												
24.00 - 24.45	UT56												
24.50	D51	24.50	SPT(S)	N=42 (5,8/9,9,10,14)									
24.50	D52				14/12/2016 17:00	3.00							

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	6.30	6.80	00:45							300	1.20	200	3.00			
	25.00		7.50	7.70	00:30							200	25.00					
			9.30	9.90	00:45													
			15.80	16.30	00:45													

Remarks
 UT6 (3.00-3.45) - 100% recovery, 40 blows. UT7 (6.00-6.30) - 67% recovery, 100 blows. UT8 (9.00-9.30) - 67% recovery, 100 blows. UT52 (12.00-12.45) - 100% recovery, 100 blows. UT53 (15.00-15.45) - 100% recovery, 100 blows. UT54 (18.00-18.45) - 100% recovery, 100 blows. UT55 (21.00-21.45) - 100% recovery, 100 blows. UT56 (24.00-24.45) - 100% recovery, 100 blows.

Termination Depth:
25.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539281.02

Ground Level (mAOD)
264696.67
Northing (OS mN)
264696.67

Start Date
14/12/2016
End Date
15/12/2016

Scale
1:50
Sheet 1 of 3

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA				Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend					
0.10	B5				14/12/2016	0.00	Grass over soft to firm, brown slightly gravelly slightly silty CLAY with roots and rootlets. Gravel is sub-angular to sub-rounded, fine to coarse of mixed lithologies.					(0.40)		
0.10	ES				13:00							0.40		
0.10 - 0.30	ES1													
0.40	B6						[TOP SOIL]							
0.60 - 0.80	ES2						Firm, orangish brown, slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]					(1.00)		
1.20	D7	1.20	SPT(S)	N=9 (1,1/2,2,2,3)								1.40		
1.40	B8													
1.60	ES													
1.60 - 1.80	ES3						Firm, bluish grey mottled yellowish brown, slightly sandy silty CLAY with occasional fragments of gypsum. [RIVER TERRACE DEPOSITS]							
1.93	EW2													
2.00	B10	2.00	SPT(S)	N=9 (1,2/2,2,2,3)										
2.00	D9											(2.40)		
3.00	B12													
3.00 - 3.45	UT11													
3.45	D13				14/12/2016	1.65								
					17:00	1.65								
					15/12/2016									
					09:00									
4.00	B15	4.00	SPT(S)	N=16 (2,2/3,3,5,5)			Stiff, dark bluish grey, slightly silty CLAY with occasional shell fragments. [KIMMERIDGE CLAY FORMATION]					3.80		
4.00	D14													
4.00 - 4.20	ES4													
4.20	EW1													
5.00 - 5.45	UT16													
5.45	D17													
5.50	B18											(4.00)		
6.50	D19	6.50	SPT(S)	N=19 (3,3/4,4,5,6)										
7.00	B20													
8.00	U21						Grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]					(0.20)		
8.00 - 8.45	UT21						Very stiff, dark bluish grey, slightly silty gravelly CLAY with occasional shell fragments. Gravel is fine to medium of siltstone. [KIMMERIDGE CLAY FORMATION]					7.80		
8.45	D22													
8.50	B23													
9.50	D24	9.50	SPT(S)	N>50 (8,10/12,22,16 for 50mm)										
10.00	B25													

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit	7.70	7.80	00:15							300	1.20	200	1.65			
1.20	25.45	Cable Percussion	18.70	18.90	00:30							200	25.00	200				
												50	25.45					

Remarks
No groundwater encountered.
UT11 (3.00-3.45) - 100% recovery, 27 blows. UT16 (5.00-5.45) - 100% recovery, 38 blows. UT21 (8.00-8.45) - 100% recovery, 49 blows. UT26 (11.00-11.40) - 90% recovery, 78 blows. UT30 (14.00-14.45) - 100% recovery, 86 blows. UT34 (17.00-17.45) - 100% recovery, 59 blows. UT38 (20.00-20.45) - 100% recovery, 66 blows. UT42 (23.00-23.45) - 100% recovery, 97 blows.

Termination Depth:
25.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539281.02

Ground Level (mAOD)
264696.67
Northing (OS mN)
264696.67

Start Date
14/12/2016
End Date
15/12/2016

Scale
1:50
Sheet 2 of 3

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill				
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend								
11.00 - 11.40	UT26						Very stiff, dark bluish grey, slightly silty gravelly CLAY with occasional shell fragments. Gravel is fine to medium of siltstone. [KIMMERIDGE CLAY FORMATION]										
11.50	B27																
12.50	D28	12.50	SPT(S)	N=28 (5,5/6,6,8,8)													
13.00	B29																
14.00 - 14.45	UT30																
14.50	B31																
15.50	D32	15.50	SPT(S)	N=29 (5,6/6,7,8,8)													
16.00	B33																
17.00 - 17.45	UT34																
17.50	B35																
18.50	D36	18.50	SPT(S)	N>=50 (25 for 70mm/39,11 for 35mm)													
19.00	B37																
20.00 - 20.45	UT38																
													Grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]		18.70		
													Very stiff, dark bluish grey, slightly silty CLAY with occasional shell fragments. [KIMMERIDGE CLAY FORMATION]		(0.30)		
															19.00		

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit	7.70	7.80	00:15							300	1.20	200	1.65			
1.20	25.45	Cable Percussion	18.70	18.90	00:30							200	25.00	200	25.45			
												50	25.45					

Remarks
No groundwater encountered.
UT11 (3.00-3.45) - 100% recovery, 27 blows. UT16 (5.00-5.45) - 100% recovery, 38 blows. UT21 (8.00-8.45) - 100% recovery, 49 blows. UT26 (11.00-11.40) - 90% recovery, 78 blows. UT30 (14.00-14.45) - 100% recovery, 86 blows. UT34 (17.00-17.45) - 100% recovery, 59 blows. UT38 (20.00-20.45) - 100% recovery, 66 blows. UT42 (23.00-23.45) - 100% recovery, 97 blows.

Termination Depth:
25.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539281.02

Ground Level (mAOD)

Northing (OS mN)
264696.67

Start Date
14/12/2016
End Date
15/12/2016

Scale
1:50
Sheet 3 of 3

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
20.50	B39						Very stiff, dark bluish grey, slightly silty CLAY with occasional shell fragments. [KIMMERIDGE CLAY FORMATION]		(6.45)	25.45			
21.50	D40	21.50	SPT(S)	N=44 (5,7/9,10,12,13)									
22.00	B41												
23.00 - 23.45	UT42												
23.50	B43												
25.00	D44	25.00	SPT(S)	N>50 (7,9/10,11,12,13 for 5mm)	15/12/2016 17:00	1.65							

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	7.70	7.80	00:15							300	1.20	200	1.65			
1.20	25.45		18.70	18.90	00:30							200	25.00	200	25.45			

Remarks
No groundwater encountered.
UT11 (3.00-3.45) - 100% recovery, 27 blows. UT16 (5.00-5.45) - 100% recovery, 38 blows. UT21 (8.00-8.45) - 100% recovery, 49 blows. UT26 (11.00-11.40) - 90% recovery, 78 blows. UT30 (14.00-14.45) - 100% recovery, 86 blows. UT34 (17.00-17.45) - 100% recovery, 59 blows. UT38 (20.00-20.45) - 100% recovery, 66 blows. UT42 (23.00-23.45) - 100% recovery, 97 blows.

Termination Depth:
25.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541209.72

Ground Level (mAOD)
5.85
Northing (OS mN)
267262.02

Start Date
07/12/2016
End Date
07/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend			
0.00 - 0.30	B1				07/12/2016 08:00	0.00	MADE GROUND: Grass over brown, sandy CLAY. MADE GROUND: Firm, dark brown gravelly CLAY. Gravel is sub-angular to sub-rounded, fine to coarse of mixed lithologies, including an iron bar (20x1x1cm), cloth, brick and glass.		0.10	5.75		
0.00 - 0.30	ES15								0.80	5.05		
0.30	D17				1.50	SPT(S)	N=12 (1,1/3,3,3,3)		(0.70)			
0.30 - 0.80	B2											
0.30 - 0.80	ES12											
1.00	D18											
1.00	ES											
1.00 - 2.00	B3											
1.00 - 2.00	ES13											
1.20	D19											
2.00	D20											
2.00 - 3.00	B4											
2.20	EW2											
3.00	D21				4.50	SPT(S)	N=50 (2,3/7,8,25,40 for 60mm)		3.60	2.25		
3.00	U30											
3.00 - 3.45	UT30											
3.00 - 3.80	B5											
3.20	EW1											
3.50	D22											
3.80	ES											
3.80 - 4.50	B6											
3.80 - 4.50	ES14											
4.00	D23											
4.50 - 5.50	B7				7.50	SPT(S)	N=27 (4,4/5,7,7,8)		5.00	0.85		
5.00	D24											
5.50 - 6.50	B8											
6.00	D25											
6.00 - 6.33	UT31											
6.50 - 7.50	B9											
7.00	D26											
7.50 - 8.50	B10											
8.00	D27											
8.50 - 9.50	B11											
9.00	D28				07/12/2016 15:00	1.50			9.50			
9.50 - 9.95	B16											
9.50 - 9.95	UT32											
10.00	D29								10.00	-4.15		

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	3.60	3.80	00:30							300	1.20	200	1.50			
1.20	10.00		5.00	5.20	00:30							200	10.00					

Remarks
No groundwater encountered.
UT30 (3.00-3.45) - 100% recovery, 25 blows.
UT31 (6.00-6.33) - 75% recovery, 85 blows.
UT32 (9.50-9.95) - 100% recovery, 100 blows.

Termination Depth:
10.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541375.29

Ground Level (mAOD)
7.68
Northing (OS mN)
267143.84

Start Date
06/12/2016
End Date
06/12/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.00	ES					06/12/2016	0.00	Grass over brown, slightly sandy silty CLAY with fine rootlets (up to <1mm). Sand is fine to medium.			(0.40)		
0.00 - 0.40	ES1					11:00		[TOPSOIL]			0.40	7.28	
0.00 - 1.00	B2							Firm, orangish brown, slightly sandy slightly gravelly CLAY with thin lenses of grey clay. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of mixed lithologies.			(0.70)		
0.40 - 1.20	ES3							[RIVER TERRACE DEPOSITS]			1.10	6.58	
0.50	D14							Loose, orangish brown, slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of mixed lithologies.			(0.70)		
1.00	D15							[RIVER TERRACE DEPOSITS]			1.80	5.88	
1.20	D16	1.20	SPT(C)	N=5 (2,3/1,1,2,1)				Soft to firm, brown mottled grey, slightly silty gravelly CLAY. Gravel is sub-angular to sub-rounded, fine to coarse of mixed lithologies.			(1.40)		
1.20	EWW2							[RIVER TERRACE DEPOSITS]			1.80	5.88	
1.20 - 1.70	B4							Grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]			(0.20)	4.48	
1.40	EWW1							Firm to stiff grey silty slightly gravelly CLAY with occasional small gypsum crystals. Gravel is sub-angular to sub-rounded, fine to coarse of mixed lithologies.			(0.20)	4.28	
1.80	D17							[KIMMERIDGE CLAY FORMATION]			(0.20)	4.08	
1.80	ES							Grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]			(0.20)	3.88	
1.80 - 2.30	B5							Firm to stiff, grey, silty CLAY with occasional small gypsum crystals and angular gravel of siltstone (up to 3cm x 1cm x 2cm).			(1.80)		
1.80 - 2.30	ES6							[KIMMERIDGE CLAY FORMATION]			5.60	2.08	
3.00	D18							Stiff, dark grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]					
3.00 - 3.20	UT28												
3.00 - 3.50	B7												
3.00 - 3.50	ES8												
3.20	D19	3.50	SPT(S)	N>50 (5,5/4,4,4 for 55mm)									
3.50	D20												
3.50 - 4.00	B9												
4.00	D21												
4.50 - 4.95	UT29												
5.00	D22												
5.00 - 5.50	B10												
6.00	D23	6.00	SPT(S)	N=21 (3,3/4,4,6,7)									
6.00 - 6.50	B11												
7.00	D24												
7.50 - 7.95	UT30												
8.00	D25												
8.00 - 8.50	B12												
9.00	D26	9.00	SPT(S)	N=23 (2,3/4,5,7,7)									
9.50 - 10.00	B13												
10.00	D27	10.00	SPT(S)	N=24 (3,3/4,6,6,8)									

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit	3.20	3.40	00:30	06/12/2016 12:00	4.50			1.00		300	1.20	200	1.00			
1.20	10.45	Cable Percussion	3.60	3.80	00:30							200	10.00	200				
												50	10.45					

Remarks
Groundwater seepage at 4.50m bgl.
UT16 (3.00-3.20) - 44% recovery, 100 blows.
UT29 (4.50-4.95) - 100% recovery, 75 blows.
UT30 (7.50-7.95) - 100% recovery, 100 blows.

Termination Depth:
10.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541375.29

Ground Level (mAOD)
7.68
Northing (OS mN)
267143.84

Start Date
06/12/2016
End Date
06/12/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
						06/12/2016 16:00	1.00	Stiff, dark grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]		10.45	-2.77		

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER			WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	3.20	3.40	00:30	06/12/2016 12:00	4.50			1.00		300	1.20	200	1.00			
1.20	10.45		3.60	3.80	00:30							200	10.00					
												50	10.45					

Remarks
Groundwater seepage at 4.50m bgl.
UT16 (3.00-3.20) - 44% recovery, 100 blows.
UT29 (4.50-4.95) - 100% recovery, 75 blows.
UT30 (7.50-7.95) - 100% recovery, 100 blows.

Termination Depth:
10.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541475.10

Ground Level (mAOD)
6.98
Northing (OS mN)
267014.93

Start Date
06/12/2016
End Date
06/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA				Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend					
					06/12/2016 12:00	0.00	MADE GROUND: Grass over soft, brown slightly silty CLAY.			(0.20)	6.78			
0.30	B2						MADE GROUND: Soft to firm, brown, slightly gravelly, silty CLAY. Gravel is sub-angular to sub-rounded, fine to coarse of mixed lithologies.			0.20				
0.30	D1									(0.80)				
0.30	ES													
0.30 - 1.00	B3													
0.30 - 1.00	ES2													
1.00	B2						Soft, light grey mottled brown, silty CLAY. [RIVER TERRACE DEPOSITS]			1.00	5.98			
1.00	B3													
1.00 - 1.20	B4													
1.00 - 1.20	ES5													
1.20	B2													
1.20	B5													
1.20	D15									(1.20)				
1.20	D6													
1.20	EWW2													
1.20	UT16													
1.20 - 1.65	B8													
1.20 - 1.65	UT7													
1.25	U16													
2.00	D17						Soft to firm, grey mottled brown, slightly gravelly silty CLAY. Gravel is angular, fine to medium of siltstone. [KIMMERIDGE CLAY FORMATION]			2.20	4.78			
2.00	D9									(0.30)				
2.20 - 2.50	B10						Grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]			2.50	4.48			
2.30	EWW1									(0.20)				
2.50	D11									2.70	4.28			
3.00	D12	3.00	SPT(S)	N=15 (2,2/3,3,4,5)			Firm to stiff, greyish brown, silty CLAY. [KIMMERIDGE CLAY FORMATION]							
3.00	D20													
3.00 - 3.45	D13													
3.50	B7													
3.50	ES													
3.50 - 4.00	B14													
3.50 - 4.00	ES15													
4.00	D16													
4.00	D21									(2.70)				
4.50	U29													
4.50	UT29													
4.50 - 4.95	UT17													
5.00	D18													
5.50	B9						Stiff, grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]			5.40	1.58			
5.50 - 6.00	B20									(0.20)				
5.50 - 6.00	ES19						Grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]			5.60	1.38			
5.60	D21									(0.20)				
6.00	D22	6.00	SPT(S)	N=23 (2,2/5,5,5,8)			Very stiff, grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]			5.80	1.18			
6.00 - 6.45	D23													
6.50	B11													
6.50 - 7.00	B24													
7.00	D25													
7.50	UT27													
7.50 - 8.00	B26									(4.20)				
8.00	D26													
8.00	D28													
8.50 - 9.00	B29													
9.00	D27													
9.00	D30													
9.50	B14	9.50	SPT(S)	N=30 (2,3/7,7,8,8)										
9.50 - 10.00	B31													
					06/12/2016 17:00	3.00				10.00	-3.02			

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	2.50	2.70	00:30							300	1.20	200	3.00			
	10.00		5.60	5.80	00:30							200	10.00					

Remarks
No groundwater encountered.
UT7 (1.20-1.65) - No recovery, 50 blows.
UT17 (4.50-4.95) - 100% recovery, 50 blows.
UT27 (7.50-7.95) - 100% recovery, 59 blows.

Termination Depth:
10.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541663.57

Ground Level (mAOD)
5.93
Northing (OS mN)
266440.74

Start Date
12/12/2016
End Date
12/12/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.10 - 0.30	B5				12/12/2016	0.00	Grass over firm, brown, slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of sandstone. Roots and rootlets present (up to 1cm in width).				0.30		
0.10 - 0.30	ES1				08:00						0.30	5.63	
0.30 - 0.75	B6										0.45		
0.40	ES												
0.40 - 0.60	ES2										0.75	5.18	
0.50	D1												
0.75 - 1.20	B7												
0.80	D2												
0.90 - 1.10	ES3												
1.20 - 1.65	D3	1.20	SPT(S)	N=5 (1,1/1,1,1,2)									
1.20 - 1.70	B8												
1.80	ES4												
1.80	ES4												
2.00	D4												
2.00 - 2.50	B9												
3.00	UT1												
3.00 - 3.45	UT1												
3.50	D5												
3.50 - 4.00	B10												
4.50 - 4.95	D6	4.50	SPT(S)	N=14 (1,2/3,3,4,4)									
4.50 - 5.00	B11												
4.60 - 4.80	ES4												
5.50	D7												
5.50 - 6.00	B12												
6.00	UT2												
6.00 - 6.45	UT2												
6.50	D8												
6.50 - 7.00	B13												
7.50 - 7.95	D9	7.50	SPT(S)	N=14 (1,2/2,3,4,5)									
7.50 - 8.00	B14												
8.50	D10												
8.50 - 9.00	B15												
9.00 - 9.45	UT3												
9.50	D11												
9.50 - 10.00	B16												
10.00 - 10.45	D12	10.00	SPT(S)	N=21 (2,3/4,5,6,6)									

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	Hard Strata From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit										300	1.20	200	1.50			
1.20	10.45	Cable Percussion										200	10.00					
												50	10.45					

Remarks
No groundwater encountered.
UT1 (3.00-3.45) - 100% recovery, 95 blows.
UT2 (6.00-6.45) - 100% recovery, 75 blows.
UT3 (9.00-9.45) - 100% recovery, 100 blows.

Termination Depth:
10.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541663.57

Ground Level (mAOD)
5.93
Northing (OS mN)
266440.74

Start Date
12/12/2016
End Date
12/12/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
						12/12/2016 16:00	1.50	Soft to firm, fissured, dark grey, silty CLAY with occasional shell fragments. [KIMMERIDGE CLAY FORMATION]		10.45	-4.52		

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER				WATER ADDED			
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion										300 200 50	1.20 10.00 10.45	200	1.50			

Remarks

No groundwater encountered.
 UT1 (3.00-3.45) - 100% recovery, 95 blows.
 UT2 (6.00-6.45) - 100% recovery, 75 blows.
 UT3 (9.00-9.45) - 100% recovery, 100 blows.

Termination Depth:
10.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541619.68

Ground Level (mAOD)
6.30
Northing (OS mN)
266665.77

Start Date
12/12/2016
End Date
13/12/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.10	ES					12/12/2016 08:00	0.00	Grass over firm, brown, slightly sandy slightly gravelly CLAY with fine rootlets. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint and sandstone.		(0.30)			
0.10 - 0.30	B1							[TOP SOIL]		0.30	6.00		
0.30 - 0.85	B2							Stiff, orangish brown, slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to medium of mudstone.		(0.55)			
0.50	D7							[RIVER TERRACE DEPOSITS]		0.85	5.45		
0.50 - 0.80	ES5							Soft, brown mottled grey, slightly sandy gravelly CLAY with occasional sand pockets (up to 2mm x 1mm x 1mm). Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to medium of mudstone.		(0.35)			
0.85 - 1.20	B3							[RIVER TERRACE DEPOSITS]		1.20	5.10		
0.90	D8	1.20	SPT(S)	N=12 (1,2/2,3,3,4)	▼			Firm, grey mottled brown, slightly sandy slightly gravelly silty CLAY. Sand is fine to medium. Gravel is sub-angular to rounded, fine to coarse of flint.					
1.00 - 1.20	ES6							[RIVER TERRACE DEPOSITS]					
1.20	D9												
1.20 - 1.70	B13												
2.00	B2												
2.00	EWV1												
2.00 - 2.50	B14												
2.50	D10									(2.30)			
3.00	UT11												
3.00 - 3.45	UT16												
3.50	D11												
3.50 - 4.00	B15							Soft to firm, dark grey, slightly gravelly silty CLAY. Gravel is sub-rounded to rounded, medium to coarse of siltstone.		3.50	2.80		
								[KIMMERIDGE CLAY FORMATION]					
4.50	D12	4.50	SPT(S)	N=17 (2,3/3,4,5,5)									
4.50 - 5.00	B7									(2.40)			
5.50	D7												
6.00 - 6.45	UT2												
6.50	D8												
6.50 - 7.00	B8												
7.50	D9	7.50	SPT(S)	N=15 (1,2/3,3,4,5)									
7.50 - 8.00	B9												
8.50	D10												
8.50 - 9.00	B10												
9.00 - 9.45	UT3												
9.50	D11												
9.50 - 10.00	B11												
10.00	D12	10.00	SPT(S)	N=20 (4,2/4,5,5,6)									

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion				12/12/2016 09:00	1.10					300	1.20	200	3.00			
												200	10.00					
												50	10.45					

Remarks
Groundwater seepage at 1.1m bgl.
Wire-line piezometer installed to 7.50m bgl (base of tip). Pluviated sand response zone from 7.00m to 8.00m bgl.
UT16 (3.00-3.45) - 100% recovery, 75 blows.
UT2 (6.00-6.45) - 100% recovery, 65 blows.
UT3 (9.00-9.45) - 100% recovery, 100 blows.

Termination Depth:
10.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541619.68

Ground Level (mAOD)
6.30
Northing (OS mN)
266665.77

Start Date
12/12/2016
End Date
13/12/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
						12/12/2016 16:00	3.00	Soft to firm, fissured, grey silty gravelly CLAY. Gravel is fine to medium, subangular to subrounded of siltstone. [KIMMERIDGE CLAY FORMATION]			10.45	-4.15	

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER				WATER ADDED			
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion				12/12/2016 09:00	1.10					300 200 50	1.20 10.00 10.45	200	3.00			

Remarks

Groundwater seepage at 1.1m bgl.
Wire-line piezometer installed to 7.50m bgl (base of tip). Pluviated sand response zone from 7.00m to 8.00m bgl.
UT16 (3.00-3.45) - 100% recovery, 75 blows.
UT2 (6.00-6.45) - 100% recovery, 65 blows.
UT3 (9.00-9.45) - 100% recovery, 100 blows.

Termination Depth:
10.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541644.09

Ground Level (mAOD)
7.40
Northing (OS mN)
266165.27

Start Date
07/12/2016
End Date
07/12/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill	
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend					
0.00 - 0.30	B1				07/12/2016 09:00	0.00	Grass over firm, brown, sandy CLAY with rootlets (up to 7mm thick).	[TOPSOIL]		0.30	7.10			
0.00 - 0.30	ES4													
0.30	D16						Firm, orangish brown occasionally mottled grey, slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		0.90					
0.30 - 1.00	ES													
0.30 - 1.00	B2						Firm, orangish brown occasionally mottled grey, slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		1.20	6.20				
0.30 - 1.00	ES3													
1.00	D17	1.20	SPT(S)	N=12 (4,4/5,2,3,2)			Firm, grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]		2.10	5.30				
1.00	ES4													
1.10	D18									Firm, grey, silty CLAY. [KIMMERIDGE CLAY FORMATION]		2.50	4.90	
1.10	ES5									Grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]			2.70	4.70
1.20	B6									Firm to stiff, grey, silty CLAY with occasional bands of siltstone. [KIMMERIDGE CLAY FORMATION]			3.00	
1.20 - 1.70	ES5													
2.00	D19													
2.10 - 2.50	B7													
2.10 - 2.50	ES8													
2.50	D20													
2.50 - 3.00	B9													
2.50 - 3.00	ES10													
2.70	ES11													
3.00 - 3.30	UT29													
3.50	D21													
3.50 - 4.00	B11													
4.50	D22	4.50	SPT(S)	N=21 (2,3/4,5,5,7)										
4.50 - 5.00	B12													
5.00	D23													
6.00 - 6.45	UT30													
6.50	D24													
6.50 - 7.00	B13													
7.50	D25	7.50	SPT(S)	N=20 (4,4/4,5,5,6)										
7.50 - 8.00	B14													
8.50	D26													
9.00 - 9.50	B15	9.00	SPT(S)	N=15 (2,2/3,3,4,5)										
9.50	D27													
10.00	D28	10.00	SPT(S)	N=19 (2,2/4,3,5,7)										

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	2.50	2.70	00:30							300 200 50	1.20 10.00 10.45	200	2.60			

Remarks
No groundwater encountered.
UT29 (3.00-3.30) - 67% recovery, 100 blows.
UT30 (6.00-6.45) - 100% recovery, 100 blows.

Termination Depth:
10.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541644.09

Ground Level (mAOD)
7.40
Northing (OS mN)
266165.27

Start Date
07/12/2016
End Date
07/12/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
						07/12/2016 15:30	2.60	Firm to stiff, fissured, dark grey CLAY with occasional shell fragments (up to 1cm in width). [KIMMERIDGE CLAY FORMATION]			10.45	-3.05	

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER				WATER ADDED			
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	2.50	2.70	00:30							300 200 50	1.20 10.00 10.45	200	2.60			

Remarks
No groundwater encountered.
UT29 (3.00-3.30) - 67% recovery, 100 blows.
UT30 (6.00-6.45) - 100% recovery, 100 blows.

Termination Depth:
10.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541646.15

Ground Level (mAOD)
6.69
Northing (OS mN)
266261.96

Start Date
08/12/2016
End Date
08/12/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.10 - 0.25	B2	1.20	SPT(S)	N=10 (3,2/3,3,2,2)		08/12/2016 09:00	0.00	Grass over firm, brown, sandy gravelly CLAY with frequent rootlets (up to 1mm thick). Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of mixed lithologies. [TOP SOIL] Firm, orangish brown, slightly gravelly sandy CLAY with occasional fine rootlets (<1mm). Sand is fine to coarse. Gravel is sub-angular to rounded, fine to coarse of mixed lithologies. [RIVER TERRACE DEPOSITS] Soft, dark brown mottled light brown, sandy gravelly CLAY with occasional pockets of bluish grey silty clay. Sand is fine to coarse. Gravel is angular to subrounded, fine to coarse of mixed lithologies. [RIVER TERRACE DEPOSITS] Medium dense, orangish brown, clayey sandy GRAVEL. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of mixed lithologies. [RIVER TERRACE DEPOSITS] Firm, bluish grey occasionally mottled brown, silty CLAY with occasional gravel of siltstone (up to 1cm x 2cm x 1cm). [KIMERIDGE CLAY FORMATION]		0.30	6.39		
0.10 - 0.25	ES1									0.30			0.20
0.30	D18									0.30			0.50
0.30 - 0.50	B3									0.30 - 0.50			0.30
0.30 - 0.50	ES5									0.50 - 0.80			0.80
0.50 - 0.80	B4									0.60			
0.50 - 0.80	ES6									0.60			
0.60	D19									0.80			
0.60	EWW2									0.80 - 1.20			
0.80	B18									0.80 - 1.20			
0.80 - 1.20	B17	1.20											
0.80 - 1.20	ES7	1.20 - 1.65											
1.20	B	1.20 - 1.70											
1.20 - 1.65	D20	1.60											
1.20 - 1.70	B8	1.90											
1.60	EWW1	1.90											
1.90	B10	1.90											
1.90	D21	1.90											
1.90	ES	1.90 - 2.40											
1.90	B9	2.50											
2.50	D22												
3.00 - 3.45	UT31												
3.50	D23												
3.50 - 4.00	B10												
3.50 - 4.00	ES11												
4.50	B12	4.50	SPT(S)	N=13 (1,2/3,3,3,4)				Grey SILTSTONE. [KIMERIDGE CLAY FORMATION] Soft to firm, bluish grey occasionally mottled brown, silty CLAY with occasional gravel of siltstone (up to 1cm x 2cm x 1cm). [KIMERIDGE CLAY FORMATION]		3.80	2.89		
4.50 - 4.95	D24									4.00		2.69	
4.50 - 5.00	B11												
5.80	D25												
5.80 - 6.00	B12												
6.00 - 6.45	UT32												
6.50	D26												
6.50 - 6.80	ES15												
6.50 - 7.00	B13												
7.50 - 7.95	D27	7.50	SPT(S)	N=16 (3,2/3,3,5,5)				Firm, fissured, dark grey, silty CLAY with occasional shell fragments (up to 1cm in width). [KIMERIDGE CLAY FORMATION]		5.80	0.89		
7.50 - 8.00	B15												
8.50	D28												
9.00 - 9.45	UT33												
9.50	D29												
9.50 - 10.00	B16												
10.00 - 10.45	D30	10.00	SPT(S)	N=19 (3,2/4,3,5,7)									

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit	3.80	4.00	00:30							300	1.20	200	4.00			
1.20	10.45	Cable Percussion										200	10.00	200				
												50	10.45					

Remarks
 No groundwater encountered.
 UT31 (3.00-3.45) - 100% recovery, 43 blows.
 UT32 (6.00-6.45) - 100% recovery, 65 blows.
 UT33 (9.00-9.45) - 100% recovery, 80 blows.

Termination Depth:
10.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541646.15

Ground Level (mAOD)
6.69
Northing (OS mN)
266261.96

Start Date
08/12/2016
End Date
08/12/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
						08/12/2016 16:00	4.00	Firm, fissured, dark grey, silty CLAY with occasional shell fragments (up to 1cm in width). [KIMERIDGE CLAY FORMATION]		10.45	-3.76		

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER				WATER ADDED			
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	3.80	4.00	00:30							300 200 50	1.20 10.00 10.45	200	4.00			

Remarks
No groundwater encountered.
UT31 (3.00-3.45) - 100% recovery, 43 blows.
UT32 (6.00-6.45) - 100% recovery, 65 blows.
UT33 (9.00-9.45) - 100% recovery, 80 blows.

Termination Depth:
10.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541483.61

Ground Level (mAOD)
7.91
Northing (OS mN)
266348.99

Start Date
08/12/2016
End Date
08/12/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.10 - 0.30	B1					08/12/2016 09:00	0.00	Grass over soft, brown, slightly sandy slightly gravelly CLAY with frequent roots and rootlets. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint.		(0.30)	7.61		
0.20 - 0.30	ES12							[TOP SOIL]		0.30			
0.30 - 1.20	B2							Brown, clayey very sandy GRAVEL. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint and sandstone.		(0.90)			
0.40	ES							[RIVER TERRACE DEPOSITS]					
0.40 - 0.60	ES13												
1.20	D16	1.20	SPT(C)	N=8 (3,3/2,2,2,2)				Loose to medium dense, light brown, gravelly SAND. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint and sandstone.		1.20	6.71		
1.20 - 2.00	B3							[RIVER TERRACE DEPOSITS]					
1.20 - 2.00	EWW2												
1.24	EWW1												
1.27	ES14												
1.30 - 1.50	B4												
2.00 - 3.00	B4									(2.80)			
3.00	B	3.00	SPT(C)	N=16 (3,3/4,4,4,4)				Soft to firm, fissured, grey, slightly gravelly silty CLAY with occasional shells and shell fragments. Gravel is fine to medium of siltstone.		4.00	3.91		
3.00	D17							[KIMMERIDGE CLAY FORMATION]					
3.00 - 4.00	B5												
4.00 - 5.00	B6												
4.30 - 4.50	ES15												
4.50 - 4.95	D18	4.50	SPT(S)	N=16 (3,4/4,4,4,4)									
5.00 - 6.00	B7												
6.00 - 6.45	UT23												
6.00 - 7.00	B8												
6.45	D19												
7.00 - 8.00	B9									(6.45)			
7.50 - 7.95	D20	7.50	SPT(S)	N=17 (3,4/4,4,4,5)									
8.00 - 9.00	B10												
9.00 - 10.00	B11												
9.00 - 9.45	UT24												
9.45	D21												
10.00 - 10.45	D22	10.00	SPT(S)	N=17 (1,2/3,4,5,5)									

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit				08/12/2016 12:00	3.00	20	1.50	3.00	4.00	300	1.20	200	4.50	1.20	4.00	50
1.20	10.45	Cable Percussion										200	10.00					
												50	10.45					

Remarks
 UT23 (6.00-6.45) - 100% recovery, 65 blows.
 UT24 (9.00-9.45) - 100% recovery, 95 blows.

Termination Depth:
10.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541483.61

Ground Level (mAOD)
7.91
Northing (OS mN)
266348.99

Start Date
08/12/2016
End Date
08/12/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA				Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend					
						08/12/2016 16:00	4.50	Soft to firm, fissured, grey, slightly gravelly silty CLAY with occasional shells and shell fragments. Gravel is fine to medium of siltstone. [KIMMERIDGE CLAY FORMATION]			10.45	-2.54		

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS						HOLE/CASING DIAMETER			WATER ADDED			
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion				08/12/2016 12:00	3.00	20	1.50	3.00	4.00	300 200 50	1.20 10.00 10.45	200	4.50	1.20	4.00	50

Remarks
 UT23 (6.00-6.45) - 100% recovery, 65 blows.
 UT24 (9.00-9.45) - 100% recovery, 95 blows.

Termination Depth:
10.45m



Unless otherwise stated:
 Depth (m), Diameter (mm), Time (hhmm),
 Thickness (m), Level (mOD).

Equipment Used
Dando 2000

Contractor
Arcadis Consulting (UK) Ltd.

Logged By
VP

Checked By
AM

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541584.31

Ground Level (mAOD)
6.65
Northing (OS mN)
266428.88

Start Date
09/12/2016
End Date
09/12/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.10 - 0.30	B1				09/12/2016	0.00	Grass over firm, brown, slightly gravelly sandy CLAY with occasional roots and rootlets. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of sandstone and flint.				0.30	6.35	
0.10 - 0.30	ES2				09:00		[TOP SOIL]						
0.30 - 0.80	D15						Firm, brown mottled grey, slightly gravelly sandy CLAY with frequent fine rootlets. Sand is fine to coarse. Gravel is sub-rounded to rounded, fine to medium of mixed lithologies.				0.60		
0.30 - 0.80	B4						[RIVER TERRACE DEPOSITS]						
0.40	ES						Firm, orangish brown mottled light grey, slightly gravelly silty sandy CLAY with occasional orange sand lenses and peaty roots. Sand is fine to coarse. Gravel is sub-rounded to rounded, fine to medium of mixed lithologies.				0.90	5.75	
0.40 - 0.60	ES3						[RIVER TERRACE DEPOSITS]						
0.90	D16	1.20	SPT(S)	N=10 (1,2/2,2,3,3)									
0.90 - 1.20	B5												
1.20 - 1.70	D17												
1.20 - 1.70	B6												
2.50	D18												
2.50 - 3.00	B7												
3.00 - 3.45	UT18												
3.50	D19												
3.50 - 4.00	B8												
4.00	D20												
4.00	EWV2												
4.00	EWV1												
4.50	D21	4.50	SPT(S)	N=12 (1,2/2,3,3,4)			Grey SILTSTONE.				3.80	2.85	
4.50 - 5.00	B9						[KIMMERIDGE CLAY FORMATION]				0.20		
4.70 - 4.90	ES14						Soft to firm, fissured, dark grey, slightly silty CLAY with occasional shell fragments (<10mm).				4.00	2.65	
							[KIMMERIDGE CLAY FORMATION]						
5.50	D22												
5.50 - 6.00	B10												
6.00 - 6.45	UT19												
6.50	D23												
6.50 - 7.00	B11												
7.50	D24	7.50	SPT(S)	N=15 (2,2/3,3,4,5)									
7.50 - 8.00	B12												
8.50	D15												
8.50 - 9.00	B13												
9.00 - 9.45	UT20												
9.50	D16												
9.50 - 10.00	B14												
10.00	D17	10.00	SPT(S)	N=20 (2,3/4,4,5,7)									

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit	3.80	4.00	00:30							300	1.20	200	4.50			
1.20	10.45	Cable Percussion										200	10.00	200				
												50	10.45					

Remarks
 No groundwater encountered.
 UT18 (3.00-3.45) - 100% recovery, 75 blows.
 UT19 (6.00-6.45) - 100% recovery, 85 blows.
 UT20 (9.00-9.45) - 100% recovery, 100 blows.

Termination Depth:
10.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541584.31

Ground Level (mAOD)
6.65
Northing (OS mN)
266428.88

Start Date
09/12/2016
End Date
09/12/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
						09/12/2016 16:00	4.50	Soft to firm, fissured, dark grey, slightly silty CLAY with occasional shell fragments (<10mm). [KIMMERIDGE CLAY FORMATION]		10.45	-3.80		

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER				WATER ADDED			
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	3.80	4.00	00:30							300 200 50	1.20 10.00 10.45	200	4.50			

Remarks
No groundwater encountered.
UT18 (3.00-3.45) - 100% recovery, 75 blows.
UT19 (6.00-6.45) - 100% recovery, 85 blows.
UT20 (9.00-9.45) - 100% recovery, 100 blows.

Termination Depth:
10.45m

Project
Northstowe Phase 2
 Client
Homes and Communities Agency

Project No.
UA008426-01
 Easting (OS mE)
541208.04

Ground Level (mAOD)
 Northing (OS mN)
266819.00

Start Date
12/12/2016
 End Date
12/12/2016

Scale
1:50
 Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.10 0.10 0.10 - 0.30	B4 ES ES1				12/12/2016 11:30		MADE GROUND: Grass over brown CLAY with occasional roots and rootlets. MADE GROUND: Soft to firm, orangish brown mottled grey, slightly sandy slightly gravelly CLAY with occasional roots and rootlets. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint, brick and mudstone.			0.05 (1.45)			
		1.20	SPT(C)	N=9 (2,2/2,2,3,2)									
1.50 1.50 - 1.70 1.70 1.80 2.00 2.00 - 2.45	B5 ES2 EWW1 EWW2 B7 D6	2.00	SPT(S)	N=12 (2,2/3,3,3,3)			Firm, bluish grey, slightly gravelly silty CLAY. Gravel is sub-angular to rounded, fine to coarse of weak mudstone. [KIMMERIDGE CLAY FORMATION]			1.50 (2.00)			
		4.00	SPT(S)	N=27 (4,5/7,9,7,4)			Grey SILTSTONE. [KIMMERIDGE CLAY FORMATION] Firm, bluish grey, slightly gravelly silty CLAY. Gravel is sub-angular to rounded, fine to coarse of weak mudstone. [KIMMERIDGE CLAY FORMATION] Grey SILTSTONE. [KIMMERIDGE CLAY FORMATION] Firm to stiff, bluish grey, slightly gravelly silty CLAY. Gravel is sub-angular to rounded, fine to coarse of weak mudstone. [KIMMERIDGE CLAY FORMATION]			3.50 (0.20) 3.70 3.80 3.90			
4.00 4.00 - 4.45	B12 D11									(1.30)			
5.00 - 5.45	UT13												
5.45 5.50	D14 B15						Stiff, dark grey CLAY. [KIMMERIDGE CLAY FORMATION]			5.20			
		6.50	SPT(S)	N=19 (3,4/4,4,5,6)									
7.00	B17												
8.00 - 8.45	UT18												
8.45 8.50	D19 B20												
		10.00	SPT(S)	N=22 (4,4/5,5,6,6)						(5.25)			
10.00 - 10.45	D21												

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	3.50	3.70	00:40							300	1.20	200	1.65			
	10.45		3.80	3.90	00:25							200	10.00	200				
												50	10.45					

Remarks
 No groundwater encountered.
 UT8 (3.00-3.45) - 100% recovery, 71 blows.
 UT13 (5.00-5.45) - 100% recovery, 42 blows.
 UT18 (8.00-8.45) - 100% recovery, 53 blows.

Termination Depth:
10.45m



Unless otherwise stated:
 Depth (m), Diameter (mm), Time (hhmm),
 Thickness (m), Level (mOD).

Equipment Used
Dando 2000

Contractor
Arcadis Consulting (UK) Ltd.

Logged By
SC

Checked By
AM

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541208.04

Ground Level (mAOD)

Northing (OS mN)
266819.00

Start Date
12/12/2016
End Date
12/12/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
						12/12/2016 16:00	1.65	Stiff, dark grey CLAY. [KIMMERIDGE CLAY FORMATION]			10.45		

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER				WATER ADDED			
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	3.50	3.70	00:40							300	1.20	200	1.65			
1.20	10.45		3.80	3.90	00:25							200	10.00					
												50	10.45					

Remarks
No groundwater encountered.
UT8 (3.00-3.45) - 100% recovery, 71 blows.
UT13 (5.00-5.45) - 100% recovery, 42 blows.
UT18 (8.00-8.45) - 100% recovery, 53 blows.

Termination Depth:
10.45m



Unless otherwise stated:
Depth (m), Diameter (mm), Time (hhmm),
Thickness (m), Level (mOD).

Equipment Used
Dando 2000

Contractor
Arcadis Consulting (UK) Ltd.

Logged By
SC

Checked By
AM

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541588.67

Ground Level (mAOD)
6.34
Northing (OS mN)
266647.16

Start Date
07/12/2016
End Date
07/12/2016

Scale
1:50
Sheet 1 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA			Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend				
0.00 - 1.20	B5					07/12/2016 10:00	0.00	MADE GROUND: Grass over soft, brown CLAY with frequent roots and rootlets.		(0.20)	6.14		
0.30	ES							MADE GROUND: Soft, brown, slightly sandy slightly gravelly CLAY with frequent roots and rootlets. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint.		(0.40)	5.74		
0.30 - 0.50	ES1							Firm, yellowish brown, slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		0.60			
1.20	D6	1.20	SPT(S)	N=15 (3,3/4,4,3,4)						(1.20)			
1.50 - 2.00	B7									1.80	4.54		
1.60 - 1.80	ES2							Loose, yellowish brown, gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		1.90	4.44		
2.00	ES												
2.00	ES3												
2.00 - 3.00	ES1							Soft, grey mottled orangish brown, slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		(2.10)			
	ES												
2.80	D9	3.00	SPT(S)	N=5 (1,2/2,1,1,1)									
2.80 - 3.00	ES3												
3.00	D9												
3.00 - 4.00	B10												
4.00	B												
4.00 - 4.50	B11							Medium dense, yellowish brown, very sandy GRAVEL. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		4.00	2.34		
4.30 - 4.40	ES4									(0.90)			
4.50	D12	4.50	SPT(C)	N=28 (7,7/6,6,7,9)									
4.50 - 4.90	B13												
5.00 - 6.00	B14							Soft to firm, fissured, blueish grey, slightly silty CLAY with occasional shells and shell fragments. [KIMMERIDGE CLAY FORMATION]		4.90	1.44		
6.00	U21												
6.00 - 6.45	UT22												
6.45	D15												
6.50 - 7.50	B16												
7.50	D17	7.50	SPT(S)	N=9 (2,3/2,2,2,3)						(5.55)			
8.00 - 9.00	B18												
9.00 - 9.45	UT23												
9.45	D19												
9.45 - 10.00	B20												
10.00	D21	10.00	SPT(S)	N=19 (3,4/4,4,5,6)									

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER			WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion				07/12/2016 13:00 07/12/2016 14:00	3.00 4.00	20 20	2.00 2.00	3.00 4.00	5.50 5.50	300 200 50	1.20 10.00 10.45	200	5.50			

Remarks
 UT22 (6.00-6.45) - 100% recovery, 65 blows.
 UT23 (9.00-9.45) - 100% recovery, 100 blows.

Termination Depth:
10.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541588.67

Ground Level (mAOD)
6.34
Northing (OS mN)
266647.16

Start Date
07/12/2016
End Date
07/12/2016

Scale
1:50
Sheet 2 of 2

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA				Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description	Legend					
						07/12/2016 16:00	5.50	Soft to firm, fissured, blueish grey, slightly silty CLAY with occasional shells and shell fragments. [KIMMERIDGE CLAY FORMATION]			10.45	-4.11		

DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS					HOLE/CASING DIAMETER			WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion				07/12/2016 13:00	3.00	20	2.00	3.00	5.50	300	1.20	200	5.50			
1.20	10.45					07/12/2016 14:00	4.00	20	2.00	4.00	5.50	200	10.00	200				
												50	10.45					

Remarks
 UT22 (6.00-6.45) - 100% recovery, 65 blows.
 UT23 (9.00-9.45) - 100% recovery, 100 blows.

Termination Depth:
10.45m



Unless otherwise stated:
 Depth (m), Diameter (mm), Time (hhmm),
 Thickness (m), Level (mOD).

Equipment Used
Dando 2000

Contractor
Arcadis Consulting (UK) Ltd.

Logged By
SC

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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541102.13

Ground Level (mAOD)
6.66
Northing (OS mN)
267131.34

Start Date
07/12/2016
End Date
07/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	PROGRESS		STRATA				Depth (Thickness)	Level	Install/ Backfill				
Depth	Type/ No.	Depth	Type/ No.	Results		Date Time	Casing Water	Description		Legend								
0.10 0.10 - 0.20 0.10 - 0.20 0.20 - 0.70 0.30 0.30 - 0.40	ES B1 ES2 B3 D16 ES4				07/12/2016 09:00	0.00	Grass over soft, brown, slightly silty gravelly CLAY with frequent rootlets. Gravel is sub-angular to sub-rounded, fine to coarse of mixed lithologies. [TOPSOIL]			(0.20) 0.20	6.46							
1.00 1.00 - 1.50 1.20	D17 B5 D18	1.50	SPT(S)	N=19 (2,2/3,5,5,6)			Firm to stiff, brown mottled grey, slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of mixed lithologies. [RIVER TERRACE DEPOSITS]			(3.50)								
2.00 2.00 - 2.50 2.40	D19 B7 EW1																	
3.00 3.00 - 3.45 3.00 - 3.50	D20 UT32 B8	3.00	SPT(S)	N=24 (3,3/6,6,6,6)						3.70 (0.20) 3.90	2.96 2.76							
3.50 3.70	D21 D22						Grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]			(1.30)								
4.00 4.00 - 4.10 4.00 - 4.50	D23 ES6 B9						Soft, grey mottled brown, silty CLAY with pockets (1cm) of orange sand and occasional angular gravel of siltstone (1cm x 2xcm x 0.5cm). [KIMMERIDGE CLAY FORMATION]			5.20 (0.20) 5.40	1.46 1.26							
5.00 5.00 - 5.50 5.30 - 5.40 5.40	D24 B10 ES15 D25						Grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]			(4.60)								
6.00 6.00 6.00 - 6.45 6.00 - 6.50 6.50	D26 U33 UT33 B11 D27						Stiff to very stiff, dark grey, silty CLAY with occasional angular gravel of siltstone. [KIMMERIDGE CLAY FORMATION]											
7.00 7.00 - 7.50	D28 B12	7.50	SPT(S)	N=34 (4,5/6,8,10,10)														
8.00 8.00 - 8.50	D29 B13				07/12/2016 16:00	1.50				10.00	-3.34							
9.00 9.00 - 9.50 9.50 - 9.95	D30 B14 UT34																	
10.00	D31																	
DRILLING TECHNIQUE			CHISELLING			WATER OBSERVATIONS				HOLE/CASING DIAMETER				WATER ADDED				
From	To	Type	From	To	Duration	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	From	To	Volume (ltr)
0.00	1.20	Inspection Pit Cable Percussion	3.70	3.90	00:30							300	1.20	200	1.50			
1.20	10.00		5.20	5.40								200	10.00					
Remarks																		
No groundwater encountered. Gas monitoring point installed at 3.00m bgl.																		
																Termination Depth: 10.00m		



Unless otherwise stated:
Depth (m), Diameter (mm), Time (hhmm),
Thickness (m), Level (mOD).

Equipment Used
Dando 2000

Contractor
Arcadis Consulting (UK) Ltd.

Logged By
VP Checked By
AM



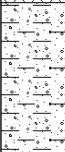






Project
Northstowe - IPs (CPT/LIF)
 Client
Homes and Communities Agency

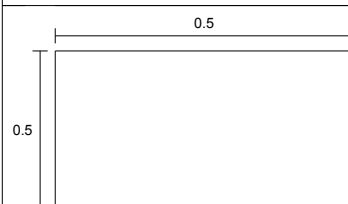
Project No.
UA008426-04
 Easting (OS mE)
541650.13

Ground Level (mAOD)
6.35
 Northing (OS mN)
266581.43

Start Date
16/12/2016
 End Date
16/12/2016

Scale
1:25
 Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10	ES1					MADE GROUND: Soft, brown, sandy silty CLAY. Sand is fine to coarse.		(0.20)		
						Firm, light brown, slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular, fine to coarse of flint and chalk. [RIVER TERRACE DEPOSITS]		0.20	6.15	
						Light yellowish grey, slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is angular, fine to coarse of flint and chalk. [RIVER TERRACE DEPOSITS]		(0.50)		
								0.70	5.65	
								(0.50)		
								1.20	5.15	

PLAN DETAILS  <p>Long Axis Orientation: 90</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): DRY</p>		Remarks Inspection pit for CPT. No groundwater encountered. Target depth reached.	Termination Depth: 1.20m
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Project
Northstowe - IPs (CPT/LIF)
Client
Homes and Communities Agency

Project No.
UA008426-04
Easting (OS mE)
541626.86

Ground Level (mAOD)
6.42
Northing (OS mN)
266398.64

Start Date
16/12/2016
End Date
16/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10	ES1					MADE GROUND: Soft, brown, sandy silty CLAY. Sand is fine to coarse.		(0.30)		
						Firm, light brown, slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular, fine to coarse of flint and chalk. [RIVER TERRACE DEPOSITS]		0.30 (0.20)	6.12	
						Light yellowish grey, slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is angular, fine to coarse of flint and chalk. [RIVER TERRACE DEPOSITS]		0.50 (0.60)	5.92	
						Firm to stiff, light grey mottled light brown, slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		1.10 (0.10) 1.20	5.32 5.22	

PLAN DETAILS <p>0.5</p> <p>0.5</p> <p>Long Axis Orientation: 90</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): DRY</p>		Remarks Inspection pit for CPT. No groundwater encountered. Target depth reached.	Termination Depth: 1.20m
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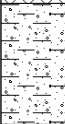



Project
Northstowe - IPs (CPT/LIF)
Client
Homes and Communities Agency

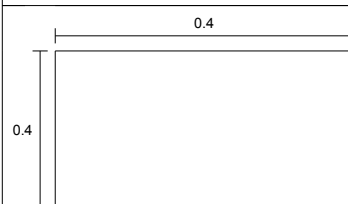
Project No.
UA008426-04
Easting (OS mE)
541054.25

Ground Level (mAOD)
9.13
Northing (OS mN)
266615.51

Start Date
13/12/2016
End Date
13/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.30	ES1	0.10	PID	<1ppm		MADE GROUND: Grass over dark brown, slightly gravelly very clayey fine to coarse SAND with occasional rootlets. Gravel is sub-angular to sub-rounded, fine to coarse of red brick.		(0.50)	8.63	
						Soft, light orangish brown, slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine of flint and chalk. [RIVER TERRACE DEPOSITS]		(0.40)	8.23	
						Soft, light orangish brown, gravelly very clayey fine to coarse SAND. Gravel is sub-angular to sub-rounded, fine of flint and chalk. [RIVER TERRACE DEPOSITS]		(0.30)	7.93	
								1.20		

<p>PLAN DETAILS</p>  <p>Long Axis Orientation: 90</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): DRY</p>	<p>Remarks</p> <p>Inspection pit for LIF. No groundwater encountered. Target depth reached.</p> <p>Termination Depth: 1.20m</p>
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Project
Northstowe - IPs (CPT/LIF)
 Client
Homes and Communities Agency

Project No.
UA008426-04
 Easting (OS mE)
541097.82

Ground Level (mAOD)
9.15
 Northing (OS mN)
266638.44

Start Date
12/12/2016
 End Date
12/12/2016

Scale
1:25
 Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.30	ES1	0.10	PID	2.8ppm		MADE GROUND: Grass over soft to firm, dark brown, slightly gravelly sandy CLAY with occasional rootlets. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to medium of flint and chalk.		(0.40)		
						Soft, light brown, slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to medium of flint and chalk. [RIVER TERRACE DEPOSITS]		0.40 (0.50)	8.75	
						Firm, bluish grey, slightly sandy CLAY. Sand is fine. [KIMMERIDGE CLAY FORMATION]		0.90 (0.30)	8.25	
								1.20	7.95	

PLAN DETAILS Long Axis Orientation: 90 Shoring / Support: None Stability: Stable Groundwater (description): DRY	Remarks Inspection pit for LIF. No groundwater encountered. Target depth reached. <div style="text-align: right; border: 1px solid black; padding: 5px;"> Termination Depth: 1.20m </div>
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Project
Northstowe - IPs (CPT/LIF)
Client
Homes and Communities Agency

Project No.
UA008426-04
Easting (OS mE)
541138.47

Ground Level (mAOD)
8.98
Northing (OS mN)
266610.48

Start Date
13/12/2016
End Date
13/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.30	ES1	0.10	PID	<1ppm		MADE GROUND: Grass over strong, grey CONCRETE.		(0.10)	8.88	
						MADE GROUND: Light greyish brown, sandy gravelly CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint and chalk.		0.10		
						50mm diameter clay pipe (land drain) encountered between 0.40-0.50m bgl. Land drain running in north-south direction in east side of pit wall.		(0.40)		
						Soft, light brown, slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine of flint and chalk. [RIVER TERRACE DEPOSITS.]		0.50	8.48	
						Stiff, bluish grey, slightly sandy CLAY. Sand is fine. [KIMMERIDGE CLAY FORMATION]		(0.50)		
								1.00	7.98	
								(0.20)		
								1.20	7.78	

<p>PLAN DETAILS</p>	<p>Remarks</p> <p>Inspection pit for LIF. No groundwater encountered. Target depth reached.</p> <p>Termination Depth: 1.20m</p>
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
Project
Northstowe - IPs (CPT/LIF)
Client
Homes and Communities Agency

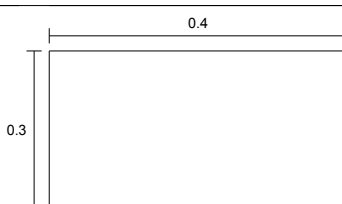
Project No.
UA008426-04
Easting (OS mE)
541132.06

Ground Level (mAOD)
9.05
Northing (OS mN)
266573.71

Start Date
13/12/2016
End Date
13/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.30	ES1	0.10	PID	<1ppm		MADE GROUND: Strong, grey CONCRETE.		(0.10)	8.95	
						MADE GROUND: Light yellowish brown, very gravelly fine to coarse SAND with occasional rootlets and low cobble content. Gravel is sub-angular to sub-rounded, fine to coarse of flint and red brick. Cobbles are angular of red brick.		(0.20)		
						Firm to stiff, dark brown, slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to medium of flint and chalk. [RIVER TERRACE DEPOSITS]		(0.30)		
								(0.50)		
								0.80	8.25	

PLAN DETAILS 		Long Axis Orientation: 90 Shoring / Support: None Stability: Stable Groundwater (description): DRY	Remarks Inspection pit for LIF. No groundwater encountered. Pit refused at 0.80m bgl due to stiffness of clay. 30 minutes of chiselling undertaken prior to pit termination.	Termination Depth: 0.80m
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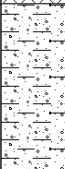


Project
Northstowe - IPs (CPT/LIF)
Client
Homes and Communities Agency

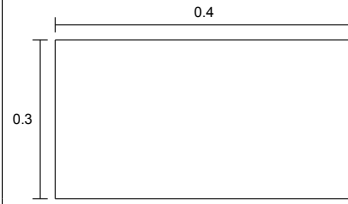
Project No.
UA008426-04
Easting (OS mE)
540869.80

Ground Level (mAOD)
9.42
Northing (OS mN)
266228.81

Start Date
12/12/2016
End Date
12/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.30	ES1	0.10	PID	<1ppm		MADE GROUND: Grass over dark brown, slightly gravelly clayey fine to coarse SAND with occasional rootlets. Gravel is sub-angular to sub-rounded, fine to coarse of flint and chalk.		(0.65)		
						Soft, light brown, slightly gravelly very sandy CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse, of flint and chalk. [RIVER TERRACE DEPOSITS]		0.65 (0.55)	8.77	
								1.20	8.22	

<p>PLAN DETAILS</p>  <p>Long Axis Orientation: 90</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): DRY</p>	<p>Remarks</p> <p>Inspection pit for LIF. No groundwater encountered. Target depth reached.</p> <p>Termination Depth: 1.20m</p>
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Project
Northstowe - IPs (CPT/LIF)
Client
Homes and Communities Agency

Project No.
UA008426-04
Easting (OS mE)
540836.24

Ground Level (mAOD)
266196.90
Northing (OS mN)
266196.90

Start Date
12/12/2016
End Date
12/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.30	ES1	0.10	PID	<1ppm		MADE GROUND: Strong, grey CONCRETE.		(0.10)		
						MADE GROUND: Light to dark brown, slightly sandy very clayey GRAVEL with low cobble content. Sand is fine to coarse. Gravel is angular to sub-angular, fine to coarse of red brick. Cobbles are angular to sub-angular or red brick.		0.10		
						Soft, dark brown, slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint and chalk. [RIVER TERRACE DEPOSITS]		0.30		
								(0.80)		
						Soft, light orangish brown, slightly gravelly very sandy CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint and chalk. [RIVER TERRACE DEPOSITS]		1.10		
								(0.10)		
								1.20		

PLAN DETAILS <p>Long Axis Orientation: 90</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): DRY</p>		Remarks Inspection pit for LIF. No groundwater encountered. Target depth reached.	Termination Depth: 1.20m
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Project
Northstowe - IPs (CPT/LIF)
Client
Homes and Communities Agency

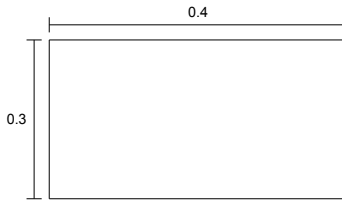
Project No.
UA008426-04
Easting (OS mE)
540888.32

Ground Level (mAOD)
9.48
Northing (OS mN)
266178.17

Start Date
13/12/2016
End Date
13/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.20 - 0.50	ES1	0.20	PID	<1ppm		MADE GROUND: Strong, grey, wire reinforced CONCRETE.		(0.20)	9.28	
						MADE GROUND: Reddish brown, very gravelly fine to coarse SAND with low cobble content. Gravel is sub-angular to sub-rounded, fine to coarse of red brick and concrete. Cobbles are angular to sub-angular of red brick and concrete.		0.20		
								(0.30)		
								0.50	8.98	

<p>PLAN DETAILS</p>  <p>Long Axis Orientation: 90</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): DRY</p>	<p>Remarks</p> <p>Inspection pit for LIF. No groundwater encountered. Pit refused at 0.50m bgl due to cobbles of red brick and concrete. 30 minutes of chiselling undertaken prior to pit termination.</p> <p style="text-align: right;">Termination Depth: 0.50m</p>
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Project
Northstowe - IPs (CPT/LIF)
Client
Homes and Communities Agency








Project No.
UA008426-04
Easting (OS mE)
540765.79

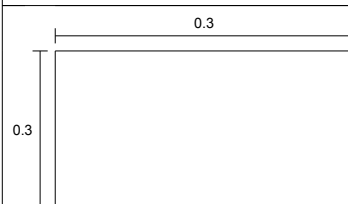
Ground Level (mAOD)

Northing (OS mN)
266172.15

Start Date
12/12/2016
End Date
12/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.30	ES1	0.10	PID	<1ppm		MADE GROUND: Grass over dark brown, slightly gravelly clayey fine to coarse SAND with occasional rootlets. Gravel is angular to sub-rounded, fine of flint and chalk.		(0.34)		
						Soft, light brown, slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint and chalk. [RIVER TERRACE DEPOSITS]		0.34 (0.36)		
						Soft, greyish brown mottled yellowish brown, slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint and chalk. [RIVER TERRACE DEPOSITS]		0.70 (0.50)		
								1.20		

<p>PLAN DETAILS</p>  <p>Long Axis Orientation: 90</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): DRY</p>	<p>Remarks</p> <p>Inspection pit for LIF. No groundwater encountered. Target depth reached.</p>
	<p>Termination Depth: 1.20m</p>

Project
Northstowe - IPs (CPT/LIF)
Client
Homes and Communities Agency

Project No.
UA008426-04
Easting (OS mE)
540564.71

Ground Level (mAOD)
266155.46
Northing (OS mN)
266155.46

Start Date
16/12/2016
End Date
16/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10	ES1					MADE GROUND: Soft, brown, sandy silty CLAY. Sand is fine to coarse.		(0.40)		
						Light brown, slightly sandy GRAVEL. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint and chalk. [RIVER TERRACE DEPOSITS]		0.40		
								(0.80)		
								1.20		

PLAN DETAILS <p>Long Axis Orientation: 90</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): DRY</p>	Remarks Inspection pit for LIF. No groundwater encountered. Target depth reached.
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Termination Depth:
1.20m

Project
Northstowe - IPs (CPT/LIF)
Client
Homes and Communities Agency










Project No.
UA008426-04
Easting (OS mE)
540611.39

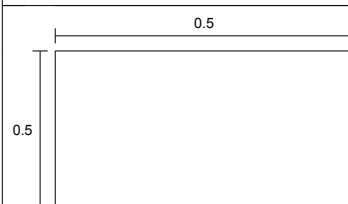
Ground Level (mAOD)

Northing (OS mN)
266121.68

Start Date
16/12/2016
End Date
16/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10	ES1					MADE GROUND: Soft, brown, sandy silty CLAY. Sand is fine to coarse.		(0.20)		
						Firm, brown, sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		0.20		
						Light yellow, gravelly SAND. Sand is fine to coarse. Gravel is sub-angular, fine to coarse of chalk. [RIVER TERRACE DEPOSITS]		(0.40)		
								0.60		
								(0.60)		
								1.20		

PLAN DETAILS  <p>Long Axis Orientation: 90</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): DRY</p>		Remarks Inspection pit for LIF. No groundwater encountered. Target depth reached.	Termination Depth: 1.20m
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Project
Northstowe - IPs (CPT/LIF)
 Client
Homes and Communities Agency

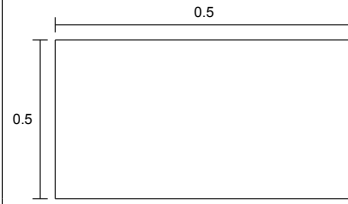
Project No.
UA008426-04
 Easting (OS mE)
540770.78

Ground Level (mAOD)
 Northing (OS mN)
266001.83

Start Date
16/12/2016
 End Date
16/12/2016

Scale
1:25
 Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10	ES1					MADE GROUND: Soft, brown, sandy silty CLAY. Sand is fine to coarse.		(0.40)		
						Firm, bluish grey, slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		0.40 (0.80)		
								1.20		

PLAN DETAILS  <p>Long Axis Orientation: 90</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): DRY</p>	Remarks Inspection pit for LIF. No groundwater encountered. Target depth reached. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin-left: auto;"> Termination Depth: 1.20m </div>
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Project
Northstowe - IPs (CPT/LIF)
Client
Homes and Communities Agency

Project No.
UA008426-04
Easting (OS mE)
540764.85

Ground Level (mAOD)

Northing (OS mN)
266051.60

Start Date
16/12/2016
End Date
16/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10	ES1					MADE GROUND: Soft, brown, sandy silty CLAY. Sand is fine to coarse.		(0.40)		
						Firm, bluish grey, slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		0.40 (0.80)		
								1.20		

PLAN DETAILS

0.5

0.5

Long Axis Orientation: 90

Shoring / Support: None

Stability: Stable

Groundwater (description): DRY

Remarks

Inspection pit for LIF.
No groundwater encountered.
Target depth reached.

Termination Depth:
1.20m

Project
Northstowe - IPs (CPT/LIF)
Client
Homes and Communities Agency



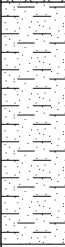
Project No.
UA008426-04
Easting (OS mE)
540810.59

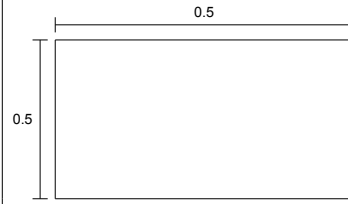
Ground Level (mAOD)

Northing (OS mN)
266069.30

Start Date
16/12/2016
End Date
16/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10	ES1					MADE GROUND: Soft, brown, sandy silty CLAY. Sand is fine to coarse.		(0.40)		
						Firm, bluish grey, slightly sandy CLAY. Sand is fine to coarse. [KIMMERISDGE CLAY FORMATION]		0.40		
								(0.80)		
								1.20		

PLAN DETAILS		Remarks	
 <p>0.5</p> <p>0.5</p> <p>Long Axis Orientation: 90</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): DRY</p>	<p>Inspection pit for LIF. No groundwater encountered. Target depth reached.</p>		<p>Termination Depth: 1.20m</p>

Project
Northstowe - IPs (CPT/LIF)
Client
Homes and Communities Agency






Project No.
UA008426-04
Easting (OS mE)
540819.74

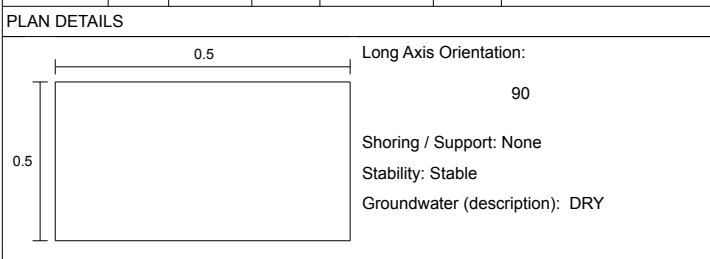
Ground Level (mAOD)

Northing (OS mN)
266038.34

Start Date
16/12/2016
End Date
16/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/Backfill
Depth	Type/No.	Depth	Type/No.	Results		Description	Legend			
0.10	ES1					MADE GROUND: Soft, brown, sandy silty CLAY. Sand is fine to coarse.		(0.40)		
						Firm, bluish grey, slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		0.40 (0.80)		
								1.20		



Remarks

Inspection pit for LIF.
No groundwater encountered.
Target depth reached.

Termination Depth:
1.20m





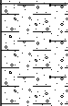
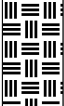


Project
Northstowe - IPs (CPT/LIF)
 Client
Homes and Communities Agency

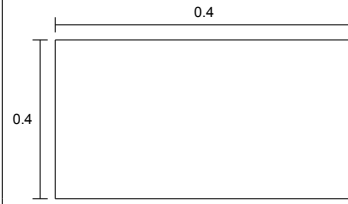
Project No.
UA008426-04
 Easting (OS mE)
541666.85

Ground Level (mAOD)
5.97
 Northing (OS mN)
266462.04

Start Date
13/12/2016
 End Date
13/12/2016

Scale
1:25
 Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.30	ES1	0.10	PID	<1ppm		MADE GROUND: Grass over dark brown, very clayey fine to coarse SAND with occasional rootlets.		(0.35)		
						Light brown, very sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		0.35	5.62	
						Firm, light blueish grey, slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is sub*angular to sub-rounded, fine of flint and chalk. [KIMMERIDGE CLAY FORMATION]		0.65	5.32	
								(0.35)		
								1.00	4.97	

<p>PLAN DETAILS</p>  <p>Long Axis Orientation: 90</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): DRY</p>	<p>Remarks</p> <p>Inspection pit for LIF. No groundwater encountered. Pit refused at 1.00m bgl due to stiffness of clay. 30 minutes of chiselling undertaken prior to pit termination.</p> <p style="text-align: right;">Termination Depth: 1.00m</p>
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Project
Northstowe - IPs (CPT/LIF)
Client
Homes and Communities Agency

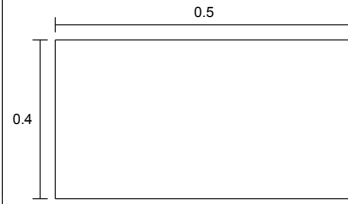
Project No.
UA008426-04
Easting (OS mE)
540874.74

Ground Level (mAOD)
9.02
Northing (OS mN)
266412.83

Start Date
12/12/2016
End Date
12/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.30	ES1	0.10	PID	<1ppm		MADE GROUND: Grass over dark brown, slightly gravelly very clayey fine to coarse SAND with occasional rootlets. Gravel is sub-angular to sub-rounded, fine to medium of flint and chalk.		(0.70)	8.32	
						Light to dark brown, clayey gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded, fine to medium of flint and chalk. [RIVER TERRACE DEPOSITS]		(0.50)	7.82	
								1.20		

<p>PLAN DETAILS</p>  <p>Long Axis Orientation: 90</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): DRY</p>	<p>Remarks</p> <p>Inspection pit for LIF. No groundwater encountered. Target depth reached.</p> <p>Termination Depth: 1.20m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

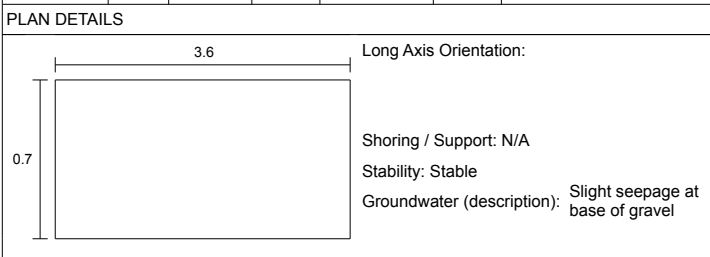
Project No.
UA008426-01
Easting (OS mE)
540969.97

Ground Level (mAOD)
9.25
Northing (OS mN)
266739.48

Start Date
16/12/2016
End Date
16/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.20 0.10 - 0.20	B1 ES1					Grass over dark brown sandy, slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular, fine to coarse chert.		(0.30)		
0.30 - 0.40 0.30 - 0.70	ES2 B2					Orangish brown gravelly fine to coarse SAND		0.30 (0.40)	8.95	
0.70 - 0.80 0.70 - 1.00	ES3 B3				▼	Soft to firm light bluish grey mottled brown silty CLAY. gravelly fine to coarse SAND pocket.		0.70	8.55	
1.00 - 1.10	D1					by 1.00 m dark bluish grey				
1.80 - 1.90	D2	1.80	HV(1)	102(44)kPa						
		1.80	HV(2)	110(42)kPa						
		1.80	HV(3)	98(38)kPa						
2.00 - 2.50	B4					sand and gravel pocket		(2.30)		
		2.50	HV(4)	100(36)kPa						
		2.50	HV(5)	102(48)kPa						
		2.50	HV(6)	>120(kPa)						
								3.00	6.25	



Remarks

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540952.23

Ground Level (mAOD)
9.25
Northing (OS mN)
266678.73

Start Date
16/12/2016
End Date
16/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.30 0.10 - 0.30	B1 ES2					Grass over topsoil.		(0.30)		
0.50 - 0.80	B3					Grass over light brown slightly gravelly clayey SAND. Gravel is fine to coarse, subangular to subrounded of chert. [RIVER TERRACE DEPOSITS]		0.30 (0.90)	8.95	
1.20 - 1.40 1.20 - 1.40	B4 ES5					Yellowish brown sandy GRAVEL. Gravel is fine to coarse, subangular to subrounded of mixed lithologies. [RIVER TERRACE DEPOSITS]		1.20 (1.10)	8.05	
2.50 - 2.80 2.50 - 2.80 2.50 - 2.80	B6 D7 ES8	2.50	HV(1)	90(42)kPa	▼	Firm to stiff dark grey CLAY [KIMMERIDGE CLAY]		2.30 (0.70)	6.95	
								3.00	6.25	

PLAN DETAILS	Remarks
<p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description):</p>	<p>Groundwater encountered at 2.3m bgl. Pit terminated at target depth.</p> <p>Termination Depth: 3.00m</p>

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540826.95

Ground Level (mAOD)
9.35
Northing (OS mN)
266296.10

Start Date
01/12/2016
End Date
01/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/Backfill
Depth	Type/No.	Depth	Type/No.	Results		Description	Legend			
0.10 0.10 - 0.20 0.20 - 0.40	ES ES1 B2					Dark orangish brown slightly silty SAND with occasional rootlets. Sand is fine to coarse (NATURAL) [RIVER TERRACE DEPOSITS]		(0.70)	8.65	
1.00 - 1.10 1.10 - 1.30	ES3 B4					Light brownish orange slightly clayey gravelly SAND. Gravel of subrounded to subangular fine to coarse flint. Sand is fine to coarse (NATURAL) [RIVER TERRACE DEPOSITS]		(1.50)		
2.00 - 2.10	ES5							2.20	7.15	

<p>PLAN DETAILS</p> <p>0.5</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description):</p>	<p>Remarks</p> <p>Hole backfilled itself to 2.1 before photo was taken. Hole backfilled to ground level.</p> <p>Termination Depth: 2.20m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540889.55

Ground Level (mAOD)
9.07
Northing (OS mN)
266338.17

Start Date
01/12/2016
End Date
01/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
						CONCRETE		(0.30)		
0.50 - 0.60	ES7					MADE GROUND: Soft to firm dark reddish brown very sandy CLAY with rare brick fragments. Sand is fine to coarse.		0.30	8.77	
0.60 - 0.80	B1							(0.55)		
0.90 - 1.10	B2					MADE GROUND: Dark orangish brown slightly clayey slightly gravelly SAND. Gravel of subrounded to subangular fine to coarse flint. Sand is fine to coarse.		0.85	8.22	
1.10 - 1.20	ES3							(0.90)		
1.90	ES					MADE GROUND: Light whitish grey SAND & GRAVEL. Sand is fine to coarse. Gravel of subrounded to subangular fine to medium flint. Strong hydrocarbon smell.		1.75	7.32	
1.90 - 2.00	ES4							(0.45)		
2.00 - 2.10	B5									
2.00 - 2.10	ES6							2.20	6.87	

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description):</p>		<p>Remarks</p> <p>Hydrocarbon smell emitting from bottom strata – PID machine not picking anything up – 1.5 reading on bag and 0.9/1.3 reading on pot. Water encountered at 1.8m – oily sheen on surface – sample taken. Hole terminated at 2.2m due to water ingress and risk of spreading hydrocarbons on surface. Sidewalls collapsed backfilling hole to 1.8m. Hole backfilled to ground level.</p> <p>Termination Depth: 2.20m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540751.75

Ground Level (mAOD)

Northing (OS mN)
266150.97

Start Date
30/11/2016
End Date
30/11/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.20	ES ES1					Grass over TOPSOIL with abundant roots and rootlets.		(0.30)		
0.30 - 0.40 0.30 - 0.50	ES2 B3					Light brown very sandy CLAY with low cobble content of sandstone. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		0.30 (0.40)		
0.70 - 0.80	D4					Stiff light grey mottled orangish brown sandy, slightly gravelly SILT. Gravel is subangular, fine to coarse of predominantly chert. Occasional mm scale pockets of orangish brown fine to coarse SAND. [KIMMERIDGE CLAY FORMATION]		0.70		
1.00 1.00 - 1.10 1.00 - 1.20	ES ES5 B6							(1.50)		
1.80 1.80 1.80		1.80 1.80 1.80	HV(1) HV(2) HV(3)	>120(kPa) >120(kPa) >120(kPa)						
2.00 - 2.20	B7									
2.20 - 2.30 2.20 - 2.50	ES8 B9					Soft grey silty CLAY with occasional orangish brown mottling and shelly fragments (1-2mm). [KIMMERIDGE CLAY FORMATION]		2.20		
2.40 2.40 2.40		2.40 2.40 2.40	HV(4) HV(5) HV(6)	52(22)kPa 62(30)kPa 64(40)kPa				(0.80)		
2.90 - 3.00 2.90 - 3.00 2.90 - 3.00	D11 ES10 W12					Abundant black organic rich bands (mm scale) and partially decomposed plant material and wood.		3.00		

PLAN DETAILS

Long Axis Orientation:

Shoring / Support: N/A

Stability: Stable

Groundwater (description): Water seepage at 2.8m

Remarks

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540810.68

Ground Level (mAOD)
9.35
Northing (OS mN)
266225.19

Start Date
30/11/2016
End Date
30/11/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.15 0.15 - 0.25 0.15 - 0.25	ES B2 ES1					CONCRETE: Wire reinforced concrete.		(0.15)	9.20	
						MADE GROUND: Dark brown to reddish black sandy GRAVEL. Gravel fine to coarse, subangular to subrounded of brick and concrete. Low cobble content of brick.		(0.30)		
0.50 0.50 - 0.60 0.50 - 0.60	ES B4 ES3					Light orangish brown clayey gravelly fine to coarse SAND. Gravel is fine to coarse, subrounded to subangular of mixed lithologies. [RIVER TERRACE DEPOSITS]		0.45	8.90	
1.00 - 1.10 1.00 - 1.10	B6 ES5							(1.05)		
						Soft becoming firm to stiff dark blueish grey slightly gravelly sandy CLAY. Gravel is fine to coarse, subangular to subrounded of mixed lithologies. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		1.50	7.85	
2.00 - 2.10 2.00 - 2.10	B8 ES7	2.10 2.10 2.10	HV(1) HV(2) HV(3)	72(40)kPa 86(40)kPa 90(38)kPa				(1.50)		
		2.50 2.50 2.50	HV(4) HV(5) HV(6)	100(44)kPa 116(56)kPa 90(42)kPa						
		2.70 2.70 2.70	HV(7) HV(8) HV(9)	102(50)kPa 110(48)kPa 92(42)kPa						
2.90 - 3.00 2.90 - 3.00	B10 ES9	3.00	HV(10)	120(k)Pa	▼			3.00	6.35	

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description):</p>	<p>Remarks</p> <p>Seepage encountered at 3m bgl. Pit terminated at target depth</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

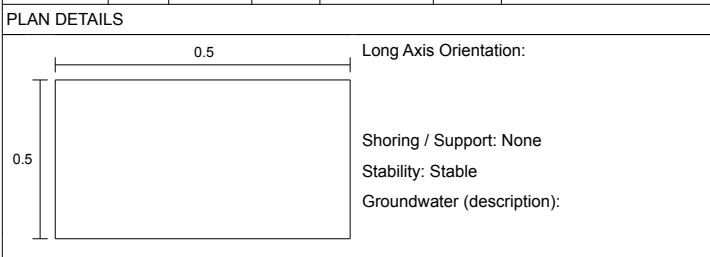
Project No.
UA008426-01
Easting (OS mE)
540867.88

Ground Level (mAOD)
9.30
Northing (OS mN)
266257.40

Start Date
01/12/2016
End Date
01/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.40 0.40 - 0.50 0.50 - 0.70	ES ES2 B1					Concrete		(0.20)	9.10	
1.10 - 1.20	ES3					Light orangish brown slightly silty SAND. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(1.80)		
2.00 - 2.10 2.10 - 2.30	ES4 B5					Light orangish grey clayey SAND. Rootlets up to 2mm. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		2.00 (1.00)	7.30	
2.90 - 3.00	ES6							3.00	6.30	



Remarks

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540805.08

Ground Level (mAOD)
9.47
Northing (OS mN)
266157.60

Start Date
30/11/2016
End Date
30/11/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.20 0.10 - 0.70	ES1 B2					Grass over dark brown slightly silty slightly clayey SAND with rare brick cobbles. Sand is fine to coarse.		(0.70)	8.77	
1.10 1.10 - 1.20 1.10 - 2.00	ES ES3 B4					Soft to firm grey slightly sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]				
		1.80 1.80 1.80	HV(1) HV(2) HV(3)	64(44)kPa 74(52)kPa 80(60)kPa				(1.80)		
2.00 - 2.10 2.00 - 2.50	ES5 B6									
		2.90 2.90 2.90	HV(4) HV(5) HV(6)	27(23)kPa 29(18)kPa 34(21)kPa	▼	Very soft dark grey slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		2.50 (0.50)	6.97	
2.80 - 2.90 2.80 - 3.00	ES7 B8							3.00	6.47	

PLAN DETAILS

Long Axis Orientation:

Shoring / Support: None
Stability: Stable
Groundwater (description): Seepage

Remarks

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540963.57

Ground Level (mAOD)
9.29
Northing (OS mN)
266251.07

Start Date
01/12/2016
End Date
01/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.20 0.20 - 0.40	ES ES1 B2					Dark reddish brown slightly silty, slightly gravelly SAND. Gravel is subrounded to subangular of mixed lithologies [KIMMERIDGE CLAY FORMATION]		(0.68)	8.61	
0.90 - 1.10 1.10 - 1.20	B3 ES4					Light orangish brown slightly clayey, slightly gravelly SAND. Gravel of subrounded and subangular flint. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]				
1.90 2.00 - 2.10	EW7 ES5					Clay content increases until 1.7m, where it becomes clayey SAND		(2.32)		
2.90 - 3.00	ES6					Gravel content increases until 2.5, where it becomes SAND and GRAVEL			6.29	
								3.00		

<p>PLAN DETAILS</p> <p>0.5</p> <p>Long Axis Orientation:</p> <p>Shoring / Support:</p> <p>Stability:</p> <p>Groundwater (description):</p>	<p>Remarks</p> <p>Hole started to backfill from 2.5m, however max depth was achieved</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540951.04

Ground Level (mAOD)
9.50
Northing (OS mN)
266201.95

Start Date
30/11/2016
End Date
30/11/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.20 0.20 0.20 - 0.30	B2 ES ES1					Concrete		(0.20)	9.30	
0.50 0.50 - 0.60	B4 ES3					Light orangish brown slightly clayey SAND. Sand is fine to coarse. [RIVER TERRACE DEPOSITS] becoming increasingly clayey		0.20		
1.00 1.00 1.00 - 1.10	B6 ES ES5							(1.50)		
1.90 1.90 - 2.00	B8 ES7	1.90 1.90 1.90	HV(1) HV(2) HV(3)	42(26)kPa 55(39)kPa 66(46)kPa		Soft light brownish grey sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		1.70	7.80	
2.90 2.90 - 3.00	B10 ES9					Very soft light grey very sandy CLAY. Sand is fine to coarse [KIMMERIDGE CLAY FORMATION]		2.70 (0.30)	6.80	
					▼			3.00	6.50	

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Unstable</p> <p>Groundwater (description): Seepage</p>	<p>Remarks</p> <p>Hand vane not possible at 2.9m bgl, material too soft.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540949.90

Ground Level (mAOD)
9.82
Northing (OS mN)
266099.57

Start Date
29/11/2016
End Date
29/11/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.15 0.15 0.15 - 0.30	D2 ES1 B3					MADE GROUND:		(0.15)		
						Stiff dark brown slightly sandy, slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to subrounded, fine to coarse of chert. [RIVER TERRACE DEPOSITS]		(0.45)	9.67	
0.60 0.60 0.60 0.60 - 1.00	D5 ES ES4 B6	0.50 0.50 0.50	HV(1) HV(2) HV(3)	100(62)kPa 105(60)kPa 110(58)kPa		Light grey and orangish brown sandy, slightly gravelly CLAY. Gravel is angular to subrounded, fine to coarse of chert. Occasional orangish brown sand horizons. [RIVER TERRACE DEPOSITS]		0.60	9.22	
1.70	D7							(1.70)		
1.90	W10									
2.30 2.30 - 2.60	ES8 B9					Orangish brown clayey GRAVEL of subrounded, fine to coarse chert. [RIVER TERRACE DEPOSITS]		2.30	7.52	
								(0.70)		
								3.00	6.82	

PLAN DETAILS

Long Axis Orientation:

Shoring / Support:

Stability:

Groundwater (description): Strike at 2.10m.

Remarks

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency


Project No.
UA008426-01
Easting (OS mE)
541029.42

Ground Level (mAOD)
9.44
Northing (OS mN)
266203.87

Start Date
29/11/2016
End Date
29/11/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.25	ES1					Topsoil over dark brown slightly silty SAND. Sand is fine to coarse.				
0.30	B2							(0.50)		
0.30	ES									
0.30 - 0.40	ES3									
0.60	B4					Dark reddish brown slightly silty SAND. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]			8.94	
0.60 - 0.70	ES5							(0.40)		
1.00	B6					Light orangish brown very clayey SAND. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]			8.54	
1.00 - 1.10	ES7							(0.90)		
1.75	B8					Strong hydrocarbon odour encountered, staining observed				
1.75	ES									
1.75 - 1.85	ES9									
2.00	B10					Strong hydrocarbon odour encountered, staining observed				
2.00	ES									
2.00 - 2.10	ES11							(2.10)		
2.50	EW				▼					
3.00	B12									
3.00	ES									
3.00	ES13							3.00	6.44	

PLAN DETAILS  <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Unstable</p> <p>Groundwater (description): Seepage</p>		Remarks Pit excavated to 3m, water seepage from 2.5m resulting in the pit collapsing to 2.5m. No handvanes taken as material unsuitable.
		Termination Depth: 3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency






Project No.
UA008426-01
Easting (OS mE)
541029.40


Ground Level (mAOD)

Northing (OS mN)
266203.84

Start Date
29/11/2016
End Date
29/11/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
						Grass over TOPSOIL		(0.20)		
						MADE GROUND: Dark brown clayey fine to coarse SAND.		0.20 0.40		
								0.60		

<p>PLAN DETAILS</p>  <p>Long Axis Orientation:</p> <p>Shoring / Support:</p> <p>Stability:</p> <p>Groundwater (description):</p>	<p>Remarks</p> <p>Terminated on engineers instruction at 0.60m due to encountering cable warning tiles.</p> <p style="text-align: right;">Termination Depth: 0.60m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540986.37

Ground Level (mAOD)
9.59
Northing (OS mN)
266065.41

Start Date
29/11/2016
End Date
29/11/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 0.00 - 0.25	ES ES1					Grass over dark brown slightly silty SAND. Sand is fine to coarse		(0.25)		
0.30 0.30 0.30 - 0.40	B2 ES ES3					Dark orangish brown slightly silty SAND. Sand is fine to coarse [RIVER TERRACE DEPOSITS]		(0.25)	9.34	
0.60 0.60 - 0.70	B4 ES5					Firm light orangish brown very sandy CLAY. Sand is fine to coarse [RIVER TERRACE DEPOSITS]		(0.70)	9.09	
1.40 1.40 - 1.50	B6 ES7	1.40 1.40 1.40	HV(1) HV(2) HV(3)	14(14)kPa 24(16)kPa 36(24)kPa		Soft light greyish brown slightly sandy CLAY. Sand is fine to coarse [RIVER TERRACE DEPOSITS]		1.20	8.39	
1.70 1.70 - 1.80	B8 ES9							(1.10)		
2.50 2.50 - 2.60	B10 ES11	2.50 2.50 2.50	HV(4) HV(5) HV(6)	48(28)kPa 66(34)kPa 77(20)kPa		Soft dark brownish grey slightly sandy CLAY. Sand is fine to coarse [KIMMERIDGE CLAY FORMATION]		(0.50)	7.29	
3.00 3.00	B12 ES13					Soft light greyish brown slightly sandy CLAY. Sand is fine to coarse [KIMMERIDGE CLAY FORMATION]		(0.20)	6.79	
								3.00	6.59	

PLAN DETAILS

Long Axis Orientation:

Shoring / Support: None
Stability: Stable
Groundwater (description): Seepage

Remarks

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency


Project No.
UA008426-01
Easting (OS mE)
541049.86

Ground Level (mAOD)
9.64
Northing (OS mN)
266150.07

Start Date
29/11/2016
End Date
29/11/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 0.00 - 0.25	ES ES1					Grass over light orangish brown slightly silty SAND. Sand is fine to coarse.				
0.30 0.30 - 0.40	B2 ES3							(0.70)	8.94	
0.50 0.50 - 0.60	B4 ES ES5					Soft light reddish grey very sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]				
1.60 1.60 - 1.70	B6 ES7	1.60 1.60 1.60	HV(1) HV(2) HV(3)	36(26)kPa 48(14)kPa 56(20)kPa				(1.60)		
2.00 2.00 - 2.10	B8 ES9									
2.50 2.50 - 2.60	B10 ES11				▼	Stiff dark grey slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		2.30	7.34	
2.90 3.00	B12 EW14	2.90 2.90 2.90	HV(4) HV(5) HV(6)	120(36)kPa 120(38)kPa 96(33)kPa	▽			(0.70)		
								3.00	6.64	

<p>PLAN DETAILS</p>  <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description):</p>	<p>Remarks</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540840.05

Ground Level (mAOD)
9.60
Northing (OS mN)
266126.73

Start Date
30/11/2016
End Date
30/11/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 - 0.20	B2 ES ES1					Grass over dark reddish brown slightly silty SAND. Sand is fine to coarse.		(0.45)	9.15	
0.70 0.70 0.70 - 0.80	B4 ES ES3					Light orangish brown slightly silty SAND. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.55)		
1.10 1.10 - 1.20	B6 ES5					Stiff light grey slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		1.00	8.60	
2.00 2.00 - 2.10	B8 ES7							(1.70)		
2.90 2.90 - 3.00	B10 ES9	2.90 2.90 2.90	HV(1) HV(2) HV(3)	56(30)kPa 76(33)kPa 76(40)kPa		Firm dark grey slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(0.30)	6.90	
								3.00	6.60	

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Seepage</p>	<p>Remarks</p> <p>Hand vane not undertaken between 1m bgl and 2.7m bgl and no suitable samples were obtained.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

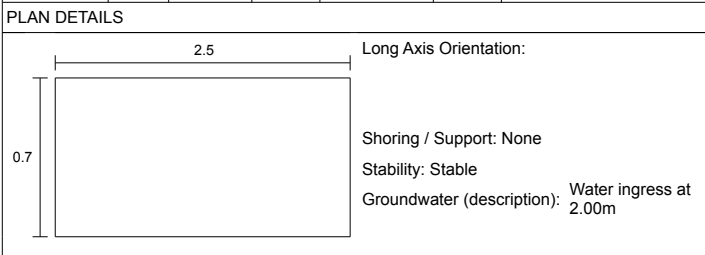
Project No.
UA008426-01
Easting (OS mE)
541048.08

Ground Level (mAOD)
9.20
Northing (OS mN)
266049.14

Start Date
29/11/2016
End Date
29/11/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 0.00	ES ES1					Grass over TOPSOIL; Soft dark brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint.		(0.20)		
0.20 0.20 - 0.40	ES2 B3					Brown slightly gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of mixed lithologies. [RIVER TERRACE DEPOSITS]		0.20	9.00	
								(0.50)		
0.70 0.70 0.70 - 1.00 0.70 - 1.00	ES ES4 B5 D12					Soft dark brown sandy, slightly gravelly CLAY. Gravel is subangular, fine to coarse of mixed lithologies. [RIVER TERRACE DEPOSITS]		0.70	8.50	
								(0.40)		
1.10 1.10 - 1.30	ES6 B7					Firm to stiff light grey and orangish brown slightly sandy, slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular, fine to coarse of predominantly chert. [KIMMERIDGE CLAY FORMATION]		1.10	8.10	
								(1.30)		
2.00 - 2.20	B8				▼					
2.40 2.40 - 2.70 2.40 - 2.70	ES9 B10 D11	2.40 2.40 2.40	HV(1) HV(2) HV(3)	42(18)kPa 42(22)kPa 54(24)kPa	▼	Soft grey and brownish grey SILT. [KIMMERIDGE CLAY FORMATION]		2.40	6.80	
								(0.60)		
		2.80 2.80	HV(4) HV(5)	60(24)kPa 64(28)kPa				3.00	6.20	



Remarks

Terminated on engineers instruction at 3.00m on reaching target depth.

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541066.53

Ground Level (mAOD)

Northing (OS mN)
266046.30

Start Date
16/01/2017
End Date
16/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10	B1					MADE GROUND: Grass over dark brown sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of flint.		(0.20)		
0.10	D3					MADE GROUND: Dark brownish black slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is subangular to rounded, fine to coarse of bituminous bound macadam.		0.20		
0.10	ES2							(0.15)		
0.30	B4					Soft brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of flint. [RIVER TERRACE DEPOSITS]		0.35		
0.30	D6							(0.65)		
0.30	ES5									
0.50	B7					Occasional brick cobbl				
0.50	D9									
0.50	ES8					Land drain at 0.9m				
								1.00		

PLAN DETAILS	Remarks
<p>0.8 Long Axis Orientation:</p> <p>2.2</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Dry</p>	<p>Terminated on engineers instruction at 1.00m due to land drain.</p> <p>Termination Depth: 1.00m</p>

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541066.53

Ground Level (mAOD)
266046.30
Northing (OS mN)

Start Date
16/01/2017
End Date
16/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10	B1 D3 ES2					Grass over TOPSOIL; Firm slightly gravelly sandy CLAY with roots and rootlets. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of flint.		(0.70)		
0.40 0.40 0.40	B4 D6 ES5					Soft to firm slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is subangular and subrounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		0.70	(0.30)	
0.80 0.80 0.80	B7 D9 ES8					Firm brown mottled grey slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint. [KIMMERIDGE CLAY FORMATION]		1.00		
1.10 1.10 1.10	B10 D2 ES1							(1.50)		
2.60 2.60 2.60	B3 D5 ES4					Firm grey mottled brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint. Occasional shell fragments (<5 mm x 2 mm x 2 mm). [KIMMERIDGE CLAY FORMATION]		2.50	(0.50)	
								3.00		

PLAN DETAILS	Remarks
<p>2.3 0.8</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None Stability: Stable Groundwater (description): Dry</p>	<p>Terminated on engineers instruction at 3.00m on reaching target depth.</p> <p>Termination Depth: 3.00m</p>

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541047.48

Ground Level (mAOD)

Northing (OS mN)
265948.43

Start Date
23/01/2017
End Date
23/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.40	ES					MADE GROUND: Concrete.		(0.35)		
0.40	ES1					MADE GROUND: Light brown gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint.		0.35 (0.15)		
0.60	ES	0.60	HV(1)	40()kPa		Firm to stiff grey sandy CLAY. Sand is fine to coarse.		0.50		
0.60	ES2	0.60	HV(2)	60()kPa		[RIVER TERRACE DEPOSITS]		(0.40)		
0.60		0.60	HV(3)	90()kPa						
1.00	ES3					Orangish brown slightly gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is subangular and subrounded, fine to coarse of flint.		0.90		
								(1.30)		
2.30	ES4	2.30	HV(4)	110()kPa		Stiff grey mottled brown slightly sandy CLAY. Relic rootlets up to 5 mm in thickness. Sand is fine to coarse		2.20		
		2.30	HV(5)	120()kPa		[KIMMERIDGE CLAY FORMATION]		(0.20)		
								2.40		

PLAN DETAILS

0.9
Long Axis Orientation:

3.0

Shoring / Support: None
Stability: Unstable
Groundwater (description): Seepage at 2.40m

Remarks

Terminated on engineers instruction at 2.40m due to water ingress.

Termination Depth:
2.40m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541030.37

Ground Level (mAOD)
10.54
Northing (OS mN)
265859.91

Start Date
16/01/2017
End Date
16/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D3 ES ES2					Grass over TOPSOIL; Firm slightly gravelly, slightly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint. <u>Possible redundant telephone cable.</u>		(0.30)	10.24	
0.40 0.40 0.40	B4 ES ES5					Brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded, fine and medium of flint. [RIVER TERRACE DEPOSITS]		(0.30)	9.94	
0.70 0.70 0.70	B6 D8 ES7					Firm orangish brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular and subangular, fine and medium of flint. [RIVER TERRACE DEPOSITS] <u>0.20m thick concrete drainage pipe.</u>		(0.80)	9.14	
1.50 1.50 1.50	B9 D1 ES10					Orangish brown gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint. [RIVER TERRACE DEPOSITS]		(0.70)	8.44	
2.30	B7				▼					

PLAN DETAILS	Remarks
<p>2.2</p> <p>0.8</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Unstable from 2.10m</p> <p>Groundwater (description): Water ingress at 2.10m</p>	<p>Terminated on engineers instruction at 2.10m due to water ingress causing hole to become unstable.</p> <p>Termination Depth: 2.10m</p>

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541007.82

Ground Level (mAOD)
11.72
Northing (OS mN)
265699.15

Start Date
20/01/2017
End Date
20/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00	ES					Grass over TOPSOIL; Dark reddish brown slightly gravelly very clayey SAND. Sand is fine to coarse. Gravel is subangular and subrounded, fine and medium of mixed lithologies. With occasional rootlets.		(0.50)	11.22	
0.10	ES									
0.10 - 0.30	B2									
0.10 - 0.30	ES1									
0.60 - 0.90	B4				Orangish brown slightly gravelly very clayey SAND. Sand is fine to coarse. Gravel is angular to subrounded, fine and medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		(1.20)	11.22		
0.60 - 0.90	ES3									
1.60 - 1.70	B5				▼	Firm to stiff dark bluish grey mottled brownish yellow CLAY. [KIMMERIDGE CLAY FORMATION]		1.70	10.02	
2.40 - 2.80	B6	2.50	HV(1)	>120(kPa)				(1.30)	8.72	
2.40 - 2.80	D7									
2.40 - 2.80	ES8									

<p>PLAN DETAILS</p> <p>2.4</p> <p>0.7</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Water ingress at 1.60m</p>	<p>Remarks</p> <p>Terminated on engineers instruction at 3.00m on reaching target depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540941.59

Ground Level (mAOD)

Northing (OS mN)
265525.84

Start Date
26/01/2017
End Date
26/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30	ES B2 ES1					Grass over TOPSOIL; Dark brown to black slightly gravelly very clayey SAND. Sand is fine to coarse. Gravel is subangular to rounded fine to medium of sandstone and mudstone.		(0.30)		
						Brownish orange gravelly very clayey fine to coarse SAND. Gravel is subangular to rounded fine to medium of sandstone and mudstone. [RIVER TERRACE DEPOSITS]		0.30		
0.70 - 1.00 0.70 - 1.00	B4 ES3					Firm dark bluish grey slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(0.80)		
						Pocket of orange SAND.		1.10		
2.00 - 2.30 2.00 - 2.30 2.00 - 2.30	B6 D7 ES5							(1.90)		
		2.50	HV(1)	78(31)kPa						
								3.00		

<p>PLAN DETAILS</p>	<p>Remarks</p> <p>Terminated on engineers instruction at 3.00m on reaching target depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540381.21

Ground Level (mAOD)
11.97
Northing (OS mN)
265071.05

Start Date
09/01/2017
End Date
09/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D3 ES ES2					Grass over TOPSOIL; Firm brown slightly gravelly, slightly sandy CLAY. Gravel subangular and subrounded fine to coarse of mixed lithologies. Roots and rootlets throughout.		(0.30)		
0.50 0.50 0.50	B4 D6 ES5					Firm to stiff orangish brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of mixed lithologies. [RIVER TERRACE DEPOSITS]		0.30 (0.90)	11.67	
1.20 1.20 1.20	B7 D9 ES8					Orangish brown slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of mixed lithologies [RIVER TERRACE DEPOSITS] Red clay land drain at 1.20m		1.20 (0.50)	10.77	
2.00 2.00 2.00	B10 D14 ES11					Firm to stiff bluish grey mottled orangish brown CLAY with pockets of sand. Frequent selenite crystals (<20 mm x 60 mm x 30 mm). [KIMMERIDGE CLAY FORMATION] Tending to slightly sandy clay.		1.70 (0.80)	10.27	
2.50 2.50 2.50	B15 D13 ES12					Stiff dark grey mottled yellow slightly sandy CLAY. Sand is fine. Selenite crystals (<2 mm x 5 mm x 10 mm). [KIMMERIDGE CLAY FORMATION]		2.50 (0.50)	9.47	
								3.00	8.97	

<p>PLAN DETAILS</p> <p>2.5 0.7</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Dry</p>	<p>Remarks</p> <p>Terminated on engineers instruction at 3.00m on reaching target depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540432.26

Ground Level (mAOD)
11.39
Northing (OS mN)
264925.70

Start Date
05/01/2017
End Date
05/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D3 ES ES2					MADE GROUND; Grass over soft dark brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular and subangular, fine to coarse of chalk and flint.		(0.55)	10.84	
						1 No. brick				
0.80 0.80 0.80 0.80	B4 D6 ES ES5	1.00	HV()	()kPa		MADE GROUND; Soft orangish brown mottled grey slightly gravelly sandy CLAY Sand is fine to coarse. Gravel is angular and subangular fine to coarse of flint and clinker. [RIVER TERRACE DEPOSITS]		(0.70)		
1.30 1.30 1.30	B7 D9 ES8					Firm light grey mottled orangish brown slightly sandy CLAY. Sand is fine to coarse. With pockets of white sand. [RIVER TERRACE DEPOSITS]		(0.25)	10.14	
						Stiff dark grey mottled orangish brown fissile, fissured slightly sandy slightly gravelly CLAY. With pockets (<100 mm x 300 mm) of mottled orange and white gravel. Sand is fine to coarse of crushed selenite. Gravel is angular to subrounded fine and medium of chalk. With frequent selenite crystals (Up to 10 mm x 40 mm). Moderate organic odour. Fissures are very closely spaced, possibly subhorizontal undulating with orangish brown ferruginous staining to surfaces. [KIMMERIDGE CLAY FORMATION]		(1.50)	9.89	
2.80 2.80	B10 D11								8.39	
									3.00	

PLAN DETAILS

2.5
0.6

Long Axis Orientation:

Shoring / Support: None
Stability: Stable
Groundwater (description): Dry

Remarks

Terminated on engineers instruction at 3.00m on reaching target depth.

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540322.08

Ground Level (mAOD)
12.42
Northing (OS mN)
264848.38

Start Date
06/01/2017
End Date
06/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D3 ES ES2					Grass over TOPSOIL: Soft dark brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular, fine to coarse of chalk and flint.		(0.25)	12.17	
						Firm light orangish brown mottled light grey slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular and subangular, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		0.25		
1.00 1.00 1.00	B4 D6 ES5							(1.05)		
1.80 1.80 1.80	B7 D9 ES8					Stiff dark grey mottled orangish white fissured, fissile slightly gravelly CLAY. Gravel is angular and subangular, fine and medium of chalk. Fissures are very closely to closely spaced, likely subhorizontal with occasional ferruginous staining. Abundant selenite crystals (< 10 mm x 80 mm). Occasional crinoid and shell fragments. [KIMMERIDGE CLAY FORMATION]		1.30	11.12	
								(1.70)		
								3.00	9.42	

<p>PLAN DETAILS</p> <p>2.5 0.5</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None Stability: Stable Groundwater (description): Dry</p>	<p>Remarks</p> <p>Terminated on engineers instruction at 3.00m on reaching target depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

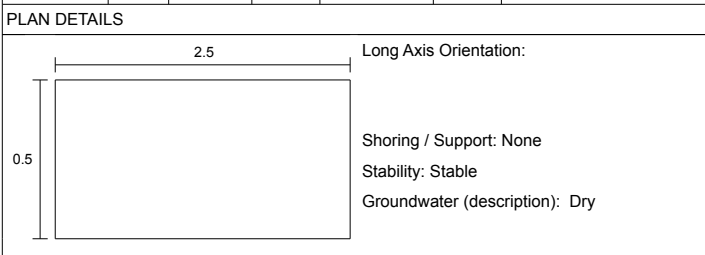
Project No.
UA008426-01
Easting (OS mE)
540182.67

Ground Level (mAOD)
13.55
Northing (OS mN)
264797.63

Start Date
06/01/2017
End Date
06/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D3 ES ES2					Grass over TOPSOIL: Soft dark brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular and subangular, fine to coarse of chalk and flint.		(0.30)	13.25	
					Firm light orangish brown mottled light grey slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular and subangular, fine to coarse of flint. [RIVER TERRACE DEPOSITS] Half of pit orangish brown slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is subangular to angular, fine to coarse of flint.		0.30			
0.80 0.80 0.80 0.80	B4 D6 ES ES5							(1.20)	12.05	
					Stiff bluish grey becoming dark grey mottled orangish white fissured slightly gravelly CLAY. Gravel is angular to subangular, fine and medium of chalk. Fissures are very closely to closely spaced, likely subhorizontal, with ferruginous staining. Occasional selenite crystals (<4 mm x 8 mm). [KIMMERIDGE CLAY FORMATION] Water seepage. Slightly sandy due to crushed selenite crystals.		1.50			
2.30 2.30	B7 D8							(1.50)	10.55	
								3.00		



Remarks

Terminated on engineers instruction at 3.00m on reaching target depth.

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540131.24

Ground Level (mAOD)
13.77
Northing (OS mN)
264745.19

Start Date
09/01/2017
End Date
09/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D3 ES ES2					Grass over TOPSOIL; Soft brown slightly gravelly CLAY. Gravel is subangular and subrounded fine to coarse of flint and chalk.		(0.35)	13.42	
0.40 0.40 0.40	B4 D6 ES5					Soft orangish brown CLAY. [RIVER TERRACE DEPOSITS]		(0.35)		
						Soft becoming firm orangish brown mottled grey slightly gravelly CLAY. Gravel is subangular and subrounded fine to coarse of chalk and flint [RIVER TERRACE DEPOSITS]		(0.70)	13.07	
1.00 1.00 1.00	B7 D9 ES8							(0.60)		
						Orange gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint. [RIVER TERRACE DEPOSITS]		1.30 (0.10)	12.47	
1.50 1.50	B10 D11					Soft bluish grey CLAY. [KIMMERIDGE CLAY FORMATION]		1.40	12.37	
								(0.80)		
2.50 2.50	B12 D13					Soft dark grey mottled orangish brown and greenish grey fissured fissile CLAY. Fissures are very closely spaced, randomly orientated, undulating wit orangish brown ferruginous staining to surfaces. With frequent selenite crystals (<20 mm x 100 mm). [KIMMERIDGE CLAY FORMATION]		2.20	11.57	
								(0.80)		
								3.00	10.77	

<p>PLAN DETAILS</p> <p>2.6 0.7</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None Stability: Stable Groundwater (description): Dry</p>	<p>Remarks</p> <p>Terminated on engineers instruction at 3.00m on reaching target depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

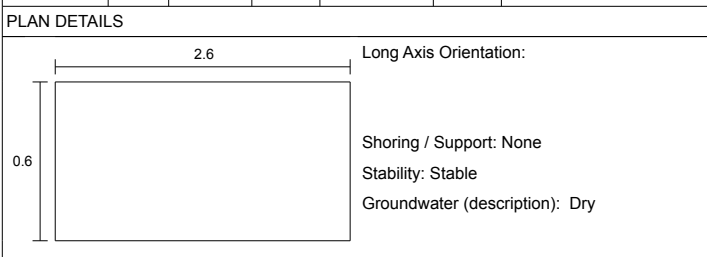
Project No.
UA008426-01
Easting (OS mE)
540053.37

Ground Level (mAOD)
13.99
Northing (OS mN)
264713.46

Start Date
25/01/2017
End Date
25/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D3 ES ES2					Grass over TOPSOIL: Very soft dark brown slightly gravelly CLAY. Gravel is angular and subangular, fine to coarse of flint and chalk.		(0.30)	13.69	
0.40 0.40 0.40 0.40	B4 D6 ES ES5					Soft orangish brown slightly gravelly CLAY. Gravel is angular and subangular, fine to coarse of flint and chalk. [RIVER TERRACE DEPOSITS]		(0.70)		
1.10 1.10 1.10	B7 D9 ES8					Firm light grey mottled orangish brown and dark brown CLAY. [KIMMERIDGE CLAY FORMATION] 1 No. pocket (200 mm x 300 mm) of orange gravelly sand. Gravel is subangular to rounded, fine to coarse of flint.		1.00	12.99	
2.30 2.30	B10 D11					Firm dark grey mottled orangish brown and reddish brown friable CLAY. With frequent selenite crystals. [KIMMERIDGE CLAY FORMATION]		2.30 (0.70)	11.69	
								3.00	10.99	



Remarks

Terminated on engineers instruction at 3.00m on reaching target depth.. Soil management samples taken at 0.10 m (SMB1, SMD2) and 0.40 m (SMB3, SMD4).

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539966.51

Ground Level (mAOD)
14.25
Northing (OS mN)
264707.58

Start Date
25/01/2017
End Date
25/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D3 ES ES2					Vegetation over TOPSOIL: Very soft brown slightly gravelly CLAY. Gravel is angular to subrounded, fine to coarse of chalk and flint. With occasional rootlets (< 2 mx 100 mm).		(0.40)		
0.40 0.40 0.40 0.40	B4 D6 ES ES5					Very soft becoming soft orangish brown slightly gravelly CLAY. Gravel is subangular and rounded, fine and medium of flint and chalk. With occasional pockets (10 mm x 100 mm) of reddish brown ferruginous staining. [RIVER TERRACE DEPOSITS]		0.40 (0.40)	13.85	
0.80 0.80 0.80 0.90 0.90	B7 D9 ES8 B10 ES11					Firm becoming stiff light grey mottled orangish brown CLAY. [KIMMERIDGE CLAY FORMATION] 1 No. lense/pocket (< 600 mm x 1500 mm) of orange gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded, fine to coarse of flint.		0.80 (1.50)	13.45	
2.00 2.00	B12 D13									
2.50 2.50	B14 D15					Firm dark grey mottled orangish brown friable/fissile CLAY. With frequent selenite crystals (< 50 mm x 100 mm). [KIMMERIDGE CLAY FORMATION]		2.30 (0.70)	11.95	
								3.00	11.25	

PLAN DETAILS	Remarks
<p>2.6 0.6</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None Stability: Stable Groundwater (description): Dry</p>	<p>Terminated on engineers instruction at 3.00m on reaching target depth.</p> <p>Termination Depth: 3.00m</p>

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539773.77

Ground Level (mAOD)
15.21
Northing (OS mN)
264671.66

Start Date
25/01/2017
End Date
25/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.30 0.10 - 0.30 0.10 - 0.30	B2 D3 ES1					Grass over TOPSOIL; Soft light to dark reddish brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded, fine and medium of mixed lithologies.		(0.30)	14.91	
0.40 0.40 - 0.70 0.40 - 0.70 0.40 - 0.70	B6 B5 D6 ES4					Soft light brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded, fine and medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		(0.90)	14.01	
2.30 - 2.60 2.30 - 2.60 2.30 - 2.60	B8 D9 ES7	2.50 2.50 2.50	HV(1) HV(2) HV(3)	108(41)kPa >120(kPa) >120(kPa)		Soft to firm light becoming dark mottled yellow bluish grey CLAY. Selenite crystals present (< 5 mm). [KIMMERIDGE CLAY FORMATION]		(1.80)	12.21	
								3.00		

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Dry</p>	<p>Remarks</p> <p>Terminated on engineers instruction at 3.00m on reaching target depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539587.99

Ground Level (mAOD)
15.78
Northing (OS mN)
264673.79

Start Date
05/01/2017
End Date
05/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D3 ES ES2					TOPSOIL: Soft dark brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular to rounded fine and medium of chalk and flint.		(0.30)		
0.50 0.50 0.50	B4 D6 ES5					Soft orangish brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subangular to rounded fine to coarse of flint and chalk. [RIVER TERRACE DEPOSITS]		0.30	15.48	
		1.00	HV()	()kPa				(1.20)		
1.50 1.50 1.50	B7 D9 ES8					Firm to stiff light grey mottled orangish brown CLAY. With orangish brown ferruginous staining. [KIMMERIDGE CLAY FORMATION]		1.50	14.28	
								(1.10)		
2.60 2.60 2.60	B10 D12 ES11					Very stiff fissured dark grey mottled orangish white slightly gravelly CLAY. Fissile. Gravel is angular to subrounded fine and medium of chalk. Moderate to strong organic odour. With abundant selenite crystals (< 10 mm x 500 mm). Fissures are very closely spaced, possibly subhorizontal, undulating with orangish brown ferruginous staining to surfaces. [KIMMERIDGE CLAY FORMATION]		2.60	13.18	
								(0.40)		
								3.00	12.78	

<p>PLAN DETAILS</p>	<p>Remarks</p> <p>Terminated on engineers instruction at 3.00m on reaching target depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

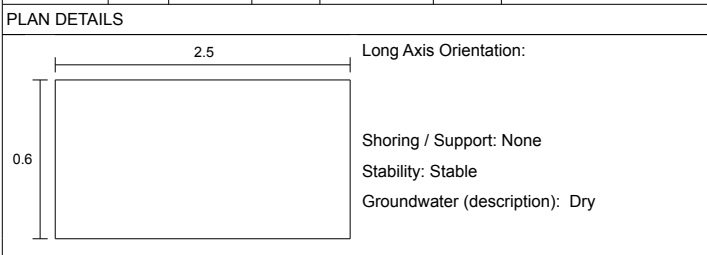
Project No.
UA008426-01
Easting (OS mE)
539438.62

Ground Level (mAOD)
16.22
Northing (OS mN)
264648.72

Start Date
05/01/2017
End Date
05/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D3 ES ES2					TOPSOIL; Soft brown mottled light orangish brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of chalk and flint.		(0.35)		
0.60 0.60 0.60	B4 D6 ES5	1.00	HV()	()kPa		Soft orangish brown mottled grey slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of chalk and flint. [RIVER TERRACE DEPOSITS]			15.87	
1.60 1.60 1.60	B7 D9 ES8					Stiff to very stiff light grey CLAY. With occasional selenite crystals (<100 mm x 150 mm) [KIMMERIDGE CLAY FORMATION]			14.72	
2.80 2.80	B10 D11					Very stiff fissured dark grey mottled orangish white slightly gravelly CLAY. Fissile. With pockets (<100 mm x 230 mm) of mottled orangish white gravel. Gravel is angular to subrounded fine and medium of chalk. With frequent selenite crystals (< 4 mm x 6 mm). Moderate organic odour. Fissures are very closely spaced, possibly subhorizontal undulating with orangish brown ferruginous staining to surfaces. [KIMMERIDGE CLAY FORMATION]			13.52	
								(0.30)	13.22	



Remarks

Terminated on engineers instruction at 3.00m on reaching target depth.

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539360.14

Ground Level (mAOD)
16.11
Northing (OS mN)
264679.29

Start Date
05/01/2017
End Date
05/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D3 ES ES2					TOPSOIL: Soft brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine and medium of chalk.		(0.30)		
0.50 0.50 0.50	B4 D6 ES5					Soft orangish brown slightly gravelly sandy CLAY. Sand is fine and medium. Gravel is subangular and subrounded fine to coarse of flint and chalk. [RIVER TERRACE DEPOSITS]		0.30	15.81	
		1.00	HV()	()kPa				(1.30)		
1.60 1.60 1.60	B7 D9 ES8	1.50	HV()	()kPa		Light grey mottled orangish brown slightly gravelly CLAY. Gravel is subangular to subrounded fine and medium of chalk. With rare selenite crystals (<3 mm x 5 mm). [KIMMERIDGE CLAY FORMATION]		1.60	14.51	
								(1.10)		
2.70 2.70	B10 D11					Dark grey mottled orangish brown slightly gravelly CLAY. Fissile. With pockets (<100 mm x 230 mm) of mottled orange and white gravel. Gravel is angular to subrounded fine and medium of chalk. With frequent selenite crystals (< 4 mm x 6 mm). Moderate organic odour. Fissures are very closely spaced, possibly subhorizontal undulating with orangish brown ferruginous staining to surfaces. [KIMMERIDGE CLAY FORMATION]		2.70	13.41	
								(0.30)		
								3.00	13.11	

<p>PLAN DETAILS</p> <p>2.5 0.6</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Dry</p>	<p>Remarks</p> <p>Terminated on engineers instruction at 3.00m on reaching target depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
 Client
Homes and Communities Agency

Project No.
UA008426-01
 Easting (OS mE)
539118.52

Ground Level (mAOD)
15.83
 Northing (OS mN)
264715.40

Start Date
25/01/2017
 End Date
25/01/2017

Scale
1:25
 Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30	ES B2 ES1					Grass over TOPSOIL; Dark reddish brown slightly gravelly very clayey SAND. Sand is fine to coarse. Gravel is subangular and subrounded, fine to medium of mixed lithologies.		(0.40)	15.43	
0.40 - 0.80 0.40 - 0.80	B4 ES3					Soft light brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded, fine and medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		(0.80)		
						Soft to firm light becoming dark bluish grey mottled yellow CLAY. With selenite crystals (<5 mm). [KIMMERIDGE CLAY FORMATION]		(1.20)	14.63	
								(1.80)		
2.30 - 2.70 2.30 - 2.70 2.30 - 2.70	B6 D7 ES5									
									3.00	12.83

PLAN DETAILS Long Axis Orientation: Shoring / Support: None Stability: Stable Groundwater (description): Dry	Remarks Terminated on engineers instruction at 3.00m on reaching target depth. Termination Depth: 3.00m
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
539012.80

Ground Level (mAOD)
15.52
Northing (OS mN)
264710.13

Start Date
25/01/2017
End Date
25/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30 0.10 - 0.30	ES B2 D3 ES1					Grass over TOPSOIL; Soft light to dark reddish brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded, fine and medium of mixed lithologies.		(1.10)		
						Soft to firm light becoming dark bluish grey mottled yellow CLAY. With selenite crystals (< 5 mm). [KIMMERIDGE CLAY FORMATION]		1.10	14.42	
						Pocket of orange SAND.				
								(1.90)		
2.20 - 2.70 2.20 - 2.70 2.20 - 2.70	B5 D6 ES4									
								3.00	12.52	

<p>PLAN DETAILS</p> <p>2.9 0.7</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None Stability: Stable Groundwater (description): Dry</p>	<p>Remarks</p> <p>Terminated on engineers instruction at 3.00m on reaching target depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
538889.12

Ground Level (mAOD)
15.09
Northing (OS mN)
264796.05

Start Date
25/01/2017
End Date
25/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10	ES					Grass over TOPSOIL; Soft light to dark reddish brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to medium of mixed lithologies.		(0.30)	14.79	
0.10 - 0.30	B2									
0.10 - 0.30	D3									
0.10 - 0.30	ES1					Soft light brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		(0.40)	14.39	
0.40 - 0.70	B5									
0.40 - 0.70	D6									
0.40 - 0.70	ES4					Soft to firm light becoming dark bluish grey mottled yellow CLAY. With selenite crystals (< 5 mm). [KIMMERIDGE CLAY FORMATION]		(2.30)	12.09	
2.20 - 2.60	B8									
2.20 - 2.60	D9									
2.20 - 2.60	ES7									

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Dry</p>	<p>Remarks</p> <p>Terminated on engineers instruction at 3.00m on reaching target depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
538760.76

Ground Level (mAOD)
15.32
Northing (OS mN)
264794.53

Start Date
11/01/2017
End Date
11/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30 0.10 - 0.30	ES B1 D3 ES2					Grass and stubble over TOPSOIL; Soft brown slightly sandy slightly gravelly CLAY. Gravel is subangular and subrounded, fine to coarse of flint. With frequent rootlets.		(0.40)	14.92	
0.50 - 0.60 0.50 - 0.60 0.50 - 0.60	B4 D6 ES5					Firm orangish brown slightly gravelly slightly sandy CLAY. Gravel is subangular and subrounded fine to coarse of flint. With occasional rootlets. [RIVER TERRACE DEPOSITS]		(0.35)	14.57	
0.90 - 1.10 0.90 - 1.10 0.90 - 1.10	B7 D9 ES8					Firm bluish grey mottled orangish brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular and subangular, fine and medium of flint. Pockets (up to < 1 mm x 5 mm) of fine selenite crystals. With occasional rootlets. [KIMMERIDGE CLAY FORMATION]		(0.75)	13.82	
						Orangish brown gravelly slightly clayey SAND. Sand is fine to coarse. Gravel is subangular and subrounded, fine to coarse of flint. [KIMMERIDGE CLAY FORMATION]		(0.20)	13.62	
						Firm dark grey mottled brown slightly silty slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(0.80)	12.82	
2.60 - 2.80 2.60 - 2.80 2.60 - 2.80	B10 D12 ES11					Firm dark grey mottled yellow CLAY with crystals of selenite (< 10 mm x 20 mm x 60 mm). [KIMMERIDGE CLAY FORMATION]		(0.50)	12.32	

PLAN DETAILS

2.6
0.7

Long Axis Orientation:

Shoring / Support: None
Stability: Stable
Groundwater (description): Water seepage at 1.62m

Remarks

Terminated on engineers instruction at 3.00m on reaching target depth.

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
538694.54

Ground Level (mAOD)
15.70
Northing (OS mN)
264709.56

Start Date
10/01/2017
End Date
10/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30 0.10 - 0.30	ES B1 D3 ES2					Grass over TOPSOIL; Soft brown slightly sandy, slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular and subrounded of flint. Frequent roots and rootlets. Occasional sandy pockets (<2 mm x 1 mm x 1 mm).		(0.30)	15.40	
0.40 - 0.60 0.40 - 0.60 0.40 - 0.60	B4 D6 ES5					Soft orangish brown slightly sandy slightly gravelly CLAY. Gravel is subangular and subrounded fine to coarse of flint. Sand is fine to coarse. With occasional rootlets [RIVER TERRACE DEPOSITS]		(0.40)	15.00	
0.80 - 1.00 0.80 - 1.00 0.80 - 1.00	B7 D9 ES8					Orangish brown slightly clayey, gravelly SAND. Gravel is subangular and subrounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		(0.90)		
1.70 - 1.80 1.70 - 1.80 1.70 - 1.80	B10 D12 ES11					Firm to stiff grey mottled orangish brown, slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(0.30)	14.10	
2.10	B3								13.80	

PLAN DETAILS

2.5 Long Axis Orientation:

0.8

Shoring / Support: None
Stability: Unstable
Groundwater (description): Water seepage at 1.90m

Remarks

Termination Depth:
1.90m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
538668.28

Ground Level (mAOD)
15.39
Northing (OS mN)
264746.24

Start Date
10/01/2017
End Date
10/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.20 0.10 - 0.20 0.10 - 0.20	B1 D3 ES2					Grass and stubble over TOPSOIL; Soft slightly gravelly, slightly sandy CLAY. Gravel is subangular and subrounded of flint. With frequent roots and rootlets		(0.30)	15.09	
0.40 - 0.50 0.40 - 0.50 0.40 - 0.50	B4 D6 ES5					Soft orangish brown sandy CLAY. Sand is fine to coarse [RIVER TERRACE DEPOSITS]		(0.30)		
0.70 - 0.90 0.70 - 0.90 0.70 - 0.90	B7 D9 ES8					Orangish brown slightly clayey, sandy GRAVEL. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint. [RIVER TERRACE DEPOSITS]		(0.40)	14.79	
1.20 - 1.40 1.20 - 1.40 1.20 - 1.40	B10 D12 ES11					Stiff bluish grey mottled brown slightly gravelly sandy CLAY. Sand is fine an medium. Gravel is subangular and subrounded fine to coarse of flint. [KIMMERIDGE CLAY FORMATION]		(1.00)	14.39	
2.10 - 2.20 2.10 - 2.20 2.10 - 2.20	B13 D15 ES14					Firm dark grey mottled brown slightly sandy CLAY. Sand is fine to coarse [KIMMERIDGE CLAY FORMATION]		(1.00)	13.39	
2.70 - 2.80 2.70 - 2.80 2.70 - 2.80	B16 D18 ES17						(1.00)	12.39		

PLAN DETAILS	Remarks
<p>2.5 0.7</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Seepage at 0.90m</p>	<p>Terminated on engineers instruction at 3.00m on reaching target depth.</p> <p>Termination Depth: 3.00m</p>

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
538701.40

Ground Level (mAOD)
14.60
Northing (OS mN)
264933.41

Start Date
11/01/2017
End Date
11/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30 0.10 - 0.30	ES B1 D3 ES2					Grass and stubble over TOPSOIL; Soft brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular and subrounded, fine to coarse of flint. With frequent rootlets.		(0.40)	14.20	
0.50 - 0.70 0.50 - 0.70 0.50 - 0.70	B4 D6 ES5					Soft orangish brown slightly sandy CLAY. With pockets (up to 1 mm) of fine to coarse sand. With occasional rootlets. [RIVER TERRACE DEPOSITS]		(0.40)		
0.80 - 0.90 0.80 - 0.90 0.80 - 0.90	B7 D9 ES8					Soft orangish brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		0.80 (0.10) 0.90	13.80 13.70	
1.00 - 1.10 1.00 - 1.10	B10 ES11					Soft orangish brown slightly gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded, fine to coarse of flint [RIVER TERRACE DEPOSITS]		(0.65)		
1.50 - 1.70 1.50 - 1.70 1.50 - 1.70	B12 D14 ES13					Stiff bluish grey mottled orangish brown slightly sandy CLAY. Sand is fine and medium. [KIMMERIDGE CLAY FORMATION]		1.55 (0.25)	13.05	
								1.80	12.80	

<p>PLAN DETAILS</p> <p>2.5 Long Axis Orientation:</p> <p>0.8</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Dry</p>	<p>Remarks</p> <p>Termination Depth: 1.80m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
538728.40

Ground Level (mAOD)
14.48
Northing (OS mN)
264990.60

Start Date
12/01/2017
End Date
12/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D3 ES ES2					Grass and stubble over TOPSOIL; Soft to firm brown slightly gravelly slightly sandy CLAY with frequent rootlets. Sand is fine to coarse. Gravel is angular and subangular, fine to coarse of flint.		(0.30)	14.18	
0.40 0.40 0.40	B4 D6 ES5					Firm orangish brown slightly silty CLAY with occasional rootlets. [RIVER TERRACE DEPOSITS]		(0.50)		
0.90 0.90 0.90	B7 D9 ES8					Firm to stiff orangish brown slightly sandy gravelly CLAY. Occasional subrounded cobbles of flint (50 mm x 30 mm x 80 mm). Sand is fine to coarse. Gravel is subangular and subrounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		(0.40)	13.68	
1.40 1.40 1.40	B10 D2 ES1					Firm dark grey mottled orangish brown slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION] <div style="border: 1px solid black; padding: 2px; display: inline-block;">300 x 400 mm sand pocket</div>		(0.60)	13.28	
						Firm to stiff dark grey mottled brown CLAY with pockets (1 mm x 2 mm x 1 mm) of fine (<0.5mm) selenite crystals. [KIMMERIDGE CLAY FORMATION]		1.80	12.68	
								(0.80)		
2.70 2.70 2.70	B3 D5 ES4					Firm bluish grey mottled orange CLAY. With pockets (<5 mm x 5 mm x 10 mm) of sand and selenite crystals (crystals up to 1 mm). [KIMMERIDGE CLAY FORMATION]		2.60	11.88	
								(0.50)	11.38	

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Dry</p>	<p>Remarks</p> <p>Terminated on engineers instruction at 3.10m on reaching target depth.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin-left: auto;"> <p>Termination Depth: 3.10m</p> </div>
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







Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
538708.17

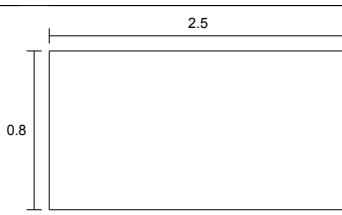
Ground Level (mAOD)
15.07
Northing (OS mN)
264830.16

Start Date
11/01/2017
End Date
11/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30 0.10 - 0.30	ES B1 D3 ES2					Grass and stubble over TOPSOIL; Soft brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular and subrounded, fine to coarse of flint. With frequent rootlets.		(0.30)	14.77	
0.40 - 0.50 0.40 - 0.50 0.40 - 0.50	B4 D6 ES5					Soft orangish brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular and subrounded, fine and medium of flint. With occasional rootlets. [RIVER TERRACE DEPOSITS]		(0.40)		
0.80 - 1.00 0.80 - 1.00	B7 ES8					Orangish brown slightly clayey slightly gravelly SAND with occasional cobbles of flint (40 mm x 80 mm x 30 mm). Sand is fine to coarse. Gravel is subangular and subrounded, fine to coarse of flint. With occasional rootlets [RIVER TERRACE DEPOSITS]		(0.40)	14.37	
1.20 - 1.30 1.20 - 1.30 1.20 - 1.30	B9 D1 ES10					Firm bluish grey mottled orangish brown slightly sandy slightly gravelly CLAY. Sand is fine and medium. Gravel is subangular and subrounded, fine and medium of flint. [KIMMERIDGE CLAY FORMATION]		(0.40)	13.97	
								1.50	13.57	

PLAN DETAILS



2.5 Long Axis Orientation:

0.8

Shoring / Support: None
Stability: Unstable
Groundwater (description): Seepage at 0.70m

Remarks

Termination Depth:
1.50m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
538596.10

Ground Level (mAOD)
15.91
Northing (OS mN)
264684.08

Start Date
11/01/2017
End Date
11/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30 0.10 - 0.30	ES B1 D3 ES2					Grass and stubble over TOPSOIL; Soft brown slightly sandy slightly gravelly CLAY. Gravel is subangular and subrounded, fine to coarse of flint. With frequent rootlets.		(0.40)	15.51	
0.50 - 0.70 0.50 - 0.70 0.50 - 0.70	B4 D6 ES5					Soft orangish brown slightly sandy CLAY. With pockets (up to 1 mm) of fine to coarse sand. With occasional rootlets. [RIVER TERRACE DEPOSITS]		(0.40)		
0.80 - 0.90 0.80 - 0.90	B7 ES8					Soft orangish brown slightly gravelly sandy CLAY. Gravel is subangular and subrounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		0.80 (0.10)	15.11	
						Orangish brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		0.90	15.01	
								(0.65)		
1.60 - 1.70 1.60 - 1.70 1.60 - 1.70	B9 D1 ES10					Bluish grey mottled orangish brown slightly sandy CLAY. Sand is fine and medium. With pockets (up to 1 mm) of sand. [KIMMERIDGE CLAY FORMATION]		1.55 (0.30)	14.36	
								1.85	14.06	

<p>PLAN DETAILS</p> <p>2.9 Long Axis Orientation:</p> <p>0.8</p> <p>Shoring / Support: None Stability: Unstable Groundwater (description): Dry</p>	<p>Remarks</p> <p>Termination Depth: 1.85m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541426.94

Ground Level (mAOD)

Northing (OS mN)
265340.43

Start Date
20/01/2017
End Date
20/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30	ES B2 ES1					Grass over TOPSOIL; Dark reddish brown slightly gravelly very clayey SAND. Sand is fine to coarse. Gravel is subangular and subrounded, fine and medium of mixed lithologies. With occasional rootlets.		(0.50)		
0.60 0.60 - 1.00 0.60 - 1.00	ES B4 ES3					Yellowish brown clayey gravelly SAND. Sand is fine to coarse. Gravel is subangular to rounded, fine to coarse of sandstone and mudstone. [RIVER TERRACE DEPOSITS]		0.50		
1.90 - 2.30 1.90 - 2.30 1.90 - 2.30	B6 D7 ES5					Light to dark bluish grey mottled white slightly sandy CLAY. Sand is fine. [KIMMERIDGE CLAY FORMATION]		1.70		
		2.50	HV(1)	>120(kPa)				(1.30)		
								3.00		

<p>PLAN DETAILS</p>	<p>Remarks</p> <p>Terminated on engineers instruction at 3.00m on reaching target depth.</p> <p style="text-align: right;">Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541642.55

Ground Level (mAOD)
9.59
Northing (OS mN)
265347.59

Start Date
13/01/2017
End Date
13/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10	B1					TOPSOIL; Very soft dark brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine and medium of flint. With frequent roots/rootlets (2 mm x 230 mm).		(0.20)	9.39	
0.10	D3					Very soft orangish brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine and medium of flint. With occasional roots/rootlets (2 mm x 230 mm). [RIVER TERRACE DEPOSITS]		0.20		
0.10	ES									
0.10	ES2									
0.30	B4									
0.30	D6									
0.30	ES5									
1.30	B7					Orangish brown gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint. [RIVER TERRACE DEPOSITS]		1.25	8.34	
1.30	ES8							(0.55)		
1.80	B9					Yellowish brown gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine of flint. [RIVER TERRACE DEPOSITS]		1.80	7.79	
1.80	ES10							(1.20)		
3.00	B11							3.00	6.59	

<p>PLAN DETAILS</p> <p>2.2 0.7</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None Stability: Stable Groundwater (description): Dry</p>	<p>Remarks</p> <p>Terminated on engineers instruction at 3.00m on reaching target depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
 Client
Homes and Communities Agency

Project No.
UA008426-01
 Easting (OS mE)
538694.47

Ground Level (mAOD)
15.70
 Northing (OS mN)
264709.26

Start Date
13/01/2017
 End Date
13/01/2017

Scale
1:25
 Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill	
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend				
0.10 - 0.30	B1					Grass over TOPSOIL; Brown slightly gravelly sandy CLAY with frequent rootlets. Sand is fine to coarse. Gravel is subangular and subrounded, fine and medium of flint.		(0.20)	15.50		
0.10 - 0.30	D3					Firm brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is subrounded to subangular, fine to coarse of flint. Occasional rootlets.		(0.20)			
0.10 - 0.30	ES2					[RIVER TERRACE DEPOSITS]					
0.30	B4					Soft orangish brown slightly sandy and slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint. Occasional rootlets		(0.40)	15.30		
0.30	D6					[RIVER TERRACE DEPOSITS]					
0.30	ES5										
0.40 - 0.60	B4						Loose orangish brown slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint.		(0.70)	15.00	
0.40 - 0.60	D6						[RIVER TERRACE DEPOSITS]				
0.40 - 0.60	ES5						Orangish brown slightly clayey, gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint.		(0.90)	14.90	
0.50	B7						[RIVER TERRACE DEPOSITS]				
0.50	D9						Light brown sandy GRAVEL. Sand is fine to coarse. Gravel is subangular and subrounded, fine to coarse of flint.		(1.60 (1.70))	14.10	
0.50	ES8				[RIVER TERRACE DEPOSITS]						
0.80 - 1.00	B7				From 2.00m; becoming sandy						
0.80 - 1.00	D9				13.80						
0.80 - 1.00	ES8										
0.90	B10										
0.90	D2										
0.90	ES1										
1.70 - 1.80	B10										
1.70 - 1.80	D12										
1.70 - 1.80	ES11										
2.10	B3										
2.10	D5										
2.10	ES4										

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540292.26

Ground Level (mAOD)
12.35
Northing (OS mN)
265176.55

Start Date
17/01/2017
End Date
17/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill	
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend				
0.10	B1					Grass and stubble over TOPSOIL: Firm to stiff dark brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular, and subrounded fine to coarse of flint.		(0.30)			
0.10	D3	0.20	HV(1)	110(kPa)		Firm to stiff orangish brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular and subangular, fine to coarse of flint. Occasional rootlets. [RIVER TERRACE DEPOSITS]		0.30	12.05		
0.10	ES	0.20	HV(2)	120(kPa)							
0.10	ES2	0.20	HV(3)	80(kPa)							
0.50	B4	0.40	HV(4)	100(kPa)		Orangish brown slightly sandy clayey GRAVEL. Sand is fine to coarse. Gravel is subangular and subrounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		0.50			
0.50	D6	0.40	HV(5)	120(kPa)							
0.50	ES5	0.40	HV(6)	90(kPa)							
1.00	B7	1.20	HV(7)	70(kPa)		Firm orangish brown mottled grey slightly sandy, slightly gravelly CLAY. Gravel is subangular and subrounded fine to coarse of flint. Frequent selenite crystals (<2 mm x 5 mm x 5 mm). [RIVER TERRACE DEPOSITS]		0.80	11.55		
1.00	ES8	1.20	HV(8)	80(kPa)							
		1.20	HV(9)	90(kPa)							
1.30	B9	1.80	HV(10)	60(kPa)		Firm dark grey mottled yellowish orange slightly silty CLAY with frequent fine to coarse orange pockets of sand (up to 10 mm thick). [KIMMERIDGE CLAY FORMATION]		1.15	11.20		
1.30	D1	1.80	HV(11)	70(kPa)							
1.30	ES10	1.80	HV(14)	80(kPa)							
		1.80	HV(4)	70(kPa)				(1.45)			
2.70	B2	2.80	HV(12)	70(kPa)		Firm dark grey mottled yellowish orange slightly silty CLAY with frequent fine to coarse orange pockets of sand (up to 10 mm thick). [KIMMERIDGE CLAY FORMATION]		2.60	9.75		
2.70	D4	2.80	HV(13)	70(kPa)							
2.70	ES3	2.80	HV(14)	80(kPa)							
		3.00						3.00	9.35		

<p>PLAN DETAILS</p> <p>2.3 0.8</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Water seepage at 1.90m</p>	<p>Remarks</p> <p>Terminated on engineers instruction at 3.00m on reaching target depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540281.87

Ground Level (mAOD)
12.50
Northing (OS mN)
265046.24

Start Date
17/01/2017
End Date
17/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D3 ES ES2					Grass and stubble over TOPSOIL; Soft brown slightly sandy slightly gravelly CLAY with roots and rootlets. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint.		(0.30)	12.20	
0.40 0.40 0.40	B4 D6 ES5					Soft to firm brown slightly gravelly silty CLAY with rootlets. Gravel is angular and subangular, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		(0.35)		
0.70 0.70 0.70	B7 ES ES8					Brown slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is subangular and subrounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		(0.25)	11.85	
1.00 1.00 1.00	B9 D11 ES10					Firm brown slightly gravelly slightly sandy CLAY with occasional pockets of grey silty sandy CLAY. Sand is fine to coarse. Gravel is angular and subangular, fine to coarse of flint. [KIMMERIDGE CLAY FORMATION]		0.90	11.60	
1.60 1.60 1.60	B12 D14 ES13					Firm to stiff light brown mottled grey slightly gravelly CLAY. Gravel is fine angular an subangular, fine to coarse of flint. Pockets of sandy clay (20 mm x 10 mm). [KIMMERIDGE CLAY FORMATION]		(0.50)	11.10	
2.30 2.30 2.30	B15 D17 ES16					Firm to stiff bluish grey mottled orange slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular and subangular, fine to coarse of flint. [KIMMERIDGE CLAY FORMATION]		(1.10)	10.60	
								3.00	9.50	

<p>PLAN DETAILS</p> <p>2.5 0.8</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Dr</p>	<p>Remarks</p> <p>Terminated on engineers instruction at the scheduled depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

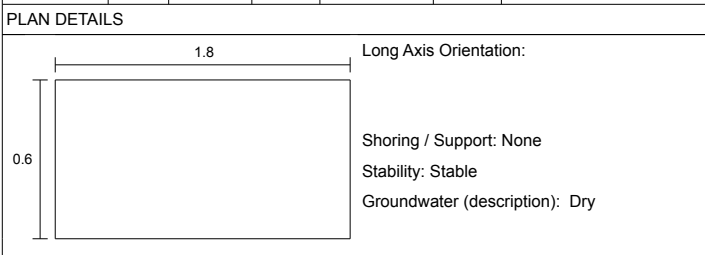
Project No.
UA008426-01
Easting (OS mE)
541157.13

Ground Level (mAOD)
5.55
Northing (OS mN)
267268.13

Start Date
06/12/2016
End Date
06/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30	ES B2 ES1					Grass over TOPSOIL; Firm light to dark brown slightly silty gravelly CLAY. Gravel is subangular and subrounded fine to medium of sandstone. [KIMMERIDGE CLAY FORMATION]		(0.80)	4.75	
1.00 1.00 - 1.20 1.00 - 1.20 1.00 - 1.20	ES B4 D5 ES3	1.00 1.00 1.00	HV(1) HV(2) HV(3)	48(kPa) 50(kPa) 55(kPa)		Firm to stiff light bluish grey slightly sandy slightly gravelly CLAY. Sand is fine. Gravel is subangular to subrounded fine of sandstone and siltstone [KIMMERIDGE CLAY FORMATIO]		(0.70)		
1.70 - 1.90 1.70 - 1.90	B7 ES6					Weak light bluish grey occasionally yellowish brown SILTSTONE [KIMMERIDGE CLAY FORMATIO]		(0.30)	4.05	
2.70 - 2.80 2.70 - 2.80 2.70 - 2.80	B9 D10 ES8	2.70 2.70 2.70	HV(4) HV(5) HV(6)	103(kPa) 105(kPa) 117(kPa)		Stiff bluish light grey occasionally mottled red slightly sandy CLAY. Sand is fine. [KIMMERIDGE CLAY FORMATIO]		(1.30)	3.75	
						Weak light bluish grey siltstone layer				
									3.10	2.45



Remarks

Pit terminated on engineers instruction at 3.10m at scheduled depth.

Termination Depth:
3.10m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

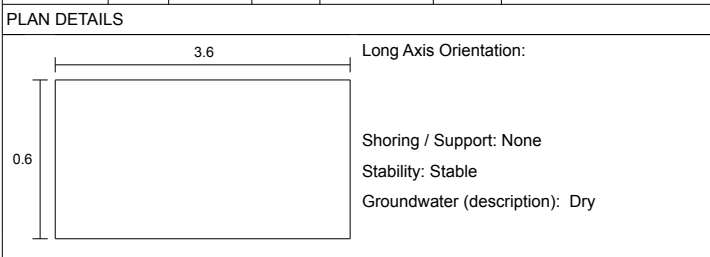
Project No.
UA008426-01
Easting (OS mE)
541287.68

Ground Level (mAOD)
7.68
Northing (OS mN)
267184.81

Start Date
07/12/2016
End Date
07/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.20 0.10 - 0.20	ES B2 ES1					Grass over TOPSOIL; Black to brown slightly clayey gravelly SAND with occasional rootlets. Sand is fine to coarse. Gravel is subangular to rounded fine of mixed lithologies.		(0.25)		
						Soft to firm light brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine of mixed lithologies. [RIVER TERRACE DEPOSITS]		0.25	7.43	
0.70 - 1.00 0.70 - 1.00 0.70 - 1.00	B4 D5 ES3							(1.15)		
						Soft to firm bluish grey mottled brown silty sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		1.40	6.28	
1.90 - 2.20 1.90 - 2.20 1.90 - 2.20	B7 D8 ES6							(1.60)		
2.70 - 3.00 2.70 - 3.00 2.70 - 3.00	B10 D11 ES9	2.60 2.60 2.60	HV(1) HV(2) HV(3)	101(kPa) 107(kPa) 95(kPa)						
								3.00	4.68	



Remarks

Pit terminated on engineers instruction at 3.00m at scheduled depth.

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

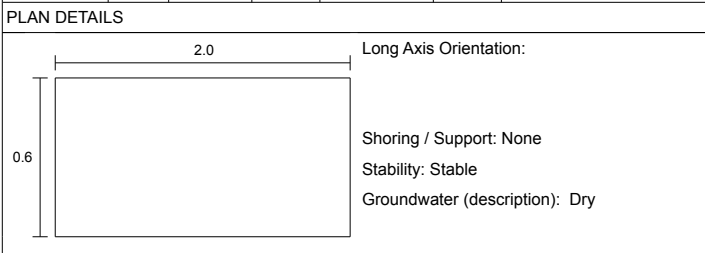
Project No.
UA008426-01
Easting (OS mE)
541445.81

Ground Level (mAOD)
7.27
Northing (OS mN)
267093.33

Start Date
02/12/2016
End Date
02/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/Backfill
Depth	Type/No.	Depth	Type/No.	Results		Description	Legend			
0.00 - 0.30 0.00 - 0.30 0.00 - 0.30	ES B2 D6 ES1					Grass over TOPSOIL; Soft brown sandy, slightly gravelly CLAY with abundant roots and rootlets. Sand is fine to coarse. Gravel is subrounded fine to coarse of mixed lithologies.		(0.30)		
0.30 - 0.60 0.30 - 0.60 0.30 - 0.60	B4 D5 ES3					Very soft orangish brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular fine to coarse of chert. [RIVER TERRACE DEPOSITS]		0.30 (0.30)	6.97	
0.90 - 1.10	D11	0.75 0.75 0.75	HV(1) HV(2) HV(3)	100(60)kPa 86(58)kPa 90(48)kPa		Stiff dark grey mottled brown silty CLAY. [KIMMERIDGE CLAY FORMATION]		0.60	6.67	
1.20 - 1.30 1.20 - 1.30 1.20 - 1.90	ES ES6 B7					Pocket of orangish brown sandy GRAVEL of subangular, fine to coarse chert.		(2.30)		
2.50 - 2.60 2.50 - 2.90	ES8 B9					SILTSTONE band				
2.90 - 3.00	D10					Very weak light grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]		2.90 (0.10) 3.00	4.37 4.27	



Remarks
Pit terminated on engineers instruction at 3.00m at scheduled depth..

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541144.79

Ground Level (mAOD)
5.81
Northing (OS mN)
267213.81

Start Date
06/12/2016
End Date
06/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30 0.10 - 0.30	ES B2 D3 ES1					Grass over TOPSOIL; Soft dark brown slightly gravelly silty CLAY with occasional rootlets. Gravel is subangular and subrounded fine of mixed lithologies.		(0.30)	5.51	
						Firm yellowish brown slightly gravelly CLAY. Gravel is subangular to subrounded of mixed lithologies. [RIVER TERRACE DEPOSITS]				
								(1.20)		
1.00 - 1.10 1.00 - 1.10 1.00 - 1.10	B5 D6 ES4	1.00 1.00 1.00	HV(1) HV(2) HV(3)	100(kPa) 79(kPa) 93(kPa)		Pocket of weak grey SILTSTONE				
						Firm bluish grey occasionally brown and dark bluish grey slightly sandy silty CLAY. Sand is fine to medium. [KIMMERIDGE CLAY FORMATION]		1.50	4.31	
2.00 2.00 - 2.20 2.00 - 2.20 2.00 - 2.20	ES B8 D9 ES7	2.00 2.00 2.00 2.00	HV(4) HV(5) HV(6)	103(kPa) 110(kPa) 93(kPa)		Pocket of weak grey S		(1.50)		
2.80 - 3.00 2.80 - 3.00 2.80 - 3.00	B11 D12 ES10									
								3.00	2.81	

PLAN DETAILS

Long Axis Orientation:

Shoring / Support: None
Stability: Stable
Groundwater (description): Dry

Remarks

Pit terminated on engineers instruction at 3.00m at scheduled depth.

Termination Depth:
3.00m

Project
Northstowe Phase 2
 Client
Homes and Communities Agency

Project No.
UA008426-01
 Easting (OS mE)
541562.75

Ground Level (mAOD)
6.41
 Northing (OS mN)
266769.46

Start Date
02/12/2016
 End Date
02/12/2016

Scale
1:25
 Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 0.00 - 0.40 0.00 - 0.40 0.00 - 0.40	ES B2 D3 ES1					Grass over TOPSOIL; Very soft dark brown slightly sandy, slightly gravelly CLAY. Sand is fine to coarse. Gravel is subrounded, fine to coarse of mixed lithologies.		(0.40)		
0.40 - 0.50 0.40 - 0.90	ES4 B5					Soft orangish brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular fine to coarse of chert. [RIVER TERRACE DEPOSITS]		0.40 (0.50)	6.01	
0.90 0.90 0.90 - 1.00 0.90 - 1.70	ES W11 ES6 B7					Orangish brown sandy GRAVEL. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of chert. [RIVER TERRACE DEPOSITS]		0.90 (0.80)	5.51	
1.70 - 1.80 1.70 - 1.80 1.70 - 2.60	D10 ES8 B9					Stiff grey mottled brown silty CLAY. Occasional relict plant matter. [KIMMERIDGE CLAY FORMATION]		1.70 (0.90)	4.71	
								2.60	3.81	

PLAN DETAILS

Long Axis Orientation:

Shoring / Support: None

Stability: Stable

Groundwater (description): Rapid groundwater inflow at 0.9

Remarks

Pit terminated on engineers instruction due to rapid groundwater inflow into pit.

Termination Depth:
2.60m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541675.15

Ground Level (mAOD)
8.17
Northing (OS mN)
265990.64

Start Date
21/12/2016
End Date
21/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/Backfill
Depth	Type/No.	Depth	Type/No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D2 ES ES1					Grass over TOPSOIL; Dark brown slightly clayey slightly gravelly SAND. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of flint. With abundant roots and rootlets.		(0.36)		
						Light orangish brown sandy GRAVEL. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of flint. [RIVER TERRACE DEPOSITS]		0.36	7.81	
1.00 1.00	B3 ES2							(1.24)		
1.70	B4					Light grey slightly gravelly SAND. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of flint. [RIVER TERRACE DEPOSITS]		1.60 (0.20)	6.57	
								1.80	6.37	

PLAN DETAILS	Remarks
<p>2.5 Long Axis Orientation:</p> <p>1.6</p> <p>Shoring / Support: None Stability: Stable to 1.60 m Groundwater (description): Rapid inflow of groundwater at 1.63</p>	<p>Pit terminated on engineers instruction at 1.80 m due to water strike and pit wall collapse.</p> <p>Termination Depth: 1.80m</p>

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541675.15

Ground Level (mAOD)

Northing (OS mN)
265990.61

Start Date
16/12/2016
End Date
16/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.20 0.10 - 0.30	ES1 B1					Dark brown slightly gravelly sandy CLAY with abundant roots and rootlets. Sand is fine to coarse. Gravel is angular fine to coarse of flint. [RIVER TERRACE DEPOSITS]		(0.30)		
0.30 - 0.40 0.30 - 0.40 0.40 - 0.50 0.40 - 0.70	B2 ES2 ES3 B3					Light brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of chert. [RIVER TERRACE DEPOSITS]		0.30 (0.10) 0.40		
0.70 - 0.80 0.70 - 1.50	ES4 B4					Light brown clayey gravelly SAND. Sand is fine to coarse. Gravel is angular fine to coarse of chert. [RIVER TERRACE DEPOSITS]		(0.30)		
						White SAND with abundant shell fragments. Sand is fine. [RIVER TERRACE DEPOSITS]		0.70		
						yellowish brown SAND.				
						Slight seepage at 1.70m.				
2.20	W1							2.20		

PLAN DETAILS

Long Axis Orientation:

Shoring / Support: None

Stability: Stable

Groundwater (description): Rapid inflow of groundwater at 2.20

Remarks

Pit terminated on engineers instruction due to rapid inflow of groundwater at base of pit

Termination Depth:
2.20m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541551.83

Ground Level (mAOD)
8.00
Northing (OS mN)
266249.28

Start Date
21/12/2016
End Date
21/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/Backfill
Depth	Type/No.	Depth	Type/No.	Results		Description	Legend			
0.10 0.10 0.10	B1 D2 ES1					MADE GROUND; Grass over dark brown slightly clayey slightly gravelly SAND. Sand is fine to coarse. Gravel is angular and subangular, fine to coarse of flint.		(0.23)		
0.40 0.40 0.40 0.40	B3 D4 ES ES2					MADE GROUND: Light greyish brown gravelly to very gravelly SAND with high cobble content. Sand is fine to coarse. Gravel is angular and subangular, fine to coarse of brick, concrete, rebar and clinker. Cobbles are subangular to angular of concrete and brick.		0.23 (0.30)	7.77	
0.90 0.90 0.90 0.90	B5 D6 ES ES3					Soft orangish brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular and subangular fine and medium of flint. [RIVER TERRACE DEPOSITS]		0.53 (0.61)	7.47	
2.15 2.15 2.15	B0 B7 D8					Light yellowish orange sandy GRAVEL. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of flint. [RIVER TERRACE DEPOSITS]		1.14 (0.91)	6.86	
						Light grey slightly clayey locally clayey silty SAND. Sand is fine and medium. [RIVER TERRACE DEPOSITS]		2.05 (0.18)	5.95	
								2.23	5.77	

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable to 2.05 m</p> <p>Groundwater (description): Groundwater inflow at 2.00</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 2.23 m due to water strike and pit wall collapse from 2.05 m.</p> <p>Termination Depth: 2.23m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541560.71

Ground Level (mAOD)
6.81
Northing (OS mN)
266491.57

Start Date
11/01/2017
End Date
11/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10	B1					TOPSOIL; Very soft dark brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint. With frequent roots/rootlets (<1 mm x 120 mm).		(0.20)		
0.10	D3					Very soft orangish brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint and chalk. With occasional roots/rootlets (< 2mm x 130mm). [RIVER TERRACE DEPOSITS]		0.20	6.61	
0.10	ES							(0.25)		
0.30	B4					Firm grey mottled light grey slightly gravelly silty CLAY. Gravel is subangular and subrounded fine and medium of flint. [KIMMERIDGE CLAY FORMATION]		0.45	6.36	
0.30	D6							(0.45)		
0.60	B7					Orangish brown gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint. [RIVER TERRACE DEPOSITS]		0.90	5.91	
0.60	D9							(0.10)		
0.60	ES					Stiff becoming very stiff with depth dark grey mottled greyish brown silty CLAY. With occasional orangish brown ferruginous staining. [KIMMERIDGE CLAY FORMATION]		1.00	5.81	
0.60	ES8							(2.00)		
1.00	B10	1.00	HV(1)	80(36)kPa						
1.00	D11	1.00	HV(2)	80(40)kPa						
		1.00	HV(3)	82(38)kPa						
		2.50	HV(1)	102(40)kPa						
		2.50	HV(2)	108(42)kPa						
		2.50	HV(3)	112(54)kPa						
3.00	B12							3.00	3.81	
3.00	D13									

PLAN DETAILS	Remarks
<p>2.5 Long Axis Orientation:</p> <p>0.7</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Dry</p>	<p>Pit terminated on engineers instruction at 3.00m at scheduled depth.</p> <p>Termination Depth: 3.00m</p>

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540977.40

Ground Level (mAOD)
6.50
Northing (OS mN)
267127.40

Start Date
10/01/2017
End Date
10/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D3 ES ES2					MADE GROUND; Very soft dark brown slightly gravelly CLAY. Gravel is subangular and subrounded fine to coarse of flint and brick.		(0.35)		
0.40 0.40 0.40 0.40 0.50 0.50	B4 D6 ES ES5 B7 D8	0.50 0.50 0.50	HV(1) HV(2) HV(3)	70(30)kPa 76(34)kPa 78(32)kPa		Soft orangish brown mottled grey slightly gravelly CLAY. Gravel is subangular and subrounded fine to coarse of flint. [RIVER TERRACE DEPOSITS] Very stiff grey mottled light grey silty CLAY [KIMMERIDGE CLAY FORMATION]		0.35 (0.15) 0.50	6.15 6.00	
1.50 1.50	B9 D10	1.50 1.50 1.50	HV(4) HV(5) HV(6)	86(38)kPa 86(40)kPa 88(36)kPa		Very stiff grey mottled orangish brown CLAY. With occasional decayed organic material. [KIMMERIDGE CLAY FORMATION]		1.50 (1.10)	5.00	
2.50 2.50	B11 D12					Weak, light grey SILTSTONE [KIMMERIDGE CLAY FORMATION]		2.60	3.90	

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None Stability: Stable Groundwater (description): Dry</p>	<p>Remarks</p> <p>Pit terminated on engineers instructions at 2.60m due to refusal on hard strata</p> <p>Termination Depth: 2.60m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541080.74

Ground Level (mAOD)
8.35
Northing (OS mN)
267023.66

Start Date
14/12/2016
End Date
14/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30 0.10 - 0.30	ES B2 D3 ES1					Grass over TOPSOIL; Soft dark brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to medium of mixed lithologies.		(0.40)	7.95	
0.70 0.70 - 1.00 0.70 - 1.00 0.70 - 1.00	ES B5 D6 ES4	0.80 0.80 0.80	HV(1) HV(2) HV(3)	70(kPa) 72(kPa) 79(kPa)		Soft to firm light brown slightly gravelly silty sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine and medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		(0.60)	7.35	
1.70 - 2.00 1.70 - 2.00 1.70 - 2.00	B8 D9 ES7					Firm bluish grey sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(1.70)		
2.70 - 3.00 2.70 - 3.00 2.70 - 3.00	B11 D12 ES10	2.50 2.50 2.50	HV(4) HV(5) HV(6)	79(kPa) 81(kPa) 81(kPa)		Firm bluish grey mottled brown sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(0.30)	5.65	
					▼				5.35	

PLAN DETAILS

Long Axis Orientation:

Shoring / Support: None

Stability: Stable

Groundwater (description): Groundwater inflow at 3.00

Remarks

Pit terminated on engineers instruction at 3.00m at scheduled depth.

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541301.13

Ground Level (mAOD)
7.80
Northing (OS mN)
267149.09

Start Date
01/12/2016
End Date
01/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00	ES					Soft dark reddish brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of mixed lithologies. [RIVER TERRACE DEPOSITS]		(0.35)	7.45	
0.10	ES									
0.10 - 0.20	ES1									
0.20	ES									
0.20 - 0.35	B2									
0.40	ES					Firm yellowish brown slightly gravelly slightly sandy CLAY. Sand is fine. Gravel is subangular to rounded fine and medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		(0.35)	7.10	
0.40 - 0.50	ES3									
0.50 - 0.70	B4									
						Firm dark grey slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		0.70		
						Becoming very sandy CLAY				
1.80 - 2.00	B5							(2.30)		
2.00 - 2.10	ES6									
2.90 - 3.00	ES7									
								3.00	4.80	

PLAN DETAILS

Long Axis Orientation:

Shoring / Support: None
Stability: Stable
Groundwater (description): Dry

Remarks

Pit terminated on engineers instruction at 3.00m at scheduled depth.

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

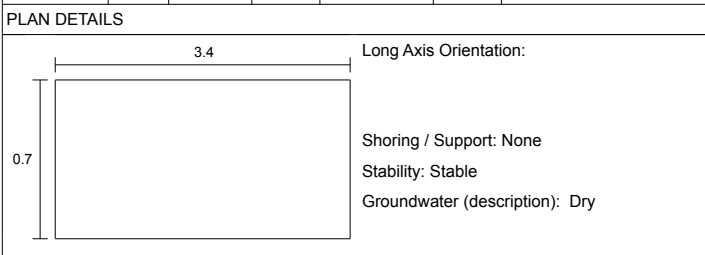
Project No.
UA008426-01
Easting (OS mE)
541170.18

Ground Level (mAOD)
6.95
Northing (OS mN)
267146.30

Start Date
07/12/2016
End Date
07/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00	ES					Grass over TOPSOIL; Soft dark brown silty gravelly CLAY with occasional rootlets. Gravel is subangular to rounded fine and medium of sandstone.		(0.30)	6.65	
0.10	ES					Firm yellowish brown slightly gravelly slightly sandy silty CLAY. Sand is fine. Gravel is subangular to rounded fine and medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		(1.00)	6.65	
0.10 - 0.20	B2									
0.10 - 0.20	D3									
0.10 - 0.20	ES1									
0.50 - 0.80	B5					Firm to stiff bluish grey sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(0.40)	5.65	
0.50 - 0.80	D6									
0.50 - 0.80	ES4									
		1.00	HV(1)	80(kPa)		Firm to stiff light bluish grey slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(1.20)	5.25	
		1.00	HV(2)	85(kPa)						
		1.00	HV(3)	95(kPa)						
1.50 - 1.80	B8					Firm to stiff light bluish grey slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(1.20)	5.25	
1.50 - 1.80	D9									
1.50 - 1.80	ES7									
		2.40	HV(4)	75(kPa)		Weak light grey SILTSTONE band		(1.20)	5.25	
		2.40	HV(5)	84(kPa)						
		2.40	HV(6)	87(kPa)						
2.50 - 2.80	B11					Weak light grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]		(0.10)	4.05	
2.50 - 2.80	D12									
2.50 - 2.80	ES10									
								2.90	3.95	
								(0.10)		
								3.00		



Remarks

Pit terminated on engineers instruction at 3.00m at scheduled depth.

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

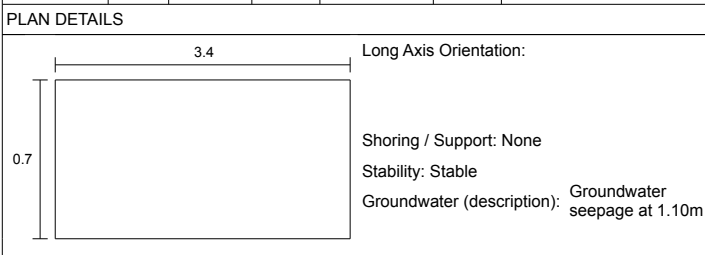
Project No.
UA008426-01
Easting (OS mE)
541073.76

Ground Level (mAOD)
8.82
Northing (OS mN)
266974.23

Start Date
07/12/2016
End Date
07/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.20 0.10 - 0.20	ES B2 ES1					Grass over TOPSOIL; Soft dark brown slightly gravelly silty CLAY with occasional rootlets. Gravel is subangular to rounded fine to medium of sandstone.		(0.30)		
						Soft yellowish brown sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		0.30	8.52	
0.50 - 0.80 0.50 - 0.80 0.50 - 0.80	B4 D5 ES3	0.60 0.60 0.60	HV(1) HV(2) HV(3)	62()kPa 66()kPa 72()kPa		Firm bluish grey slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to medium of mixed lithologies. [KIMMERIDGE CLAY FORMATION]		(0.50)		
						Land drain Pocket of yellowish brown sandy GRAVEL		0.80	8.02	
1.70 - 2.00 1.70 - 2.00 1.70 - 2.00	B7 D8 ES6							(1.60)		
						Stiff bluish grey slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to medium of mixed lithologies. [KIMMERIDGE CLAY FORMATION]		2.40	6.42	
2.70 - 3.00 2.70 - 3.00 2.70 - 3.00	B10 D11 ES9	2.70 2.70 2.70	HV(4) HV(5) HV(6)	103()kPa 105()kPa 92()kPa				(0.60)		
								3.00	5.82	



Remarks

Pit terminated on engineers instruction at 3.00m at scheduled depth.

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541194.46

Ground Level (mAOD)
8.07
Northing (OS mN)
267048.01

Start Date
14/12/2016
End Date
14/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30 0.10 - 0.30	ES B2 D3 ES1					Grass over TOPSOIL; Soft dark brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to medium of mixed lithologies.		(0.40)		
0.50 - 0.80 0.50 - 0.80 0.50 - 0.80	B5 D6 ES4					Soft light brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine and medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		0.40 (0.40)	7.67	
						Firm bluish grey slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to medium of mixed lithologies. [KIMMERIDGE CLAY FORMATION]		0.80	7.27	
					▼					
1.50 - 1.80 1.50 - 1.80 1.50 - 1.80	B8 D9 ES7					Pocket of gravel		(1.90)		
						Weak light grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]		2.70 (0.20)	5.37	
2.90 - 3.10 2.90 - 3.10 2.90 - 3.10	B11 D12 ES10					Firm bluish grey mottled brownish orange sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		2.90 (0.20)	5.17	
								3.10	4.97	

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Groundwater inflow at 1.30</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 3.00m at scheduled depth.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin-left: auto;"> <p>Termination Depth: 3.10m</p> </div>
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Project
Northstowe Phase 2
 Client
Homes and Communities Agency

Project No.
UA008426-01
 Easting (OS mE)
541600.47

Ground Level (mAOD)
6.81
 Northing (OS mN)
266369.59

Start Date
12/01/2017
 End Date
12/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/Backfill
Depth	Type/No.	Depth	Type/No.	Results		Description	Legend			
0.10	B1					TOPSOIL; Very soft dark brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint. With frequent roots/rootlets (≤ 4 mm x 180 mm).		(0.15)	6.66	
0.10	D3									
0.10	ES									
0.10	ES2					Soft orangish brown slightly gravelly CLAY. Gravel is subangular to rounded fine to coarse of chalk. With occasional roots/rootlets (< 2 mm x 135 mm). [RIVER TERRACE DEPOSITS]		(0.45)	6.21	
0.20	B4									
0.20	D6									
0.20	ES5									
0.60	B7					Soft orangish brown gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint. [RIVER TERRACE DEPOSITS]		(0.30)	5.91	
0.60	D9									
0.60	ES8									
0.90	B					Orangish brown gravelly SAND. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of flint. [RIVER TERRACE DEPOSITS]		(0.10)	5.81	
0.90	B10									
1.00	B11									
1.00	D13									
1.00	ES									
1.00	ES12				Firm to very stiff grey mottled greyish brown silty sandy CLAY with occasional orangish brown root traces and ferruginous staining. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(2.00)	3.81		
2.50	B14				[KIMMERIDGE CLAY FORMATION]		3.00	3.81		
2.50	D15									

PLAN DETAILS

Long Axis Orientation:

Shoring / Support: None
 Stability: Stable
 Groundwater (description): Dry

Remarks

Pit terminated on engineers instruction at 3.00m at scheduled depth.

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541596.47

Ground Level (mAOD)
7.74
Northing (OS mN)
266187.56

Start Date
21/12/2016
End Date
21/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D3 ES ES2					MADE GROUND; Turf over Soft brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of flint, chalk and occasional red brick.		(0.35)	7.39	
0.60 0.60 0.60	B4 D6 ES5					MADE GROUND; Soft orangish brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to subrounded fine to coarse of flint, chalk, pottery and brick.		(0.55)		
1.00 1.00	B7 ES8					Orangish brown very sandy GRAVEL. Sand is fine to coarse. Gravel is subangular to rounded fine to coarse of flint and chalk. [RIVER TERRACE DEPOSITS]		0.90	6.84	
								(1.30)		
						Grey SILT. [KIMMERIDGE CLAY FORMATION]		2.20	5.54	

PLAN DETAILS

2.4
1.4

Long Axis Orientation:

Shoring / Support: None

Stability: Stable

Groundwater (description): Water ingress at 1.60m

Remarks

Water ingress at 1.60, slow to start then flow rate increased. Pit terminated at 2.20m due to water ingress and water level monitored for 20 minutes.

Termination Depth:
2.20m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541651.06

Ground Level (mAOD)
7.69
Northing (OS mN)
266100.01

Start Date
21/12/2016
End Date
21/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D3 ES ES2					MADE GROUND; Turf over soft brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of flint, chalk and occasional red brick.		(0.25)		
						Soft brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of flint chalk. Occasional rootlets (, 1 mm x 80 mm). [RIVER TERRACE DEPOSITS]	 Relic cables Relic cables	(0.35)	7.44	
0.50 0.50 0.50	B4 D6 ES5				▼	Soft grey mottled orangish brown slightly gravelly silty CLAY. Gravel is subangular to subrounded fine to coarse of chalk and flint. [KIMMERIDGE CLAY FORMATION]		0.60	7.09	
1.00 1.00 1.00 1.00	B7 D9 ES ES8							(1.40)		
2.00 2.00	B10 D11					Soft brownish grey mottled dark grey clayey SILT. [KIMMERIDGE CLAY FORMATION]		2.00	5.69	
								(1.00)		
								3.00	4.69	

<p>PLAN DETAILS</p> <p>2.5 1.4</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Unstable from 2.00m</p> <p>Groundwater (description): Water seepage from 0.60m</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 3.00m at scheduled depth. Pit became unstable from 2.00m.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

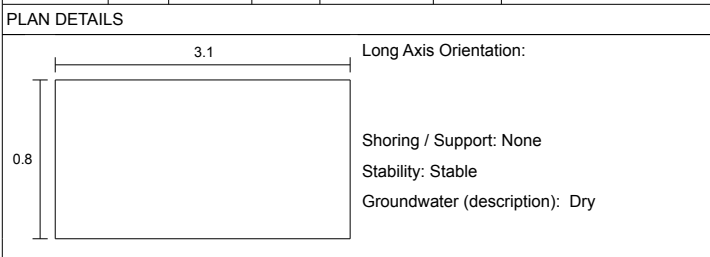
Project No.
UA008426-01
Easting (OS mE)
541251.01

Ground Level (mAOD)
6.08
Northing (OS mN)
267319.31

Start Date
07/12/2016
End Date
07/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.20 0.10 - 0.20	ES B2 ES1					MADE GROUND: Grass over dark brown to black gravelly SAND with occasional rootlets. Sand is fine to coarse. Gravel is subangular to rounded fine to medium of mixed lithologies.		(0.30)		
0.40 0.40 - 0.70 0.40 - 0.70	ES B4 ES3					MADE GROUND: Light brown gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of brick, ceramics and glass.		0.30 (0.40)	5.78	
1.00 1.00 - 1.20 1.00 - 1.20 1.00 - 1.20	ES B6 D7 ES5					Very stiff brownish grey sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		0.70 (1.10)	5.38	
1.80 - 2.00 1.80 - 2.00 1.80 - 2.00	B9 D10 ES8	1.80 1.80 1.80	HV(1) HV(2) HV(3)	112()kPa 115()kPa 120()kPa		Stiff brown and bluish grey becoming dark bluish grey sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		1.80	4.28	
						Weak light grey SILTSTONE band		(1.20)		
2.80 - 3.00 2.80 - 3.00 2.80 - 3.00	B12 D13 ES11	2.80 2.80 2.80	HV(4) HV(5) HV(6)	101()kPa 107()kPa 110()kPa				3.00	3.08	



Remarks

Pit terminated on engineers instruction at 3.0m at scheduled depth.

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541251.86

Ground Level (mAOD)

Northing (OS mN)
267262.78

Start Date
05/12/2016
End Date
05/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10	B2 ES ES1					MADE GROUND: Grass over black to dark brown, sandy GRAVEL. Sand is fine to coarse. Gravel is angular to sub-angular, fine to coarse of ash and clinker, ceramics, glass and red brick.		(0.35)		
0.35 0.35 0.35	B4 ES ES3					Soft to firm, yellowish brown, slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine of flint and chalk. [RIVER TERRACE DEPOSITS]		0.35		
1.00 1.00 1.00	B6 D7 ES5							(1.25)		
2.00 2.00 2.00	B9 D10 ES8	2.00 2.00 2.00	HV(1) HV(2) HV(3)	55(kPa) 60(kPa) 80(kPa)		Firm, light bluish grey, slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine of flint and chalk. [KIMMERIDGE CLAY FORMATION]		1.60		
						Weak, bluish grey SILTSTONE.				
2.00 2.00 2.00	B9 D10 ES8							(1.40)		
3.00 3.00 3.00	B12 D13 ES11	3.00 3.00 3.00	HV(4) HV(5) HV(6)	105(kPa) 65(kPa) 85(kPa)				3.00		

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): DRY</p>	<p>Remarks</p> <p>No groundwater encountered. Pit terminated on reaching target depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

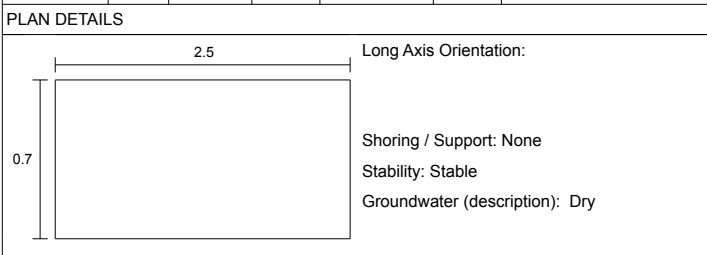
Project No.
UA008426-01
Easting (OS mE)
541623.96

Ground Level (mAOD)
6.39
Northing (OS mN)
266533.34

Start Date
13/01/2017
End Date
13/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D3 ES ES2					TOPSOIL; Very soft dark brown slightly gravelly CLAY. Gravel is subangular and subrounded fine to coarse of flint.		(0.30)		
0.40 0.40 0.40	B4 D6 ES5					Soft orangish brown slightly gravelly CLAY. Gravel is subangular and subrounded fine to coarse of flint and chalk. [RIVER TERRACE DEPOSITS]		0.30 (0.60)	6.09	
1.00 1.00 1.00	B7 D9 ES8					Soft to firm grey mottled light grey slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is angular and subrounded fine of flint and chalk. With frequent orangish brown ferruginous staining. [KIMMERIDGE CLAY FORMATION]		0.90 (1.10)	5.49	
2.00 2.00 2.00	B10 D11 ES					Stiff grey silty CLAY. With frequent selenite crystals (≤ 2 mm x 4 mm). [KIMMERIDGE CLAY FORMATION]		2.00 (0.40)	4.39	
						Extremely weak, light grey SILTSTONE [KIMMERIDGE CLAY FORMATION]		2.40 (0.15)	3.99	
						Very stiff grey silty CLAY. With frequent selenite crystals (≤ 4 mm x 6 mm). [KIMMERIDGE CLAY FORMATION]		2.55 (0.45)	3.84	
3.00 3.00	B12 D13							3.00	3.39	



Remarks

Pit terminated on engineers instruction at 3.00m at scheduled depth.

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541670.10

Ground Level (mAOD)
6.09
Northing (OS mN)
266499.16

Start Date
13/01/2017
End Date
13/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10	B1					Grass over TOPSOIL; Very soft dark brown slightly gravelly slightly sandy silty CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint. Frequent rootlets.		(0.30)	5.79	
0.10	D3									
0.10	ES									
0.10	ES2									
0.30	B4					RIVER TERRACE DEPOSITS [RIVER TERRACE DEPOSITS]		(0.20)	5.59	
0.30	D6									
0.30	ES5									
0.40	ES									
0.50	B7									
0.50	D9					RIVER TERRACE DEPOSITS [RIVER TERRACE DEPOSITS]		(0.20)	5.39	
0.50	ES8									
0.90	B10									
0.90	D2									
0.90	ES1					Firm becoming stiff grey mottled brown slightly sandy slightly silty CLAY. Sand is fine to coarse with pockets up to 10 x 10 x 10 mm. [KIMMERIDGE CLAY FORMATION]		(2.30)	3.09	
2.10	B3				Becoming firm with depth. Pockets of selenite crystals (< 1 mm).		(2.30)	3.09		
2.10	D5									
2.10	ES4									

PLAN DETAILS <p>Long Axis Orientation: Shoring / Support: None Stability: Stable Groundwater (description): Dry</p>		Remarks Pit terminated on engineers instruction at 3.00m at scheduled depth.	Termination Depth: 3.00m
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541593.50

Ground Level (mAOD)
6.23
Northing (OS mN)
266709.86

Start Date
02/12/2016
End Date
02/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.20 0.10 - 0.40 0.20 - 0.30	ES ES2 B1 D3					Very soft dark brown slightly sandy CLAY with rare rootlets. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.40)		
0.40 - 0.70 0.40 - 0.90	D4 B5					Stiff dark orangish brown sandy CLAY with rare rootlets. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		0.40	5.83	
		0.70 0.70 0.70	HV(1) HV(2) HV(3)	103(48)kPa 105(50)kPa 83(58)kPa				(0.50)		
0.90 - 1.10 0.90 - 3.00 1.00 1.00 - 1.10	D7 B8 ES ES6					Very stiff dark bluish grey silty CLAY. [KIMMERIDGE CLAY FORMATION]		0.90	5.33	
						pocket of SAND & GRAVEL				
2.00 - 2.10 2.10 - 2.20	ES9 D10							(2.10)		
2.80 - 3.00 2.90 - 3.00	D12 ES11									
								3.00	3.23	

PLAN DETAILS

Long Axis Orientation:

Shoring / Support: None

Stability: Stable

Groundwater (description): Water ingress from 0.90m

Remarks

Pit terminated on engineers instruction at 3.00m at scheduled depth.

Termination Depth:
3.00m

Project
Northstowe Phase 2
 Client
Homes and Communities Agency

Project No.
UA008426-01
 Easting (OS mE)
541615.81

Ground Level (mAOD)
6.52
 Northing (OS mN)
266483.47

Start Date
12/01/2017
 End Date
12/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00	ES					Firm brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine and medium of flint. [RIVER TERRACE DEPOSITS]				
0.10	B1									
0.10	D3									
0.10	ES	0.20	HV(1)	60()kPa						
0.10	ES2	0.20	HV(2)	70()kPa						
		0.20	HV(3)	70()kPa						
0.50	B4					Firm to stiff orangish brown slightly sandy CLAY with occasional rootlets. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]				
0.50	D6									
0.50	ES5	0.60	HV(4)	120()kPa						
		0.60	HV(5)	70()kPa						
		0.60	HV(6)	80()kPa						
		0.80	HV(7)	100()kPa						
		0.80	HV(8)	110()kPa						
		0.80	HV(9)	120()kPa						
1.50	B7					Brown slightly gravelly clayey SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint. [RIVER TERRACE DEPOSITS]				
1.50	D9									
1.50	ES									
1.50	ES8									
1.80	B10					Firm to stiff grey mottled brown CLAY with fine to coarse sand pockets up to 10 x 1 x 5 mm. [KIMMERIDGE CLAY FORMATION]				
1.80	D12									
1.80	ES									
1.80	ES11									
		2.30	HV(10)	80()kPa						
		2.30	HV(11)	80()kPa						
		2.30	HV(12)	80()kPa						
						Stiff grey CLAY with pockets of fine selenite crystals in < 5 x 5 x 5 mm pockets. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]				

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Dry</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 3.20m at scheduled depth.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin-left: auto;"> <p>Termination Depth: 3.20m</p> </div>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541545.92

Ground Level (mAOD)
7.07
Northing (OS mN)
266436.36

Start Date
12/01/2017
End Date
12/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill					
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend								
0.10	B1					TOPSOIL; Very soft dark brown slightly gravelly slightly sandy silty CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint. With frequent roots/rootlets ($\leq 4 \text{ mm} \times 180 \text{ mm}$).		(0.15)	6.92						
0.10	D3														
0.10	ES					Very soft orangish brown slightly gravelly CLAY. Gravel is subangular to rounded fine to coarse of flint and chalk. With occasional roots/rootlets ($< 2 \text{ mm} \times 135 \text{ mm}$). [RIVER TERRACE DEPOSITS]		(0.40)	6.52						
0.10	ES2														
0.40	B4					Soft to firm grey mottled greyish brown slightly gravelly CLAY. Gravel is subangular to rounded fine to coarse of flint and chalk. [KIMMERIDGE CLAY FORMATION]		0.55	6.52						
0.40	D6														
0.40	ES5														
0.70	B7					Stiff grey mottled greyish brown silty CLAY. With frequent selenite crystals ($< 1 \text{ mm} \times 2 \text{ mm}$). [KIMMERIDGE CLAY FORMATION]		(1.20)	5.32						
0.70	D9														
0.70	ES														
0.70	ES8														
1.50	B10				pocket (200 mm x 500 mm) of orange gravelly sand.						1.75	5.32			
1.50	ES11														
1.80	B12				Stiff grey mottled greyish brown silty CLAY. With frequent selenite crystals ($< 1 \text{ mm} \times 2 \text{ mm}$). [KIMMERIDGE CLAY FORMATION]						(1.35)	5.32			
1.80	D14														
1.80	ES														
1.80	ES13														
							3.10	3.97							

PLAN DETAILS <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Dry</p>		Remarks Pit terminated on engineers instruction at 3.10m at scheduled depth.
		Termination Depth: 3.10m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541100.70

Ground Level (mAOD)
9.14
Northing (OS mN)
266149.55

Start Date
28/11/2016
End Date
28/11/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00	ES1					Grass over TOPSOIL		(0.16)		
0.30 0.30 0.30 - 0.50	ES ES3 B2					Dark brown clayey, gravelly fine to coarse SAND. Gravel is subrounded, fine to coarse predominantly of chert. [RIVER TERRACE DEPOSITS]		(0.64)	8.98	
0.80 0.80 - 1.00	ES5 B4					Yellowish brown gravelly fine to coarse SAND. Gravel is angular to subangular, fine to coarse of mixed lithologies. [RIVER TERRACE DEPOSITS]		(0.50)	8.34	
1.30 1.30 - 1.50	ES7 B6					Stiff to very stiff light grey slightly gravelly silty CLAY. Gravel is angular to subrounded, fine to coarse of chert. [RIVER TERRACE DEPOSITS]		(0.80)	7.84	
2.10 2.10 - 2.30	ES8 B9					Yellowish brown very gravelly fine to coarse SAND. Gravel is subangular to subrounded, fine to coarse of predominantly chert. [KIMMERIDGE CLAY FORMATION]		(0.30)	7.04	
2.40 2.40 2.40 - 2.50	ES10 W14 D11	2.40 2.40 2.40	HV(1) HV(2) HV(3)	40(18)kPa 62(30)kPa 68(28)kPa		Very stiff light grey sandy SILT. Sand is fine to medium. [KIMMERIDGE CLAY FORMATION]		(0.35)	6.74	
2.75 2.75 - 2.90	ES13 B12					Yellowish brown very gravelly fine to coarse SAND. Gravel is subangular to subrounded, fine to coarse of predominantly chert. [KIMMERIDGE CLAY FORMATION]		(0.25)	6.39	
									6.14	

<p>PLAN DETAILS</p>	<p>Remarks</p> <p>Terminated on engineers instruction at scheduled depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540740.61

Ground Level (mAOD)
8.93
Northing (OS mN)
266945.79

Start Date
19/12/2016
End Date
19/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10	ES ES1					TOPSOIL: Grass over soft brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular to angular, fine and medium of flint.		(0.30)		
						Soft light brownish orange slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subangular to angular, fine and medium of flint. [RIVER TERRACE DEPOSITS]		0.30 (0.45)	8.63	
0.80 0.80 0.80 0.80	B1 D2 ES ES2					Light brownish orange slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is subangular to angular, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		0.75 (0.25)	8.18	
						Light brownish orange slightly clayey very sandy GRAVEL. Sand is fine to coarse. Gravel is subangular to angular, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		1.00 (0.80)	7.93	
					▼	Stiff dark bluish grey slightly sandy slightly gravelly silty CLAY. Sand is fine. Gravel is fine, subrounded to subangular of flint. [KIMMERIDGE CLAY FORMATION]		1.80 (1.40)	7.13	
2.00 2.00 2.00	B3 D4 ES3							3.20	5.73	

PLAN DETAILS

2.5
Long Axis Orientation:

1.6

Shoring / Support: None
Stability: Stable
Groundwater (description): Water ingress at 1.80m

Remarks

Pit terminated on engineers instruction at 3.20 m. Water ingress at 1.80 m.

Termination Depth:
3.20m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540800.05

Ground Level (mAOD)
8.59
Northing (OS mN)
267000.03

Start Date
20/12/2016
End Date
20/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.20	B2 D1 ES1 ES					TOPSOIL: Very soft dark brown slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is subangular to angular, fine to coarse of flint.		(0.32)	8.27	
0.50 0.50 0.50 0.50	B4 D3 ES ES2					Soft dark orangish brown slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is subangular to angular, fine and medium of flint. [RIVER TERRACE DEPOSITS]		0.32 (0.48)		
						Pockets of firm bluish grey clay. Becoming orangish brown.				
						Orangish brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is subangular to angular, fine and medium of flint. [RIVER TERRACE DEPOSITS]		0.80 0.85	7.79 7.74	
						Stiff bluish grey slightly sandy slightly gravelly silty CLAY. Sand is fine. Gravel is fine, subangular to subrounded of flint. [KIMMERIDGE CLAY FORMATION]				
1.40 1.40 1.40	B6 D5 ES3					Band of orangish brown gravelly sand.				
		1.90 1.90 1.90	HV(1) HV(2) HV(3)	103(26)kPa 112(30)kPa 92(26)kPa						
								(3.25)		
								4.10	4.49	

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description):</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 4.10 m.</p> <p>Termination Depth: 4.10m</p>
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Project
Northstowe Phase 2
 Client
Homes and Communities Agency

Project No.
UA008426-01
 Easting (OS mE)
540949.85

Ground Level (mAOD)
7.32
 Northing (OS mN)
267050.27

Start Date
20/12/2016
 End Date
20/12/2016

Scale
1:25
 Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill	
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend				
0.10	B2					Grass over soft dark brown slightly sandy slightly gravelly silty CLAY. Sand is fine and medium. Gravel is subangular to angular, fine and medium of flint.		(0.25)			
0.10	D1					Soft orangish brown and grey slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is subangular to angular, fine and medium occasionally coarse of flint. Occasional pockets of bluish grey clay. [RIVER TERRACE DEPOSITS]		0.25	7.07		
0.10	ES1										
0.20	ES										
0.35	B4										
0.35	D3										
0.35	ES2					Stiff bluish grey silty CLAY [KIMMERIDGE CLAY FORMATION]		1.10	6.22		
								(0.10)			
								1.20	6.12		
2.50	D9										

PLAN DETAILS 2.5 Long Axis Orientation: Shoring / Support: None Stability: Stable Groundwater (description): Dry	Remarks Pit terminated due to land drain at 1.10 m. Pit relocated to TP906A. Termination Depth: 1.20m
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540949.83

Ground Level (mAOD)

Northing (OS mN)
267050.23

Start Date
20/12/2016
End Date
20/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
1.20 1.20 1.20	B6 D5 ES3	1.00	HV(1)	100(40)kPa		Grass over soft dark brown slightly sandy to sandy slightly gravelly CLAY. Sand is fine and medium. Gravel is subangular to angular, fine and medium of flint.		(0.25)		
		1.00	HV(2)	104(52)kPa		Soft grey and orangish brown slightly sandy slightly gravelly CLAY. Sand is fine and medium. Gravel is subangular to angular, fine and medium occasionally coarse of flint. Occasional pockets of bluish grey clay. [RIVER TERRACE DEPOSITS]		0.25		
		1.00	HV(3)	106(48)kPa		Tending to bluish grey. Sand and gravel content decreasing.		(0.65)		
						Firm to stiff dark grey silty CLAY. With occasional pockets of light grey, orange and white fine to coarse sand. [KIMMERIDGE CLAY FORMATION]		0.90		
								(1.94)		
						Weathered light grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]		2.85		

<p>PLAN DETAILS</p> <p>2.5 1.6</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Dry</p>	<p>Remarks</p> <p>Pit terminated at 2.85 due to refusal on weathered siltstone.</p> <p>Termination Depth: 2.85m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)

Ground Level (mAOD)
Northing (OS mN)

Start Date
20/12/2016
End Date
20/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10	B1 ES ES2					Turf over dark brown slightly gravelly clayey SAND. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of flint, brick and plastic.		(0.30)		
0.65 0.65 0.65 0.65	B3 D5 ES ES4					Soft orangish brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine and medium of flint.		(0.70)		
1.20 1.20	B6 ES7					Yellowish brown gravelly SAND. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of flint and chalk.		1.00		
2.00 2.00	B8 D9					Soft becoming firm with depth bluish grey CLAY. With occasional pockets (<120 mm x 180 mm) of orange fine to coarse sand.		2.00		
3.00 3.00	B10 D11					Soft grey silt.		2.90 (0.10) 3.00		

<p>PLAN DETAILS</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 3.00 m.</p> <p style="text-align: right;">Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540802.04

Ground Level (mAOD)
9.05
Northing (OS mN)
266828.54

Start Date
19/12/2016
End Date
19/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B3 D4 ES ES1					TOPSOIL: Grass over soft slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is subangular to angular, fine and medium of flint.		(0.30)	8.75	
0.70 0.70 0.70 0.70	B1 D2 ES ES2					Light orangish brown slightly clayey slightly gravelly to gravelly SAND. Sand is fine to coarse. Gravel is subangular to angular, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		(1.05)		
					▼	Light orangish brown slightly sandy to sandy GRAVEL. Sand is fine to coarse. Gravel is subrounded to angular, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		1.35 (0.65)	7.70	
2.20 2.20 2.20	B5 D6 ES3	2.00 2.00 2.00	HV(1) HV(2) HV(3)	104(50)kPa 112(52)kPa 98(54)kPa		Stiff to very stiff dark bluish grey silty CLAY. [KIMMERIDGE CLAY FORMATION]		2.00 (0.45)	7.05	
								2.45	6.60	

<p>PLAN DETAILS</p> <p>2.5 1.6</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable to 1.35 m</p> <p>Groundwater (description): Water ingress at 1.35m</p>	<p>Remarks</p> <p>Pit terminated at 2.45 m due to instability from 1.35-2.00 m.</p> <p>Termination Depth: 2.45m</p>
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Project
Northstowe Phase 2
 Client
Homes and Communities Agency

Project No.
UA008426-01
 Easting (OS mE)
540897.62

Ground Level (mAOD)
8.79
 Northing (OS mN)
266931.46

Start Date
19/12/2016
 End Date
19/12/2016

Scale
1:25
 Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/Backfill
Depth	Type/No.	Depth	Type/No.	Results		Description	Legend			
0.00	ES					TOPSOIL: Grass over soft brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular to angular, fine and medium of flint and chalk.		(0.45)	8.34	
0.10	B1									
0.10	ES									
0.10	ES2									
0.20	ES					Dark orangish brown sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.75)		
0.50	B3									
0.50	ES4					Soft becoming firm with depth bluish grey mottled brown CLAY with frequent reddish brown root traces. [KIMMERIDGE CLAY FORMATI]		1.20	7.59	
1.20	B5	1.20	HV(1)	78(42)kPa						
1.20	D6	1.20	HV(2)	80(42)kPa						
1.20		1.20	HV(3)	84(40)kPa						
		2.00	HV(4)	100(52)kPa						
		2.00	HV(5)	102(42)kPa						
		2.00	HV(6)	98(48)kPa						
								(1.75)		
2.50	B7									
2.50	D8									
								2.95	5.84	

<p>PLAN DETAILS</p>	<p>Remarks</p>
	<p>Pit terminated on engineers instruction at 2.95m.</p> <p style="text-align: right;">Termination Depth: 2.95m</p>

Project
Northstowe Phase 2
 Client
Homes and Communities Agency

Project No.
UA008426-01
 Easting (OS mE)
540850.27

Ground Level (mAOD)
9.07
 Northing (OS mN)
266849.37

Start Date
19/12/2016
 End Date
19/12/2016

Scale
1:25
 Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/Backfill
Depth	Type/No.	Depth	Type/No.	Results		Description	Legend			
0.10 0.10 0.10	B1 ES ES2					TOPSOIL: Grass over soft brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular to angular, fine and medium of flint and chalk.		(0.40)	8.67	
0.50 0.50	B3 ES4					Dark orangish brown sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.70)		
1.10 1.10	B5 ES6					Yellowish brown gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint and chalk. [RIVER TERRACE DEPOSITS]		1.10 (0.50)	7.97	
1.60 1.60	B7 D8				▼	Soft becoming firm with depth bluish grey mottled brown slightly sandy slightly gravelly silty CLAY with frequent reddish brown root traces. Sand is fine to medium. Gravel is fine to medium, subangular to subrounded of flint and chalk. [KIMMERIDGE CLAY FORMATION]		1.60 (1.40)	7.47	
2.00 2.00 2.00			HV(1) HV(2) HV(3)	90(40)kPa 94(38)kPa 96(46)kPa						
2.50	D9									
									3.00	6.07

<p>PLAN DETAILS</p> <p>2.5 Long Axis Orientation:</p> <p>1.6</p> <p>Shoring / Support: None Stability: Stable Groundwater (description): Slight water ingress</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 3.00m at scheduled depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540850.76

Ground Level (mAOD)
9.22
Northing (OS mN)
266799.15

Start Date
19/12/2016
End Date
19/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D2 ES ES1					TOPSOIL: Grass over very soft brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular to angular, fine to coarse of flint.		(0.35)	8.87	
						Soft dark orangish brown slightly sandy to sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		0.35 (0.50)		
						Light orangish brown sandy GRAVEL. Sand is fine to coarse. Gravel is subangular to angular, fine to coarse of flint. [RIVER TERRACE DEPOSIT]		0.85	8.37	
1.20 1.20 1.20	B3 D4 ES2				▼			(1.45)		
2.50 2.50 2.50	B5 D6 ES3					Very stiff dark bluish grey slightly gravelly silty CLAY. Gravel is fine, subangular to subrounded of flint. [KIMMERIDGE CLAY FORMATION]		2.30 (0.80)	6.92	
								3.10	6.12	

PLAN DETAILS

2.5 Long Axis Orientation:

1.6

Shoring / Support: None
Stability: Stable to 2.30 m
Groundwater (description): Water ingress at 1.30m

Remarks

Pit terminated on engineers instruction at 3.10 m due to pit wall instability.

Termination Depth:
3.10m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540899.13

Ground Level (mAOD)
9.19
Northing (OS mN)
266848.90

Start Date
19/12/2016
End Date
19/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10	B1 ES ES2					TOPSOIL: Grass over soft brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular to angular, fine and medium of flint and chalk and occasional red brick.		(0.30)		
0.50 0.50	B3 ES4					Dark orangish brown sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		0.30 (0.65)	8.89	
0.95 0.95	B5 ES6							0.95	8.24	

<p>PLAN DETAILS</p> <p>2.5 Long Axis Orientation:</p> <p>1.6</p> <p>Shoring / Support: None Stability: Stable Groundwater (description): Dry</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 0.95m due to pit wall instability.</p> <p>Termination Depth: 0.95m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)

Ground Level (mAOD)
Northing (OS mN)

Start Date
20/12/2016
End Date
20/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D3 ES ES2					Turf over very soft brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of flint.		(0.40)		
0.50 0.50 0.50	B4 D6 ES5					Soft orangish brown slightly sandy CLAY. Sand is fine to coarse.		0.40		
1.20 1.20 1.20	B7 D9 ES8									
1.40 1.40	B10 D11					Soft becoming firm with depth bluish grey CLAY with occasional pockets (<150 mm x 280 mm) of orange fine to coarse sand. Frequent selenite crystals (<2mm).		1.40		
3.00 3.00	B12 D13							3.00		

<p>PLAN DETAILS</p> <p>2.5 1.4</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description):</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 3.00 m.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
 Client
Homes and Communities Agency

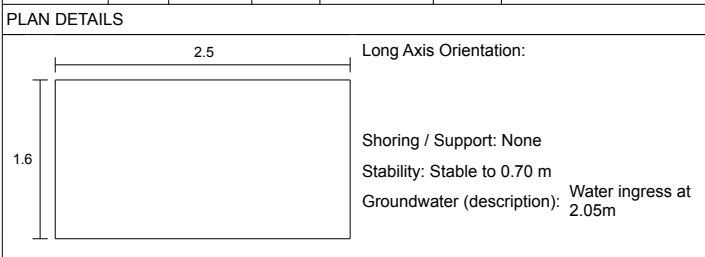
Project No.
UA008426-01
 Easting (OS mE)
540950.31

Ground Level (mAOD)
9.30
 Northing (OS mN)
266849.37

Start Date
19/12/2016
 End Date
19/12/2016

Scale
1:25
 Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/Backfill	
Depth	Type/No.	Depth	Type/No.	Results		Description	Legend				
0.10	B1				▼	TOPSOIL: Grass over very soft dark brown slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is subangular to angular, fine to coarse of flint.		(0.33)	8.97		
0.10	D2										
0.10	ES										
0.10	ES1										
0.45	B3						Dark orangish brown becoming orangish brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is subangular to angular, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		(0.37)		
0.45	D4										
0.45	ES2										
0.80	B5						Light yellowish orange slightly clayey slightly sandy GRAVEL. Sand is fine to coarse. Gravel is subrounded to angular, fine to coarse of flint. [REIVER TERRACE DEPOSITS]		0.70	8.60	
0.80	D6										
0.80	ES										
0.80	ES3										
									(1.35)		
							Very stiff dark bluish grey CLAY. [KIMMERIDGE CLAY FORMATION]		2.05	7.25	
								(0.22)			
								2.27	7.03		



Remarks

Pit terminated on engineers instruction at 2.27 m due to water ingress and pit wall instability.

Termination Depth:
2.27m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540998.99

Ground Level (mAOD)
9.17
Northing (OS mN)
266852.42

Start Date
09/12/2016
End Date
09/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.10 0.00 - 0.20	ES1 B2					Soft dark brown sandy, slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular, fine to coarse of chert.		(0.20)		
0.20 0.20 - 0.30 0.20 - 0.30 0.20 - 0.50	ES D4 ES3 B5					Soft light orangish brown very sandy, slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is angular, fine to medium of chert. (Possible MADE GROUND)		0.20 (0.30)	8.97	
0.50 - 0.60 0.50 - 1.00	ES6 B7					Light orangish brown and light yellowish brown gravelly fine to coarse SAND. Gravel is angular to subrounded, fine to coarse of chert.		0.50 (0.80)	8.67	
1.00 - 1.10 1.00 - 1.30	ES8 B9									
1.30 - 1.40 1.30 - 1.40 1.30 - 2.00	D12 ES10 B11				▼	Soft becoming stiff dark bluish grey silty sandy CLAY with rare shell fragments. Sand is fine to coarse.		1.30	7.87	
		1.50 1.50 1.50	HV(1) HV(2) HV(3)	100(34)kPa 90(28)kPa 92(40)kPa		mottled brown				
2.20 - 2.30 2.20 - 2.30 2.20 - 3.00	D14 ES13 B15	2.20 2.20 2.20	HV(4) HV(5) HV(6)	100(40)kPa 102(38)kPa 92(32)kPa				(2.00)		
3.00 - 3.10 3.00 - 3.10 3.00 - 3.30	D17 ES16 B18	3.00 3.00 3.00	HV(7) HV(8) HV(9)	112(48)kPa 80(40)kPa 86(44)kPa						
								3.30	5.87	

<p>PLAN DETAILS</p> <p>3.3 0.9</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: N/A</p> <p>Stability: Unstable</p> <p>Groundwater (description): Slow seepage at base of gravel</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 3.30m due to pit wall instability. 10cm. Dia land drain at 0.80m depth. Pit collapsed back to 2.20m.</p> <p>Termination Depth: 3.30m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541041.76

Ground Level (mAOD)
9.21
Northing (OS mN)
266806.13

Start Date
13/12/2016
End Date
13/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 0.00 - 0.10 0.00 - 0.30	ES ES1 B2					Grass over very soft dark brown slightly sandy, slightly gravelly CLAY. Gravel is subangular, fine to coarse of chert.		(0.30)		
0.30 - 0.40 0.30 - 0.40 0.30 - 0.70	D3 ES4 B5	0.30	PID	<1ppm		Light brown soft sandy CLAY. Sand is fine to coarse.		0.30	8.91	
		0.50 0.50	HV(1) HV(2)	100(60)kPa 105(70)kPa				(0.40)		
0.70 - 0.80 0.70 - 0.90 0.70 - 1.30	ES6 D11 B7					Firm to stiff light grey mottled brown sandy CLAY. Sand is fine to coarse. Occasional orangish brown, fine to coarse sand pockets.		0.70	8.51	
		1.00 1.00 1.00	HV(3) HV(4) HV(5)	84(38)kPa 90(36)kPa 90(48)kPa				(0.60)		
1.30 1.30 - 1.40 1.30 - 2.00	ES ES12 B8	1.30	PID	<1ppm		Orangish brown slightly clayey gravelly fine to coarse SAND. Gravel is angular to subrounded, fine to coarse of predominantly chert. Gravelly sand pocket. Clay continues from 1.3-2.0m at Face D.		1.30	7.91	
								(0.70)		
2.00 - 3.00	B9					Stiff dark bluish grey occasionally mottled brown silty CLAY. Rare pockets of gypsum crystals up to 5cm length. Rare pockets of shelly fragments.		2.00	7.21	
2.40	D10	2.50 2.50 2.50	HV(6) HV(7) HV(8)	100(30)kPa 108(50)kPa 110(40)kPa				(1.00)		
3.00	W13							3.00	6.21	

<p>PLAN DETAILS</p> <p>2.6 0.6</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: N/A</p> <p>Stability: Stable</p> <p>Groundwater (description): Slight seepage at 1.1m</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 3.00m at scheduled depth Slow seepage from gravelly sand throughout pitting.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

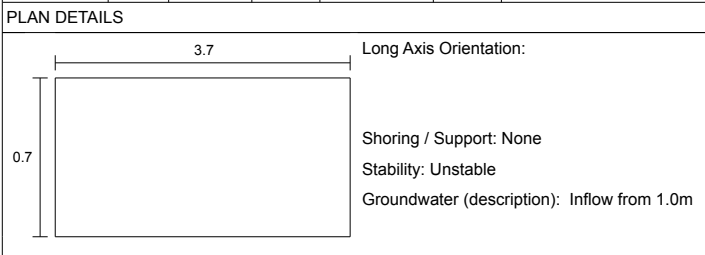
Project No.
UA008426-01
Easting (OS mE)
541115.00

Ground Level (mAOD)
9.33
Northing (OS mN)
266848.83

Start Date
14/12/2016
End Date
14/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.10 0.00 - 0.80	ES1 B4					MADE GROUND: Grass over soft brown sandy, slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is subangular to subrounded, fine to medium of mixed lithologies.		(0.80)		
0.50 0.50 - 0.60 0.50 - 0.60	ES D3 ES2									
0.80 - 0.90 0.80 - 1.50	ES5 B6					Light brown very gravelly fine to coarse SAND. Gravel is angular to subrounded, fine to coarse of predominantly chert. [RIVER TERRACE DEPOSITS]	 70mm clay pipe Yellowish brown fine SAND lens	0.80	8.53	
1.50 - 1.60 1.50 - 1.90 1.60 - 1.70	ES7 B9 D8					Firm bluish grey and orangish brown slightly sandy silty CLAY. [KIMMERIDGE CLAY FORMATION]		1.50	7.83	
1.90 - 2.70	B11					Soft to firm dark bluish grey slightly sandy slightly gravelly CLAY with occasional mottled brown pockets and gypsum. Gravel is fine to medium, subangular to subrounded of flint. [KIMMERIDGE CLAY FORMATIO]		1.90	7.43	
2.30 2.30 2.30		2.30 2.30 2.30	HV(1) HV(2) HV(3)	50(25)kPa 60(20)kPa 62(22)kPa				(0.80)		
2.50 - 2.60	D10					from 2.50m becoming stiff		2.70	6.63	



Remarks

Pit terminated on engineers instruction at 2.70m due to pit side collapse and groundwater inflow.

Termination Depth:
2.70m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541148.66

Ground Level (mAOD)
9.57
Northing (OS mN)
266825.66

Start Date
14/12/2016
End Date
14/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.10 0.00 - 0.40 0.10 - 0.20	ES ES1 B3 D2					Grass over dark brown sandy, slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is subangular, fine to coarse of chert.		(0.40)		
0.40 - 0.50 0.40 - 1.00 0.60 - 0.70 0.80 - 0.90	ES4 B7 D5 ES6					Orangish brown clayey very gravelly fine to coarse SAND. Gravel is angular to subangular, fine to coarse of chert. [RIVER TERRACE DEPOSIT]		0.40 (0.60)	9.17	
1.00 - 1.10 1.00 - 1.80 1.60	ES ES8 B10 W9					Light yellowish brown slightly clayey to clayey gravelly fine to coarse SAND. Gravel is angular to subangular, fine to coarse of chert. [RIVER TERRACE DEPOSITS]		1.00 (0.80)	8.57	
1.80 - 1.90 1.80 - 3.00 2.00 - 2.10	ES11 B14 D12	2.00 2.00 2.00	HV(1) HV(2) HV(3)	90(32)kPa 90(38)kPa 98(30)kPa		Firm to stiff dark bluish grey silty CLAY with rare shell fragments. [KIMMERIDGE CLAY FORMATION]		1.80	7.77	
2.50 - 2.70	D13	2.60 2.60 2.60	HV(4) HV(5) HV(6)	80(28)kPa 80(34)kPa 82(40)kPa				(1.20)		
								3.00	6.57	

PLAN DETAILS

3.9
0.7

Long Axis Orientation:

Shoring / Support: None
Stability: Stable
Groundwater (description): Slow inflow at 1.70m

Remarks

Pit terminated on engineers instruction at 3.00m at scheduled depth

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

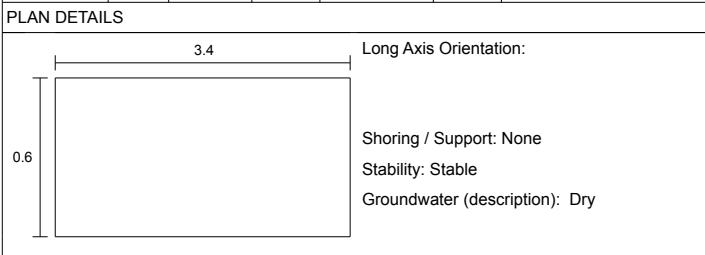
Project No.
UA008426-01
Easting (OS mE)
541098.79

Ground Level (mAOD)
9.37
Northing (OS mN)
266749.66

Start Date
14/12/2016
End Date
14/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30	ES B2 ES1					Grass over dark brown slightly gravelly very clayey fine to coarse SAND with occasional rootlets. Gravel is fine to medium, subangular to subrounded of mixed lithologies.		(0.40)		
0.50 - 0.80 0.50 - 0.80 0.50 - 0.80	B4 D5 ES3	0.60	HV(1)	95(41)kPa		Soft to firm light brown silty CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSIT]		0.40 (0.70)	8.97	
1.10 - 1.30 1.10 - 1.30 1.10 - 1.30	B7 D8 ES6					Firm light bluish grey mottled brown silty sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATI]		1.10	8.27	
						Pocket of sand.		(0.80)		
2.00 - 2.30 2.00 - 2.30 2.00 - 2.30	B10 D11 ES9	2.30	HV(2)	110(42)kPa		Firm dark bluish grey mottled yellowish brown silty sandy gravelly CLAY with angular clear selenite crystals (4 mm x 8mm). Sand is fine to coarse. Gravel is fine to medium, subangular to subrounded of flint. [KIMMERIDGE CLAY FORMATI]		1.90 (1.10)	7.47	
								3.00	6.37	



Remarks

Pit terminated on reaching target depth.

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541065.27

Ground Level (mAOD)
9.23
Northing (OS mN)
266685.61

Start Date
15/12/2016
End Date
15/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 0.00 - 0.10	ES ES1					Grass over dark brown slightly sandy, slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is subangular, fine to coarse of chert. Abundant roots and rootlets.		(0.30)		
0.30 - 0.40 0.30 - 0.40 0.30 - 0.80	D3 ES2 B4					Soft light brown slightly sandy CLAY. Sand is fine to medium. [RIVER TERRACE DEPOSIT]		0.30 (0.50)	8.93	
0.80 - 0.90 0.80 - 1.10 0.90 - 1.00	ES5 B7 D6					Soft to firm light grey and brown slightly sandy, slightly gravelly silty CLAY with a low cobble content of chert. Sand is fine to coarse. Gravel is subrounded, fine to coarse of mixed lithologies. [RIVER TERRACE DEPOSITS]		0.80 (0.30)	8.43	
1.10 1.10 - 1.20 1.10 - 1.50	ES ES8 B9					Orangish brown very sandy GRAVEL of angular to subrounded, fine to coarse mixed lithologies. Sand is fine to coarse. [RIVER TERRACE DEPOSIT]		1.10 (1.10)	8.13	
						White and brown coarse GRAVEL at base with slow groundwater inflow.				
2.20 - 2.30	D10	2.20 2.20 2.20	HV(1) HV(2) HV(3)	110(40)kPa 80(38)kPa 96(32)kPa		Firm dark bluish grey silty CLAY with occasional reddish brown relic rootlets. [KIMMERIDGE CLAY FORMATI] mottled brown and orangish brown.		2.20	7.03	
2.50 2.60 - 3.00	W11 B12	2.50 2.50 2.50	HV(4) HV(5) HV(6)	102(30)kPa 104(38)kPa >120(kPa)				(1.10)		
3.00 - 3.10	D13							3.30	5.93	

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Slow inflow from 1.80m</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 3.10m at scheduled depth</p> <p>Termination Depth: 3.30m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541149.46

Ground Level (mAOD)
9.38
Northing (OS mN)
266749.61

Start Date
14/12/2016
End Date
14/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.10	ES1					MADE GROUND: Grass over dark brown slightly sandy, slightly gravelly CLAY. Sand is fine to coarse. Gravelly is subangular to subrounded, fine to coarse of mixed lithologies.	[Cross-hatch pattern]	(0.30)	9.08	[Hatched pattern]
0.00 - 0.30	B1									
0.30	ES					MADE GROUND: Soft reddish brown to grey silty sandy gravelly CLAY. Sand is fine to coarse. Gravel is subangular to subrounded, fine to coarse of mixed lithologies including brick. Occasional sand pockets.	[Cross-hatch pattern]	0.30	9.08	[Hatched pattern]
0.30 - 0.40	D1									
0.30 - 0.40	ES2									
0.30 - 0.60	B2									
1.00 - 1.10	D2						[Cross-hatch pattern]	(1.30)	9.08	[Hatched pattern]
1.00 - 1.10	ES3									
1.30 - 1.60	B3					Pocket of yellowish brown sandy GRAVEL of subangular to rounded, fine to coarse mixed lithologies. Sand is fine to coarse.	[Cross-hatch pattern]		9.08	[Hatched pattern]
1.60 - 1.70	D3					Light grey mottled orangish brown gravelly, silty CLAY. Gravel is subangular, fine to coarse of chert.	[Cross-hatch pattern]	1.60	7.78	[Hatched pattern]
1.60 - 1.70	ES4									
1.70 - 2.00	B4					[RIVER TERRACE DEPOSITS]	[Cross-hatch pattern]	(0.10)	7.68	[Hatched pattern]
1.70 - 2.00	D5					Stiff dark bluish grey silty sandy CLAY. Occasionally brown and yellow mottling with selenite crystals. [KIMMERIDGE CLAY FORMATI]				
2.40 - 2.50	D4	2.40	HV(1)	100(40)kPa			[Cross-hatch pattern]	(1.30)	9.08	[Hatched pattern]
		2.40	HV(2)	94(38)kPa						
		2.40	HV(3)	96(36)kPa						
3.00	W1							3.00	6.38	

<p>PLAN DETAILS</p> <p>0.7</p> <p>3.7</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Seepage from 1.60m</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 3.00m at scheduled depth</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541199.71

Ground Level (mAOD)
8.97
Northing (OS mN)
266698.42

Start Date
15/12/2016
End Date
15/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.20 0.10 - 0.50	ES ES1 B2					MADE GROUND: Grass over dark brown sandy, slightly gravelly CLAY with low cobble content of brick.		(0.50)		
0.50 0.50 - 0.60 0.50 - 0.60 0.50 - 0.85	ES D4 ES3 B5					Soft light brown mottled grey sandy, slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of chert. [RIVER TERRACE DEPOSITS]		0.50 (0.35)	8.47	
0.90 - 1.00 0.90 - 1.00 0.90 - 1.40	D7 ES6 B8	0.90 0.90	HV(1) HV(2)	100(50)kPa 80(44)kPa		Firm light grey and brown slightly sandy, slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is subangular, fine to coarse of chert. Occasional orangish brown fine to coarse sand pockets. [RIVER TERRACE DEPOSITS]		0.85 (0.55)	8.12	
1.40 - 1.50 1.40 - 1.50 1.40 - 1.70	D10 ES9 B11					Soft to firm light bluish grey mottled brown and yellowish brown silty CLAY with abundant selenite crystals. [KIMMERIDGE CLAY FORMATI]		1.40	7.57	
1.80 - 1.90	D12	1.90 1.90 1.90	HV(3) HV(4) HV(5)	60(40)kPa 84(33)kPa 92(56)kPa		from 2.10 m becoming dark bluish grey		(1.60)		
2.50 - 2.60	D13							3.00	5.97	

<p>PLAN DETAILS</p> <p>3.7 0.7</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None Stability: Stable Groundwater (description): Dry</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 3.00m at scheduled dept</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541202.35

Ground Level (mAOD)
8.88
Northing (OS mN)
266649.09

Start Date
15/12/2016
End Date
15/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill	
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend				
0.10	ES					Grass over TOPSOIL		(0.10)	8.78		
0.10 - 0.20	D2					MADE GROUND: Firm brown sandy, slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is subangular, fine to coarse of mixed lithologies. Metal fragment		0.10			
0.10 - 0.20	ES1										
0.10 - 0.60	D3								(0.50)		
0.40 - 0.50	ES7										
0.60 - 0.70	D5					Stiff to very stiff brown and grey slightly sandy silty CLAY. Sand is fine to medium. [RIVER TERRACE DEPOSIT]		0.60	8.28		
0.60 - 0.70	ES4										
0.80 - 1.30	B6								(0.70)		
1.30	ES					Very stiff grey silty CLAY. Abundant nodules of white firm silt. [KIMMERIDGE CLAY FORMATIO] orangish brown sandy subrounded fine to coarse GRAVEL. Sand is fine to coarse.		1.30	7.58		
1.30 - 1.40	D9										
1.30 - 1.40	ES8										
1.50 - 2.50	B10								(1.20)		
2.50 - 2.60	D11					Firm dark bluish grey mottled brown silty CLAY with shelly fragments and gypsum crystals. [KIMMERIDGE CLAY FORMATIO]		2.50	6.38		
2.50 - 3.00	B12								(0.50)		
								3.00	5.88		

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Dry</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 3.00m at scheduled depth</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541170.19

Ground Level (mAOD)

Northing (OS mN)
267146.29

Start Date
21/12/2016
End Date
21/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 0.10 0.10	B1 D3 ES ES2					Turf over TOPSOIL; Very soft dark brown slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of flint. With frequent roots and rootlets (<3mm x 150mm).		(0.40)		
						Dark orangish brown silty gravelly SAND. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of flint and chalk.		0.40		
0.75 0.75 0.75 0.75	B4 D6 ES ES5					Orange SAND. Sand is fine to coarse.		1.00 (0.20)		
1.20 1.20	B7 D8				▼	Soft becoming firm with depth bluish grey mottled brown slightly gravelly CLAY. Gravel is subangular to rounded fine to coarse of flint and chalk.		1.20		
								(2.10)		
3.30 3.30	B9 D10							3.30		

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Water seepage at 1.20m</p>	<p>Remarks</p> <p>Trial pit terminated at 3.30m on engineers instruction.</p> <p>Termination Depth: 3.30m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

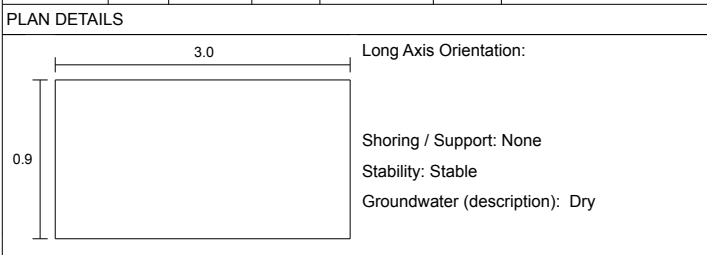
Project No.
UA008426-01
Easting (OS mE)
540952.40

Ground Level (mAOD)
9.17
Northing (OS mN)
266285.73

Start Date
23/01/2017
End Date
23/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.20 0.20	ES ES1	0.20	PID	5.608ppm		MADE GROUND: Concrete.		(0.15)		
0.40 0.40	ES ES2	0.40	PID	18.16ppm		MADE GROUND: Reddish brown slightly sandy GRAVEL. Sand is fine to coarse. Gravel is subrounded to subangular, fine to coarse tarmac. Firm to stiff grey slightly sandy CLAY. Sand is fine to medium. With pockets (< 10 x 10 x 10 mm) of black oily clay.		0.15 (0.10) 0.25	9.02 8.92	
1.20 1.20	ES ES3	1.20	PID	122.55ppm		Firm bluish grey slightly sandy CLAY. Sand is fine to coarse.		(0.85)		
1.35	ES4	1.35	PID	4.18ppm		Orangish brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is subrounded to subangular, fine to coarse of flint.		1.10 (0.20)	8.07	
						Clay drainage pipe.		1.30 (0.10) 1.40	7.87 7.77	



Remarks
Pit terminated on engineers instruction at 1.40 m as drainage pipe was encountered at 1.30 m.

Termination Depth:
1.40m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540952.00

Ground Level (mAOD)
266286.00
Northing (OS mN)
266286.00

Start Date
24/01/2017
End Date
24/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/Backfill
Depth	Type/No.	Depth	Type/No.	Results		Description	Legend			
0.20	ES1	0.20	PID	6.1ppm		MADE GROUND: Concrete.		(0.20)		
						MADE GROUND: Reddish brown slightly sandy GRAVEL. Sand is fine to coarse. Gravel is subrounded to subangular, fine to coarse tarmac.		0.20 (0.15)		
0.50 0.50	ES ES2	0.50	PID	54.24ppm		Firm to stiff grey slightly sandy CLAY. Sand is fine to medium. With pockets (< 10 x 10 x 10 mm) of black oily clay. Geotextile mat	 	0.35 (0.55)		
1.00 1.00	ES ES3	1.00	PID	55.49ppm		Firm bluish grey slightly sandy CLAY. Sand is fine to coarse. Strong hydrocarbon odour.		0.90 (0.40)		
1.50 1.50	ES ES4	1.50	PID	139.91ppm		Orangish brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is subrounded to subangular, fine to coarse of flint.		1.30 (0.60)		
								1.90		

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Unstable</p> <p>Groundwater (description): Seepage at 1.9m</p>	<p>Remarks</p> <p>Excavated next to TPC016A. Trial pit terminated on engineers instruction at 1.90m due to instability.</p> <p>Termination Depth: 1.90m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541053.05

Ground Level (mAOD)
9.54
Northing (OS mN)
266223.99

Start Date
24/01/2017
End Date
24/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30	ES ES1	0.10	PID	1.249ppm		Grass over TOPSOIL; Dark brown slightly gravelly clayey SAND. Sand is fine to coarse. Gravel is rounded to subangular, fine to coarse of sandstone. With occasional rootlets.		(0.90)	8.64	
1.10 1.10 - 1.40	ES ES2	1.10	PID	1.729ppm		Light reddish brown gravelly SAND. Sand is fine to coarse. Gravel is subrounded to subangular, fine and medium of sandstone.		(0.55)	8.09	
2.00 - 2.30	ES3					Yellowish brown gravelly SAND. Sand is fine to coarse. Gravel is subrounded to subangular, fine and medium of sandstone.		(0.95)	7.14	

PLAN DETAILS

2.5 Long Axis Orientation:

0.7

Shoring / Support: None
Stability: Stable
Groundwater (description): Groundwater inflow at 2.40m

Remarks

Pit terminated on engineers instruction at 2.40m due to groundwater influx.

Termination Depth:
2.40m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540862.09

Ground Level (mAOD)
9.46
Northing (OS mN)
266361.19

Start Date
24/01/2017
End Date
24/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
						MADE GROUND: Concrete.		(0.15)		
0.40	ES1	0.40	PID	200.8ppm		Firm to stiff grey slightly sandy CLAY with pockets (up to 10 x 10 x 10 mm) of black oily clay. Sand is fine and medium. Strong hydrocarbon odour.		0.15 (0.45)	9.31	
0.80	ES2	0.80	PID	109.28ppm		Firm bluish grey slightly sandy CLAY. Sand is fine to coarse.		0.60 (0.50)	8.86	
1.50	ES3	1.50	PID	2.17ppm		Orangish brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is subrounded to subangular, fine to coarse of flint.		1.10 (1.00)	8.36	
								2.10	7.36	

PLAN DETAILS

Long Axis Orientation:

Shoring / Support: None

Stability: Unstable

Groundwater (description): Groundwater inflow at 2.10m

Remarks

Pit terminated on engineers instruction at 2.10 m, unstable due to influx of water.

Termination Depth:
2.10m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540864.00

Ground Level (mAOD)
266059.00
Northing (OS mN)
266059.00

Start Date
24/01/2017
End Date
24/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10	ES ES1	0.10	PID	<1ppm		Vegetation over TOPSOIL; Soft dark brown slightly gravelly slightly sandy CLAY. With frequent roots and rootlets (less than 20 mm x 300 mm). Gravel is subangular and subrounded fine to coarse of flint.		(0.25)		
						Very soft greyish brown slightly gravelly slightly sandy CLAY Sand is fine to coarse. Gravel is subangular to rounded fine to coarse of flint.		0.25		
0.50 0.50	ES ES2	0.50	PID	5.02ppm				(0.55)		
						Soft orangish brown slightly sandy slightly gravelly CLAY Sand is fine and medium. Gravel is subangular and subrounded fine to coarse of flint. With occasional roots/rootlets (less than 2 mm x 250 mm)		0.80		
1.00	ES3	1.00	PID	<1ppm				(0.40)		
1.20	ES4					Very soft light grey mottled orange slightly gravelly CLAY Gravel is subangular and subrounded fine to coarse of chalk and flint. With occasional rootlets (less than 2 mm x 100 mm).		1.20		
								(0.80)		
						Orangish brown slightly gravelly clayey SAND Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint.		2.00		
								(0.40)		
					▼	Orangish brown slightly gravelly CLAY Not possible to sample due to pit collapsing in.		2.40		
2.60	ES5	2.60	PID	2.348ppm				(0.30)		
								2.70		

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Unstable</p> <p>Groundwater (description): Water seepage at 2.40m</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 2.70m, unstable due to water seepage.</p> <p>Termination Depth: 2.70m</p>
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










Project
Northstowe Phase 2
Client
Homes and Communities Agency


Project No.
UA008426-01
Easting (OS mE)
540767.00

Ground Level (mAOD)
266193.00
Northing (OS mN)
266193.00

Start Date
24/01/2017
End Date
24/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.40 0.40	ES ES1	0.40	PID	<1ppm		Vegetation over MADE GROUND; Soft orangish brown slightly sandy CLAY. Sand is fine to coarse.		(0.10)		
						MADE GROUND; Concrete footing with rebar - weak grey concrete, 50% clasts, 30% concrete, 20% voids.		0.10		
1.00 1.00	ES2	1.00	PID	<1ppm		Soft orangish brown slightly gravelly slightly sandy CLAY Sand is fine. Gravel is subangular and subrounded fine to coarse of flint.		0.30		
								(1.00)		
1.50 1.50	ES ES3	1.50	PID	<1ppm		Orange gravelly SAND Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint.		1.30		
						Firm to stiff light grey slightly gravelly CLAY Gravel is subangular and subrounded fine and medium of flint.		(0.20)		
2.30 2.30	ES ES4	2.30	PID	<1ppm				1.50		
								(0.80)		
								2.30		

<p>PLAN DETAILS</p>  <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description):</p>	<p>Remarks</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin-left: auto;"> Termination Depth: 2.30m </div>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540800.13

Ground Level (mAOD)
9.41
Northing (OS mN)
266197.82

Start Date
24/01/2017
End Date
24/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.30 0.30	ES ES1	0.30	PID	<1ppm		MADE GROUND: Weak grey concrete, 40% clasts, 40% concrete, 20% voids. With rebar.		(0.20)	9.21	
0.50 0.50	ES ES2	0.50	PID	<1ppm		MADE GROUND: Dark brown mottled black slightly gravelly slightly sandy CLAY with strong hydrocarbon odour. Sand is fine to coarse. Gravel is angular and subangular fine to coarse of brick and concrete. Very strong odour of hydrocarbons and sheen to material.		(0.20)	9.01	
0.90 0.90	ES ES3	0.90	PID	1.1ppm		Dark greyish brown mottled black slightly gravelly clayey SAND with strong hydrocarbon odour and sheen to gravel fragments. Sand is fine to coarse. Gravel is angular of possible ballast.		(0.50)	8.51	
1.50 1.50	ES ES4	1.50	PID	5.23ppm		Soft light grey mottled brown slightly gravelly CLAY diesel odour noted. Very strong hydrocarbon odour and obvious sheen to gravel. Gravel is angular to subrounded fine to coarse of flint.		(1.60)		
3.00 3.00	ES ES5	3.00	PID	<1ppm		Very soft dark greyish brown slightly gravelly silty CLAY with strong hydrocarbon odour. With frequent shell fragments (less than 5 mm x 7 mm). Gravel is subangular to rounded fine and medium of flint.		(0.50)	6.91	
								3.00	6.41	

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stabl</p> <p>Groundwater (description): Dry</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 3.00m at scheduled depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540923.48

Ground Level (mAOD)
9.35
Northing (OS mN)
266771.87

Start Date
17/01/2017
End Date
17/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.30 0.10 - 0.30	B2 ES1					Grass over TOPSOIL; Light to dark brown clayey gravelly SAND. Sand is fine to coarse. Gravel is subangular to subrounded, fine and medium of mixed lithologies.		(0.60)	8.75	
1.00 - 1.50 1.00 - 1.50	B4 ES3					Yellowish brown very gravelly SAND. Sand is fine to coarse. Gravel is subangular to subrounded, fine and medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		(1.30)	7.45	

<p>PLAN DETAILS</p> <p>2.2 0.7</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None Stability: Unstable Groundwater (description): Groundwater inflow at 1.90</p>	<p>Remarks</p> <p>Pit terminated due to groundwater inflow and pit collapsing.</p> <p>Termination Depth: 1.90m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540926.59

Ground Level (mAOD)
9.20
Northing (OS mN)
266634.08

Start Date
17/01/2017
End Date
17/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.30 0.10 - 0.30	B2 ES1					MADE GROUND: Grass over dark brown slightly clayey sandy GRAVEL. Sand is fine. Gravel is angular to subrounded, fine to coarse of brick, concrete and ceramics. Low cobble content of subrounded concrete and angular brick.		(0.50)	8.70	
0.60 - 0.90 0.60 - 0.90	B4 ES3					Yellowish brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is subangular to subrounded, fine and medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		(1.20)		
1.80 - 2.20 1.80 - 2.20	B6 ES5					Dark yellowish brown slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is subangular to subrounded, fine and medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		(0.50)	7.50	
2.50 - 2.80 2.50 - 2.80	B7 D8				▼	Firm dark bluish grey slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(0.80)	7.00	
								3.00	6.20	

<p>PLAN DETAILS</p> <p>2.4 0.7</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Groundwater inflow at 2.20m</p>	<p>Remarks</p> <p>Pit terminated on reaching target depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540744.76

Ground Level (mAOD)
9.60
Northing (OS mN)
266262.35

Start Date
08/12/2016
End Date
08/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.30 0.10 - 0.30	B2 ES1					Grass over TOPSOIL; Light to dark brown slightly gravelly clayey SAND with occasional rootlets. Sand is fine to coarse Gravel is subangular and subrounded fine to medium of sandstone.		(0.50)	9.10	
0.50 0.50 - 0.90 0.50 - 0.90	ES B4 ES3					Yellowish brown slightly clayey very sandy GRAVEL. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of mixed lithologies. Low cobble content of angular and subrounded flint and sandstone. [RIVER TERRACE DEPOSITS]		(1.10)		
1.60 - 1.90 1.60 - 1.90	B6 ES5					Yellowish brown clayey very sandy GRAVEL. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of mixed lithologies. Low cobble content of subrounded to angular flint and sandstone. [RIVER TERRACE DEPOSITS]		(0.80)	8.00	
2.60 - 2.90 2.60 - 2.90 2.60 - 2.90	B8 D9 ES7	2.60 2.60 2.60	HV(1) HV(2) HV(3)	101(kPa) 102(kPa) 91(kPa)		Firm dark bluish grey slightly sandy CLAY. Sand is fine. [KIMMERIDGE CLAY FORMATION]		(0.60)	7.20	
									6.60	

<p>PLAN DETAILS</p> <p>2.5 Long Axis Orientation:</p> <p>0.6</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Groundwater at 2.40m</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 3.00m at scheduled depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540842.66

Ground Level (mAOD)
9.30
Northing (OS mN)
266347.84

Start Date
10/01/2017
End Date
10/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/Backfill
Depth	Type/No.	Depth	Type/No.	Results		Description	Legend			
0.10 0.10 0.10	B1 D3 ES2					Grass over TOPSOIL; Firm brown slightly gravelly CLAY. Sand is fine to medium. Gravel is subangular and subrounded fine to coarse of flint. Frequent roots and rootlets		(0.30)	9.00	
						Firm orangish brown slightly gravelly, sandy CLAY. Gravel is subangular and subrounded fine to coarse of flint. Occasional rootlets. [RIVER TERRACE DEPOSITS]		0.30		
0.90 0.90 0.90	B4 D6 ES5							(1.10)		
1.50 1.50 1.50	B7 D9 ES8					Orangish brown gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint. Occasional rootlets [RIVER TERRACE DEPOSITS]		1.40	7.90	
								(0.70)		
2.20 2.20 2.20	B10 D12 ES11					Orangish brown sandy GRAVEL. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of flint. [RIVER TERRACE DEPOSITS]		2.10 (0.20)	7.20	
								2.30	7.00	

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Unstable</p> <p>Groundwater (description): Water seepage at 2.30m</p>	<p>Remarks</p> <p>Pit terminated on engineers instructions at 2.30m due to water ingress.</p> <p>Termination Depth: 2.30m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540741.02

Ground Level (mAOD)

Northing (OS mN)
266184.08

Start Date
05/01/2017
End Date
05/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10	B1				Grass over TOPSOIL: Light to dark brown slightly gravelly clayey SAND with occasional rootlets. Sand is fine to coarse. Gravel is subangular to subrounded fine to medium of mixed lithologies.		(0.50)	0.50		
0.10	D3									
0.10	ES				Light orangish brown slightly clayey slightly gravelly SAND. Sand is fine to coarse. Gravel is angular to subrounded fine to medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		0.50	1.60		
0.10	ES2									
0.10 - 0.30	B2									
0.10 - 0.30	ES1									
0.50	B4									
0.50	D6									
0.50	ES5									
0.70	ES									
0.70 - 1.10	B4									
0.70 - 1.10	ES3									
0.90	B7				[RIVER TERRACE DEPOSITS]		2.10			
0.90	D9									
0.90	ES8									
1.50	B10									
1.50	D12									
1.50	ES11									
1.50 - 1.80	B5									
2.70	B13									
2.70	D15									
2.70	ES14									

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Unstable</p> <p>Groundwater (description): Groundwater at 2.10m</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 2.30m due to collapse through water ingress.</p> <p>Termination Depth: 2.10m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540854.77

Ground Level (mAOD)

Northing (OS mN)
266171.31

Start Date
06/01/2016
End Date
06/01/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30	ES B2 ES1					Grass over TOPSOIL; Dark brown clayey gravelly SAND with occasional rootlets. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse of mixed lithologies.		(0.75)		
0.80 - 1.20 0.80 - 1.20	B4 ES3					Orangish brown occasionally light grey slightly gravelly very clayey SAND. Sand is fine to coarse. Gravel is subangular to subrounded fine to medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		0.75		
1.60 1.60 - 2.00 1.60 - 2.00	ES B6 ES5					Orangish brown occasionally light grey gravelly very clayey SAND. Sand is fine to coarse. Gravel is subangular to subrounded fine to medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		1.80		
								(0.50)		
								2.30		

<p>PLAN DETAILS</p> <p>2.3 0.7</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Unstable</p> <p>Groundwater (description): Groundwater at 2.30m</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 2.30m due to collapse through water ingress.</p> <p>Termination Depth: 2.30m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541050.82

Ground Level (mAOD)
9.29
Northing (OS mN)
266100.51

Start Date
06/01/2016
End Date
06/01/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.30 0.10 - 0.30	B2 ES1					Grass over TOPSOIL; Dark brown slightly clayey slightly gravelly SAND with occasional rootlets. Sand is fine. Gravel is angular to subrounded fine to medium of sandstone and flint. Old land drain encountered in eastern pit wall		(0.80)	8.49	
0.90 - 1.20 0.90 - 1.20	B4 ES3					Yellowish brown occasionally grey slightly gravelly clayey SAND. Sand is fine to coarse. Gravel is angular to subrounded fine to medium, of sandstone and flint. [RIVER TERRACE DEPOSITS]		(1.30)		
								2.10	7.19	

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Unstable</p> <p>Groundwater (description): Groundwater at 2.10m</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 2.10m due to collapse through water ingress</p> <p>Termination Depth: 2.10m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540950.55

Ground Level (mAOD)
9.76
Northing (OS mN)
266150.75

Start Date
06/01/2016
End Date
06/01/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.30 0.10 - 0.30	B2 ES1					MADE GROUND: Grass over dark brown slightly clayey slightly gravelly SAND. Sand is fine and medium. Gravel is subangular to subrounded fine to coarse of brick. Low cobble content of angular brick.		(0.45)	9.31	
0.60 - 1.00 0.60 - 1.00	B4 ES3					Light orangish brown slightly gravelly clayey SAND. Sand is fine to coarse. Gravel is subangular to subrounded fine and medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		(0.85)		
1.50 - 2.00 1.50 - 2.00	B6 ES5					Light orangish brown slightly clayey slightly gravelly SAND. Sand is fine to coarse. Gravel is subangular to subrounded fine to medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		(0.80)	8.46	
									2.10	7.66

<p>PLAN DETAILS</p> <p>1.9 0.7</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Unstable</p> <p>Groundwater (description): Groundwater at 2.10m</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 2.10 due to collapse through water ingress.</p> <p>Termination Depth: 2.10m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540401.25

Ground Level (mAOD)
9.19
Northing (OS mN)
266549.79

Start Date
04/01/2017
End Date
04/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/Backfill
Depth	Type/No.	Depth	Type/No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30	ES B2 ES1					Grass over TOPSOIL; Dark brown slightly clayey slightly gravelly SAND. Sand is fine to coarse. Gravel is subangular to subrounded fine and medium of mixed lithologies.		(0.40)	8.79	
0.60 - 0.90 0.60 - 0.90	B4 ES3					Light brown slightly clayey slightly gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine of mixed lithologies. [RIVER TERRACE DEPOSITS]		(0.50)	8.29	
1.10 - 1.50 1.10 - 1.50	B6 ES5					Very light yellowish brown very gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine and medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		(1.10)	7.19	
								2.00		

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable to 2.00m</p> <p>Groundwater (description): Groundwater at 2.00m</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 2.00m due to collapse.</p> <p>Termination Depth: 2.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)

Ground Level (mAOD)
Northing (OS mN)

Start Date
04/01/2017
End Date
04/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.30 0.30 0.30	B1 D3 ES2					TOPSOIL: Grass over soft dark brown slightly gravelly sandy CLAY tending to clayey SAND. Sand is fine to coarse. Gravel is subangular to angular, fine to coarse of flint.		(0.60)		
						Yellowish orange gravelly SAND. Sand is fine to coarse. Gravel is subangular to angular, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		0.60 (0.35)		
1.00 1.00	B4 ES5					Light grey gravelly becoming slightly gravelly SAND. Sand is fine to coarse. Gravel is subangular to angular, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		0.95 (0.79)		
1.80 1.80	B6 ES7					Light grey sandy GRAVEL. Sand is fine to coarse. Gravel is subangular to angular, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		1.74 (1.06)		
								2.80		

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable to 1.33m</p> <p>Groundwater (description):</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 2.80 m due to pit wall stability, Pit collapsed back to 2.10 m and 1.50 m. Soakaway test undertaken in adjacent pit.</p> <p>Termination Depth: 2.80m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541049.17

Ground Level (mAOD)
6.18
Northing (OS mN)
267148.33

Start Date
11/01/2017
End Date
11/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill	
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend				
0.10	B1					Very soft dark greyish brown slightly gravelly CLAY. Gravel is subangular and angular fine to coarse of flint. With frequent roots/rootlets (<2 mm x 100 mm). [RIVER TERRACE DEPOSITS]	---	(0.30)	5.88		
0.10	D3										
0.10	ES										
0.10	ES2					Soft orangish brown slightly gravelly CLAY Gravel is subangular and angular fine to coarse of flint. With frequent roots/rootlets (<2 mm x 100 mm). [RIVER TERRACE DEPOSITS]	---	(0.25)	5.63		
0.35	B4										
0.35	D6										
0.35	ES5					Stiff grey mottled light grey slightly gravelly silty CLAY. Gravel is subangular and subrounded fine and medium of flint. [KIMMERIDGE CLAY FORMATION]	---	---	(1.45)		---
0.60	B7										
0.60	D9										
0.60	ES					Very weak, light grey SILTSTONE [KIMMERIDGE CLAY FORMATION]	xxxxxx xxxxxx xxxxxx	2.00 (0.15)	4.18		
0.60	ES8										
2.00	B10				Stiff grey mottled greyish brown silty CLAY. With occasional orangish brown ferruginous staining. [KIMMERIDGE CLAY FORMATION]					---	2.15
2.20	B11	2.20	HV(1)	106(46)kPa							
2.20	D12	2.20	HV(2)	110(48)kPa							
2.20		2.20	HV(3)	98(50)kPa						(0.85)	
										3.00	3.18

PLAN DETAILS	Remarks
	Pit terminated on engineers instruction at 3.00m on reaching target depth.
	Termination Depth: 3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541462.10

Ground Level (mAOD)
7.11
Northing (OS mN)
266890.02

Start Date
15/12/2016
End Date
15/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30	ES B2 ES1					Grass over TOPSOIL; Soft to firm dark brown slightly gravelly very clayey SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine and medium of mixed lithologies.		(0.40)	6.71	
0.50 - 0.80 0.50 - 0.80 0.50 - 0.80	B4 D5 ES3					Soft light brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine and medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		(0.40)	6.31	
0.90 0.90 - 1.20 0.90 - 1.20 0.90 - 1.20	ES B7 D8 ES6					Firm light bluish grey mottled brown slightly gravelly slightly sandy to sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine and medium of mixed lithologies. [KIMMERIDGE CLAY FORMATION]		(0.80)	5.51	
					▼	Firm to stiff dark bluish grey mottled yellowish brown sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION] Occasional gravel pockets		1.60		
2.40 - 2.70 2.40 - 2.70 2.40 - 2.70	B10 D11 ES9	2.50 2.50	HV(1) HV(2)	110(53)kPa >120(kPa)				(1.40)		
								3.00	4.11	

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Stable</p> <p>Groundwater (description): Groundwater at 1.80m</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 3.00m on reaching target depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541462.07

Ground Level (mAOD)

Northing (OS mN)
266889.94

Start Date
15/12/2016
End Date
15/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
						Grass over TOPSOIL; Soft to firm dark brown soft to firm slightly gravelly very clayey SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine and medium of mixed lithologies.		(0.30)		
						Soft light brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular and subrounded fine and medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		0.30 (0.40)		
						Yellowish brown sandy very clayey GRAVEL. Sand is fine to coarse. Gravel is subangular and subrounded fine and medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		0.70 (0.70)		
								1.40		

<p>PLAN DETAILS</p> <p>2.1 0.7</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None Stability: Stable Groundwater (description): Dry</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 1.40m on reaching target depth for soakaway test.</p> <p>Termination Depth: 1.40m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541456.47

Ground Level (mAOD)
6.89
Northing (OS mN)
266730.84

Start Date
18/01/2017
End Date
18/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10	B1	0.10	HV(1)	30(10)kPa	▼	Grass and stubble over TOPSOIL; Soft brown slightly gravelly CLAY. Gravel is subangular and subrounded fine to coarse of flint. Frequent rootlets. Firm orangish brown slightly sandy CLAY. Sand is fine to coarse. Occasional rootlets. [RIVER TERRACE DEPOSITS] Firm to stiff orangish brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subangular to rounded fine to coarse of flint. [RIVER TERRACE DEPOSITS] Stiff grey mottled brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse. With occasional remnants of plant rootlets and pockets (< 100 mm) of sand. Gravel is angular and subangular fine to coarse of flint. Occasional siltstone fragments (<10 mm x 10 mm x 20 mm). [KIMMERIDGE CLAY FORMATION] Selenite crystals <1mm in size		(0.30)	6.59	
0.10	D3	0.10	HV(2)	40(20)kPa						
0.10	ES	0.10	HV(3)	50(10)kPa						
0.50	B4	0.50	HV(4)	40(10)kPa				(0.45)	6.14	
0.50	D6	0.50	HV(5)	50(20)kPa						
0.50	ES5	0.50	HV(6)	60(20)kPa						
0.90	B7	0.90	HV(7)	100(50)kPa				(0.45)	5.69	
0.90	D9	0.90	HV(8)	110(60)kPa						
0.90	ES8	0.90	HV(9)	110(60)kPa						
2.00	B10	2.00	HV(10)	110(50)kPa				(1.80)	3.89	
2.00	D2	2.00	HV(11)	110(50)kPa						
2.00	ES1	2.00	HV(12)	120(70)kPa						

PLAN DETAILS

2.2
0.9

Long Axis Orientation:

Shoring / Support: None
Stability: Stable
Groundwater (description): Slight seepage at 1.30m

Remarks

Pit terminated on engineers instruction at 3.00m on reaching target depth.

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540399.66

Ground Level (mAOD)
9.26
Northing (OS mN)
266451.05

Start Date
04/01/2017
End Date
04/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.40 0.10 - 0.40	ES B2 ES1					Grass over TOPSOIL; Dark brown slightly clayey slightly gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine and medium of mixed lithologies.		(0.40)	8.86	
0.70 0.70 - 1.00 0.70 - 1.00	ES B4 ES3					Light yellowish brown gravelly very clayey SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine and medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		(0.80)	8.06	
1.50 - 2.00 1.50 - 2.00	B6 ES5					Very light yellowish brown very gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine of mixed lithologies. [RIVER TERRACE DEPOSITS]		(1.00)	7.06	

<p>PLAN DETAILS</p> <p>2.3 0.7</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Unstable at 2.20m</p> <p>Groundwater (description): Groundwater at 2.20m</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 2.20m due to collapse.</p> <p>Termination Depth: 2.20m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)

Ground Level (mAOD)
Northing (OS mN)

Start Date
04/01/2017
End Date
04/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.20 0.20 0.20	B1 D3 ES2					Grass over TOPSOIL: Soft dark brown slightly gravelly sandy CLAY tending to clayey SAND. Sand is fine to coarse. Gravel is angular and subangular, fine to coarse of flint.		(0.40)		
0.90 0.90	B4 ES5					Light yellowish orange gravelly SAND. Sand is fine to coarse. Gravel is angular and subangular, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		0.40		
						Light yellowish grey sand.				
						Dark grey gravelly sand.				
2.60	D6					Light grey sandy GRAVEL. Sand is fine to coarse. Gravel is angular and subangular, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		2.50 (0.15) 2.65		

<p>PLAN DETAILS</p> <p>2.5 Long Axis Orientation:</p> <p>0.5</p> <p>Shoring / Support: None</p> <p>Stability: Stable to approx 2.00m</p> <p>Groundwater (description): Groundwater at 1.90m</p>	<p>Remarks</p> <p>Pit terminated on engineers instructions at 2.65 m due to pit wall instability. Soakaway test undertaken in adjacent pit.</p> <p>Termination Depth: 2.65m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540600.05

Ground Level (mAOD)
9.68
Northing (OS mN)
266249.41

Start Date
05/01/2017
End Date
05/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30	ES B2 ES1					Grass over TOPSOIL; Dark brown slightly gravelly clayey fine to coarse SAND with occasional rootlets. Gravel is subangular and subrounded fine and medium of mixed lithologies.		(0.30)	9.38	
0.70 - 1.00 0.70 - 1.00	B4 ES3				▼	Yellowish brown slightly gravelly clayey fine to coarse SAND. Gravel is subangular and subrounded fine and medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		(1.30)		
1.80 - 2.30 1.80 - 2.30 1.80 - 2.30	B6 D7 ES5					Firm to stiff dark bluish grey slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		1.60	8.08	
		2.50 2.50	HV(1) HV(2)	90(42)kPa 93(41)kPa				(1.40)		
								3.00	6.68	

PLAN DETAILS

Long Axis Orientation:

Shoring / Support: None

Stability: Stable

Groundwater (description): Groundwater at 1.20m

Remarks

Pit terminated on engineers instruction at 3.00m on reaching target depth.

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

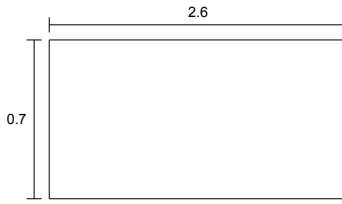
Project No.
UA008426-01
Easting (OS mE)
540549.32

Ground Level (mAOD)
9.44
Northing (OS mN)
266448.71

Start Date
05/01/2017
End Date
05/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30	ES B2 ES1					Grass over TOPSOIL; Light and dark brown slightly clayey slightly gravelly SAND with occasional rootlets. Sand is fine to coarse. Gravel is subangular and subrounded fine of flint.		(1.20)		
0.70 - 1.00	B3									
1.20 - 1.50 1.20 - 1.50	B5 ES4					Orangish brown gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine and medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		1.20 (0.30)	8.24	
						Very light yellowish brown gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine and medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		1.50	7.94	
2.30 - 2.60 2.30 - 2.60	B7 ES6							(1.20)		
					▼ ▽			2.70	6.74	

PLAN DETAILS	Remarks
 <p>2.6 Long Axis Orientation:</p> <p>0.7</p> <p>Shoring / Support: None Stability: Unstable at 2.70m Groundwater (description): Groundwater at 2.70m</p>	<p>Pit terminated on engineers instruction at 2.70m due to collapse</p> <p>Termination Depth: 2.70m</p>

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540550.58

Ground Level (mAOD)
9.72
Northing (OS mN)
266300.63

Start Date
05/01/2017
End Date
05/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30	ES B2 ES1					Grass over TOPSOL; Light and dark brown slightly clayey slightly gravelly SAND with occasional rootlets. Sand is fine to coarse. Gravel is subangular and subrounded fine and medium of mixed lithologies.		(0.60)	9.12	
0.70 - 1.00 0.70 - 1.00	B4 ES3					Light yellowish brown slightly gravelly clayey SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine and medium of mixed lithologies. [RIVER TERRACE DEPOSITS]		(1.10)		
1.20 - 1.60 1.20 - 1.60	B6 ES5					Light orangish brown slightly gravelly SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine of mixed lithologies. [RIVER TERRACE DEPOSITS]		1.70 (0.30)	8.02	
					▼			2.00	7.72	

<p>PLAN DETAILS</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Unstable at 2.00m</p> <p>Groundwater (description): Groundwater at 2.00m</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 2.00m due to collapse.</p> <p>Termination Depth: 2.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540698.31

Ground Level (mAOD)
9.27
Northing (OS mN)
266348.94

Start Date
08/12/2016
End Date
08/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30	ES B2 ES1					Grass over TOPSOIL; Dark brown clayey SAND with occasional rootlets. Sand is fine to coarse.		(0.40)	8.87	
0.50 0.50 - 0.80 0.50 - 0.80	ES B4 ES3					Light brown slightly gravelly clayey SAND. Sand is fine to coarse. Gravel is subangular and subrounded fine of mixed lithologies. [RIVER TERRACE DEPOSITS]		(0.40)	8.47	
1.20 - 1.60 1.20 - 1.60	B6 ES5					Yellowish brown very sandy GRAVEL. Sand is fine to coarse. Gravel is subangular and subrounded fine to coarse of mixed lithologies. Low cobble content of subangular to subrounded sandstone. [RIVER TERRACE DEPOSITS]		(1.30)	7.17	

<p>PLAN DETAILS</p> <p>3.1 0.6</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Unstable at 2.10m</p> <p>Groundwater (description): Groundwater at 2.10m</p>	<p>Remarks</p> <p>Pit terminated on engineers instructions at 2.10m due to collapsing.</p> <p>Termination Depth: 2.10m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540751.71

Ground Level (mAOD)
8.97
Northing (OS mN)
266800.18

Start Date
18/01/2017
End Date
18/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill	
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend				
0.10	B1	0.10	HV(1)	70(40)kPa		TOPSOIL; Firm to stiff dark brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is subrounded and rounded fine to coarse of flint. Frequent roots and rootlets.		(0.20)	8.77		
0.10	D3	0.10	HV(2)	80(40)kPa		Stiff orangish brown slightly gravelly CLAY. Gravel is subrounded and rounded, fine and medium of flint. Occasional rootlets. [RIVER TERRACE DEPOSITS]		0.20			
0.10	ES	0.10	HV(3)	90(50)kPa							
0.40	B4	0.40	HV(4)	80(40)kPa		Firm to stiff grey mottled brown silty slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is subangular, fine to coarse of siltstone. [RIVER TERRACE DEPOSITS]		(0.30)	8.47		
0.40	ES5	0.40	HV(5)	80(50)kPa							
0.40		0.40	HV(6)	90(60)kPa							
0.70	B6	0.70	HV(7)	110(70)kPa		Grey sandy GRAVEL. Sand is fine to coarse. Gravel is angular to rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		0.50	7.77		
0.70	ES7	0.70	HV(8)	120(80)kPa							
0.70		0.70	HV(9)	120(80)kPa							
1.40	B8	1.40	D10			Stiff dark grey slightly gravelly slightly sandy CLAY. Sand is fine to coarse. Gravel is rounded, coarse of flint. Occasional cobbles up to 80 x 40 x 20 mm. Frequent selenite crystals (<5 mm). [KIMMERIDGE CLAY FORMATION]		(0.40)	7.37		
1.40	ES9	1.40									
1.40		1.40									
2.00	B1	2.00	HV(10)	120(60)kPa			1.60	5.97			
2.00	D3	2.00	HV(11)	120(80)kPa							
2.00	ES2	2.00	HV(12)	120(80)kPa							
							(1.40)				
							3.00				

<p>PLAN DETAILS</p>	<p>Remarks</p> <p>Pit terminated on engineers instruction at 3.00m on reaching target depth.</p> <p>Termination Depth: 3.00m</p>
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Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)

Ground Level (mAOD)
Northing (OS mN)

Start Date
16/01/2017
End Date
16/01/2017

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 - 0.20 0.10 - 0.20 0.10 - 0.20	B2 D8 ES1					Grass over soft dark brown slightly sandy gravelly CLAY. Sand is fine. Gravel is fine to medium, subangular to subrounded of mixed lithologies.		(0.30)		
0.30 - 0.60 0.30 - 0.60 0.30 - 0.60	B4 D9 ES3					Soft slightly gravelly sandy CLAY. Sand is fine. Gravel is fine to medium, subangular to subrounded of mixed lithologies.		0.30		
1.30 - 1.60 1.30 - 1.60 1.30 - 1.60	B6 D10 ES5					Yellowish brown gravelly fine to coarse SAND. Gravel is fine to coarse, angular to subrounded of sandstone.		1.30		
2.10 - 2.40 2.10 - 2.40	B7 D11	2.30	HV(1)	91(71)kPa	▼	Firm dark blueish grey slightly sandy CLAY. Sand is fine.		1.80		
								(0.90)		
								2.70		

PLAN DETAILS	Remarks
<p>2.2</p> <p>0.7</p> <p>Long Axis Orientation:</p> <p>Shoring / Support: None</p> <p>Stability: Unstable</p> <p>Groundwater (description):</p>	<p>Pit terminated due to pit becoming unstable.</p> <p>Termination Depth: 2.70m</p>

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541231.07

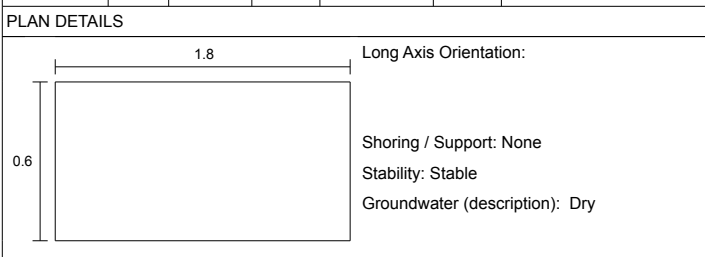
Ground Level (mAOD)

Northing (OS mN)
267200.63

Start Date
06/12/2016
End Date
06/12/2016

Scale
1:25
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.30 0.10 - 0.30 0.10 - 0.30	ES B2 D3 ES1					Grass over TOPSOIL; Soft to firm dark brown gravelly silty CLAY with occasional rootlets. Gravel is subangular and subrounded fine and medium of sandstone.		(0.40)		
						Firm bluish light brown and grey slightly gravelly slightly sandy CLAY. Sand is fine. [KIMMERIDGE CLAY FORMATION]		0.40 (0.70)		
1.00 1.00 - 1.20 1.00 - 1.20 1.00 - 1.20	ES B5 D6 ES4	1.00 1.00 1.00	HV(1) HV(2) HV(3)	52(kPa) 57(kPa) 60(kPa)		Weak light bluish grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]		1.10 (0.30)		
1.30 - 1.50 1.30 - 1.50	B8 ES7					Firm light bluish grey mottled brown slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		1.40 (0.90)		
2.00 - 2.20 2.00 - 2.20 2.00 - 2.20	B10 D11 ES9					Weak light bluish grey SILTSTONE. [KIMMERIDGE CLAY FORMATION]		2.30 (0.30)		
2.80 - 3.00 2.80 - 3.00	D14 ES12					Stiff light bluish grey mottled brown sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(0.40)		
		3.00 3.00 3.00	HV(4) HV(5) HV(6)	107(kPa) 110(kPa) 115(kPa)				3.00		



Remarks

Pit terminated on engineers instruction at 3.00m on reaching target depth.

Termination Depth:
3.00m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541022.98

Ground Level (mAOD)
Northing (OS mN)
266637.11

Start Date
14/12/2016
End Date
14/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.40	B1				Dark reddish brown, clayey SAND. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.40)			
0.10	ES									
0.10 - 0.20	ES2				Firm, dark orangish brown, slightly sandy silty gravelly CLAY. Sand is fine to coarse. Gravel is fine to medium, subangular to subrounded of flint. [RIVER TERRACE DEPOSITS]		0.40			
0.50 - 1.20	B3									
0.90 - 1.00	ES4				Becoming slightly gravelly. Gravel is angular to sub-rounded, fine to coarse of flint.		(1.10)			
1.00 - 1.20	D5									
1.20 - 1.50	B6	1.20	SPT(S)	N=10 (2,3/3,3,2,2)	Firm, dark blueish grey, slightly sandy silty CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		1.50			
1.50 - 3.00	B7									
1.90	ES				Locally very soft.		(1.95)			
1.90 - 2.00	ES8	2.00	SPT(S)	N=11 (2,2/2,3,3,3)						
2.00 - 2.45	D9				Firm, dark blueish grey, slightly sandy silty CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		1.50			
3.00 - 3.45	D10	3.00	SPT(S)	N=12 (2,2/2,2,4,4)						

DRILLING TECHNIQUE			WATER OBSERVATIONS						HOLE/CASING DIAMETER				BACKFILL		
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit							300	1.20	128	2.00	0.00	0.10	Concrete
1.20	3.00	Dynamic Sample							112	2.00			0.10	0.50	Arisings
									98	3.00			0.50	1.50	Gravel
									50	3.45			1.50	3.45	Bentonite

Remarks
No groundwater encountered.
Target depth reached.

Termination Depth:
3.45m


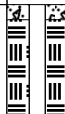
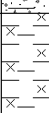



Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540682.24

Ground Level (mAOD)
266204.60
Northing (OS mN)
266204.60

Start Date
13/12/2016
End Date
13/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.30	B1				▼	Dark reddish brown, slightly clayey slightly silty slightly gravelly SAND. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS] Light orangish brown, slightly clayey slightly gravelly SAND. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		(0.30)		
0.10	ES							0.30		
0.10 - 0.20	ES2									
0.30 - 1.20	B3									
0.90	ES							(1.10)		
0.90 - 1.00	ES4									
1.20	ES	1.20	SPT(S)	N=14 (2,3/3,3,3,5)						
1.20 - 1.65	D5									
1.30 - 1.70	B6									
1.70 - 1.80	ES7							1.40		
2.00 - 2.45	D10	2.00	SPT(S)	N=4 (1,1/1,1,1,1)	Firm, light grey, slightly sandy silty CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(1.20)			
2.00 - 2.60	D8						Locally very soft.			
2.90 - 3.00	ES9									
3.00 - 3.45	D11	3.00	SPT(S)	N=9 (2,2/2,3,2,2)	Firm, dark grey, slightly sandy silty gravelly CLAY. Sand is fine to coarse. Gravel is fine, subangular to subrounded of flint. [KIMMERIDGE CLAY FORMATION]		2.60			
3.00 - 3.45	D11						(0.85)			
								3.45		

DRILLING TECHNIQUE			WATER OBSERVATIONS						HOLE/CASING DIAMETER				BACKFILL		
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit	13/12/2016 14:00	1.90	20	1.90			300	1.20	128	2.00	0.00	0.10	Concrete
1.20	1.20	Dynamic Sample							112	2.00			0.10	0.80	Arisings
									98	3.00			0.80	1.00	Bentonite
									50	3.45			1.00	1.50	Gravel

Remarks
Groundwater encountered at 1.90m bgl.
Target depth reached.

Termination Depth:
3.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540796.32

Ground Level (mAOD)
266249.13
Northing (OS mN)
266249.13

Start Date
12/12/2016
End Date
12/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill	
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend				
0.00 - 0.60	B1				▼	MADE GROUND: Soft, light brown, slightly sandy gravelly CLAY with frequent rootlets. Sand is fine to coarse. Gravel is angular to sub-angular, fine to coarse of red brick.		(0.60)			
0.10 - 0.20	ES ES2								0.60		
0.60 - 1.20	B3						Soft to firm, dark brown slightly clayey silty gravelly fine to coarse SAND. Gravel is fine to medium, subangular to subrounded of mixed lithologies. [RIVER TERRACE DEPOSITS]		(0.80)		
0.90 - 1.00	ES4										
1.20 - 1.65	D5	1.20	SPT(S)	N=10 (2,2/3,3,2,2)							
1.65 - 2.00	B6						Light orangish brown, sandy GRAVEL. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSIT]		1.40 (0.25)		
1.90 - 2.00	ES ES7	2.00	SPT(S)	N=6 (1,1/1,2,1,2)			Loose, light brownish orange, very clayey SAND locally tending to sandy slightly gravelly clay. Sand is fine to coarse. Gravel is subangular to angular, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		(0.75)		
2.00 - 2.45	D8										
2.40 - 2.60	D9						Loose, becoming medium dense, light orangish brown, fine to coarse SAND. [RIVER TERRACE DEPOSITS]		2.40		
2.90 - 3.00	ES10	3.00	SPT(S)	N=14 (1,1/3,3,4,4)					(1.05)		
3.00 - 3.45	D11							3.45			

DRILLING TECHNIQUE			WATER OBSERVATIONS						HOLE/CASING DIAMETER				BACKFILL		
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit	12/12/2016 15:00	2.30	20	2.30	2.00		300	1.20	128	2.00	0.00	0.10	Concrete
1.20	3.45	Dynamic Sample							112	2.00			0.10	0.80	Arisings
									98	3.00			0.80	1.00	Bentonite
									50	3.45			1.00	3.00	Gravel

Remarks
Groundwater encountered at 2.30m bgl.
Target depth reached.

Termination Depth:
3.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540923.37

Ground Level (mAOD)
266302.27
Northing (OS mN)

Start Date
12/12/2016
End Date
12/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.50 0.10	B1 ES ES2					Dark reddish brown, silty fine to coarse SAND with frequent rootlets. [RIVER TERRACE DEPOSITS]		(0.50)		
0.10 - 0.20										
0.50 - 1.20	B3					Dense, light brownish orange, gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		0.50		
0.90 - 1.00	ES4									
1.20 - 1.65 1.20 - 1.70	D5 B6	1.20	SPT(S)	N=36 (3,5/6,7,10,13)				(1.30)		
1.75	EW1									
1.90	ES	1.90	PID	31.6ppm		Black fine to coarse SAND. Strong hydrocarbon odour. [RIVER TERRACE DEPOSITS]		1.80		
1.90 - 2.00	ES7	2.00	SPT(S)	N=32 (3,5/7,8,8,9)				(0.20)		
2.00	EW1									
2.00 - 2.45	D8					Dense, light grey SAND & GRAVEL. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint. Hydrocarbon odour. [RIVER TERRACE DEPOSITS]		(0.55)		
2.90	ES									
2.90 - 3.00	ES9	3.00	SPT(S)	N=15 (4,6/3,5,4,3)		Dense, becoming medium dense, light brownish orange SAND & GRAVEL. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		(0.90)		
3.00 - 3.45	D10									
								3.45		

DRILLING TECHNIQUE			WATER OBSERVATIONS						HOLE/CASING DIAMETER				BACKFILL		
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit	12/12/2016 10:00	1.70	20	1.70			300	1.20	128	2.00	0.00	0.10	Concrete
1.20	3.45	Dynamic Sample							112	2.00			0.10	0.80	Arisings
									98	3.00			0.80	1.00	Bentonite
									50	3.45			1.00	2.20	Gravel

Remarks
Groundwater encountered at 1.70m bgl.
Target depth reached.

Termination Depth:
3.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540244.00

Ground Level (mAOD)
Northing (OS mN)
266597.00

Start Date
15/12/2016
End Date
15/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.70 0.10 0.10 - 0.20	B1 ES ES2					Dark reddish brown, slightly clayey SAND. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.70)		
0.70 - 1.20 1.00 1.00 - 1.10 1.20 - 1.65	B3 ES ES4 D5	1.20	SPT(S)	N=50 (2,6/12,12,12,14)		Dense to very dense, light orangish brown, slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to medium of flint. [RIVER TERRACE DEPOSITS]		0.70 (0.95) 1.65		

DRILLING TECHNIQUE			WATER OBSERVATIONS						HOLE/CASING DIAMETER				BACKFILL		
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit Dynamic Sample							300	1.20			0.00	1.65	Arisings
1.20	1.65								50	1.65					

Remarks
No groundwater encountered.
Refusal at 1.65m bgl.

Termination Depth:
1.65m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540303.00

Ground Level (mAOD)
266524.00
Northing (OS mN)
266524.00

Start Date
15/12/2016
End Date
15/12/2016

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1:50
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SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill					
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend								
0.00 - 0.70 0.10 0.10 - 0.20	B1 ES ES2					Dark reddish brown, slightly clayey SAND. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.70)							
0.70 - 1.20	B3					Medium dense to dense, light orangish brown, slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to medium of flint. [RIVER TERRACE DEPOSITS]		0.70							
1.00 - 1.10 1.20 - 1.65 1.20 - 1.80	ES4 D9 B5	1.20	SPT(S)	N=30 (5,6/7,7,8,8)				(1.10)							
1.80 - 2.40 2.00 - 2.45 2.10 - 2.20	B7 D10 ES6	2.00	SPT(S)	N=29 (3,7/7,6,8,8)	▼	Stiff, light greyish white chalky sandy SILT. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		1.80 (0.60)							
2.40 - 3.00 3.00 - 3.45	B8 ES11	3.00	SPT(S)	N=61 (4,7/8,11,16,26)		Very dense, light orangish brown slightly clayey SAND. Sand is fine to medium. [RIVER TERRACE DEPOSITS] Lens of gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded, fine to coarse of flint.		2.40 (1.05) 3.45							
DRILLING TECHNIQUE		WATER OBSERVATIONS				HOLE/CASING DIAMETER				BACKFILL					
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit Dynamic Sample	15/12/2016 13:00	2.00	20	2.00	2.00		300	1.20	128	2.00	0.00	0.10	Concrete
									112	2.00			0.10	1.00	Arisings
									98	3.00			1.00	1.80	Bentonite
									50	3.45			1.80	2.40	Gravel
Remarks															
Groundwater encountered at 2.00m bgl. Target depth reached.															
														Termination Depth:	
														3.45m	

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541126.11

Ground Level (mAOD)
5.61
Northing (OS mN)
267250.40

Start Date
06/12/2016
End Date
06/12/2016

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1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.30	B2				Firm, light greyish brown, slightly sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.30)	5.31		
0.10	ES									
0.10 - 0.20	D3									
0.10 - 0.20	ES1									
0.40 - 1.20	B5				Stiff, brownish grey, slightly sandy silty CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(1.28)	4.03		
1.00 - 1.10	ES4									
1.00 - 1.20	D6	1.20	SPT(S)	N>50 (2,3/5,20,25,0 for 0mm)						
1.20 - 1.58	D7									

DRILLING TECHNIQUE			WATER OBSERVATIONS						HOLE/CASING DIAMETER				BACKFILL		
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit							300	1.20			0.00	1.58	Arisings
1.20	1.58	Dynamic Sample							50	1.58					

Remarks
No groundwater encountered.
Refusal at 1.5m bgl.

Termination Depth:
1.58m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541393.12

Ground Level (mAOD)
7.44
Northing (OS mN)
267184.39

Start Date
06/12/2016
End Date
06/12/2016

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1:50
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SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.30 0.10	B2 ES				[RIVER TERRACE DEPOSITS]		(0.30)	7.14		
0.10 - 0.20	ES1									
0.10 - 0.30	D3									
0.30 - 1.20	B5									
0.40 - 0.80	D6									
0.90 - 1.00	ES4									
1.20 - 1.65 1.20 - 2.00	D7 B11	1.20	SPT(S)	N=9 (1,1/2,1,3,3)	[RIVER TERRACE DEPOSITS]		1.30	6.14		
1.90 - 2.00 2.00 - 2.45	ES8 D9	2.00	SPT(S)	N=13 (2,1/2,3,4,4)	[RIVER TERRACE DEPOSITS]		2.00	5.44		
3.00 - 3.23	D10	3.00	SPT(S)	N>50 (9,10/23,27 for 10mm)	NO RECOVERY. Anticipated to be firm to stiff, dark grey, slightly sandy silty CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(1.23)	4.21		
							3.23			

DRILLING TECHNIQUE			WATER OBSERVATIONS						HOLE/CASING DIAMETER				BACKFILL		
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit							300	1.20	128	2.00	0.00	1.00	Arisings
1.20	3.23	Dynamic Sample							112	2.00			1.00	3.23	Bentonite
									98	3.00					
									50	3.23					

Remarks
No groundwater encountered.
Refusal at 3.23m bgl.

Termination Depth:
3.23m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541495.76

Ground Level (mAOD)
7.08
Northing (OS mN)
267012.51

Start Date
07/12/2016
End Date
07/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.30	B1					Soft, dark reddish brown, slightly sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.30)		
0.00 - 0.30	D2							0.30	6.78	
0.10	ES									
0.10 - 0.20	ES3					Soft, light reddish brown, slightly sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]				
0.30 - 0.40	D5									
0.30 - 1.20	B4									
0.90 - 1.00	ES6							(1.00)		
1.20 - 1.65	D7	1.20	SPT(S)	N=12 (1,2/2,3,3,4)						
1.20 - 2.00	B8					Firm, dark grey, slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		1.30	5.78	
1.60 - 1.70	D14							(0.30)		
1.90 - 2.00	ES9					Light grey, highly weathered SILTSTONE. [KIMMERIDGE CLAY FORMATION]	x x x x	1.60	5.48	
2.00 - 2.45	D10	2.00	SPT(S)	N=20 (5,3/3,5,5,7)		Firm, dark grey, slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]	x x x x	1.70	5.38	
2.00 - 2.80	B11					Light grey, highly weathered SILTSTONE. [KIMMERIDGE CLAY FORMATION]	x x	1.80	5.28	
						Stiff to very stiff, dark grey, slightly sandy silty CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]	x x	1.90	5.18	
2.70	ES	2.70	SPT(S)	N>50 (2,3/10,40 for 10mm)				(1.03)		
2.70 - 2.80	ES12									
2.70 - 2.93	D13									
3.00	D13							2.93	4.15	

DRILLING TECHNIQUE			WATER OBSERVATIONS					HOLE/CASING DIAMETER				BACKFILL			
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit							300	1.20	128	2.00	0.00	1.00	Arisings
1.20	2.93	Dynamic Sample							112	2.00			1.00	2.93	Bentonite
									98	2.70					
									50	2.93					

Remarks
No groundwater encountered.
Refusal at 2.93m bgl.

Termination Depth:
2.93m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541509.85

Ground Level (mAOD)
6.75
Northing (OS mN)
266942.64

Start Date
07/12/2016
End Date
07/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.30	B1					Soft, dark reddish brown, slightly sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.30)	6.45	
0.00 - 0.30	D2									
0.10	ES									
0.10 - 0.20	ES3									
0.30 - 0.70	D5									
0.30 - 1.20	B4									
0.90 - 1.00	ES6									
1.20 - 1.65	D7	1.20	SPT(S)	N=10 (1,2/2,2,3,3)						
1.20 - 3.00	B12									
1.90 - 2.00	ES8									
2.00 - 2.45	D9	2.00	SPT(S)	N=14 (4,5/4,3,3,4)	Firm to stiff, dark grey, slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		1.30	5.45		
2.90 - 3.00	ES10							(2.15)		
3.00 - 3.45	D11	3.00	SPT(S)	N=26 (4,8/6,6,7,7)				3.45	3.30	

DRILLING TECHNIQUE			WATER OBSERVATIONS						HOLE/CASING DIAMETER				BACKFILL		
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit							300	1.20	128	2.00	0.00	1.00	Arisings
1.20	3.45	Dynamic Sample							112	2.00			1.00	3.45	Bentonite
									98	3.00					
									50	3.45					

Remarks
No groundwater encountered.
Target depth reached.

Termination Depth:
3.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541415.79

Ground Level (mAOD)
7.37
Northing (OS mN)
267053.38

Start Date
07/12/2016
End Date
07/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.30 0.00 - 0.40 0.10 0.10 - 0.20 0.40 - 1.20	B1 D2 ES ES3 D5					Soft, dark reddish brown, slightly sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.40)	6.97	
0.70 - 0.90 0.90 - 1.00	B4 ES6					Firm, dark grey, slightly sandy silty CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(1.00)		
1.20 - 1.65 1.20 - 2.00 1.40 - 1.50	D7 D11 D8	1.20	SPT(S)	N=9 (3,2/2,3,2)				1.40 1.50	5.97 5.87	
1.90 - 2.00 2.00 - 2.45 2.00 - 2.80	ES10 D9 B12	2.00	SPT(S)	N=14 (2,2/2,3,4,5)		Light orangish brown, fine to coarse SAND. [RIVER TERRACE DEPOSITS] Firm to stiff, dark grey, slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(1.45)		
2.70 - 2.80 2.80 - 2.95	ES13 D14	2.80	SPT(S)	N>50 (25,50 for 80mm/0 for 0mm)				2.95	4.42	

DRILLING TECHNIQUE			WATER OBSERVATIONS						HOLE/CASING DIAMETER				BACKFILL		
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit							300	1.20	128	2.00	0.00	1.00	Arisings
1.20	2.95	Dynamic Sample							112	2.00			1.00	2.95	Bentonite
									98	2.80					
									50	2.95					

Remarks
No groundwater encountered.
Refusal at 2.95m bgl.

Termination Depth:
2.95m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541231.07

Ground Level (mAOD)
6.96
Northing (OS mN)
267200.73

Start Date
05/12/2016
End Date
05/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.30	B2					Soft, dark brown, slightly sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.30)		
0.00 - 0.30	D3							0.30	6.66	
0.10	ES									
0.10 - 0.20	ES1					Firm to stiff, dark grey, slightly sandy silty CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]				
0.30 - 0.70	D5									
0.30 - 1.90	B4									
0.90	ES									
0.90 - 1.00	ES6									
1.20 - 1.65	D7	1.20	SPT(S)	N=12 (3,3/2,4,3,3)				(1.60)		
1.20 - 2.00	D9									
1.50 - 2.00	D8									
2.00 - 2.16	D10	2.00	SPT(S)	N>50 (3,4/50 for 10mm)		Strong, light grey, highly weathered SILTSTONE. [KIMMERIDGE CLAY FORMATION]		1.90 (0.26) 2.16	5.06 4.80	

DRILLING TECHNIQUE			WATER OBSERVATIONS						HOLE/CASING DIAMETER				BACKFILL		
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit							300	1.20	128	2.00	0.00	1.00	Arisings
1.20	2.16	Dynamic Sample							112	2.00			1.00	2.16	Bentonite
									50	2.16					

Remarks
No groundwater encountered.
Refusal at 2.16m bgl.

Termination Depth:
2.16m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541186.94

Ground Level (mAOD)
6.19
Northing (OS mN)
267204.82

Start Date
06/12/2016
End Date
06/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.30	B2				Soft to firm, dark brown, slightly silty sandy CLAY with occasional rootlets. Sand is fine to coarse. [RIVER TERRACE DEPOSITS] Firm to stiff, light greyish brown, slightly sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.30)	5.89		
0.00 - 0.30	D3									
0.10	ES									
0.10 - 0.20	ES1									
0.30 - 0.70	D6									
0.30 - 1.20	B5									
0.90 - 1.00	ES4									
1.20 - 1.65	D7	1.20	SPT(S)	N=8 (1,2/2,2,2,2)						
1.20 - 2.00	B11									
1.90	ES	1.90	SPT(S)	N=28 (2,3/4,6,8,10)						
1.90 - 2.00	ES8									
1.90 - 2.35	D9									
2.50 - 2.75	D10	2.50	SPT(S)	N>50 (4,10/14,36 for 20mm)	Becoming very stiff from 2.50m bgl.		2.75	3.44		

DRILLING TECHNIQUE			WATER OBSERVATIONS						HOLE/CASING DIAMETER				BACKFILL		
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit							300	1.20	128	2.00	0.00	1.00	Arisings
1.20	2.75	Dynamic Sample							112	2.00			1.00	2.75	Bentonite
									98	2.50					
									50	2.75					

Remarks
No groundwater encountered.
Refusal at 2.75m bgl.

Termination Depth:
2.75m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541182.26

Ground Level (mAOD)
5.68
Northing (OS mN)
267238.67

Start Date
05/12/2016
End Date
05/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 1.20 0.10 0.10 - 0.20 0.10 - 1.20	B1 ES ES3 D2					Firm, dark greenish grey, slightly sandy silty gravelly CLAY. Sand is fine to coarse. Gravel is fine, subangular to subrounded of flint. [KIMMERIDGE CLAY FORMATION]		(1.30)		
1.00 - 1.10 1.20 - 1.80	ES4 B6	1.20	SPT(S)	N=18 (3,3/4,4,5,5)				1.30	4.38	
1.70 1.70 - 1.80	ES ES5	1.80	SPT(S)	N>50 (2,2/3,27,20 for 20mm)		Stiff to very stiff, dark grey, slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(0.82)		
								2.12	3.56	

DRILLING TECHNIQUE			WATER OBSERVATIONS					HOLE/CASING DIAMETER				BACKFILL			
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit Dynamic Sample							300 112 50	1.20 1.80 2.12			0.00 1.00	1.00 2.12	Arisings Bentonite

Remarks
No groundwater encountered.
Refusal at 2.12m bgl.

Termination Depth:
2.12m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541223.80

Ground Level (mAOD)
6.33
Northing (OS mN)
267222.96

Start Date
06/12/2016
End Date
06/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill	
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend				
0.00 - 0.50	B1					Firm, dark brownish grey, slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(0.50)	5.83		
0.00 - 0.50	D2					Firm to stiff, dark grey, slightly sandy silty CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		0.50			
0.10	ES										
0.10 - 0.20	ES3										
0.50 - 1.10	B4										
0.50 - 1.10	D5										
0.90 - 1.10	ES6										
1.20 - 1.65	D7	1.20	SPT(S)	N=14 (2,2/3,3,4,4)							
1.90 - 2.00	ES8										
2.00 - 2.45	D9	2.00	SPT(S)	N=17 (1,2/2,4,4,7)				(2.58)			
2.60 - 2.70	ES10										
2.70 - 3.08	D11	2.70	SPT(S)	N>50 (2,3/7,8,10,25 for 10mm)							
							Becoming very stiff from 2.70m bgl.				
									3.08	3.25	

DRILLING TECHNIQUE			WATER OBSERVATIONS					HOLE/CASING DIAMETER				BACKFILL			
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit							300	1.20	128	2.00	0.00	1.00	Arisings
1.20	3.08	Dynamic Sample							112	2.00			1.00	3.08	Bentonite
									98	2.70					
									50	3.08					

Remarks
No groundwater encountered.
Refusal at 3.08m bgl.

Termination Depth:
3.08m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541605.93

Ground Level (mAOD)
6.37
Northing (OS mN)
266751.77

Start Date
07/12/2016
End Date
07/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.90 0.00 - 0.90 0.10 0.10 - 0.20	B1 D2 ES ES3					Soft, dark reddish brown, slightly sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.90)		
0.90 - 1.20 0.90 - 1.20 1.00 - 1.10 1.20 - 1.40 1.20 - 1.65	B4 D5 ES6 B12 D7	1.20	SPT(S)	N=20 (2,3/6,5,5,4)	▼	Firm to stiff, light orangish grey, sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		0.90 (0.50)	5.47	
1.90 - 2.00 2.00 - 2.45 2.00 - 3.00	ES8 D9 B13	2.00	SPT(S)	N=11 (2,1/2,2,3,4)		Medium dense, dark greyish orange, fine to coarse SAND. [RIVER TERRACE DEPOSITS]		1.40 (0.60)	4.97	
2.90 2.90 - 3.00 3.00 - 3.45	ES ES10 D11	3.00	SPT(S)	N=32 (2,3/4,10,10,8)		Firm to stiff, dark grey, slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		2.00 (1.45)	4.37	
								3.45	2.92	

DRILLING TECHNIQUE			WATER OBSERVATIONS						HOLE/CASING DIAMETER				BACKFILL		
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit Dynamic Sample	07/12/2016 10:00	1.40	20	1.40			300	1.20	128	2.00	0.00	1.00	Arisings Bentonite
1.20	112								2.00						
	98								3.00						
	50								3.45						

Remarks
Groundwater encountered at 1.40m bgl.
Target depth reached.

Termination Depth:
3.45m



Unless otherwise stated:
Depth (m), Diameter(mm), Time (hhmm),
Thickness (m), Level (mOD).

Equipment Used
Dart 365

Contractor
Arcadis Consulting (UK) Ltd.

Logged By
WB

Checked By
SH

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541668.97

Ground Level (mAOD)
5.95
Northing (OS mN)
266385.16

Start Date
08/12/2016
End Date
08/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.40 0.10 0.10 - 0.20 0.40 - 1.20	B1 ES ES2 B3					Dark reddish brown, gravelly SAND. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of mixed lithologies. [RIVER TERRACE DEPOSITS]		(0.40)	5.55	
0.90 - 1.00	ES4					Light orangish brown, slightly gravelly silty sandy CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		(1.30)		
1.20 - 1.65 1.20 - 1.70	D5 B6	1.20	SPT(S)	N=17 (3,3/5,4,4,4)						
1.90 - 2.00 1.90 - 3.00 2.00 - 2.45 2.00 - 3.00	ES7 ES10 D9 B8	2.00	SPT(S)	N=10 (2,2/2,2,3,3)		Firm, dark grey, slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		1.70 (1.75)	4.25	
3.00 - 3.45	D11	3.00	SPT(S)	N=10 (2,2/2,2,3,3)				3.45	2.50	

DRILLING TECHNIQUE			WATER OBSERVATIONS						HOLE/CASING DIAMETER				BACKFILL		
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit Dynamic Sample	08/12/2016 10:00	1.00	20	1.00			300	1.20	128	2.00	0.00	1.00	Arisings Bentonite
1.20	112								2.00						
	98								3.00						
	50								3.45						

Remarks
Groundwater encountered at 1.00m bgl.
Target depth reached.

Termination Depth:
3.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541676.14

Ground Level (mAOD)
6.08
Northing (OS mN)
266320.67

Start Date
08/12/2016
End Date
08/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.40 0.10 - 0.20	B1 ES2					Dark reddish brown, silty SAND. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.40)	5.68	
0.40 - 1.20	B3					Light brownish orange, clayey SAND. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		0.40		
0.90 0.90 - 1.00	ES ES4							(0.90)		
1.20 - 1.65 1.20 - 3.00	D6 B5	1.20	SPT(S)	N=11 (0,1/2,3,3,3)				1.30	4.78	
1.90 - 2.00 2.00 - 2.45	ES7 D8	2.00	SPT(S)	N=11 (2,2/2,3,3,3)		Firm, dark grey, slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(2.15)		
2.90 - 3.00 3.00 - 3.45	ES9 D10	3.00	SPT(S)	N=14 (2,2/3,3,4,4)		<u>2 thin bands of siltstone, up to 20mm thick.</u>		3.45	2.63	

DRILLING TECHNIQUE			WATER OBSERVATIONS						HOLE/CASING DIAMETER				BACKFILL		
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit							300	1.20	128	2.00	0.00	1.00	Arisings
1.20	3.45	Dynamic Sample							112	2.00			1.00	3.45	Bentonite
									98	3.00					
									50	3.45					

Remarks
No groundwater encountered.
Target depth reached.

Termination Depth:
3.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541697.03

Ground Level (mAOD)
7.57
Northing (OS mN)
266060.33

Start Date
09/12/2016
End Date
09/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.50 0.10 - 0.20	B1 ES2					Dark brown, silty SAND. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.50)	7.07	
0.50 - 1.20	B3					Medium dense, light orangish grey, slightly clayey slightly gravelly silty SAND. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		0.50		
0.90 0.90 - 1.00	ES ES4							(1.00)		
1.20 - 1.65 1.20 - 2.00	D5 B6	1.20	SPT(S)	N=13 (2,2/3,3,3,4)	▼	Light orange, fine to coarse SAND. [RIVER TERRACE DEPOSITS]		1.50	6.07	
1.90 - 2.00 2.00 - 2.45 2.00 - 3.00	ES7 D8 B9	2.00	SPT(S)	N=8 (1,1/2,2,2,2)		Soft to firm, light grey, sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		2.00	5.57	
2.90 - 3.00 3.00 - 3.45	ES10 D11	3.00	SPT(S)	N=39 (2,4/6,9,12,12)		Becoming very stiff from 3.00m bgl.		(1.45)		
								3.45	4.12	

DRILLING TECHNIQUE			WATER OBSERVATIONS					HOLE/CASING DIAMETER				BACKFILL			
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit	09/12/2016 10:00	1.30	20	1.30			300	1.20	128	2.00	0.00	1.00	Arisings
1.20	3.45	Dynamic Sample							112	2.00			1.00	3.45	Bentonite
									98	3.00					
									50	3.45					

Remarks
Groundwater encountered at 1.30m bgl.
Target depth reached.

Termination Depth:
3.45m



Unless otherwise stated:
Depth (m), Diameter(mm), Time (hhmm),
Thickness (m), Level (mOD).

Equipment Used
Dart 365

Contractor
Arcadis Consulting (UK) Ltd.

Logged By
WB

Checked By
SH

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541652.20

Ground Level (mAOD)
8.20
Northing (OS mN)
266024.42

Start Date
09/12/2016
End Date
09/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.50 0.10	B1 ES ES2					Dark brown, silty SAND. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.50)	7.70	
0.50 - 1.20	B3					Firm, light orangish brown silty CLAY. [RIVER TERRACE DEPOSITS]		0.50		
0.90 - 1.00	ES4									
1.20 - 1.65 1.20 - 2.00	D5 B6	1.20	SPT(S)	N=27 (3,6/7,6,7,7)	▼			(1.90)		
1.90 1.90 - 2.00 2.00 - 2.45	ES ES7 D8	2.00	SPT(S)	N=11 (2,1/2,3,3,3)						
2.50 - 3.00	B9					Firm, light grey, slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		2.40	5.80	
2.90 - 3.00 3.00 - 3.45	ES10 D11	3.00	SPT(S)	N=12 (2,2/3,2,3,4)				(1.05)		
								3.45	4.75	

DRILLING TECHNIQUE			WATER OBSERVATIONS						HOLE/CASING DIAMETER				BACKFILL		
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit	09/12/2016 10:00	1.80	20	1.80			300	1.20	128	2.00	0.00	1.00	Arisings
1.20	3.45	Dynamic Sample							112	2.00			1.00	3.45	Bentonite
									98	3.00					
									50	3.45					

Remarks
Groundwater encountered at 1.20m bgl.
Target depth reached.

Termination Depth:
3.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541632.47

Ground Level (mAOD)
6.28
Northing (OS mN)
266552.50

Start Date
08/12/2016
End Date
08/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.10 0.10 - 0.20 0.10 - 0.40 0.20 - 0.40 0.40 - 0.70 0.40 - 1.20	ES ES3 B1 D2 D5 B4					Soft, dark reddish brown, slightly sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.40)		
0.90 - 1.00	ES6					Firm, light orangish grey, slightly sandy slightly gravelly silty CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		0.40	5.88	
1.20 - 1.65 1.20 - 2.00	D7 B10	1.20	SPT(S)	N=11 (1,0/2,3,3,3)		Firm, dark grey, slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(0.80)		
1.90 - 2.00 2.00 - 2.38	ES8 D9	2.00	SPT(S)	N>50 (2,0/20,15,5,10 for 0mm)		Becoming very stiff.		1.20	5.08	
								(1.18)		
								2.38	3.90	

DRILLING TECHNIQUE			WATER OBSERVATIONS					HOLE/CASING DIAMETER				BACKFILL			
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit							300	1.20	128	2.00	0.00	1.00	Arisings
1.20	2.38	Dynamic Sample							112	2.00				2.38	Bentonite
									50	2.38					

Remarks
No groundwater encountered.
Refusal at 2.38m bgl.

Termination Depth:
2.38m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541562.31

Ground Level (mAOD)
6.25
Northing (OS mN)
266671.09

Start Date
07/12/2016
End Date
08/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill																																																																																																	
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend																																																																																																				
0.00 - 0.50 0.10 - 0.20 0.20 - 0.50	B1 ES3 D2				▼	Soft, dark reddish brown, slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is fine to medium, subangular to subrounded of mixed lithologies. [RIVER TERRACE DEPOSITS]		(0.90)																																																																																																			
0.50 - 0.80 0.50 - 1.20	D5 B4					Firm, light grey, slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		0.90	5.35																																																																																																		
0.90 0.90 - 1.00	ES ES6																																																																																																										
1.20 - 1.65 1.20 - 2.40	D7 B12	1.20	SPT(S)	N=15 (2,2/3,4,4,4)					(1.50)																																																																																																		
1.90 - 2.00 2.00 - 2.45	ES8 D9	2.00	SPT(S)	N=6 (1,1/1,1,2,2)			Locally soft.		2.40	3.85																																																																																																	
2.40 - 3.00	B13						Firm to stiff, dark grey, slightly sandy silty CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(1.05)																																																																																																		
2.90 - 3.00 3.00 - 3.45	ES10 D11	3.00	SPT(S)	N=19 (2,2/4,3,4,8)					3.45	2.80																																																																																																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">DRILLING TECHNIQUE</th> <th colspan="6">WATER OBSERVATIONS</th> <th colspan="4">HOLE/CASING DIAMETER</th> <th colspan="3">BACKFILL</th> </tr> <tr> <th>From</th> <th>To</th> <th>Technique</th> <th>Date/Time</th> <th>Strike At</th> <th>Time Elapsed</th> <th>Rise To</th> <th>Casing</th> <th>Sealed</th> <th>Hole Dia.</th> <th>Depth</th> <th>Casing Dia.</th> <th>Depth</th> <th>Top</th> <th>Base</th> <th>Backfill</th> </tr> </thead> <tbody> <tr> <td>0.00</td> <td>1.20</td> <td>Inspection Pit</td> <td>07/12/2016 10:00</td> <td>0.80</td> <td>20</td> <td>0.80</td> <td></td> <td></td> <td>300</td> <td>1.20</td> <td>128</td> <td>2.00</td> <td>0.00</td> <td>1.00</td> <td>Arisings</td> </tr> <tr> <td>1.20</td> <td>3.45</td> <td>Dynamic Sample</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>112</td> <td>2.00</td> <td></td> <td></td> <td></td> <td>3.45</td> <td>Bentonite</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>98</td> <td>3.00</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>50</td> <td>3.45</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>											DRILLING TECHNIQUE			WATER OBSERVATIONS						HOLE/CASING DIAMETER				BACKFILL			From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill	0.00	1.20	Inspection Pit	07/12/2016 10:00	0.80	20	0.80			300	1.20	128	2.00	0.00	1.00	Arisings	1.20	3.45	Dynamic Sample							112	2.00				3.45	Bentonite										98	3.00															50	3.45						
DRILLING TECHNIQUE			WATER OBSERVATIONS						HOLE/CASING DIAMETER				BACKFILL																																																																																														
From	To	Technique	Date/Time	Strike At		Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill																																																																																											
0.00	1.20	Inspection Pit	07/12/2016 10:00	0.80	20	0.80			300	1.20	128	2.00	0.00	1.00	Arisings																																																																																												
1.20	3.45	Dynamic Sample							112	2.00				3.45	Bentonite																																																																																												
									98	3.00																																																																																																	
									50	3.45																																																																																																	
Remarks Groundwater encountered at 0.80m bgl. Target depth reached.																																																																																																											
										Termination Depth: 3.45m																																																																																																	

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541248.85

Ground Level (mAOD)
8.45
Northing (OS mN)
266649.43

Start Date
15/12/2016
End Date
15/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.60 0.10 0.10 - 0.20	B1 ES ES2					Soft, dark reddish brown, slightly sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.70)		
0.60 - 1.20	B3					Stiff, light brownish orange, slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		0.70	7.75	
1.10 - 1.20 1.20 1.20 - 1.65 1.20 - 1.70	ES4 EW1 D5 B6	1.20	SPT(S)	N=19 (2,4/3,5,5,6)				(1.00)		
1.70 - 2.00 1.90 1.90 - 2.00 2.00 - 2.45 2.00 - 3.00 2.30 - 2.60	B8 ES ES7 D9 B11 D12	2.00	SPT(S)	N=10 (2,2/2,2,3,3)		Light brownish orange, slightly clayey slightly gravelly SAND. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS] Firm to stiff, dark blueish grey, slightly sandy CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		1.70 (0.30) 2.00	6.75 6.45	
2.90 - 3.00 3.00 - 3.23	ES10 D13	3.00	SPT(S)	N>50 (3,20/50,0 for 0mm)		Band of gravelly SAND. Becoming very stiff from 3.00m bgl.		(1.23) 3.23		

DRILLING TECHNIQUE			WATER OBSERVATIONS						HOLE/CASING DIAMETER				BACKFILL		
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit							300	1.20	128	2.00	0.00	0.10	Concrete
1.20	3.23	Dynamic Sample							112	2.00			0.10	1.00	Arisings
									98	3.00			1.00	1.70	Bentonite
									50	3.23			1.70	2.00	Gravel

Remarks
No groundwater encountered.
Refusal at 3.23m bgl.

Termination Depth:
3.23m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540849.34

Ground Level (mAOD)
8.40
Northing (OS mN)
267000.05

Start Date
14/12/2016
End Date
14/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 1.00 0.10 0.10 - 0.20	B1 ES ES2					Soft, dark reddish brown, slightly sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(1.00)		
0.70	EW1									
1.10 1.10 - 1.20 1.20 - 1.30 1.20 - 1.65	EW1 ES3 D5 D4	1.20	SPT(S)	N=11 (1,2/2,2,3,4)		Firm to stiff, dark blueish grey, slightly sandy silty CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		1.00 (0.65)	7.40	
								1.65	6.75	

DRILLING TECHNIQUE			WATER OBSERVATIONS					HOLE/CASING DIAMETER				BACKFILL			
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit							300	1.20			0.00	0.10	Concrete
1.20	1.30	Dynamic Sample							50	1.65			0.10	0.50	Arisings
													0.50	1.30	Gravel
													1.30	1.65	Bentonite

Remarks
No groundwater encountered.
Refusal at 1.65m bgl.

Termination Depth:
1.65m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540950.27

Ground Level (mAOD)
8.76
Northing (OS mN)
266950.29

Start Date
14/12/2016
End Date
14/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill					
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend								
0.00 - 0.60 0.10 0.10 - 0.20	B1 ES ES2					Soft, dark brown, slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		(0.60)							
0.60 - 1.00 0.70 0.70 - 0.80 0.86 1.05 - 1.15 1.20 - 1.65	B3 ES ES4 EW1 ES5 D6	1.20	SPT(S)	N=7 (2,2/1,2,2,2)		Light brownish orange, slightly clayey slightly gravelly SAND. Sand is fine to coarse. Gravel is angular to sub-rounded, fine to coarse of flint. [RIVER TERRACE DEPOSITS]		0.60 (0.40)	8.16						
						Soft, dark blueish grey, slightly sandy silty CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		1.00 (0.65)	7.76						
								1.65	7.11						
DRILLING TECHNIQUE		WATER OBSERVATIONS				HOLE/CASING DIAMETER				BACKFILL					
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit Dynamic Sample							300 50	1.20 1.65			0.00 0.10 0.60 1.20	0.10 0.60 1.20 1.65	Concrete Arisings Gravel Bentonite
Remarks															
No groundwater encountered. Refusal at 1.65m bgl.															
														Termination Depth:	
														1.65m	

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
540798.63

Ground Level (mAOD)
9.23
Northing (OS mN)
266750.86

Start Date
15/12/2016
End Date
15/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend			
0.00 - 0.80 0.10 0.10 - 0.20	B1 ES ES2					Dark reddish brown, slightly clayey slightly silty SAND. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.80)		
0.80 - 1.20 1.00 1.00 - 1.10 1.15 1.20 - 1.65 1.20 - 1.90	B3 ES ES4 EW1 D5 B6	1.20	SPT(S)	N=32 (3,5/6,8,9,9)		Dense, light brownish orange, slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to medium of flint. [RIVER TERRACE DEPOSITS] <u>Tending to clayey very gravelly sand.</u>		(0.70)	8.43	
2.00 - 2.45 2.00 - 3.00	D7 B9	2.00	SPT(S)	N=19 (3,2/3,5,6,5)		Light brownish orange SAND and GRAVEL. Sand is fine to coarse. Gravel is sub-angular to sub-rounded, fine to medium of flint. [RIVER TERRACE DEPOSITS]		(0.40)	7.73	
2.50 - 2.60	ES8					Stiff, dark blue, slightly sandy silty CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(1.55)	7.33	
3.00 - 3.45	D10	3.00	SPT(S)	N=18 (3,2/3,3,6,6)					3.45	5.78

DRILLING TECHNIQUE			WATER OBSERVATIONS						HOLE/CASING DIAMETER				BACKFILL		
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit							300	1.20	128	2.00	0.00	0.10	Concrete
1.20	3.45	Dynamic Sample							112	2.00			0.10	1.00	Arisings
									98	3.00			1.00	1.50	Gravel
									50	3.45			1.50	3.45	Arisings

Remarks
No groundwater encountered.
Target depth reached

Termination Depth:
3.45m

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541049.66

Ground Level (mAOD)
9.11
Northing (OS mN)
266848.70

Start Date
13/12/2016
End Date
13/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/Backfill
Depth	Type/No.	Depth	Type/No.	Results		Description	Legend			
0.00 - 0.50	B1					Soft, dark orangish brown, silty sandy gravelly CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		(0.50)	8.61	
0.10	ES									
0.10 - 0.20	ES3									
0.20 - 0.50	D2									
0.50 - 1.20	B4									
0.60 - 0.90	D5					Soft to firm, dark greenish grey, slightly sandy silty CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		0.50	8.61	
0.90	ES									
0.90 - 1.00	ES6									
1.20	EW1	1.20	SPT(S)	N=5 (1,2/1,2,1,1)						
1.20 - 1.65	D8									
1.20 - 3.00	B7					Soft to firm, dark greenish grey, slightly sandy silty CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		(2.95)	8.61	
2.00 - 2.45	D9	2.00	SPT(S)	N=9 (1,2/2,2,2,3)						
3.00 - 3.45	D10	3.00	SPT(S)	N=13 (2,3/3,3,3,4)		Locally dark grey.		3.45	5.66	

DRILLING TECHNIQUE			WATER OBSERVATIONS						HOLE/CASING DIAMETER				BACKFILL			
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill	
0.00	1.20	Inspection Pit	13/12/2016 10:30	1.10	20	1.10	2.00		300	1.20	128	2.00	0.00	0.10	Concrete	
1.20	3.45	Dynamic Sample	13/12/2016 11:00	2.50	20	2.50			112	2.00			0.10	0.80	Arisings	
									98	3.00			0.80	1.00	Bentonite	
									50	3.45			1.00	2.50	Gravel	

Remarks
Groundwater encountered at 1.10m bgl and 2.50m bgl.
Target depth reached.

Termination Depth:
3.45m



Unless otherwise stated:
Depth (m), Diameter(mm), Time (hhmm),
Thickness (m), Level (mOD).

Equipment Used
Dart 365

Contractor
Arcadis Consulting (UK) Ltd.

Logged By
WB

Checked By
SH

Project
Northstowe Phase 2
Client
Homes and Communities Agency

Project No.
UA008426-01
Easting (OS mE)
541019.11

Ground Level (mAOD)

Northing (OS mN)
266734.71

Start Date
14/12/2016
End Date
15/12/2016

Scale
1:50
Sheet 1 of 1

SAMPLES		TESTS			Water Strikes	STRATA		Depth (Thickness)	Level	Install/ Backfill					
Depth	Type/ No.	Depth	Type/ No.	Results		Description	Legend								
0.00 - 1.00 0.10 0.10 - 0.20	B1 ES ES2					Soft, dark orangish brown, slightly sandy CLAY. Sand is fine to coarse. [RIVER TERRACE DEPOSITS]		1.00							
						Colour change to light brownish orange.									
1.20 1.20 - 1.30 1.20 - 1.65 1.20 - 3.00 1.40	ES ES3 D4 B5 EW1	1.20	SPT(S)	N=13 (3,2/2,3,4,4)		Firm, dark blueish grey, slightly sandy silty CLAY. Sand is fine to coarse. [KIMMERIDGE CLAY FORMATION]		1.00							
2.00 - 2.45	D6	2.00	SPT(S)	N=13 (3,2/3,3,3,4)				2.45							
3.00 - 3.45	D7	3.00	SPT(S)	N=13 (2,3/3,3,3,4)				3.45							
DRILLING TECHNIQUE		WATER OBSERVATIONS				HOLE/CASING DIAMETER				BACKFILL					
From	To	Technique	Date/Time	Strike At	Time Elapsed	Rise To	Casing	Sealed	Hole Dia.	Depth	Casing Dia.	Depth	Top	Base	Backfill
0.00	1.20	Inspection Pit							300	1.20	128	2.00	0.00	0.10	Concrete
1.20	3.45	Dynamic Sample							112	2.00			0.10	0.50	Arisings
									98	3.00			0.50	2.50	Gravel
									50	3.45			2.50	3.45	Bentonite
Remarks															
No groundwater encountered. Target depth reached.															
														Termination Depth:	
														3.45m	

Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA407

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	9.19 mAOD	Date Excavated	04/01/2017
Depth	1.21		Coordinates	540401.25 mE	Date Tested	04/01/2017
Width	0.70			266549.79 mN		
Length	1.50					

Test 1

Time min	Depth to Water m bgl	Test Parameters	Water Level m bgl	Elapsed Time (min)
0	0.84	75% esd (mbgl) 0.93	0.00	0
1	0.90	50% esd (mbgl) 1.03	0.20	20
2	0.94	25% esd (mbgl) 1.12	0.40	40
4	0.97	A_{s50} (m ²) 1.86	0.60	60
8	1.01	V_{p75-25} (m ³) 0.19	0.80	80
15	1.06	t_{75} (min) 5.1	1.00	100
30	1.13	t_{25} (min) 21.0	1.20	120
60	1.29	Data Fit R ² 0.948	1.40	140
90	1.35			
120	1.41			

Infiltration rate f (ms⁻¹) 1.09E-04 **Total effective storage depth (esd) (m) 0.37**

Test 2

Time min	Depth to Water m bgl	Test Parameters	Water Level m bgl	Elapsed Time (min)
0		75% esd (mbgl)	0.00	0
1		50% esd (mbgl)	0.10	20
2		25% esd (mbgl)	0.20	40
4		A_{s50} (m ²)	0.30	60
8		V_{p75-25} (m ³)	0.40	80
15		t_{75} (min)	0.50	100
30		t_{25} (min)	0.60	
45		Data Fit R ²	0.70	
60			0.80	
90			0.90	

Infiltration rate f (ms⁻¹) NO VALID DATA **Total effective storage depth (esd) (m)**

Test 3

Time min	Depth to Water m bgl	Test Parameters	Water Level m bgl	Elapsed Time (min)
0		75% esd (mbgl)	0.00	0
1		50% esd (mbgl)	0.10	20
2		25% esd (mbgl)	0.20	40
4		A_{s50} (m ²)	0.30	60
8		V_{p75-25} (m ³)	0.40	80
15		t_{75} (min)	0.50	100
30		t_{25} (min)	0.60	
45		Data Fit R ²	0.70	
60			0.80	
90			0.90	

Infiltration rate f (ms⁻¹) NO VALID DATA **Total effective storage depth (esd) (m) 0.00**

Carried out by Arcadis Consulting (UK) Ltd	Notes: Only one soakaway test undertaken due to time restraints	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA408

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	8.96 mAOD	Date Excavated	04/01/2017
Depth	1.24	1.24	Coordinates	540341.07 mE	Date Tested	04/01/2017
Width	0.70	0.70		266644.52 mN		
Length	1.32	1.03				

Test 1

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)	Water Level m bgl
0	0.35	75% esd (mbgl)	0.57		
1	0.39	50% esd (mbgl)	0.80	20	0.20
2	0.43	25% esd (mbgl)	1.02	40	0.40
4	0.48	A_{s50} (m ²)	2.72	60	0.60
8	0.53	V_{p75-25} (m ³)	0.41	80	0.80
15	0.61	t_{75} (min)	11.7	100	1.00
30	0.70	t_{25} (min)	111.5	120	1.20
60	0.86	Data Fit R ²	0.980		
90	1.00				
120	1.03				

Infiltration rate f (ms⁻¹) **2.52E-05** **Total effective storage depth (esd) (m)** **0.89**

Test 2

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)	Water Level m bgl
0	0.25	75% esd (mbgl)	0.50		
1	0.38	50% esd (mbgl)	0.75	50	0.20
2	0.41	25% esd (mbgl)	0.99	100	0.40
4	0.43	A_{s50} (m ²)	2.43	150	0.60
8	0.47	V_{p75-25} (m ³)	0.36	200	0.80
15	0.51	t_{75} (min)	8.3	250	1.00
30	0.61	t_{25} (min)	298.8	300	1.20
40	0.67	Data Fit R ²	0.935		
50	0.72				
60	0.80				

Infiltration rate f (ms⁻¹) **8.41E-06** **Total effective storage depth (esd) (m)** **0.99**

Test 3

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)	Water Level m bgl
		75% esd (mbgl)			
		50% esd (mbgl)		0.2	0.10
		25% esd (mbgl)		0.4	0.20
		A_{s50} (m ²)		0.6	0.30
		V_{p75-25} (m ³)		0.8	0.40
		t_{75} (min)		1.0	0.50
		t_{25} (min)		1.2	0.60
		Data Fit R ²			0.70

Infiltration rate f (ms⁻¹) **NO VALID DATA** **Total effective storage depth (esd) (m)** **0.00**

Carried out by Arcadis Consulting (UK) Ltd	Notes: Second test undertaken due to collapse of first pit	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA610

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	6.18 mAOD	Date Excavated	12/01/2017
Depth	1.70		Coordinates	541049.17 mE	Date Tested	12/01/2017
Width	0.70			267148.33 mN		
Length	1.40					

Test 1

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)		
0	0.67	75% esd (mbgl)	0.93	0	500	1000
1	0.67	50% esd (mbgl)	1.19	1500	2000	2500
2	0.67	25% esd (mbgl)	1.44			
4	0.67	A_{50} (m ²)	3.14			
8	0.67	V_{p75-25} (m ³)	0.50			
15	0.68	t_{75} (min)	311875.2			
30	0.69	t_{25} (min)	#####			
60	0.71	Data Fit R ²	0.843			
120	0.73					
150	0.73					

Total effective storage depth (esd) (m) 1.03

Test 2

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)		
		75% esd (mbgl)		-0.2	0	0.2
		50% esd (mbgl)		0.4	0.6	0.8
		25% esd (mbgl)		1	1.2	
		A_{50} (m ²)				
		V_{p75-25} (m ³)				
		t_{75} (min)				
		t_{25} (min)				
		Data Fit R ²				

Total effective storage depth (esd) (m)

Test 3

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)		
		75% esd (mbgl)		-0.2	0	0.2
		50% esd (mbgl)		0.4	0.6	0.8
		25% esd (mbgl)		1	1.2	
		A_{50} (m ²)				
		V_{p75-25} (m ³)				
		t_{75} (min)				
		t_{25} (min)				
		Data Fit R ²				

Total effective storage depth (esd) (m) 0.00

Carried out by Arcadis Consulting (UK) Ltd	Notes: Only one soakaway undertaken due to time restraints	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA617

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	7.72 mAOD	Date Excavated	19/01/2017
Depth	1.50		Coordinates	541377.47 mE	Date Tested	19/01/2017
Width	0.70			266821.63 mN		
Length	1.30					

Test 1

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)		
0	0.58	75% esd (mbgl)	0.81	0	500	1000
1	0.58	50% esd (mbgl)	1.04	1500	2000	2500
2	0.58	25% esd (mbgl)	1.27			
4	0.58	A_{50} (m ²)	2.75			
8	0.58	V_{p75-25} (m ³)	0.42			
15	0.60	t_{75} (min)	29933.7			
30	0.61	t_{25} (min)	#####			
60	0.63	Data Fit R ²	0.874			
90	0.64					
120	0.65					

Total effective storage depth (esd) (m) 0.92

Test 2

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)		
		75% esd (mbgl)		-0.2	0	0.2
		50% esd (mbgl)		0.4	0.6	0.8
		25% esd (mbgl)		1	1.2	
		A_{50} (m ²)				
		V_{p75-25} (m ³)				
		t_{75} (min)				
		t_{25} (min)				
		Data Fit R ²				

Total effective storage depth (esd) (m)

Test 3

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)		
		75% esd (mbgl)		-0.2	0	0.2
		50% esd (mbgl)		0.4	0.6	0.8
		25% esd (mbgl)		1	1.2	
		A_{50} (m ²)				
		V_{p75-25} (m ³)				
		t_{75} (min)				
		t_{25} (min)				
		Data Fit R ²				

Total effective storage depth (esd) (m) 0.00

Carried out by Arcadis Consulting (UK) Ltd	Notes: Only one soakway test undertaken due to time restraints	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA620

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	6.89 mAOD	Date Excavated	18/01/2017
Depth	1.20		Coordinates	541456.47 mE	Date Tested	18/01/2017
Width	0.70			266730.84 mN		
Length	1.90					

Test 1

Time min	Depth to Water m bgl	Test Parameters	Water Level m bgl
0	0.46	75% esd (mbgl) 0.65	
1	0.46	50% esd (mbgl) 0.83	
2	0.46	25% esd (mbgl) 1.02	
4	0.46	A_{s50} (m ²) 3.25	
8	0.46	V_{p75-25} (m ³) 0.49	
15	0.46	t_{75} (min) #DIV/0!	
30	0.46	t_{25} (min) #DIV/0!	
40	0.46	Data Fit R ² #DIV/0!	
50	0.46		
60	0.46		

Infiltration rate f (ms⁻¹) NO VALID DATA Total effective storage depth (esd) (m) 0.74

Test 2

Time min	Depth to Water m bgl	Test Parameters	Water Level m bgl
		75% esd (mbgl)	
		50% esd (mbgl)	
		25% esd (mbgl)	
		A_{s50} (m ²)	
		V_{p75-25} (m ³)	
		t_{75} (min)	
		t_{25} (min)	
		Data Fit R ²	

Infiltration rate f (ms⁻¹) NO VALID DATA Total effective storage depth (esd) (m)

Test 3

Time min	Depth to Water m bgl	Test Parameters	Water Level m bgl
		75% esd (mbgl)	
		50% esd (mbgl)	
		25% esd (mbgl)	
		A_{s50} (m ²)	
		V_{p75-25} (m ³)	
		t_{75} (min)	
		t_{25} (min)	
		Data Fit R ²	

Infiltration rate f (ms⁻¹) NO VALID DATA Total effective storage depth (esd) (m) 0.00

Carried out by Arcadis Consulting (UK) Ltd	Notes: Only one soakway test undertaken due to time restraints	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA801

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	9.26 mAOD	Date Excavated	04/01/2017
Depth	2.50		Coordinates	540399.66 mE	Date Tested	04/01/2017
Width	0.70			266451.05 mN		
Length	1.60					

Test 1

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)	Water Level m bgl
0	0.60	75% esd (mbgl)	1.08		
1	0.78	50% esd (mbgl)	1.55	500	0.50
2	0.83	25% esd (mbgl)	2.03	1000	1.00
4	0.86	A_{s50} (m ²)	5.49	1500	1.50
8	0.90	V_{p75-25} (m ³)	1.06	2000	2.00
15	0.93	t_{75} (min)	89.1	2500	2.50
30	0.97	t_{25} (min)	296219.7		
45	1.02	Data Fit R ²	0.984		
60	1.06				
90					

Infiltration rate f (ms⁻¹) **1.09E-08** **Total effective storage depth (esd) (m)** **1.90**

Test 2

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)	Water Level m bgl
0		75% esd (mbgl)			
1		50% esd (mbgl)		0	0.10
2		25% esd (mbgl)		20	0.20
4		A_{s50} (m ²)		40	0.30
8		V_{p75-25} (m ³)		60	0.40
15		t_{75} (min)		80	0.50
30		t_{25} (min)		100	0.60
45		Data Fit R ²			0.70
60					0.80
90					0.90

Infiltration rate f (ms⁻¹) **NO VALID DATA** **Total effective storage depth (esd) (m)**

Test 3

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)	Water Level m bgl
0		75% esd (mbgl)			
1		50% esd (mbgl)		0	0.10
2		25% esd (mbgl)		20	0.20
4		A_{s50} (m ²)		40	0.30
8		V_{p75-25} (m ³)		60	0.40
15		t_{75} (min)		80	0.50
30		t_{25} (min)		100	0.60
45		Data Fit R ²			0.70
60					0.80
90					0.90

Infiltration rate f (ms⁻¹) **NO VALID DATA** **Total effective storage depth (esd) (m)** **0.00**

Carried out by Arcadis Consulting (UK) Ltd	Notes: Too many fines for effective soakage	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA802

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	9.09 mAOD	Date Excavated	05/01/2017
Depth	1.60		Coordinates	540499.86 mE	Date Tested	05/01/2017
Width	0.70			266548.23 mN		
Length	1.30					

Test 1

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)		
0	0.60	75% esd (mbgl)	0.85	0	500	1000
1	0.78	50% esd (mbgl)	1.10	1500	2000	
2	0.83	25% esd (mbgl)	1.35			
4	0.86	A_{s50} (m ²)	2.91			
8	0.90	V_{p75-25} (m ³)	0.46			
15	0.93	t_{75} (min)	4.4			
30	0.97	t_{25} (min)	1647.5			
45	1.02	Data Fit R ²	0.984			
60	1.06					
90						

Infiltration rate f (ms⁻¹) **1.59E-06** **Total effective storage depth (esd) (m)** **1.00**

Test 2

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)		
0		75% esd (mbgl)		-20	0	20
1		50% esd (mbgl)		40	60	80
2		25% esd (mbgl)		100		
4		A_{s50} (m ²)				
8		V_{p75-25} (m ³)				
15		t_{75} (min)				
30		t_{25} (min)				
45		Data Fit R ²				
60						
90						

Infiltration rate f (ms⁻¹) **NO VALID DATA** **Total effective storage depth (esd) (m)**

Test 3

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)		
0		75% esd (mbgl)		-20	0	20
1		50% esd (mbgl)		40	60	80
2		25% esd (mbgl)		100		
4		A_{s50} (m ²)				
8		V_{p75-25} (m ³)				
15		t_{75} (min)				
30		t_{25} (min)				
45		Data Fit R ²				
60						
90						

Infiltration rate f (ms⁻¹) **NO VALID DATA** **Total effective storage depth (esd) (m)** **0.00**

Carried out by Arcadis Consulting (UK) Ltd	Notes: Only one soakaway test undertaken due time restraints	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA808

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	9.68 mAOD	Date Excavated	05/01/2017
Depth	1.00		Coordinates	540600.05 mE	Date Tested	05/01/2017
Width	0.70			266249.41 mN		
Length	1.50					

Test 1

Time min	Depth to Water m bgl	Test Parameters	
0	0.50	75% esd (mbgl)	0.63
1	0.52	50% esd (mbgl)	0.75
2	0.54	25% esd (mbgl)	0.88
4	0.54	A_{s50} (m ²)	2.15
8	0.55	V_{p75-25} (m ³)	0.26
15	0.55	t_{75} (min)	#DIV/0!
30	0.55	t_{25} (min)	#DIV/0!
60	0.55	Data Fit R ²	0.631
90	0.55		
120	0.55		

Total effective storage depth (esd) (m) 0.50

Infiltration rate f (ms⁻¹) NO VALID DATA

Test 2

Time min	Depth to Water m bgl	Test Parameters	
		75% esd (mbgl)	
		50% esd (mbgl)	
		25% esd (mbgl)	
		A_{s50} (m ²)	
		V_{p75-25} (m ³)	
		t_{75} (min)	
		t_{25} (min)	
		Data Fit R ²	

Total effective storage depth (esd) (m)

Infiltration rate f (ms⁻¹) NO VALID DATA

Test 3

Time min	Depth to Water m bgl	Test Parameters	
		75% esd (mbgl)	
		50% esd (mbgl)	
		25% esd (mbgl)	
		A_{s50} (m ²)	
		V_{p75-25} (m ³)	
		t_{75} (min)	
		t_{25} (min)	
		Data Fit R ²	

Total effective storage depth (esd) (m) 0.00

Infiltration rate f (ms⁻¹) NO VALID DATA

Carried out by Arcadis Consulting (UK) Ltd	Notes: Too many fines for effective soakage	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA813

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	9.15 mAOD	Date Excavated	18/01/2017
Depth	1.30	1.30	Coordinates	540676.33 mE	Date Tested	18/01/2017
Width	0.70	0.70		266582.34 mN		
Length	1.60	1.60				

Test 1

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)	Water Level m bgl
0	0.57	75% esd (mbgl)	0.75		
1	0.60	50% esd (mbgl)	0.94	20	0.20
2	0.62	25% esd (mbgl)	1.12	40	0.40
4	0.66	A_{s50} (m ²)	2.80	60	0.60
8	0.72	V_{p75-25} (m ³)	0.41	80	0.80
15	0.80	t_{75} (min)	11.1	100	1.00
30	0.95	t_{25} (min)	56.7		1.20
40	0.95	Data Fit R ²	0.930		1.40
60	1.16				
90	1.30				

Infiltration rate f (ms⁻¹) **5.33E-05** **Total effective storage depth (esd) (m)** **0.73**

Test 2

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)	Water Level m bgl
0	0.68	75% esd (mbgl)	0.84		
1	0.74	50% esd (mbgl)	0.99	10	0.20
2	0.76	25% esd (mbgl)	1.15	20	0.40
4	0.81	A_{s50} (m ²)	2.55	30	0.60
8	0.89	V_{p75-25} (m ³)	0.35	40	0.80
15	1.00	t_{75} (min)	4.4	50	1.00
30	1.17	t_{25} (min)	24.4	60	1.20
40	1.27	Data Fit R ²	0.967		1.40
50	1.38				1.60

Infiltration rate f (ms⁻¹) **1.14E-04** **Total effective storage depth (esd) (m)** **0.62**

Test 3

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)	Water Level m bgl
0	0.60	75% esd (mbgl)	0.78		
1	0.63	50% esd (mbgl)	0.95	10	0.20
2	0.65	25% esd (mbgl)	1.13	20	0.40
4	0.69	A_{s50} (m ²)	2.73	30	0.60
8	0.77	V_{p75-25} (m ³)	0.39	40	0.80
15	0.85	t_{75} (min)	6.9	50	1.00
30	0.99	t_{25} (min)	52.2	60	1.20
40	1.08	Data Fit R ²	0.976		1.40
50	1.14				
60	1.20				

Infiltration rate f (ms⁻¹) **5.29E-05** **Total effective storage depth (esd) (m)** **0.70**

Carried out by Arcadis Consulting (UK) Ltd	Notes: Too many fines for effective soakage	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA814

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	9.44 mAOD	Date Excavated	05/01/2017
Depth	1.80		Coordinates	540549.32 mE	Date Tested	05/01/2017
Width	0.70			266448.71 mN		
Length	2.30					

Test 1

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)		
0	1.49	75% esd (mbgl)	1.57	0	50	100
1	1.51	50% esd (mbgl)	1.65	150	200	
2	1.52	25% esd (mbgl)	1.72			
4	1.55	A_{s50} (m ²)	2.54			
8	1.61	V_{p75-25} (m ³)	0.25			
15	1.65	t_{75} (min)	7.7			
30	1.76	t_{25} (min)	20.0			
60	1.91	Data Fit R ²	0.923			
90	2.00					
150	2.13					

Total effective storage depth (esd) (m) 0.31

Test 2

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)		
0		75% esd (mbgl)		-20	0	20
1		50% esd (mbgl)		40	60	80
2		25% esd (mbgl)		100		
4		A_{s50} (m ²)				
8		V_{p75-25} (m ³)				
15		t_{75} (min)				
30		t_{25} (min)				
45		Data Fit R ²				
60						
90						

Total effective storage depth (esd) (m)

Test 3

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)		
0		75% esd (mbgl)		-20	0	20
1		50% esd (mbgl)		40	60	80
2		25% esd (mbgl)		100		
4		A_{s50} (m ²)				
8		V_{p75-25} (m ³)				
15		t_{75} (min)				
30		t_{25} (min)				
45		Data Fit R ²				
60						
90						

Total effective storage depth (esd) (m) 0.00

Carried out by Arcadis Consulting (UK) Ltd	Notes: Only one soakaway test undertaken due to time restraints	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA829

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	9.30 mAOD	Date Excavated	19/01/2017
Depth	1.30		Coordinates	540800.78 mE	Date Tested	19/01/2017
Width	0.70			266597.7 mN		
Length	1.10					

Test 1

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
0	0.61	75% esd (mbgl) 0.78	0	0.00
1	0.62	50% esd (mbgl) 0.96	200	0.20
2	0.64	25% esd (mbgl) 1.13	400	0.40
4	0.66	A_{s50} (m ²) 2.01	600	0.60
8	0.69	V_{p75-25} (m ³) 0.27	800	0.80
15	0.75	t_{75} (min) 25.9	1000	1.00
30	0.78	t_{25} (min) 852.4		1.20
60	0.85	Data Fit R ² 0.972		
90	0.91			
120	0.91			

Infiltration rate f (ms⁻¹) 2.66E-06

Total effective storage depth (esd) (m) 0.69

Test 2

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
		75% esd (mbgl)	0	0.00
		50% esd (mbgl)	0.2	0.10
		25% esd (mbgl)	0.4	0.20
		A_{s50} (m ²)	0.6	0.30
		V_{p75-25} (m ³)	0.8	0.40
		t_{75} (min)	1.0	0.50
		t_{25} (min)	1.2	0.60
		Data Fit R ²		0.70
				0.80
				0.90
				1.00

Infiltration rate f (ms⁻¹) NO VALID DATA

Total effective storage depth (esd) (m)

Test 3

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
		75% esd (mbgl)	0	0.00
		50% esd (mbgl)	0.2	0.10
		25% esd (mbgl)	0.4	0.20
		A_{s50} (m ²)	0.6	0.30
		V_{p75-25} (m ³)	0.8	0.40
		t_{75} (min)	1.0	0.50
		t_{25} (min)	1.2	0.60
		Data Fit R ²		0.70
				0.80
				0.90
				1.00

Infiltration rate f (ms⁻¹) NO VALID DATA

Total effective storage depth (esd) (m) 0.00

Carried out by Arcadis Consulting (UK) Ltd	Notes: Only one soakaway undertaken due to time restraints	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA832

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	9.72 mAOD	Date Excavated	05/01/2017
Depth	1.60		Coordinates	540550.58 mE	Date Tested	05/01/2017
Width	0.70			266300.63 mN		
Length	1.50					

Test 1

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
0	0.69	75% esd (mbgl) 0.92	0	0.00
1	0.70	50% esd (mbgl) 1.15	500	0.20
2	0.70	25% esd (mbgl) 1.37	1000	0.40
4	0.71	A_{s50} (m ²) 3.05	1500	0.60
8	0.72	V_{p75-25} (m ³) 0.48	2000	0.80
15	0.73	t_{75} (min) 467.8	2500	1.00
30	0.76	t_{25} (min) 265094.1		1.20
60	0.80	Data Fit R ² 0.890		1.40
90	0.83			1.60
120	0.85			

Infiltration rate f (ms⁻¹) 9.86E-09 **Total effective storage depth (esd) (m) 0.91**

Test 2

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
0		75% esd (mbgl)	-20	0.00
1		50% esd (mbgl)	0	0.10
2		25% esd (mbgl)	20	0.20
4		A_{s50} (m ²)	40	0.30
8		V_{p75-25} (m ³)	60	0.40
15		t_{75} (min)	80	0.50
30		t_{25} (min)	100	0.60
45		Data Fit R ²		0.70
60				0.80
90				0.90

Infiltration rate f (ms⁻¹) NO VALID DATA **Total effective storage depth (esd) (m)**

Test 3

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
0		75% esd (mbgl)	-20	0.00
1		50% esd (mbgl)	0	0.10
2		25% esd (mbgl)	20	0.20
4		A_{s50} (m ²)	40	0.30
8		V_{p75-25} (m ³)	60	0.40
15		t_{75} (min)	80	0.50
30		t_{25} (min)	100	0.60
45		Data Fit R ²		0.70
60				0.80
90				0.90

Infiltration rate f (ms⁻¹) NO VALID DATA **Total effective storage depth (esd) (m) 0.00**

Carried out by Arcadis Consulting (UK) Ltd	Notes: Too many fines for effective soakage	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA856

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	9.10 mAOD	Date Excavated	19/01/2017
Depth	1.20		Coordinates	540794.69 mE	Date Tested	19/01/2017
Width	0.70			266489.88 mN		
Length	1.50					

Test 1

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
0	0.49	75% esd (mbgl) 0.67	0	0.49
1	0.50	50% esd (mbgl) 0.85	50	0.60
2	0.51	25% esd (mbgl) 1.02	100	0.70
4	0.53	A_{s50} (m ²) 2.61	150	0.75
8	0.56	V_{p75-25} (m ³) 0.37	200	0.80
15	0.60	t_{75} (min) 24.8	250	0.85
30	0.67	t_{25} (min) 237.7	300	0.90
60	0.77	Data Fit R ² 0.925		
120	0.89			
180	1.01			

Infiltration rate f (ms⁻¹) 1.12E-05 **Total effective storage depth (esd) (m)** 0.71

Test 2

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
		75% esd (mbgl)	0	0.00
		50% esd (mbgl)	0.2	0.00
		25% esd (mbgl)	0.4	0.00
		A_{s50} (m ²)	0.6	0.00
		V_{p75-25} (m ³)	0.8	0.00
		t_{75} (min)	1.0	0.00
		t_{25} (min)	1.2	0.00
		Data Fit R ²		

Infiltration rate f (ms⁻¹) NO VALID DATA **Total effective storage depth (esd) (m)**

Test 3

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
		75% esd (mbgl)	0	0.00
		50% esd (mbgl)	0.2	0.00
		25% esd (mbgl)	0.4	0.00
		A_{s50} (m ²)	0.6	0.00
		V_{p75-25} (m ³)	0.8	0.00
		t_{75} (min)	1.0	0.00
		t_{25} (min)	1.2	0.00
		Data Fit R ²		

Infiltration rate f (ms⁻¹) NO VALID DATA **Total effective storage depth (esd) (m)** 0.00

Carried out by Arcadis Consulting (UK) Ltd	Notes: Only one soakaway test undertaken due to time restrictions	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA905

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	6.93 mAOD	Date Excavated	11/01/2017
Depth	2.00		Coordinates	540949.85 mE	Date Tested	11/01/2017
Width	0.70			267099.54 mN		
Length	1.70					

Test 1

Time min	Depth to Water m bgl	Test Parameters	Water Level m bgl
0	1.07	75% esd (mbgl) 1.30	
1	1.07	50% esd (mbgl) 1.54	
2	1.07	25% esd (mbgl) 1.77	
4	1.07	A_{s50} (m ²) 3.42	
8	1.07	V_{p75-25} (m ³) 0.55	
15	1.07	t_{75} (min) #DIV/0!	
30	1.07	t_{25} (min) #DIV/0!	
50	1.07	Data Fit R ² #DIV/0!	
60	1.07		
90	1.07		

Infiltration rate f (ms⁻¹) NO VALID DATA Total effective storage depth (esd) (m) 0.93

Test 2

Time min	Depth to Water m bgl	Test Parameters	Water Level m bgl
		75% esd (mbgl)	
		50% esd (mbgl)	
		25% esd (mbgl)	
		A_{s50} (m ²)	
		V_{p75-25} (m ³)	
		t_{75} (min)	
		t_{25} (min)	
		Data Fit R ²	

Infiltration rate f (ms⁻¹) NO VALID DATA Total effective storage depth (esd) (m)

Test 3

Time min	Depth to Water m bgl	Test Parameters	Water Level m bgl
		75% esd (mbgl)	
		50% esd (mbgl)	
		25% esd (mbgl)	
		A_{s50} (m ²)	
		V_{p75-25} (m ³)	
		t_{75} (min)	
		t_{25} (min)	
		Data Fit R ²	

Infiltration rate f (ms⁻¹) NO VALID DATA Total effective storage depth (esd) (m) 0.00

Carried out by Arcadis Consulting (UK) Ltd	Notes: Too many fines for effective soakage	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA911

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	8.97 mAOD	Date Excavated	20/01/2017
Depth	1.10		Coordinates	266800.18 mE	Date Tested	20/01/2017
Width	0.70			540751.71 mN		
Length	1.50					

Test 1

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)		
0	0.68	75% esd (mbgl)	0.79	0	500	1000
1	0.68	50% esd (mbgl)	0.89	1500	2000	2500
2	0.68	25% esd (mbgl)	1.00			
4	0.69	A_{50} (m ²)	1.97			
8	0.69	V_{p75-25} (m ³)	0.22			
15	0.70	t_{75} (min)	614.2			
30	0.71	t_{25} (min)	#####			
60	0.73	Data Fit R ²	0.914			
90	0.74					
120	0.75					

Infiltration rate f (ms⁻¹) **1.36E-09** **Total effective storage depth (esd) (m)** **0.42**

Test 2

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)		
		75% esd (mbgl)		-0.2	0	0.2
		50% esd (mbgl)		0.4	0.6	0.8
		25% esd (mbgl)		1	1.2	
		A_{50} (m ²)				
		V_{p75-25} (m ³)				
		t_{75} (min)				
		t_{25} (min)				
		Data Fit R ²				

Infiltration rate f (ms⁻¹) **NO VALID DATA** **Total effective storage depth (esd) (m)**

Test 3

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)		
		75% esd (mbgl)		-0.2	0	0.2
		50% esd (mbgl)		0.4	0.6	0.8
		25% esd (mbgl)		1	1.2	
		A_{50} (m ²)				
		V_{p75-25} (m ³)				
		t_{75} (min)				
		t_{25} (min)				
		Data Fit R ²				

Infiltration rate f (ms⁻¹) **NO VALID DATA** **Total effective storage depth (esd) (m)** **0.00**

Carried out by Arcadis Consulting (UK) Ltd	Notes: Too many fines for effective soakage	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA914

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	8.64 mAOD	Date Excavated	16/01/2017
Depth	1.30		Coordinates	540902.93 mE	Date Tested	16/01/2017
Width	0.70			266951.98 mN		
Length	1.70					

Test 1

Time min	Depth to Water m bgl	Test Parameters	
0	0.53	75% esd (mbgl)	0.72
1	0.53	50% esd (mbgl)	0.92
2	0.53	25% esd (mbgl)	1.11
4	0.53	A_{s50} (m ²)	3.04
8	0.53	V_{p75-25} (m ³)	0.46
15	0.53	t_{75} (min)	#NUM!
30	0.53	t_{25} (min)	#NUM!
40	0.53	Data Fit R ²	0.000
50	0.53		
60	0.53		

Infiltration rate f (ms⁻¹) NO VALID DATA
Total effective storage depth (esd) (m) 0.77

Test 2

Time min	Depth to Water m bgl	Test Parameters	
		75% esd (mbgl)	
		50% esd (mbgl)	
		25% esd (mbgl)	
		A_{s50} (m ²)	
		V_{p75-25} (m ³)	
		t_{75} (min)	
		t_{25} (min)	
		Data Fit R ²	

Infiltration rate f (ms⁻¹) NO VALID DATA
Total effective storage depth (esd) (m)

Test 3

Time min	Depth to Water m bgl	Test Parameters	
		75% esd (mbgl)	
		50% esd (mbgl)	
		25% esd (mbgl)	
		A_{s50} (m ²)	
		V_{p75-25} (m ³)	
		t_{75} (min)	
		t_{25} (min)	
		Data Fit R ²	

Infiltration rate f (ms⁻¹) NO VALID DATA
Total effective storage depth (esd) (m) 0.00

Carried out by Arcadis Consulting (UK) Ltd	Notes: Too many fines for effective soakage	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA920

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	8.96 mAOD	Date Excavated	16/01/2017
Depth	1.60		Coordinates	541050.26 mE	Date Tested	16/01/2017
Width	0.70			266948.43 mN		
Length	1.70					

Test 1

Time min	Depth to Water m bgl	Test Parameters		Water Level m bgl
0	0.84	75% esd (mbgl)	1.03	
1	0.85	50% esd (mbgl)	1.22	
2	0.85	25% esd (mbgl)	1.41	
4	0.85	A_{50} (m ²)	3.01	
6	0.85	V_{p75-25} (m ³)	0.45	
8	0.85	t_{75} (min)	#NUM!	
10	0.85	t_{25} (min)	#NUM!	
15	0.85	Data Fit R ²	0.000	
20	0.85			
30	0.85			

Infiltration rate f (ms⁻¹) NO VALID DATA

Total effective storage depth (esd) (m) 0.76

Test 2

Time min	Depth to Water m bgl	Test Parameters		Water Level m bgl
		75% esd (mbgl)		
		50% esd (mbgl)		
		25% esd (mbgl)		
		A_{50} (m ²)		
		V_{p75-25} (m ³)		
		t_{75} (min)		
		t_{25} (min)		
		Data Fit R ²		

Infiltration rate f (ms⁻¹) NO VALID DATA

Total effective storage depth (esd) (m)

Test 3

Time min	Depth to Water m bgl	Test Parameters		Water Level m bgl
		75% esd (mbgl)		
		50% esd (mbgl)		
		25% esd (mbgl)		
		A_{50} (m ²)		
		V_{p75-25} (m ³)		
		t_{75} (min)		
		t_{25} (min)		
		Data Fit R ²		

Infiltration rate f (ms⁻¹) NO VALID DATA

Total effective storage depth (esd) (m) 0.00

Carried out by Arcadis Consulting (UK) Ltd	Notes: Too many fines for effective soakage	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA922

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	9.07 mAOD	Date Excavated	20/01/2017
Depth	1.10		Coordinates	540849.81 mE	Date Tested	20/01/2017
Width	0.70			266750.41 mN		
Length	1.50					

Test 1

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)		
0	0.63	75% esd (mbgl)	0.75	0	500	1000
1	0.63	50% esd (mbgl)	0.87	1500	2000	2500
2	0.64	25% esd (mbgl)	0.98			
4	0.65	A_{50} (m ²)	2.08			
6	0.65	V_{p75-25} (m ³)	0.25			
8	0.66	t_{75} (min)	71.0			
15	0.69	t_{25} (min)	9339.6			
30	0.71	Data Fit R ²	0.950			
60	0.74					
120	0.77					

Total effective storage depth (esd) (m) 0.47

Infiltration rate f (ms⁻¹) 2.13E-07

Test 2

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)		
		75% esd (mbgl)		-0.2	0	0.2
		50% esd (mbgl)		0.4	0.6	0.8
		25% esd (mbgl)		1	1.2	
		A_{50} (m ²)				
		V_{p75-25} (m ³)				
		t_{75} (min)				
		t_{25} (min)				
		Data Fit R ²				

Total effective storage depth (esd) (m)

Infiltration rate f (ms⁻¹) NO VALID DATA

Test 3

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)		
		75% esd (mbgl)		-0.2	0	0.2
		50% esd (mbgl)		0.4	0.6	0.8
		25% esd (mbgl)		1	1.2	
		A_{50} (m ²)				
		V_{p75-25} (m ³)				
		t_{75} (min)				
		t_{25} (min)				
		Data Fit R ²				

Total effective storage depth (esd) (m) 0.00

Infiltration rate f (ms⁻¹) NO VALID DATA

Carried out by Arcadis Consulting (UK) Ltd	Notes: Only one soakaway test undertaken due to time constraints	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA926

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	9.45 mAOD	Date Excavated	17/01/2017
Depth	1.30		Coordinates	541048.91 mE	Date Tested	17/01/2017
Width	0.70			266748.94 mN		
Length	1.60					

Test 1

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)	Water Level m bgl
0	0.50	75% esd (mbgl)	0.70		
1	0.51	50% esd (mbgl)	0.90	500	0.20
2	0.51	25% esd (mbgl)	1.10	1000	0.40
4	0.51	A_{s50} (m ²)	2.96	1500	0.60
8	0.52	V_{p75-25} (m ³)	0.45	2000	0.70
15	0.53	t_{75} (min)	2428.7	2500	0.75
30	0.55	t_{25} (min)	#####		0.80
60	0.57	Data Fit R ²	0.902		0.90
120	0.60				1.00
180	0.61				1.20

Infiltration rate f (ms⁻¹) **2.26E-10** **Total effective storage depth (esd) (m)** **0.80**

Test 2

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)	Water Level m bgl
		75% esd (mbgl)			
		50% esd (mbgl)		0.2	0.10
		25% esd (mbgl)		0.4	0.20
		A_{s50} (m ²)		0.6	0.30
		V_{p75-25} (m ³)		0.8	0.40
		t_{75} (min)		1.0	0.50
		t_{25} (min)		1.2	0.60
		Data Fit R ²			0.70
					0.80
					0.90
					1.00

Infiltration rate f (ms⁻¹) **NO VALID DATA** **Total effective storage depth (esd) (m)**

Test 3

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)	Water Level m bgl
		75% esd (mbgl)			
		50% esd (mbgl)		0.2	0.10
		25% esd (mbgl)		0.4	0.20
		A_{s50} (m ²)		0.6	0.30
		V_{p75-25} (m ³)		0.8	0.40
		t_{75} (min)		1.0	0.50
		t_{25} (min)		1.2	0.60
		Data Fit R ²			0.70
					0.80
					0.90
					1.00

Infiltration rate f (ms⁻¹) **NO VALID DATA** **Total effective storage depth (esd) (m)** **0.00**

Carried out by Arcadis Consulting (UK) Ltd	Notes: Only one soakaway test undertaken due to time constraints	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA933

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	8.86 mAOD	Date Excavated	19/01/2017
Depth	1.20		Coordinates	541249.99 mE	Date Tested	19/01/2017
Width	0.70			266698.26 mN		
Length	1.40					

Test 1

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
0	0.46	75% esd (mbgl) 0.65	0	0.40
1	0.46	50% esd (mbgl) 0.83	500	0.45
2	0.46	25% esd (mbgl) 1.02	1000	0.50
4	0.46	A_{50} (m ²) 2.53	1500	0.55
8	0.46	V_{p75-25} (m ³) 0.36	2000	0.60
15	0.46	t_{75} (min) #####	2500	0.65
30	0.47	t_{25} (min) #####		0.70
60	0.48	Data Fit R ² 0.795		0.75
120	0.48			0.80
180	0.49			0.85

Infiltration rate f (ms⁻¹) 4.20E-21 **Total effective storage depth (esd) (m) 0.74**

Test 2

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
		75% esd (mbgl)	0	0.00
		50% esd (mbgl)	0.2	0.00
		25% esd (mbgl)	0.4	0.00
		A_{50} (m ²)	0.6	0.00
		V_{p75-25} (m ³)	0.8	0.00
		t_{75} (min)	1.0	0.00
		t_{25} (min)	1.2	0.00
		Data Fit R ²		0.00

Infiltration rate f (ms⁻¹) NO VALID DATA **Total effective storage depth (esd) (m)**

Test 3

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
		75% esd (mbgl)	0	0.00
		50% esd (mbgl)	0.2	0.00
		25% esd (mbgl)	0.4	0.00
		A_{50} (m ²)	0.6	0.00
		V_{p75-25} (m ³)	0.8	0.00
		t_{75} (min)	1.0	0.00
		t_{25} (min)	1.2	0.00
		Data Fit R ²		0.00

Infiltration rate f (ms⁻¹) NO VALID DATA **Total effective storage depth (esd) (m) 0.00**

Carried out by Arcadis Consulting (UK) Ltd	Notes: Too many fines for effective soakage	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA1002

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	8.86 mAOD	Date Excavated	17/01/2017
Depth	1.30	1.30	Coordinates	541249.99 mE	Date Tested	17/01/2017
Width	0.70	0.70		266698.26 mN		
Length	1.70	1.70				

Test 1

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
0	0.61	75% esd (mbgl) 0.78	0	0.00
1	0.64	50% esd (mbgl) 0.96	50	0.20
2	0.66	25% esd (mbgl) 1.13	100	0.40
4	0.69	A_{50} (m ²) 2.85	150	0.60
8	0.75	V_{p75-25} (m ³) 0.41	200	0.80
15	0.82	t_{75} (min) 11.5	250	0.90
30	0.86	t_{25} (min) 238.9	300	1.00
40	0.89	Data Fit R ² 0.970		
60	0.98			
90				

Infiltration rate f (ms⁻¹) 1.06E-05

Total effective storage depth (esd) (m) 0.69

Test 2

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
0	0.53	75% esd (mbgl) 0.72	0	0.00
1	0.53	50% esd (mbgl) 0.92	100	0.20
2	0.55	25% esd (mbgl) 1.11	200	0.40
4	0.57	A_{50} (m ²) 3.04	300	0.60
8	0.63	V_{p75-25} (m ³) 0.46	400	0.80
15	0.71	t_{75} (min) 18.4	500	0.90
30	0.75	t_{25} (min) 393.6		
60	0.86	Data Fit R ² 0.983		
90	0.92			
120				

Infiltration rate f (ms⁻¹) 6.70E-06

Total effective storage depth (esd) (m) 0.77

Test 3

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
		75% esd (mbgl)	0	0.00
		50% esd (mbgl)	0.2	0.10
		25% esd (mbgl)	0.4	0.20
		A_{50} (m ²)	0.6	0.30
		V_{p75-25} (m ³)	0.8	0.40
		t_{75} (min)	1.0	0.50
		t_{25} (min)	1.2	0.60
		Data Fit R ²		0.70
				0.80
				0.90
				1.00

Infiltration rate f (ms⁻¹) NO VALID DATA

Total effective storage depth (esd) (m) 0.00

Carried out by Arcadis Consulting (UK) Ltd	Notes: Second test undertaken due to collapse of first pit	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA1004

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	9.20 mAOD	Date Excavated	17/01/2017
Depth	1.70		Coordinates	540926.59 mE	Date Tested	17/01/2017
Width	0.70			266634.08 mN		
Length	1.60					

Test 1

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
0	0.67	75% esd (mbgl) 0.93	0	0.00
1	0.70	50% esd (mbgl) 1.19	500	0.20
2	0.70	25% esd (mbgl) 1.44	1000	0.40
4	0.71	A_{50} (m ²) 3.49	1500	0.60
8	0.72	V_{p75-25} (m ³) 0.58	2000	0.80
15	0.73	t_{75} (min) 691.9	2500	1.00
30	0.75	t_{25} (min) 975138.8		1.20
60	0.79	Data Fit R ² 0.870		1.40
90	0.82			1.60
120	0.85			

Infiltration rate f (ms⁻¹) **2.83E-09** **Total effective storage depth (esd) (m)** **1.03**

Test 2

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
		75% esd (mbgl)	0	0.00
		50% esd (mbgl)	0.2	0.10
		25% esd (mbgl)	0.4	0.20
		A_{50} (m ²)	0.6	0.30
		V_{p75-25} (m ³)	0.8	0.40
		t_{75} (min)	1.0	0.50
		t_{25} (min)	1.2	0.60
		Data Fit R ²		0.70
				0.80
				0.90
				1.00

Infiltration rate f (ms⁻¹) **NO VALID DATA** **Total effective storage depth (esd) (m)**

Test 3

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
		75% esd (mbgl)	0	0.00
		50% esd (mbgl)	0.2	0.10
		25% esd (mbgl)	0.4	0.20
		A_{50} (m ²)	0.6	0.30
		V_{p75-25} (m ³)	0.8	0.40
		t_{75} (min)	1.0	0.50
		t_{25} (min)	1.2	0.60
		Data Fit R ²		0.70
				0.80
				0.90
				1.00

Infiltration rate f (ms⁻¹) **NO VALID DATA** **Total effective storage depth (esd) (m)** **0.00**

Carried out by Arcadis Consulting (UK) Ltd	Notes: Only one soakaway test undertaken due to time restrictions	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA1005

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	9.08 mAOD	Date Excavated	10/01/2017
Depth	2.00		Coordinates	541101.61 mE	Date Tested	10/01/2017
Width	0.70			266651.18 mN		
Length	1.80					

Test 1

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
0	1.27	75% esd (mbgl) 1.45	0	1.20
1	1.27	50% esd (mbgl) 1.64	500	1.35
2	1.27	25% esd (mbgl) 1.82	1000	1.40
4	1.28	A ₅₀ (m ²) 3.09	1500	1.40
8	1.28	V _{p75-25} (m ³) 0.46	2000	1.40
15	1.29	t ₇₅ (min) 3151.1	2500	1.40
30	1.31	t ₂₅ (min) #####		
60	1.32	Data Fit R ² 0.876		
120	1.35			
150	1.37			

Infiltration rate f (ms⁻¹) 2.86E-11 **Total effective storage depth (esd) (m) 0.73**

Test 2

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
		75% esd (mbgl)	0	0.00
		50% esd (mbgl)	0.2	0.10
		25% esd (mbgl)	0.4	0.20
		A ₅₀ (m ²)	0.6	0.30
		V _{p75-25} (m ³)	0.8	0.40
		t ₇₅ (min)	1.0	0.50
		t ₂₅ (min)	1.2	0.60
		Data Fit R ²		

Infiltration rate f (ms⁻¹) NO VALID DATA **Total effective storage depth (esd) (m)**

Test 3

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
		75% esd (mbgl)	0	0.00
		50% esd (mbgl)	0.2	0.10
		25% esd (mbgl)	0.4	0.20
		A ₅₀ (m ²)	0.6	0.30
		V _{p75-25} (m ³)	0.8	0.40
		t ₇₅ (min)	1.0	0.50
		t ₂₅ (min)	1.2	0.60
		Data Fit R ²		

Infiltration rate f (ms⁻¹) NO VALID DATA **Total effective storage depth (esd) (m) 0.00**

Carried out by Arcadis Consulting (UK) Ltd	Notes: Too many fines for effective soakage	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA1103

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	9.30 mAOD	Date Excavated	10/01/2017	
Depth	1.80	1.60	1.60	Coordinates	540842.66 mE	Date Tested	10/01/2017
Width	0.70	0.70	0.70		266347.84 mN		
Length	1.60	1.60	1.60				

Test 1

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
0	0.88	75% esd (mbgl) 1.11	0	0.88
1	0.91	50% esd (mbgl) 1.34	1	0.91
2	0.95	25% esd (mbgl) 1.57	2	0.95
4	1.00	A_{50} (m ²) 3.24	4	1.00
8	1.08	V_{p75-25} (m ³) 0.52	8	1.08
15	1.19	t_{75} (min) 9.8	15	1.19
30	1.30	t_{25} (min) 95.4	30	1.30
40	1.36	Data Fit R ² 0.977	40	1.36
50	1.43		50	1.43
60	1.48		60	1.48

Infiltration rate f (ms⁻¹) **3.10E-05**

Total effective storage depth (esd) (m) **0.92**

Test 2

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
0	0.75	75% esd (mbgl) 0.96	0	0.75
1	0.78	50% esd (mbgl) 1.18	1	0.78
2	0.81	25% esd (mbgl) 1.39	2	0.81
4	0.84	A_{50} (m ²) 3.08	4	0.84
8	0.93	V_{p75-25} (m ³) 0.48	8	0.93
15	1.05	t_{75} (min) 7.7	15	1.05
30	1.21	t_{25} (min) 69.4	30	1.21
40	1.27	Data Fit R ² 0.980	40	1.27
50	1.33		50	1.33
60	1.38		60	1.38

Infiltration rate f (ms⁻¹) **4.18E-05**

Total effective storage depth (esd) (m) **0.85**

Test 3

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
0	0.70	75% esd (mbgl) 0.93	0	0.70
1	0.72	50% esd (mbgl) 1.15	1	0.72
2	0.75	25% esd (mbgl) 1.38	2	0.75
4	0.79	A_{50} (m ²) 3.19	4	0.79
8	0.86	V_{p75-25} (m ³) 0.50	8	0.86
15	0.97	t_{75} (min) 8.9	15	0.97
30	1.16	t_{25} (min) 73.5	30	1.16
60	1.32	Data Fit R ² 0.975	60	1.32
90	1.41		90	1.41
120	1.60		120	1.60

Infiltration rate f (ms⁻¹) **4.07E-05**

Total effective storage depth (esd) (m) **0.90**

Carried out by Arcadis Consulting (UK) Ltd	Notes:	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA1105

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	mAOD	Date Excavated	06/01/2017
Depth	1.40		Coordinates	540741.0225 mE	Date Tested	06/01/2017
Width	0.70			266184.0844 mN		
Length	1.50					

Test 1

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
0	0.50	75% esd (mbgl) 0.73	0	0.00
1	0.51	50% esd (mbgl) 0.95	500	0.20
2	0.52	25% esd (mbgl) 1.18	1000	0.40
4	0.53	A_{s50} (m ²) 3.03	1500	0.60
8	0.54	V_{p75-25} (m ³) 0.47	2000	0.80
15	0.55	t_{75} (min) 162.3	2500	0.90
30	0.58	t_{25} (min) 13679.8		1.00
60	0.65	Data Fit R ² 0.884		1.20
90	0.69			1.40
180	0.74			

Infiltration rate f (ms⁻¹) 1.92E-07 **Total effective storage depth (esd) (m) 0.90**

Test 2

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
		75% esd (mbgl)	0	0.00
		50% esd (mbgl)	0.2	0.10
		25% esd (mbgl)	0.4	0.20
		A_{s50} (m ²)	0.6	0.30
		V_{p75-25} (m ³)	0.8	0.40
		t_{75} (min)	1.0	0.50
		t_{25} (min)	1.2	0.60
		Data Fit R ²		0.70
				0.80
				0.90
				1.00

Infiltration rate f (ms⁻¹) NO VALID DATA **Total effective storage depth (esd) (m)**

Test 3

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
		75% esd (mbgl)	0	0.00
		50% esd (mbgl)	0.2	0.10
		25% esd (mbgl)	0.4	0.20
		A_{s50} (m ²)	0.6	0.30
		V_{p75-25} (m ³)	0.8	0.40
		t_{75} (min)	1.0	0.50
		t_{25} (min)	1.2	0.60
		Data Fit R ²		0.70
				0.80
				0.90
				1.00

Infiltration rate f (ms⁻¹) NO VALID DATA **Total effective storage depth (esd) (m) 0.00**

Carried out by Arcadis Consulting (UK) Ltd	Notes: Only one soakaway test undertaken due to time restrictions	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA1113

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	mAOD	Date Excavated	09/01/2017
Depth	1.80		Coordinates	540854.7661 mE	Date Tested	09/01/2017
Width	0.70			266171.3132 mN		
Length	1.60					

Test 1

Time min	Depth to Water m bgl	Test Parameters		Water Level m bgl	Elapsed Time (min)
0	0.67	75% esd (mbgl)	0.95		
1	0.68	50% esd (mbgl)	1.24	0.20	500
2	0.68	25% esd (mbgl)	1.52	0.40	1000
4	0.69	A_{50} (m ²)	3.72	0.60	1500
8	0.71	V_{p75-25} (m ³)	0.63	0.80	2000
15	0.72	t_{75} (min)	865.5	0.90	2500
30	0.75	t_{25} (min)	895896.0	1.00	
60	0.78	Data Fit R ²	0.910	1.20	
120	0.84			1.40	
180	0.87			1.60	

Infiltration rate f (ms⁻¹) **3.17E-09** **Total effective storage depth (esd) (m)** **1.13**

Test 2

Time min	Depth to Water m bgl	Test Parameters		Water Level m bgl	Elapsed Time (min)
		75% esd (mbgl)			
		50% esd (mbgl)		0.10	0.2
		25% esd (mbgl)		0.20	0.4
		A_{50} (m ²)		0.30	0.6
		V_{p75-25} (m ³)		0.40	0.8
		t_{75} (min)		0.50	1
		t_{25} (min)		0.60	1.2
		Data Fit R ²		0.70	
				0.80	
				0.90	
				1.00	

Infiltration rate f (ms⁻¹) **NO VALID DATA** **Total effective storage depth (esd) (m)**

Test 3

Time min	Depth to Water m bgl	Test Parameters		Water Level m bgl	Elapsed Time (min)
		75% esd (mbgl)			
		50% esd (mbgl)		0.10	0.2
		25% esd (mbgl)		0.20	0.4
		A_{50} (m ²)		0.30	0.6
		V_{p75-25} (m ³)		0.40	0.8
		t_{75} (min)		0.50	1
		t_{25} (min)		0.60	1.2
		Data Fit R ²		0.70	
				0.80	
				0.90	
				1.00	

Infiltration rate f (ms⁻¹) **NO VALID DATA** **Total effective storage depth (esd) (m)** **0.00**

Carried out by Arcadis Consulting (UK) Ltd	Notes: Only one soakway test undertaken due to time restrictions	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA1120

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	9.29 mAOD	Date Excavated	06/01/2017
Depth	1.50		Coordinates	541050.82 mE	Date Tested	06/01/2017
Width	0.70			266100.51 mN		
Length	1.60					

Test 1

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
0	0.52	75% esd (mbgl) 0.77	0	0.00
1	0.52	50% esd (mbgl) 1.01	500	0.20
2	0.53	25% esd (mbgl) 1.26	1000	0.40
4	0.53	A_{s50} (m ²) 3.37	1500	0.60
8	0.56	V_{p75-25} (m ³) 0.55	2000	0.80
15	0.58	t_{75} (min) 394.2	2500	0.80
30	0.60	t_{25} (min) 142330.6		1.00
60	0.65	Data Fit R ² 0.939		1.20
90	0.68			1.40
120	0.70			

Infiltration rate f (ms⁻¹) 1.91E-08 **Total effective storage depth (esd) (m) 0.98**

Test 2

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
		75% esd (mbgl)	0	0.00
		50% esd (mbgl)	0.2	0.10
		25% esd (mbgl)	0.4	0.20
		A_{s50} (m ²)	0.6	0.30
		V_{p75-25} (m ³)	0.8	0.40
		t_{75} (min)	1.0	0.50
		t_{25} (min)	1.2	0.60
		Data Fit R ²		0.70
				0.80
				0.90
				1.00

Infiltration rate f (ms⁻¹) NO VALID DATA **Total effective storage depth (esd) (m)**

Test 3

Time min	Depth to Water m bgl	Test Parameters	Elapsed Time (min)	Water Level m bgl
		75% esd (mbgl)	0	0.00
		50% esd (mbgl)	0.2	0.10
		25% esd (mbgl)	0.4	0.20
		A_{s50} (m ²)	0.6	0.30
		V_{p75-25} (m ³)	0.8	0.40
		t_{75} (min)	1.0	0.50
		t_{25} (min)	1.2	0.60
		Data Fit R ²		0.70
				0.80
				0.90
				1.00

Infiltration rate f (ms⁻¹) NO VALID DATA **Total effective storage depth (esd) (m) 0.00**

Carried out by Arcadis Consulting (UK) Ltd	Notes: Too many fines for effective soakage	Logged HK	Checked SH
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Trial Pit Soakaway Test



Based on BRE DG 365:2016

Project	Northstowe	Status	LOCATION ID
Project ID	UA008426	CHECKED	TPSA1121

Trial Pit Details

Test 1	Test 2	Test 3	Ground Level	9.76 mAOD	Date Excavated	06/01/2017
Depth	1.50		Coordinates	540950.55 mE	Date Tested	06/01/2017
Width	0.70			266150.75 mN		
Length	1.80					

Test 1

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)					
0	0.68	75% esd (mbgl)	0.89	0	500	1000			
1	0.69	50% esd (mbgl)	1.09	1500	2000	2500			
2	0.70	25% esd (mbgl)	1.30						
4	0.71	A_{50} (m ²)	3.31						
8	0.74	V_{p75-25} (m ³)	0.52						
15	0.79	t_{75} (min)	47.5						
30	0.84	t_{25} (min)	1995.8						
40	0.86	Data Fit R ²	0.944						
60	0.91								
90	0.95								
Infiltration rate f (ms⁻¹) 1.34E-06							Total effective storage depth (esd) (m) 0.82		

Test 2

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)		
		75% esd (mbgl)		-0.2	0	0.2
		50% esd (mbgl)		0.4	0.6	0.8
		25% esd (mbgl)		1	1.2	
		A_{50} (m ²)				
		V_{p75-25} (m ³)				
		t_{75} (min)				
		t_{25} (min)				
		Data Fit R ²				
Infiltration rate f (ms⁻¹) NO VALID DATA				Total effective storage depth (esd) (m)		

Test 3

Time min	Depth to Water m bgl	Test Parameters		Elapsed Time (min)		
		75% esd (mbgl)		-0.2	0	0.2
		50% esd (mbgl)		0.4	0.6	0.8
		25% esd (mbgl)		1	1.2	
		A_{50} (m ²)				
		V_{p75-25} (m ³)				
		t_{75} (min)				
		t_{25} (min)				
		Data Fit R ²				
Infiltration rate f (ms⁻¹) NO VALID DATA				Total effective storage depth (esd) (m) 0.00		

Carried out by Arcadis Consulting (UK) Ltd	Notes: Only one soakaway test undertaken due to time restraints	Logged HK	Checked SH
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PROJECT: OAKINGTON, CAMBRIDGESHIRE

**STATIC CONE PENETRATION TESTING
FACTUAL REPORT**

CLIENT: ARCADIS

CONTRACT No.: PO0063967-1



Issue	Date	Description	Prepared	Checked	Approved
01	13/01/17	Final	reg. 13		

Date: 13 January 2017

Our Ref: 1160427

Arcadis

5th Floor, The Pithay

All Saints Street

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Attention **reg. 13**

Dear **reg. 13**

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**STATIC CONE PENETRATION TESTING
AT OAKINGTON, CAMBRIDGESHIRE**

We have pleasure in providing a digital copy of our report and data in AGS format for the above project.

We hope that you are satisfied with the performance of our staff, equipment and reporting on this project. If you should have any queries about any aspect of the works carried out, please do not hesitate to contact us. We look forward to being of service to you in the future.

Yours faithfully,

In Situ Site Investigation Limited

reg. 13

Director

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1.0 INTRODUCTION

At the request of Arcadis (The Client), In Situ Site Investigation Limited (In Situ S.I.) carried out a soils investigation at Oakington, Cambridgeshire.

The investigation consisted of performing Static Cone Penetration Tests (CPTs). All tests were performed at locations set out by the Client.

The fieldwork details are shown below in figure 1.1 and figure 1.2.

Fieldwork Summary	
CPT Rig Used	20 Tonne track mounted CPT 007
Operators	reg. 13
Date Started	12/12/2016
Date Finished	23/12/2016
In Situ S.I. Project Manager	reg. 13
Main Contractor's Site Manager	reg. 13

Figure 1.1: Table showing the fieldwork summary details.

Completed Fieldwork Summary
30 Static Cone Penetration Tests (CPTs) to a maximum depth of 12.66m or refusal. Each test measured Cone Resistance (q_c), Sleeve friction (f_s), Measured Pore Pressure in the shoulder position (u_2), inclination in X and Y planes.
10 Dissipation Tests.
Provision of factual report with estimated soil type, geotechnical parameters and AGS data.

Figure 1.2: Table showing the completed fieldwork summary details.

2.0 FIELDWORK

2.1 CPT RIG

All works were performed with a 20 tonne CPT track mounted rig. A full data sheet for the rig is presented in Appendix A.

2.2 CPTU CONE

The following single electric CPTU cones were used S15-CFIIP.1032 and S15-CFIIP.1458 of a type conforming to the requirements of Application Class 2 of ISO/ FDIS 22476-1 (2012). The cones measured parameters are shown in figure 1.2. The cone had a cross-sectional area of 15cm². The piezo filter was mounted in the shoulder (u_2) position (see figure 3.2). A full datasheet for each of the cones used is shown in Appendix A.

2.3 TEST PROCEDURE

The tests are carried out in accordance with the International Standard for electrical cone and piezocone penetration test (ISO/FDIS 22476-1 2012).

The final depths of the tests were determined by either completion to the specified test depth or when the maximum safe capacity of the equipment was reached. A schedule of the tests performed is shown in Appendix A which has been compiled from the operator's daily progress reports.

The data is transmitted from the digital CPTU through an umbilical cable that runs through the push rods to the data acquisition system.

The rate of penetration is kept constant at 2cm/s \pm 10% except when penetrating very dense or hard strata. A copy of the depth encoder calibration certificate is shown in Appendix A. Results are displayed instantaneously on the computer logging screen. The results are recorded on the computer hard disc.

Before each test is carried out zero values are taken of the cone to check to see if it is within calibration. At the end of each test, zero values are taken again to see if there has been any drift during the test. These values are inspected during the post processing stage. This is a quality check on the data and the testing procedure. Individual test zero values are shown on their corresponding test results on form CPT0001 in Appendix B.

2.4 POSITIONING

All positions were set out by the Client on site.

3.0 CONE PENETRATION TEST RESULTS

All tests carried with the CPTU cone are shown in Appendix B and displays all results as described in section 3.1 and 3.2. Two graphs are shown for each test. The first graph (form CPT0001 Estimated Soil Behaviour Type Plot) shows the measured readings from the cone and the estimated soil description, these are plotted at a 0-20MPa scale for the cone resistance. The second graph (form CPT0002 Measured Pore Pressure Plot) shows derived and corrected values along with the pore pressure results; these are plotted at a 0-80MPa scale for the cone resistance.

3.1 ESTIMATED SOIL BEHAVIOUR TYPE PLOT (FORM CPT0001)

The estimated soil behaviour type plot presented in Appendix B details the following:

- Measured cone end resistance (q_c) and sleeve friction (f_s);
- Friction ratio (R_f);
- Inclination, X and Y axis;
- Estimated behaviour soil type log (Robertson *et.al* 1986, friction ratio chart)
- Legend indicating soil log (BS5930:1999 legend)

3.1.1 Estimated Soil Behaviour Type

The estimation of soil behaviour type using measurements of cone and friction is based upon the variation of the friction ratio in respect to the cone resistance. The friction ratio varies depending upon whether the soil is cohesive or granular. The cone resistance varies depending on the strength and densities of the soil.

The interpretation is based on Robertson *et. al.* (1986) (Friction ratio chart) which is shown below (figure 3.1).

The density and stiffness values descriptions are based on derived N_{60} (Robertson *et. al.* (1986)) and S_u (Lunne and Kleven (1981)) values from the cone resistance in accordance to BS5930:1999. A list of these values are presented in Appendix A.

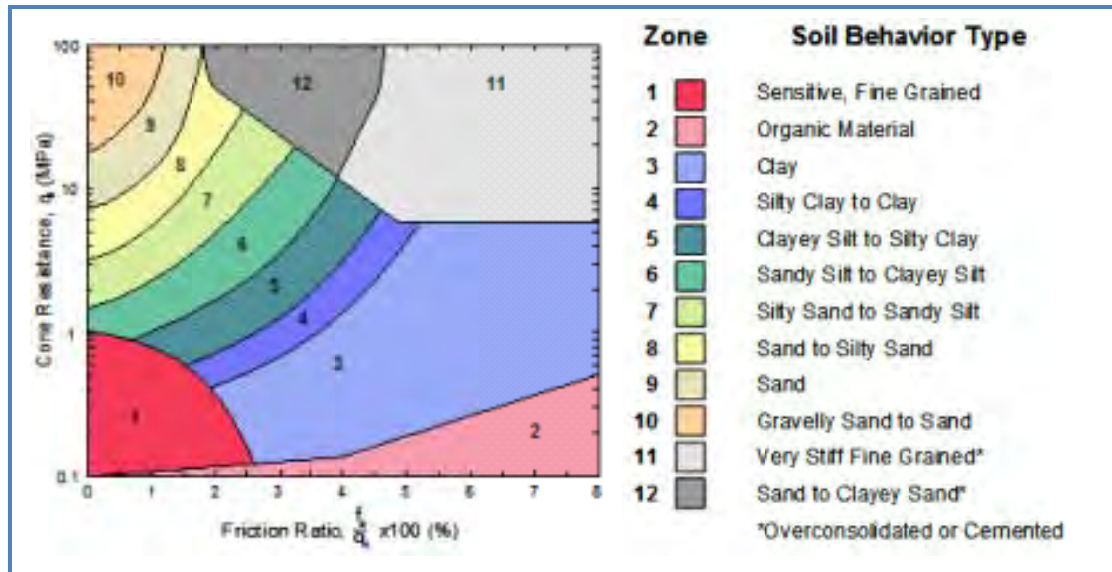


Figure 3.1: Robertson *et al.*, 1986 soil behaviour type chart.

3.1.2 Friction Ratio (R_f)

The friction ratio (R_f) is the ratio between the sleeve friction and the cone resistance. This is a very useful parameter for carrying out soil interpretation

$$\text{Friction Ratio } (R_f) = \left(\frac{\text{Sleeve Friction } (f_s)}{\text{Tip Resistance } (q_c)} \right) \times 100 \text{ (Lunne } et al., 1997)$$

3.1.3 Depth Correction

All tests in the report have been corrected for depth difference caused by inclination. This has been calculated using the method described in the International Reference Test Procedure (2001).

To calculate the corrected depth the following formula is used:

$$z = \int_0^l C_h \cdot dl$$

where:

z = penetration depth, in m;

l = penetration length, in m;

C_h = correction factor for the effect of the inclination of the CPTU relative to the vertical axis.

The equation for calculating the correction factor for the influence of the inclination for a bi-axial inclinometer is:

$$C_h = (1 + \tan^2 \alpha + \tan^2 \beta)^{-1/2}$$

3.2 MEASURED PORE PRESSURE PLOT (CPT0002)

Behind each estimated soil type plots in Appendix B is a second plot showing the pore pressure results as well as corrected and derived parameters. These logs detail the following:

- Measured Pore pressure (u_2),
- Corrected cone resistance (q_t);
- Pore pressure ratio (B_q)
- Sleeve friction (f_s)

3.2.1 Pore Pressure Results (u_2)

The CPTU measured the pore pressure during penetration. If the material is free draining and saturation is maintained it will normally measure hydrostatic pore pressure. In material that is not free draining it will record the total pore pressure (hydrostatic plus any excess pore pressures generated) created by the cone penetrating through this material

The filter element can be mounted in one of three positions. For the tests carried out in this report the filter was mounted in the u_2 , or shoulder position (see figure 3.2)

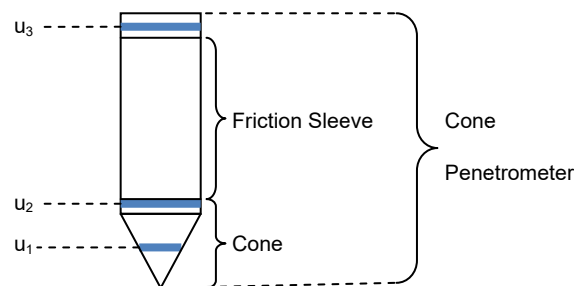


Figure 3.2: Diagram showing pore pressure filter locations (after Lunne *et al.*, 1997)

3.2.2 Corrected Cone Resistance (q_t)

For each penetration test, the measured Cone Resistance, q_c , can be corrected for the 'unequal area effect' due to the influence of the ambient pore water pressure acting on the cone.

The corrections have been applied using the following equation:

$$q_t = q_c + [u_2 \cdot (1 - \alpha)] \text{ (Lunne } et al., 1997)$$

Where α is the cone area ratio, which is **0.869** for the cone used on this project (This value is geometrically measured).

3.2.3 Pore Pressure Ratio (B_q)

Pore pressure ratio is the ratio between the measured pore pressure generated during penetration and the corrected cone resistance minus the total overburden stress.

Pore pressure ratio as defined by Senneset and Janbu (1985) is defined as:

$$B_q = \frac{u_2 - u_0}{q_t - \sigma_{vo}}$$

where:

u_2 = pore pressure measured between the cone and the friction sleeve

u_0 = equilibrium pore pressure

σ_{vo} = total overburden stress

q_t = cone resistance corrected for unequal end area effects

3.2.4 Soil Unit Weight

For calculations involving the total overburden stress, an estimate of the soil unit weight has to be made. For all calculations in this report, an approximate unit weight is assigned to each soil classification zone from the Robertson *et al.*, 1986 chart.

Figure 3.3 below lists the approximate unit weight for each zone from Lunne *et al.*, 1997.

Zone	Approximate unit weight (kN/m ³)
1	17.5
2	12.5
3	17.5
4	18
5	18
6	18
7	18.5
8	19
9	19.5
10	20
11	20.5
12	19

Figure 3.3: Estimate of unit weights based on the Robertson *et al.*, (1986) friction ratio chart (Lunne *et al.*, 1997).

3.2.5 In Situ Pore Pressure

On the pore pressure plot is a second line (in red) showing the inferred in situ or hydrostatic pore pressure, u_0 . This is calculated from a known or estimated water table level.

In the report, the water table has been inferred at 2m below ground level.

4.0 GEOTECHNICAL PARAMETERS

A number of empirical correlations can be carried out to derive geotechnical parameters from CPT data. This report includes a number of these parameters which are described in this section. For the CPT data only soil behaviour type, SPT values, shear strength and relative density are derived and are shown in Appendix C. For the CPTU data all the derived parameters described in the section are derived and displayed in Appendix C.

Please note that a number of the correlations are derived for a certain type of soil, and may not be appropriate for all the soil types encountered on this project.

4.1 SOIL BEHAVIOUR TYPE INDEX

The soil behaviour type index was derived by Jefferies and Davies (1991). It was created to allow a continuous variation of $(q_c/p_a)/N_{60}$ with soil type, which was an improvement on the discontinuous nature of an earlier conversion by Robertson *et al.* (1986).

This approach has been modified for use with the Robertson (1990) normalised CPT soil classification chart. The boundaries between soil behaviour type zones (2 to 7) can be approximated as concentric circles, and the radius of each circle can be used as a soil behaviour type index (Lunne *et al.*, 1997).

The soil behaviour type index, I_c , can then be defined as:

$$I_c = ((3.47 - \log Q_t)^2 + (\log F_r + 1.22)^2)^{0.5}$$

The boundaries of soil behaviour type are then given in terms of the index, I_c . See figure 4.1 for the table of soil behaviour types.

Soil Behaviour Type Index, I_c	Zone (from Robertson 1990 normalised chart)	Soil Behaviour Type
$I_c < 1.31$	7	Gravelly sand to dense sand
$1.31 < I_c < 2.05$	6	Sands – clean sand to silty sand
$2.05 < I_c < 2.60$	5	Sand mixtures – silty sand to sandy silts
$2.60 < I_c < 2.95$	4	Silt mixtures – clayey silt to silty clay
$2.95 < I_c < 3.60$	3	Clays: silty clay to clay
$I_c > 3.60$	2	Organic soils - peats

Figure 4.1: Boundaries of soil behaviour type index, I_c .

4.2 STANDARD PENETRATION TEST (SPT) N VALUE

The SPT N value can be derived using differing ratios of the relationship between q_c and N_{60} . These ratios were suggested by Robertson *et al.* (1986) and are shown in figure 4.2.

Zone	Soil Behaviour Type	$(q_c/p_a)/N_{60}$
1	Sensitive fine grained	2
2	Organic material	1
3	CLAY	1
4	Silty CLAY to CLAY	1.5
5	Clayey SILT to silty CLAY	2
6	Sandy SILT to clayey SILT	2.5
7	Silty SAND to sandy SILT	3
8	SAND to silty SAND	4
9	SAND	5
10	Gravelly SAND to SAND	6
11	Very stiff fine grained	1
12	SAND to clayey SAND	2

Figure 4.2: SPT N value ratios from Robertson *et al.*, 1986.

For the best results for the calculation of N_{60} it is recommended to use the soil behaviour type index, I_c . This is the method used in this report.

The relationship between N_{60} and I_c is defined as:

$$\frac{\left(\frac{q_c}{pa}\right)}{N_{60}} = 8.5 \left(1 - \frac{I_c}{4.6}\right) \text{ (Lunne } et al., 1997)$$

It is suggested (Jefferies and Davies, 1991) that this method provides a better estimate of the SPT N values than the actual SPT test due to poor repeatability of the SPT.

4.3 SHEAR STRENGTH

Estimation of s_u from CPTUs using corrected cone resistance is made from the following equation:

$$s_u = \frac{(q_t - \sigma_{vo})}{N_{kt}} \text{ (Lunne } et al., 1981)$$

where:

N_{kt} = empirical cone factor
 σ_{vo} = total overburden stress.

Research has shown that the cone factor N_{kt} varies between 11 and 30 with an average value of 15. We present an upper bound s_u value with an N_{kt} value of 15 and a lower bound s_u value with an N_{kt} value of 20. This report only presents this data on soils with a soil behaviour type index (I_c) of greater than 2.60.

4.4 RELATIVE DENSITY (D_r)

Relative density has been derived using a method by Jamiolkowski *et al.*, 1985 (see figure 4.3). This correlation was derived from five predominantly silica sands under controlled laboratory conditions. The sands were normally consolidated, un-cemented, un-aged and predominantly quartz. It is noted that field cases are likely to show more variability than that demonstrated in figure 4.3.

The correlation in this report is calculated on soil with a soil behaviour type index (I_r) of less than 2.60. The formula for calculating relative density (D_r) is:

$$D_r = -98 + 66 \log_{10} \frac{q_c}{[\sigma'_{vo}]^{0.5}}$$

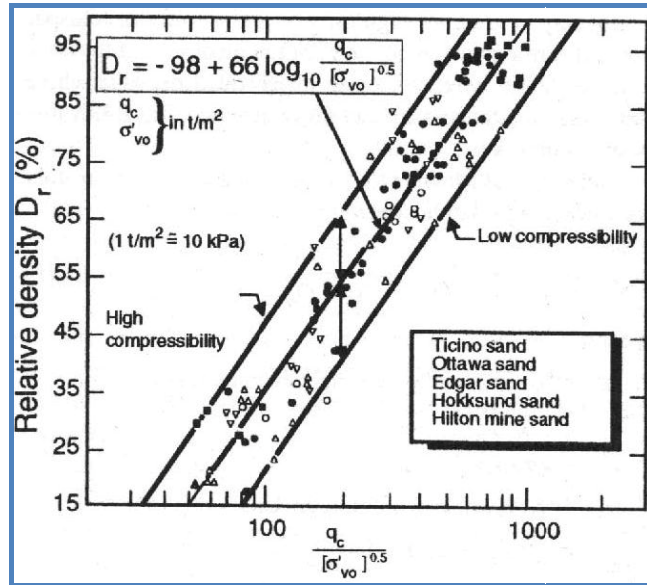


Figure 4.3: Correlation between q_c and relative density (after Jamiolkowski *et al.*, 1985)

4.5 FRICTION ANGLE

Friction angle is derived using the Robertson and Campanella (1983) method from their work looking at calibration test data (see figure 4.6). The correlation is based on un-aged un-cemented quartz sand. The formula for peak Φ' from CPTU is:

$$\Phi' = \arctan \left[0.1 + 0.38 \log \left(\frac{q_t}{\sigma_{vo}'} \right) \right]$$

The correlation in this report is calculated on soil with a soil behaviour type index (I_c) of less than 2.60.

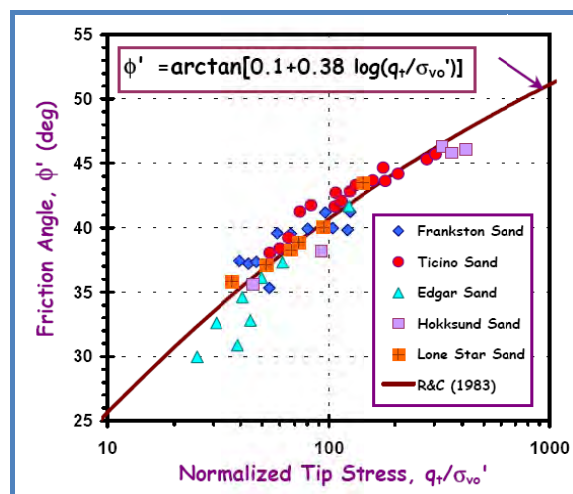


Figure 4.6: Peak friction angle of clean quartz sands from CPTU (after Robertson & Campanella, 1983).

4.6 FINES CONTENT (FC)

It is possible to estimate fines content from the friction ratio of sandy soils. Suzuki *et al.*, (1995) demonstrated how friction ratio (R_f) varies with fines content (FC) (see figure 4.7)

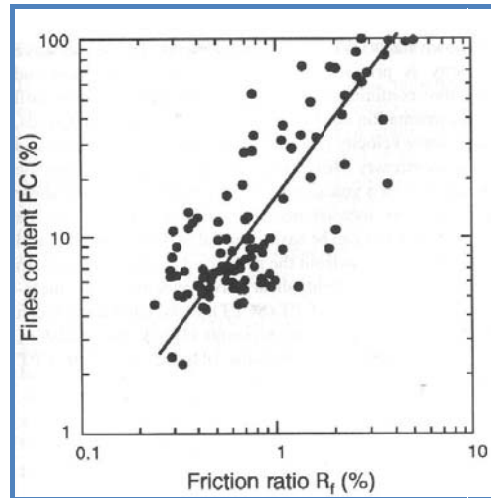


Figure 4.7: Variation of fines content with friction ratio (Suzuki *et al.*, 1995)

Robertson and Fear (1995) used this relationship and integrated it with the soil behaviour type index (I_c), this was later updated in 1998. This relationship is shown below:

$$\text{if } I_c < 1.26 \text{ apparent fines content FC (\%)} = 0$$

$$\text{if } 1.26 \leq I_c \leq 3.5 \text{ apparent fines content FC (\%)} = 1.75 I_c^3 - 3.7$$

$$\text{if } I_c > 3.5 \text{ apparent fines content FC (\%)} = 100$$

5.0 DISSIPATION TESTS

At locations instructed by the Client's representative on site, porewater dissipation tests were performed. These tests measure the dissipation of excess pore water pressure at specific soil horizons, after the advancement of the cone is temporarily stopped.

The rate of dissipation depends upon the coefficient of consolidation, which, in turn, depends on the compressibility, and permeability of soil (Lunne *et. al.*, 1997).

The results of these tests are presented in Appendix D.

The coefficient of horizontal consolidation interpretation is calculated using the Houlsby and Teh (1998) method. The interpretation is based on the results of large strain finite element analysis of the penetration pore pressures, and a finite difference analysis of the dissipation pore pressure (Lunne *et. al.*, 1997). The formula is defined as follows:

$$T^* = \frac{c_h \cdot t}{r^2 \sqrt{I_r}}$$

where:

T^* = dimensionless time factor (for T50 this value is 0.245 using a u_2 filter)

r^2 = diameter of cone

c_h = coefficient of consolidation

t = time to the T50 value

I_r = rigidity index

The values are typically calculated using the T50 value which is the time taken to reach 50% dissipation. In situations where T50 is not reached it is possible to other values of T^* as described by Houlsby and Teh (1998).

The c_h values are calculated for two different rigidity index values 50 and 500. The rigidity index is given in the formula below:

$$I_r = G_u/S_u$$

where:

G_u = Shear modulus of the soil

S_u = Undrained shear strength of the soil

The level of groundwater for the calculations has been stated at 2m below ground level.

6.0 REFERENCES

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APPENDIX A

GENERAL INFORMATION

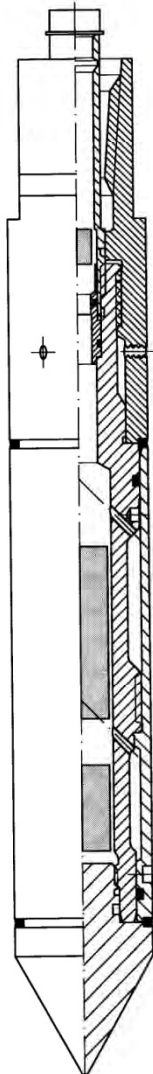
LIST OF FIGURES

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CPT Project Summary Sheet	2
20 Tonne Tracked Rig Data Sheet	1
CPT Soil Description Table	1
Explanation of Symbols	1

CONE DATASHEET



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Postbank : 5226758
BTW nr. : NL806331677801



SPECIFICATIONS
S15 SERIES
ELECTRICAL CONES

The electronic subtraction cones have been developed to address the durability problems inherent in other cone designs. The unit consists of a single element temperature compensated strain gauge transducer for measuring both cone resistance and local sleeve friction. This design is therefore more robust than a compression type cone. The cone support electronics package is located directly behind the transducer. The precision strain gauge amplifiers and power supply eliminate the effects of cable resistance on the measurements. A standard subtraction cone is capable of measuring simultaneously the following channels: Tip, Local friction, Pore pressure, Temperature and Inclination.

GENERAL SPECIFICATIONS

Cone Tip Section Area	1,500 mm ²
Friction Sleeve Surface	22,500 mm ²
Total Length	325 mm
Weight	4200 g
Power Supply	± 15 VDC, 100 mA.
Output	0 – 10 VDC*
Working Temperature	0 - 60°C
Storage Temperature	- 40 to + 85°C
Connector	Lemo 10 pins (others on request)

TIP RESISTANCE

Range	100/150* kN
Accuracy	0.25 % FS
Maximum Load	150 % of range
Cone Area Ratio	0.75

LOCAL SLEEVE FRICTION

Range	100/150* kN
Accuracy	0.50 % FS
Maximum Load	150 %
Sleeve Area Ratio	1.0 (EA)

PORE PRESSURE

Range	1/2/5/10* MPa
Accuracy	0.5 % FS
Maximum Load	150 % of range

INCLINATION

Range	25 ° (biaxial)
Accuracy	< 2 °

All our equipment complies with the ISSMGE, ASTM, DIN and NEN Standards.

**Other output and voltage ranges available on request. Loadcells may be calibrated for lower ranges.*


CONE CALIBRATION CERTIFICATE S15-CFIIP.1032

Sondeerapparatuur

Waterspanningsmeters

Hellingmeters

Veldmeetapparatuur



Cone Calibration Certificate

Rijksstraatweg 22F
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Tel. : +31 71 301 92 51
Fax : +31 71 301 92 52
E-mail : info@geopoint.nl
BTW : NL814690178.801
IBAN : NL28 INGB0682301396
BIC : INGBNL2A

Certificate:	GS-1032-008
Instrument Type:	Electric Subtraction Cone
Model:	S15-CFIIP
Serial number:	1032
Calibration date:	14-09-2016
Client:	Insitu
Calibrated by:	H. Smit
Calibration instruments	
Manufacturer:	Hottinger Baldwin Messtechnik GmbH
HBM certificate no. :	49046
Calibration conditions	
Ambient temperature:	24.1 °C
Atmospheric pressure:	1013 mBar
Cone specifications	
Cone base area:	1500 mm ²
Load tip resistance (nom.):	100 kN
Friction sleeve area:	22500 mm ²
Load tip + local friction (nom.):	100 kN
Load friction sleeve (nom.):	22.5 kN
Load pore pressure (nom.):	2 MPa
Inclination (nom.):	+/- 20 °
Temperature compensation (all channels):	0...+40 °C
Maximum overload capacity (all channels):	100 %
Cone area ratio (a):	0.79
Max. Inaccuracy, relative to measurement value:	1.0 %

	Tip:		Sleeve:		Pore Pressure:		Inclinometer:		
	qc in kN	mV	fs in kN	mV	MPa	mV	Degrees	X (mV)	Y (mV)
Zero points:		0281		0238		0204			
	0	0	0	0	0	0	0	2432	2468
	5	0304	5	0312	0.4	1562	-20	0286	0320
	10	0608	10	0624	0.8	3120	20	4607	4577
	15	0914	15	0939	1.2	4670			
	20	1219	20	1252	1.6	6211			
	25	1525	25	1566	2.0	7739			
	30	1830	30	1878					
	35	2136	35	2195					
	40	2442	40	2509					
	45	2746	45	2822					
	50	3049	50	3132					
	75	4559	75	4684					
	100	6066	100	6234					

Max. error, abs. qc: 35 kPa
 Max. error, abs. fs: 2 kPa
 Max. error, abs. u2: 10 kPa
 Max. error, abs. I: 1°

This calibration is compliant with GeoPoint Systems internal quality system, internal calibration procedures and meets the requirements of NEN2649, NEN-EN-ISO 22476-1, NORSOK G-001, ISSMFE and ASTM using calibration equipment traceable to (Inter-) National Standards.

reg. 13

Approved by: _____

Date: 14-09-2016

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www.geopoint.eu

Ingeschreven in het handelsregister van de K.v.K. voor Rijnland onder nummer 20166251.
Op al onze leveranties en/of overeenkomsten zijn de algemene verkoopvoorwaarden van Geopoint Systems B.V. van toepassing.

CONE CALIBRATION CERTIFICATE S15-CFIIP.1458

Sondeerapparatuur

Waterspanningsmeters

Hellingsmeters

Veldmeetapparatuur



Rijksstraatweg 22F
2171 AL Sassenheim
Tel. : +31 71 301 92 51
Fax : +31 71 301 92 52
E-mail : info@geopoint.nl
BTW : NL814690178.B01
IBAN : NL28 ING0682301396
BIC : INGBNL2A

Cone Calibration Certificate

Certificate: **GS-1458-001**
Instrument Type: Electric Subtraction Cone
Model: S15-CFIIP
Serial number: 1458
Calibration date: 18-08-2016
Client: Insitu
Calibrated by: W. Volgering
Calibration instruments
Manufacturer: Hottinger Baldwin Messtechnik GmbH
HBM certificate no.: 49046
Calibration conditions
Ambient temperature: 21.0 °C
Atmospheric pressure: 1011 mBar
Cone specifications
Cone base area: 1500 mm²
Load tip resistance (nom.): 100 kN
Friction sleeve area: 22500 mm²
Load tip + local friction (nom.): 100 kN
Load friction sleeve (nom.): 22.5 kN
Load pore pressure (nom.): 2 MPa
Inclination (nom.): +/- 20 °
Temperature compensation (all channels): 0...+40 °C
Maximum overload capacity (all channels): 100 %
Cone area ratio (a): 0.79
Max. Inaccuracy, relative to measurement value: 1.0 %

	Tip:		Sleeve:		Pore Pressure:		Inclinometer:		
	qc in kN	mV	fs in kN	mV	MPa	mV	Degrees	X (mV)	Y (mV)
Zero points:		0239		0249		0243			
	0	0	0	0	0	0	0	2534	2415
	5	0302	5	0310	0.4	1323	-20	0561	0325
	10	0604	10	0620	0.8	2640	20	4561	4584
	15	0909	15	0930	1.2	3952			
	20	1212	20	1241	1.6	5259			
	25	1516	25	1553	2.0	6560			
	30	1819	30	1864					
	35	2123	35	2176					
	40	2428	40	2488					
	45	2730	45	2799					
	50	3031	50	3107					
	75	4532	75	4647					
	100	6032	100	6186					

Max. error, abs. qc: 35 kPa
Max. error, abs. fs: 2 kPa
Max. error, abs. u2: 10 kPa
Max. error, abs. I: 1 °

This calibration is compliant with GeoPoint Systems internal quality system, internal calibration procedures and meets the requirements of NEN2649, NEN-EN-ISO 22476-1, NORSOK G-001, ISSMFE and ASTM using calibration equipment traceable to (Inter-) National Standards.

Approved by: **reg 13**
Date: 18-08-2016

www.geopoint.nl
www.geopoint.eu

Ingeschreven in het handelsregister van de K.v.K. voor Rijnland onder nummer 28106251.
Op al onze leveranties en/of overeenkomsten zijn de algemene verkoopvoorwaarden van Geopoint Systems B.V. van toepassing.

CPT PROJECT SUMMARY SHEET

HOLE	Final Depth of Test (m)	Date of Test	Cone Used	Test Remarks
CPT 601	3.75	19/12/2016	S15CFIIP.1032	Test refused on total pressure.
CPT 601A	11.39	20/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 602	0.24	20/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 602A	2.47	20/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 602B	2.59	20/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 603	2.26	20/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 603A	1.79	20/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 604	1.11	20/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 606	3.06	20/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 607	2.14	20/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 608	2.49	21/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 609	12.66	20/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 610	12.36	21/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 611	11.25	21/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 612	11.28	21/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 613	10.92	21/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 614	11.48	21/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 615	11.11	21/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 616	11.38	20/12/2016	S15CFIIP.1458	Test refused on total pressure.

CPT 617	2.8	21/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 1203	5.65	23/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 1204	6.92	22/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 1205	8.56	22/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 1206	6.26	22/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 1207	8.18	22/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 1208	8.44	22/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 1209	7.74	22/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 1210	9.09	22/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 1211	8.64	22/12/2016	S15CFIIP.1458	Test refused on total pressure.
CPT 1212	8.68	22/12/2016	S15CFIIP.1458	Test refused on total pressure.

20 TONNE TRACK MOUNTED CPT RIG DATA SHEET

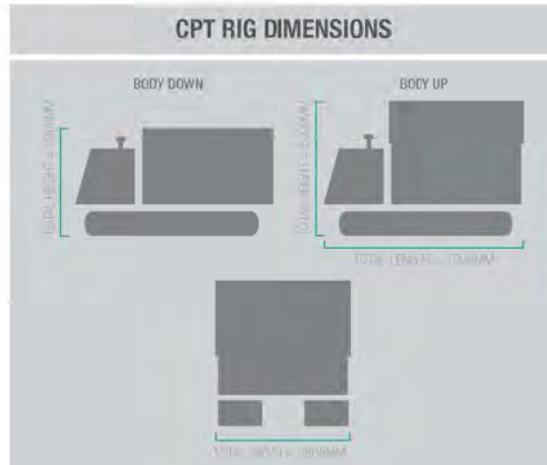
RIGS

20 TONNE CPT TRACK MOUNTED RIG (CPT007)

In Situ has a wide range of rigs which meet the clients varied CPT requirements often in difficult terrains. Projects may require CPT testing in areas which range from motorways to rugged mountainous terrain, to offshore work; the access to the projects may often be restricted for manoeuvring.

In Situ has rigs to meet all clients needs and situations .

CPT RIG DETAILS	
DRIVE SYSTEM	RUBBER TRACKED
TOTAL WEIGHT	20 TONNES
GROUND BEARING PRESSURE	35KPA
CPT RAM THRUST CAPACITY	20 TONNES
MAXIMUM PENETRATION	30-40M DEPENDING ON THE GROUND CONDITIONS
PERFORMANCE RATES	100-150M OF TESTING IN A DAY DEPENDING ON ACCESS TO POSITIONS
TYPICAL SITES FOR THIS RIG	SOFT BOGGY SITES. THE RIG HAS LOW GROUND BEARING PRESSURE.



SOIL DESCRIPTION TABLES

GRANULAR SOILS (Sands and Gravels)

Description	Cone Resistance (q_c) (MPa)
Very Loose	0 – 2
Loose	2 – 4
Medium Dense	4 – 12
Dense	12 – 20
Very Dense	>20

COHESIVE SOILS (Clays)

Description	Cone Resistance (q_c) (MPa)	Equivalent S_u value from q_c (kPa)
Very Soft	0 – 0.3	0 – 20
Soft	0.3 – 0.5	20 – 40
Firm	0.5 – 1.0	40 – 75
Stiff	1.0 – 2.0	75 – 150
Very stiff	2.0-4.0	150-300
Hard	>4.0	>300

(from Waltham, 2002)

EXPLANATION OF SYMBOLS

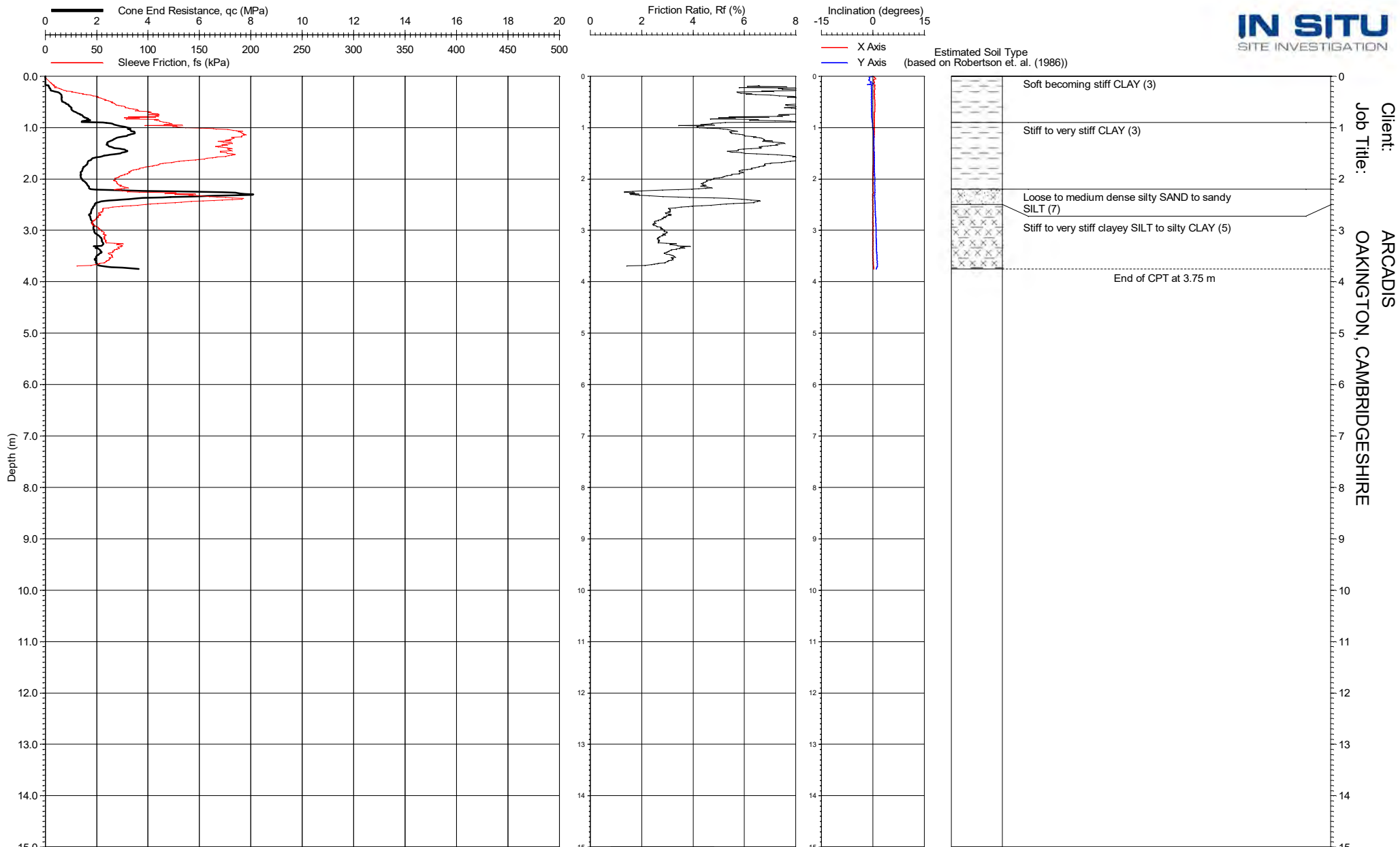
- a (α) = area ratio of the cone ($=A_n/A_c$)
 A_c = projected area of the cone
 A_n = cross-sectional area of shaft
 B_q = pore pressure parameter ($= (u_2 - u_0) / (q_r - \sigma_{vo})$)
 c_h = horizontal coefficient of consolidation
 Dr = relative density $\left(D_r = \frac{e_{max} - e}{e_{max} - e_{min}} \times 100\% \right)$
 e = void ratio
 e_o = initial void ratio
 e_{max} = maximum void ratio
 e_{min} = minimum void ratio
 f_s = unit sleeve friction
 FC = fines content
 I_c = soil behaviour type index
 I_r = rigidity index = G/s_u
 m_v = coefficient of volume change
 M = constrained deformation modulus
 N = no. Of blows in the SPT
 N_k or N_{kt} = cone factor
 N_{60} = SPT energy ratio
 q_c = measured cone resistance
 q_e = effective cone resistance = $(q_r - u_2)$
 q_n = net cone resistance = $(q_r - \sigma_{vo})$
 q_t = corrected cone resistance = $q_c + (1 - a)u_2$
 Q_t = normalised cone resistance = $(q_r - \sigma_{vo}) / \sigma'_{vo}$
 R_f = friction ratio ($= (f_s / q_c) \times 100\%$)
 s_u = undrained shear strength
 t_{50} = time for 50% dissipation of measured pore pressure
 u_0 = in situ pore pressure
 u_1 = pore pressure measured on the cone
 u_2 = pore pressure measured behind the cone
 Δu = measured pore water pressure
 φ = total friction ratio

APPENDIX B

CPT RESULTS

LIST OF FIGURES

Description	Pages Included
CPT 601 – CPT 1212 (Printed on Form CPT0001) Estimated Soil Behaviour Type Plot	30
CPT 601 – CPT 1212 (Printed on Form CPT0002) Measured Pore Pressure Plot	30



Client: **ARCADIS**
Job Title: **OAKINGTON, CAMBRIDGESHIRE**

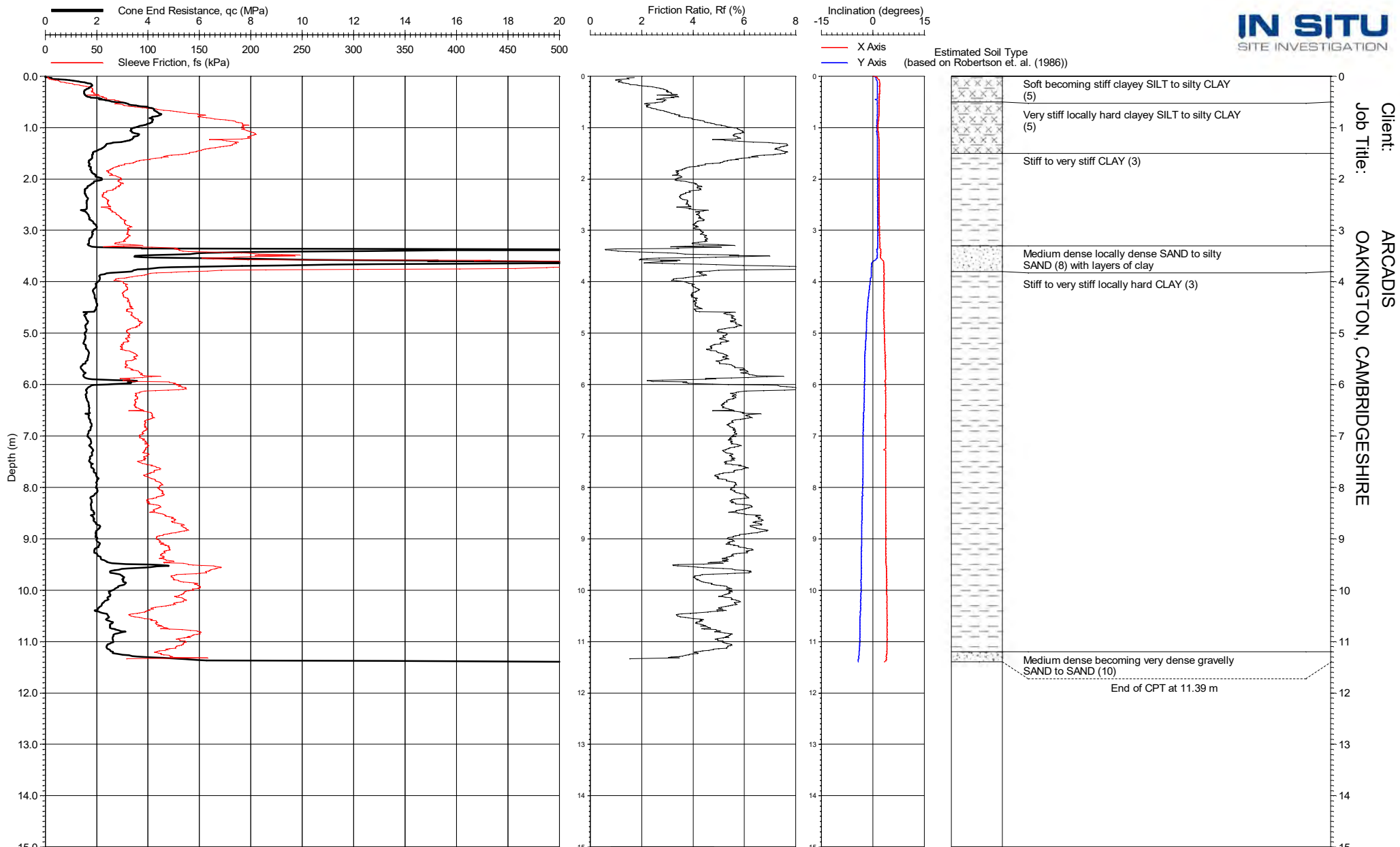
Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1032 - CPT 001
Remarks: Test refused on total pressure.

Date of Test: 19/12/2016
Date of Plot: 10/01/2017
File Name: 1160427 - CPT 601
Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 268 mV	Tip Zero Post: 267 mV	Tip Zero Difference: 0 %
Sleeve Zero Pre: 193 mV	Sleeve Zero Post: 193 mV	Sleeve Zero Difference: 0 %
Pore Pressure Zero Pre: 270 mV	Pore Pressure Zero Post: 252 mV	Pore Pressure Difference: 7 %
X Inclinator Zero Pre: 2488 mV	X Inclinator Zero Post: 2459 mV	X Inclinator Difference: 1 %
Y Inclinator Zero Pre: 2488 mV	Y Inclinator Zero Post: 2459 mV	Y Inclinator Difference: 1 %

PIEZO CONE PENETRATION TEST
CPT 601
insitusi.com
Form: CPT0001



Client: **ARCADIS**
Job Title: **OAKINGTON, CAMBRIDGESHIRE**

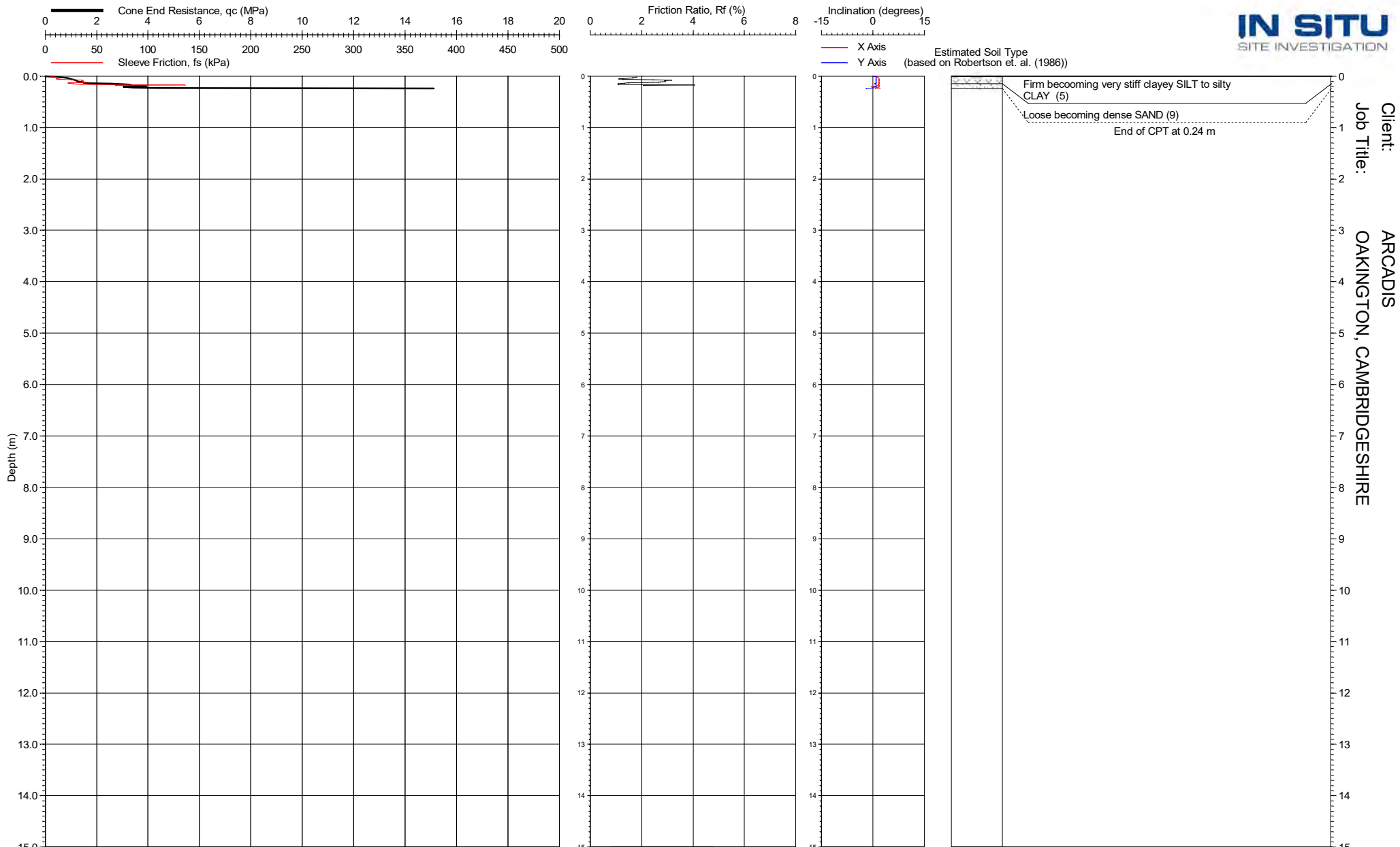
Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
Date of Plot: 10/01/2017
File Name: 1160427 - CPT 601A
Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 303 mV	Tip Zero Post: 300 mV	Tip Zero Difference: 1 %
Sleeve Zero Pre: 289 mV	Sleeve Zero Post: 283 mV	Sleeve Zero Difference: 2 %
Pore Pressure Zero Pre: 364 mV	Pore Pressure Zero Post: 351 mV	Pore Pressure Difference: 4 %
X Inclinator Zero Pre: 2621 mV	X Inclinator Zero Post: 2661 mV	X Inclinator Difference: -2 %
Y Inclinator Zero Pre: 2621 mV	Y Inclinator Zero Post: 2661 mV	Y Inclinator Difference: -2 %

PIEZO CONE PENETRATION TEST
CPT 601A
insitusi.com
Form: CPT0001



Client: **ARCADIS**
Job Title: **OAKINGTON, CAMBRIDGESHIRE**

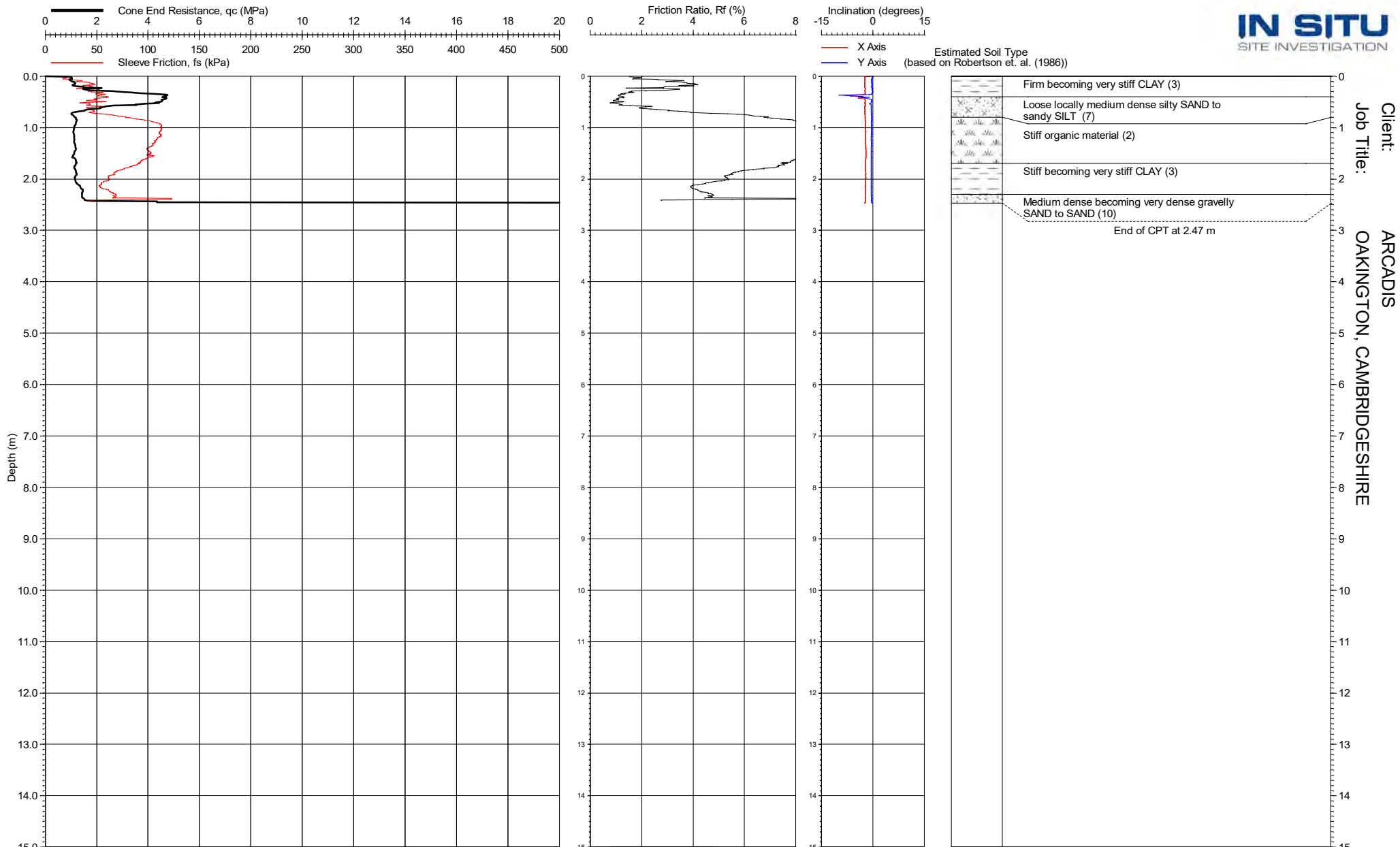
Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
Date of Plot: 10/01/2017
File Name: 1160427 - CPT 602
Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 301 mV	Tip Zero Post: 1978 mV	Tip Zero Difference: -85 %
Sleeve Zero Pre: 285 mV	Sleeve Zero Post: 2074 mV	Sleeve Zero Difference: -86 %
Pore Pressure Zero Pre: 352 mV	Pore Pressure Zero Post: 417 mV	Pore Pressure Difference: -16 %
X Inclinator Zero Pre: 2657 mV	X Inclinator Zero Post: 2727 mV	X Inclinator Difference: -3 %
Y Inclinator Zero Pre: 2657 mV	Y Inclinator Zero Post: 2727 mV	Y Inclinator Difference: -3 %

PIEZO CONE PENETRATION TEST
CPT 602
insitusi.com
Form: CPT0001



Client: **ARCADIS**
Job Title: **OAKINGTON, CAMBRIDGESHIRE**

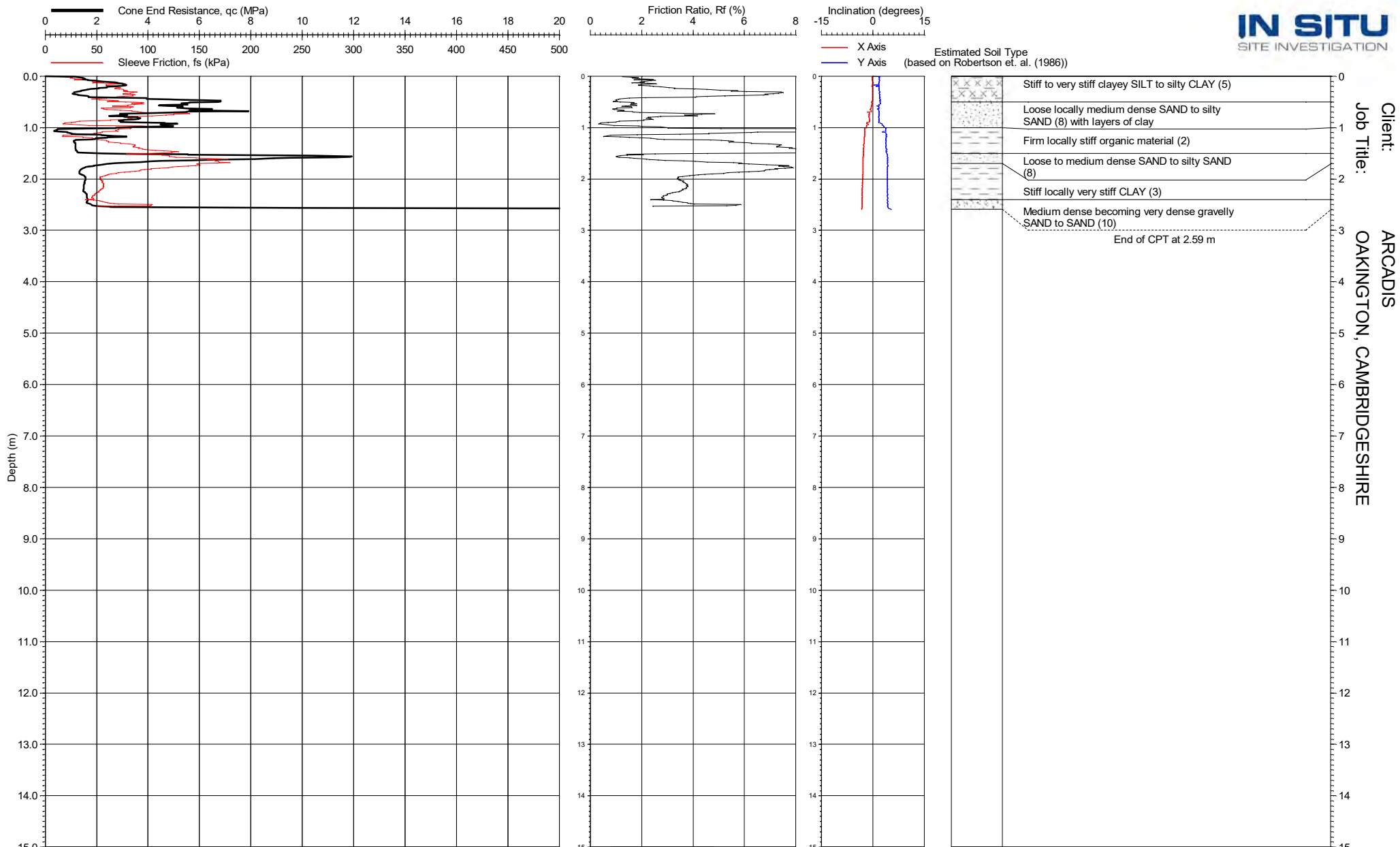
Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
Date of Plot: 10/01/2017
File Name: 1160427 - CPT 602A
Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 301 mV	Tip Zero Post: 305 mV	Tip Zero Difference: -1 %
Sleeve Zero Pre: 285 mV	Sleeve Zero Post: 288 mV	Sleeve Zero Difference: -1 %
Pore Pressure Zero Pre: 357 mV	Pore Pressure Zero Post: 391 mV	Pore Pressure Difference: -9 %
X Inclinator Zero Pre: 2293 mV	X Inclinator Zero Post: 2305 mV	X Inclinator Difference: -1 %
Y Inclinator Zero Pre: 2293 mV	Y Inclinator Zero Post: 2305 mV	Y Inclinator Difference: -1 %

PIEZO CONE PENETRATION TEST
CPT 602A
insitusi.com
Form: CPT0001



Client: **ARCADIS**
Job Title: **OAKINGTON, CAMBRIDGESHIRE**

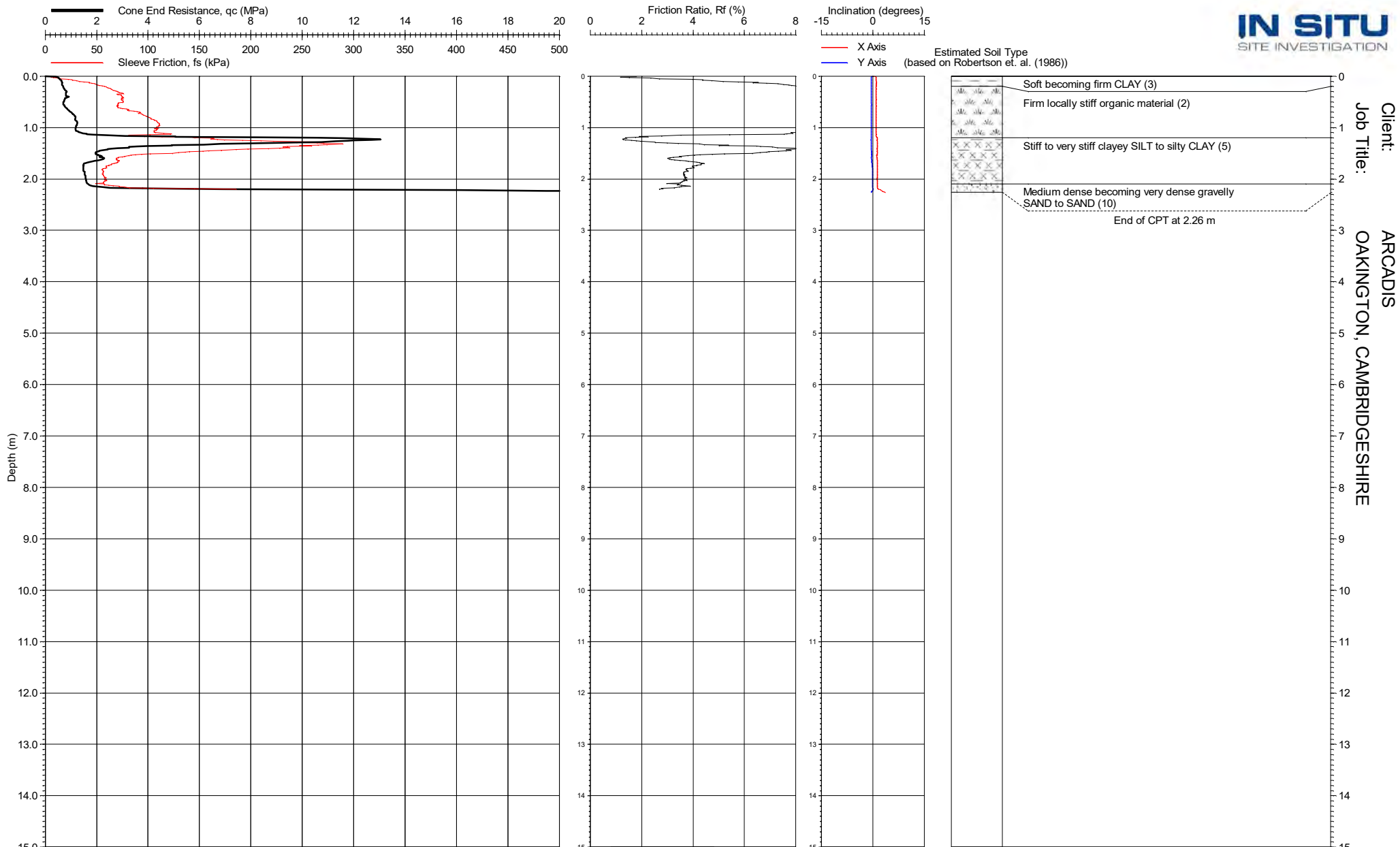
Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
Date of Plot: 10/01/2017
File Name: 1160427 - CPT 602B
Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 303 mV	Tip Zero Post: 302 mV	Tip Zero Difference: 0 %
Sleeve Zero Pre: 287 mV	Sleeve Zero Post: 286 mV	Sleeve Zero Difference: 0 %
Pore Pressure Zero Pre: 383 mV	Pore Pressure Zero Post: 374 mV	Pore Pressure Difference: 2 %
X Inclinator Zero Pre: 2502 mV	X Inclinator Zero Post: 2493 mV	X Inclinator Difference: 0 %
Y Inclinator Zero Pre: 2502 mV	Y Inclinator Zero Post: 2493 mV	Y Inclinator Difference: 0 %

PIEZO CONE PENETRATION TEST
CPT 602B
insitusi.com
Form: CPT0001



Client: **ARCADIS**
Job Title: **OAKINGTON, CAMBRIDGESHIRE**

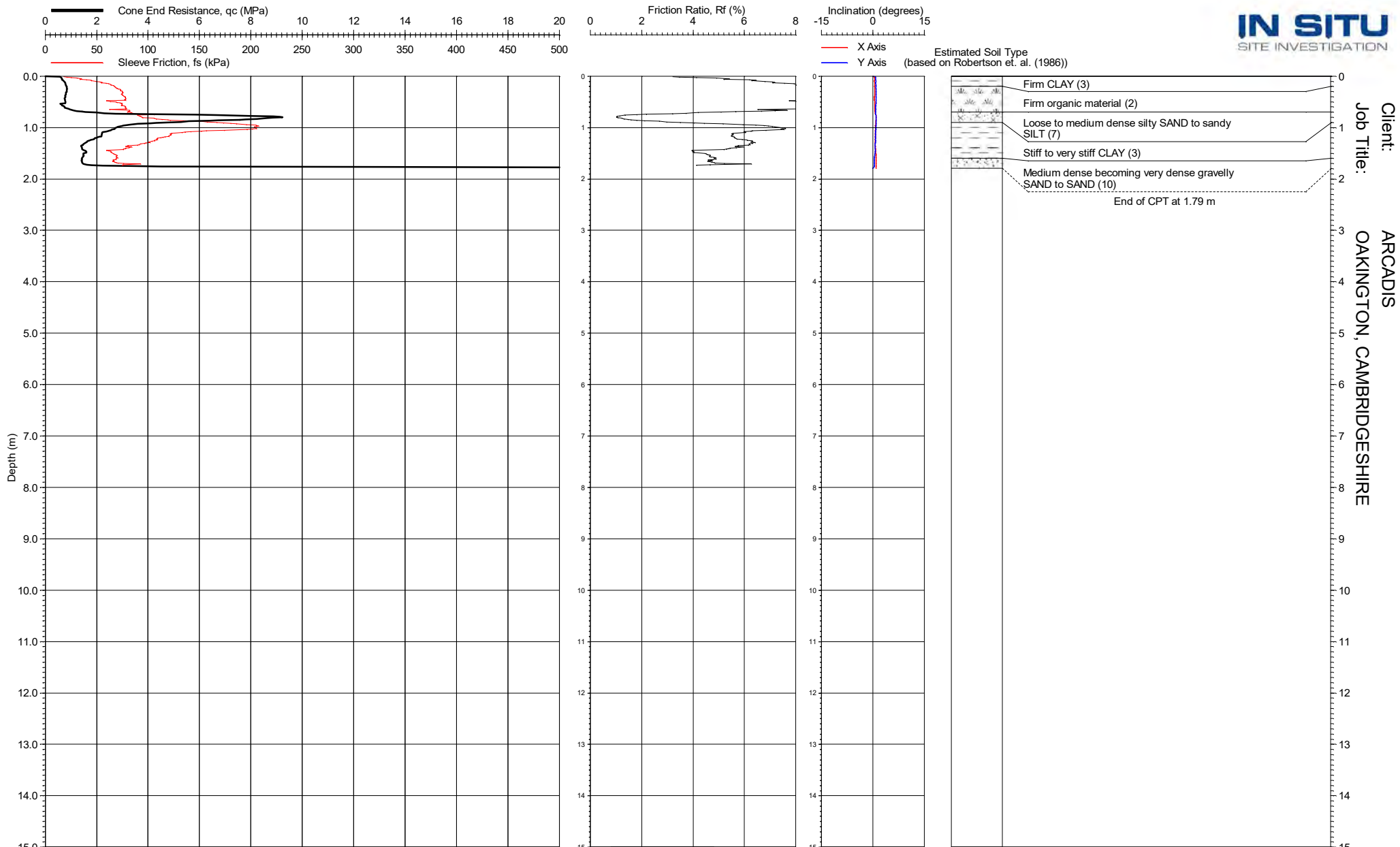
Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
Date of Plot: 10/01/2017
File Name: 1160427 - CPT 603
Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 302 mV	Tip Zero Post: 306 mV	Tip Zero Difference: -1 %
Sleeve Zero Pre: 287 mV	Sleeve Zero Post: 287 mV	Sleeve Zero Difference: 0 %
Pore Pressure Zero Pre: 361 mV	Pore Pressure Zero Post: 376 mV	Pore Pressure Difference: -4 %
X Inclinator Zero Pre: 2604 mV	X Inclinator Zero Post: 2616 mV	X Inclinator Difference: 0 %
Y Inclinator Zero Pre: 2604 mV	Y Inclinator Zero Post: 2616 mV	Y Inclinator Difference: 0 %

PIEZO CONE PENETRATION TEST
CPT 603
insitusi.com
Form: CPT0001



Client: **ARCADIS**
Job Title: **OAKINGTON, CAMBRIDGESHIRE**

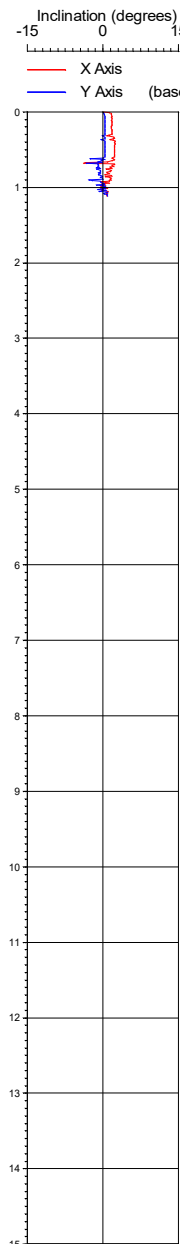
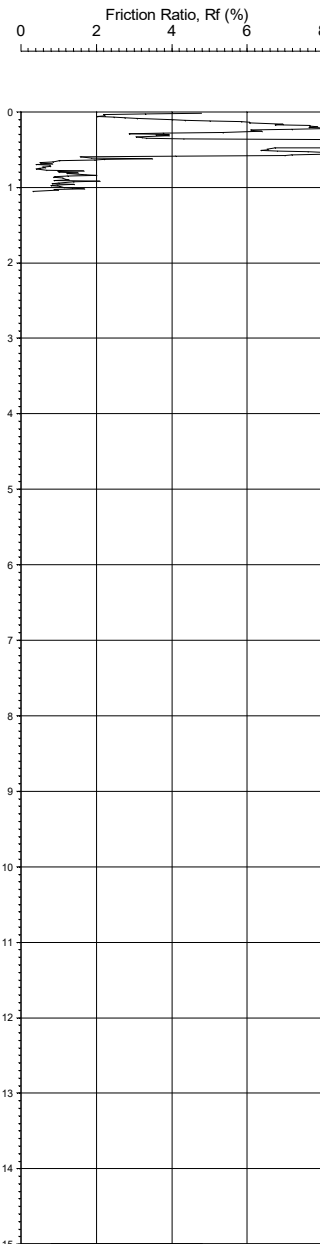
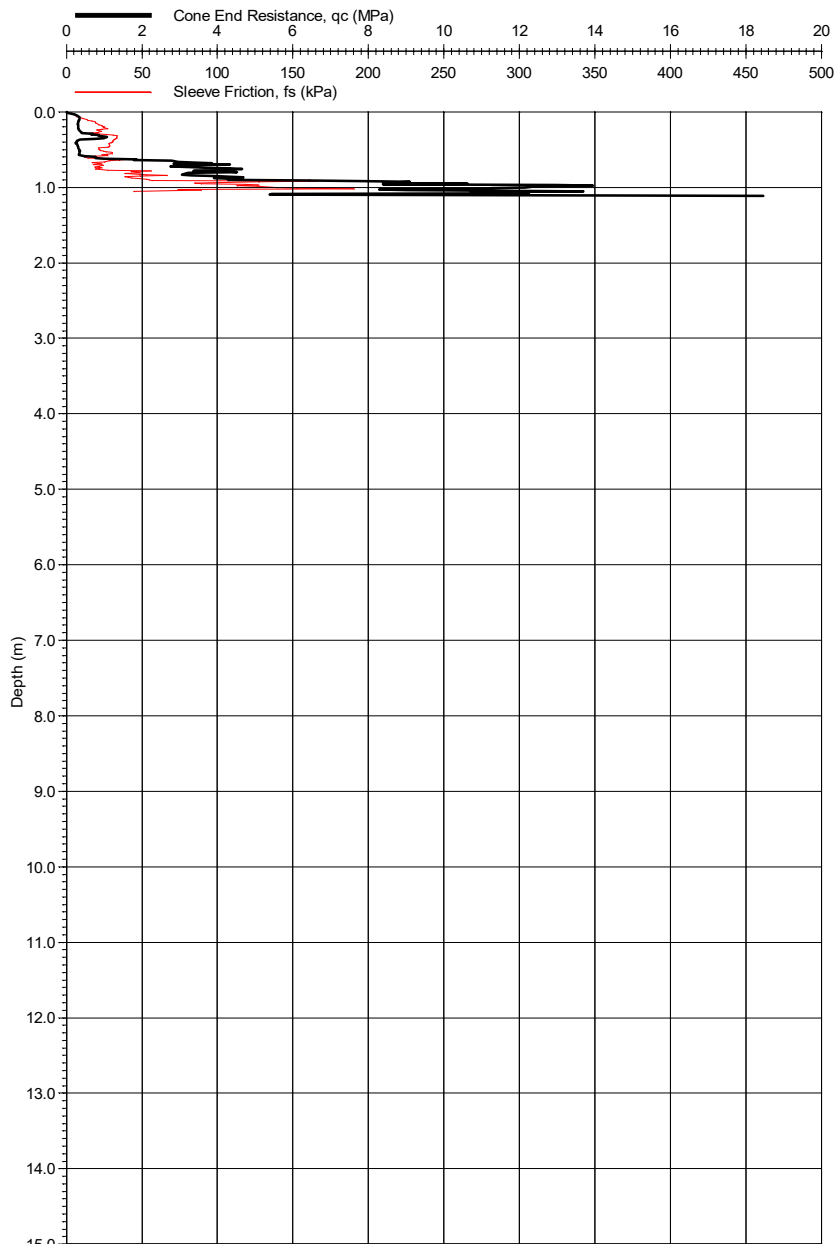
Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
Date of Plot: 10/01/2017
File Name: 1160427 - CPT 603A
Checked By: **reg. 13**

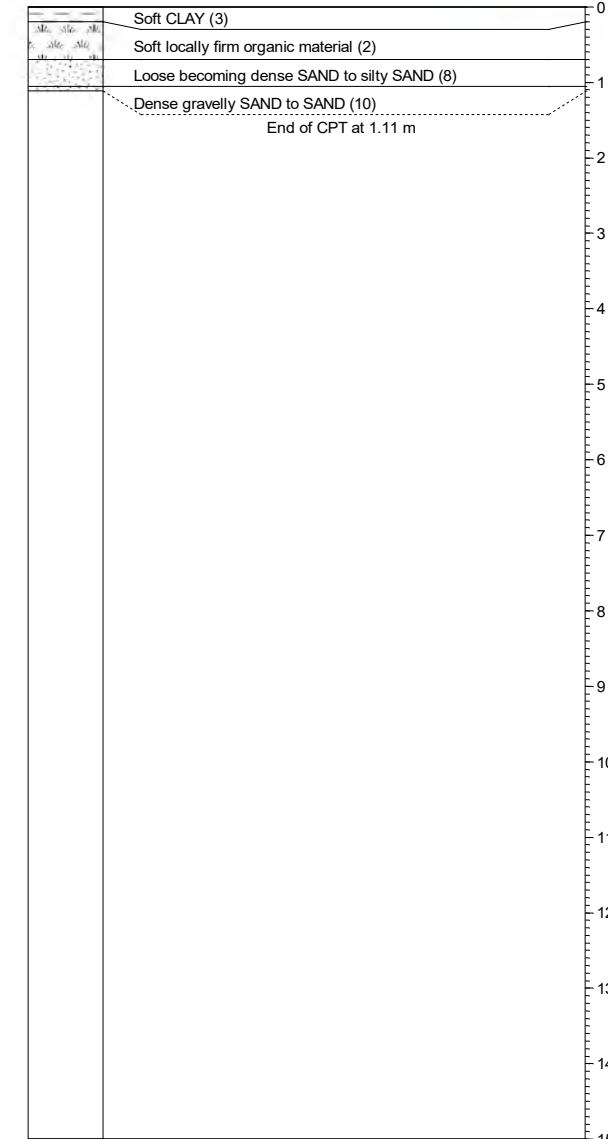
PCPT Zero Values

Tip Zero Pre: 303 mV	Tip Zero Post: 304 mV	Tip Zero Difference: 0 %
Sleeve Zero Pre: 285 mV	Sleeve Zero Post: 286 mV	Sleeve Zero Difference: 0 %
Pore Pressure Zero Pre: 370 mV	Pore Pressure Zero Post: 358 mV	Pore Pressure Difference: 3 %
X Inclinator Zero Pre: 2528 mV	X Inclinator Zero Post: 2553 mV	X Inclinator Difference: -1 %
Y Inclinator Zero Pre: 2528 mV	Y Inclinator Zero Post: 2553 mV	Y Inclinator Difference: -1 %

PIEZO CONE PENETRATION TEST
CPT 603A
insitusi.com
Form: CPT0001



Estimated Soil Type
(based on Robertson et. al. (1986))



Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**

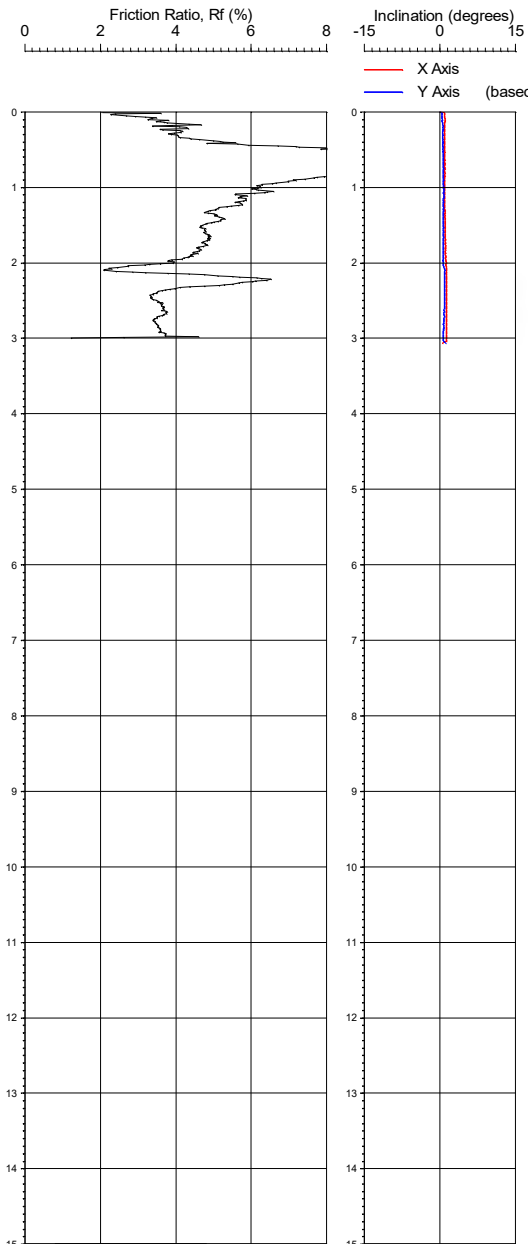
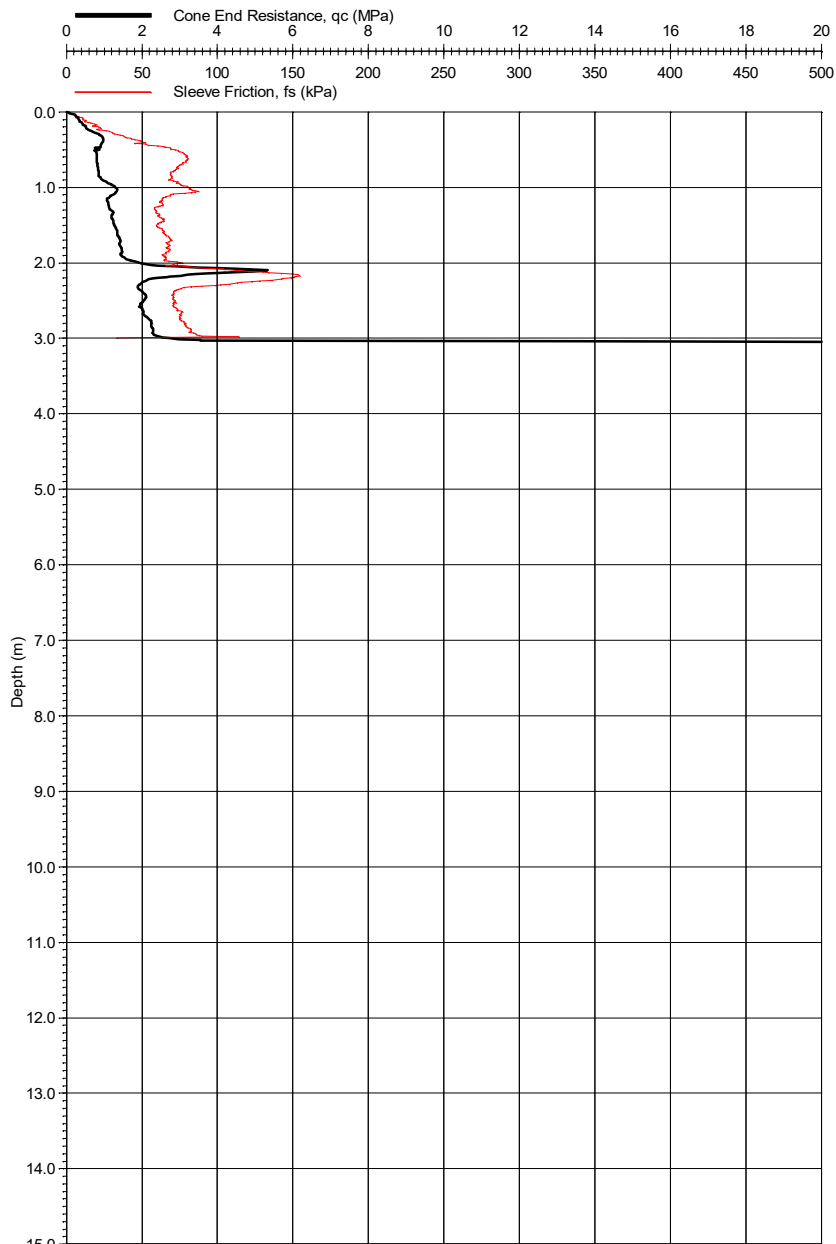
Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
 Date of Plot: 10/01/2017
 File Name: 1160427 - CPT 604
 Checked By: **reg. 13**

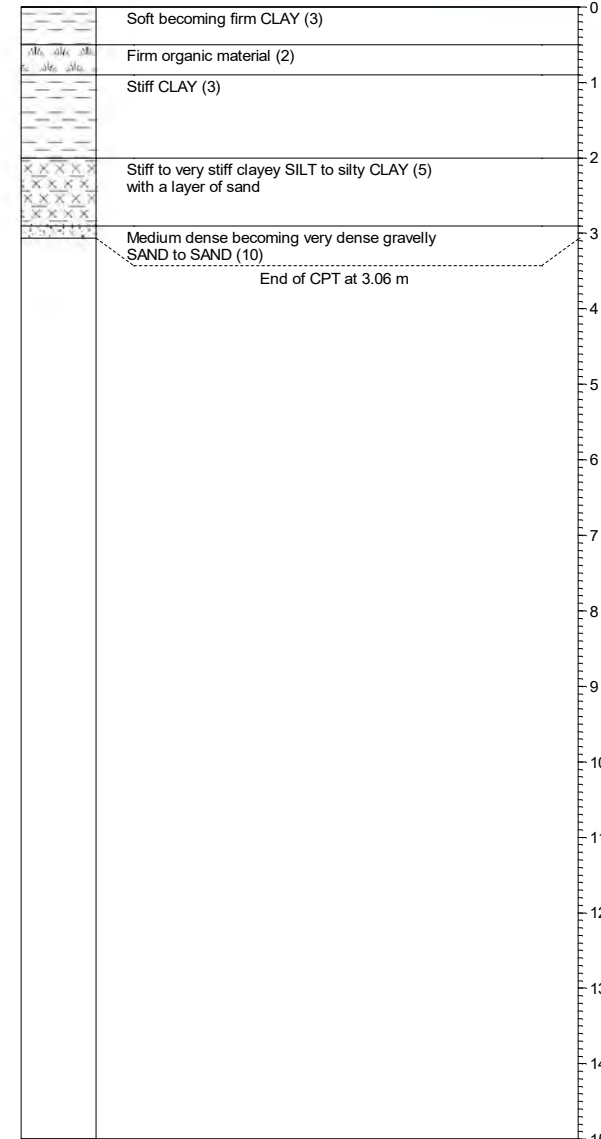
PCPT Zero Values

Tip Zero Pre: 304 mV	Tip Zero Post: 303 mV	Tip Zero Difference: 0 %
Sleeve Zero Pre: 286 mV	Sleeve Zero Post: 286 mV	Sleeve Zero Difference: 0 %
Pore Pressure Zero Pre: 358 mV	Pore Pressure Zero Post: 358 mV	Pore Pressure Difference: 0 %
X Inclinator Zero Pre: 2637 mV	X Inclinator Zero Post: 2618 mV	X Inclinator Difference: 1 %
Y Inclinator Zero Pre: 2637 mV	Y Inclinator Zero Post: 2618 mV	Y Inclinator Difference: 1 %

PIEZO CONE PENETRATION TEST
CPT 604
insitusi.com
 Form: CPT0001



Estimated Soil Type
(based on Robertson et. al. (1986))



Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**

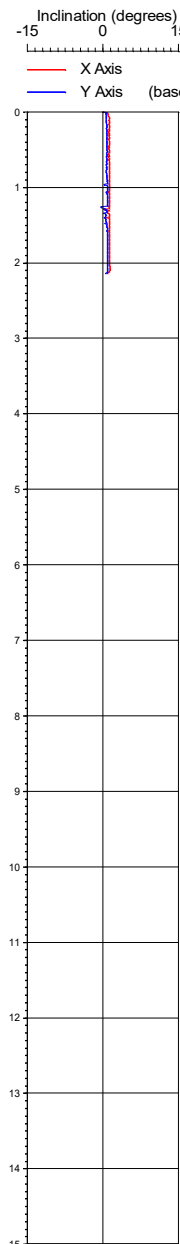
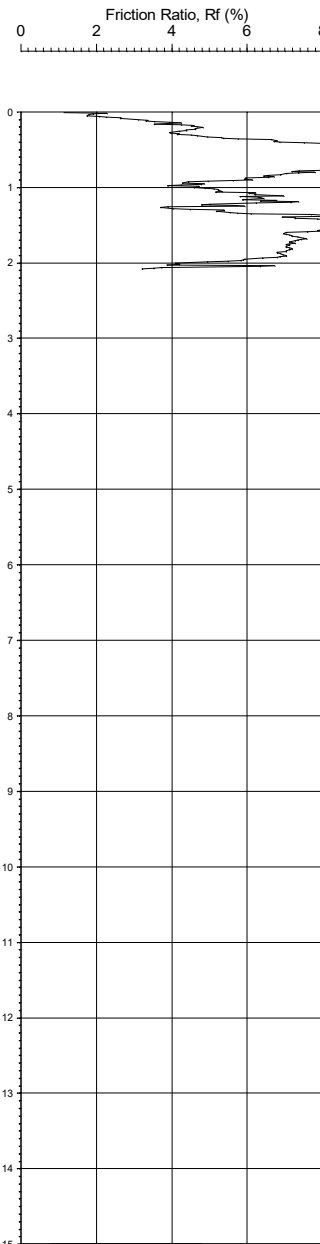
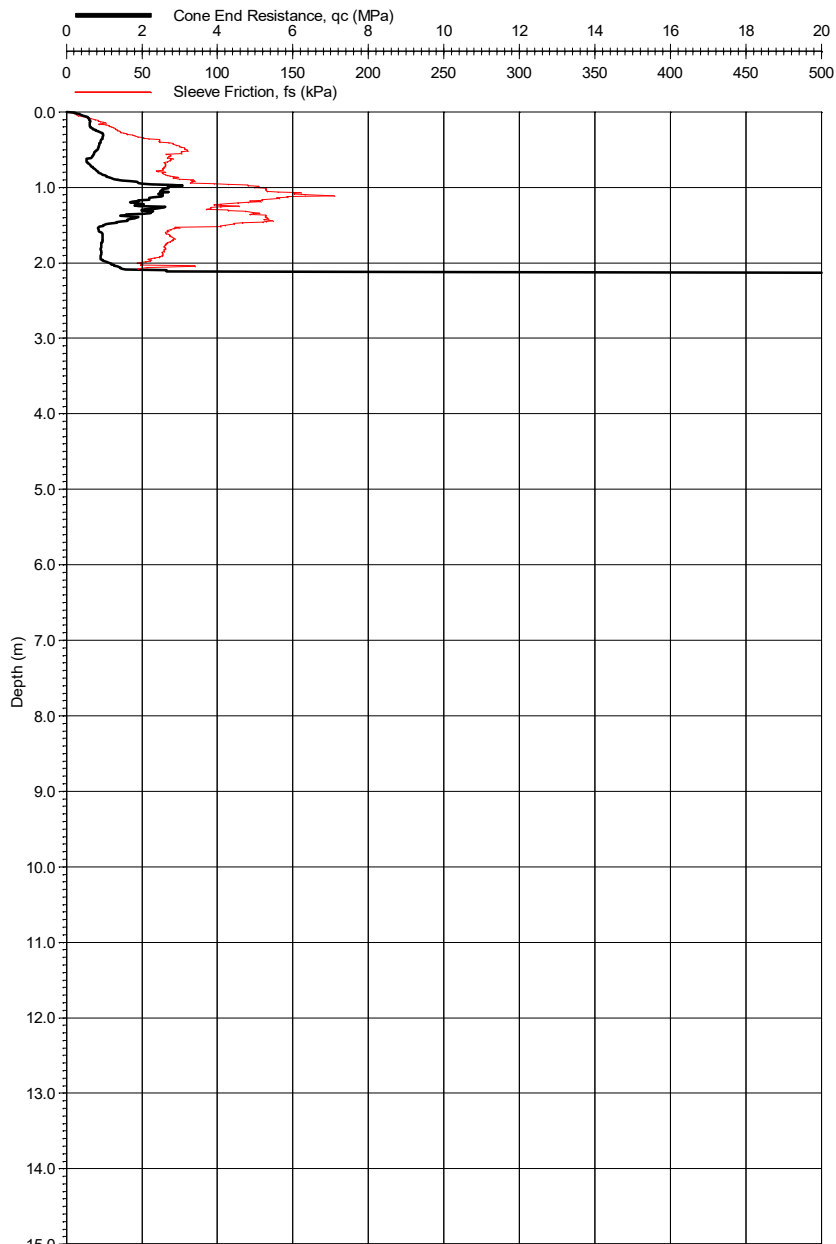
Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
 Date of Plot: 10/01/2017
 File Name: 1160427 - CPT 606
 Checked By: **reg. 13**

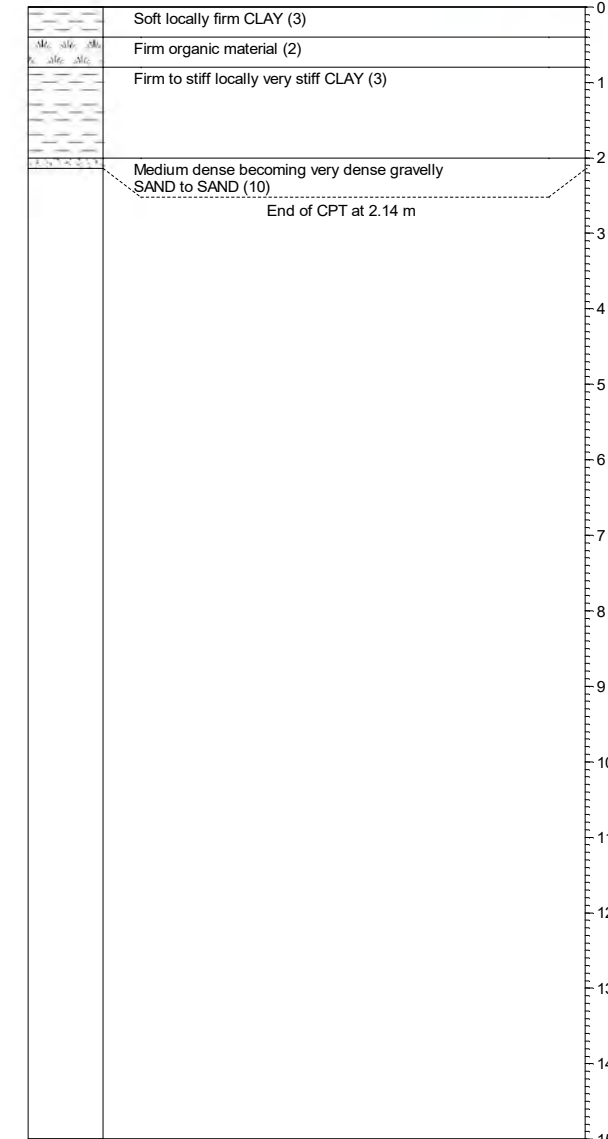
PCPT Zero Values

Tip Zero Pre: 303 mV	Tip Zero Post: 301 mV	Tip Zero Difference: 1 %
Sleeve Zero Pre: 287 mV	Sleeve Zero Post: 284 mV	Sleeve Zero Difference: 1 %
Pore Pressure Zero Pre: 359 mV	Pore Pressure Zero Post: 375 mV	Pore Pressure Difference: -4 %
X Inclinator Zero Pre: 2591 mV	X Inclinator Zero Post: 2621 mV	X Inclinator Difference: -1 %
Y Inclinator Zero Pre: 2591 mV	Y Inclinator Zero Post: 2621 mV	Y Inclinator Difference: -1 %

PIEZO CONE PENETRATION TEST
CPT 606
 insitusi.com
 Form: CPT0001



Estimated Soil Type
(based on Robertson et. al. (1986))



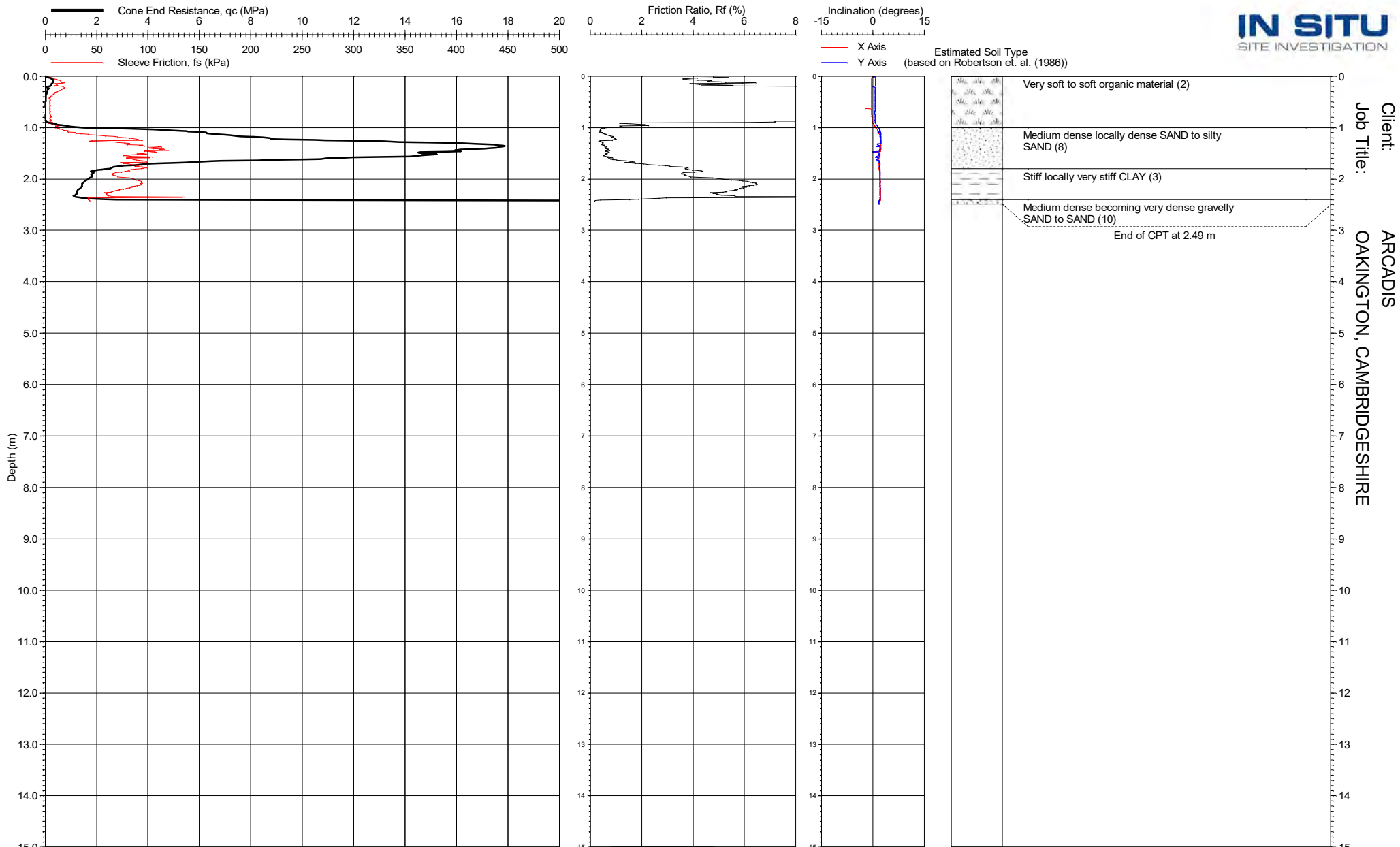
Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
Date of Plot: 10/01/2017
File Name: 1160427 - CPT 607
Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 303 mV	Tip Zero Post: 304 mV	Tip Zero Difference: 0 %
Sleeve Zero Pre: 286 mV	Sleeve Zero Post: 287 mV	Sleeve Zero Difference: 0 %
Pore Pressure Zero Pre: 370 mV	Pore Pressure Zero Post: 354 mV	Pore Pressure Difference: 5 %
X Inclinator Zero Pre: 2645 mV	X Inclinator Zero Post: 2591 mV	X Inclinator Difference: 2 %
Y Inclinator Zero Pre: 2645 mV	Y Inclinator Zero Post: 2591 mV	Y Inclinator Difference: 2 %

PIEZO CONE PENETRATION TEST
CPT 607
insitusi.com
Form: CPT0001



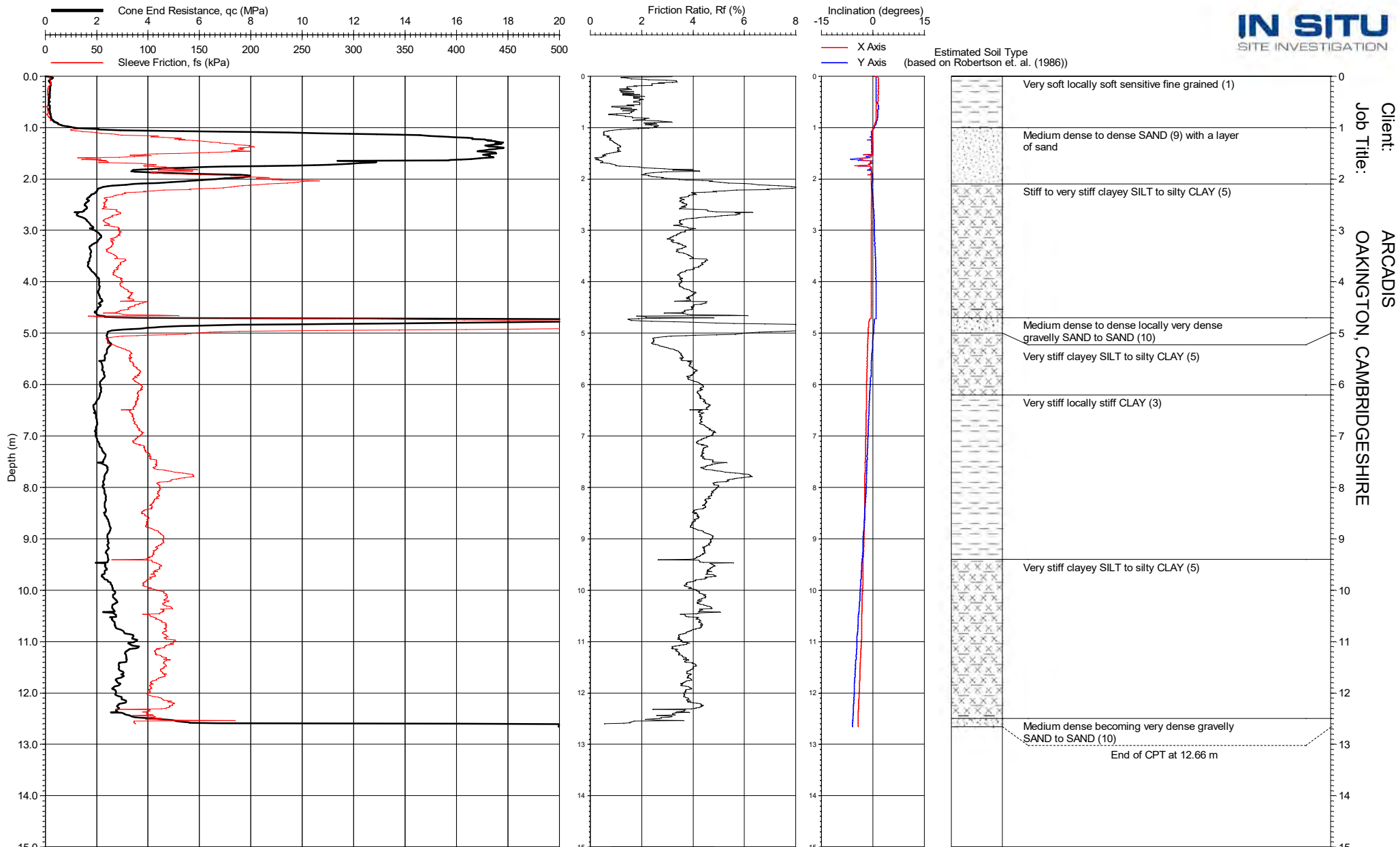
Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
 Date of Plot: 10/01/2017
 File Name: 1160427 - CPT 608
 Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 303 mV	Tip Zero Post: 302 mV	Tip Zero Difference: 0 %
Sleeve Zero Pre: 287 mV	Sleeve Zero Post: 286 mV	Sleeve Zero Difference: 0 %
Pore Pressure Zero Pre: 357 mV	Pore Pressure Zero Post: 356 mV	Pore Pressure Difference: 0 %
X Inclinator Zero Pre: 2534 mV	X Inclinator Zero Post: 2528 mV	X Inclinator Difference: 0 %
Y Inclinator Zero Pre: 2534 mV	Y Inclinator Zero Post: 2528 mV	Y Inclinator Difference: 0 %

PIEZO CONE PENETRATION TEST
CPT 608
 insitusi.com
 Form: CPT0001



Client: ARCADIS
Job Title: OAKINGTON, CAMBRIDGESHIRE

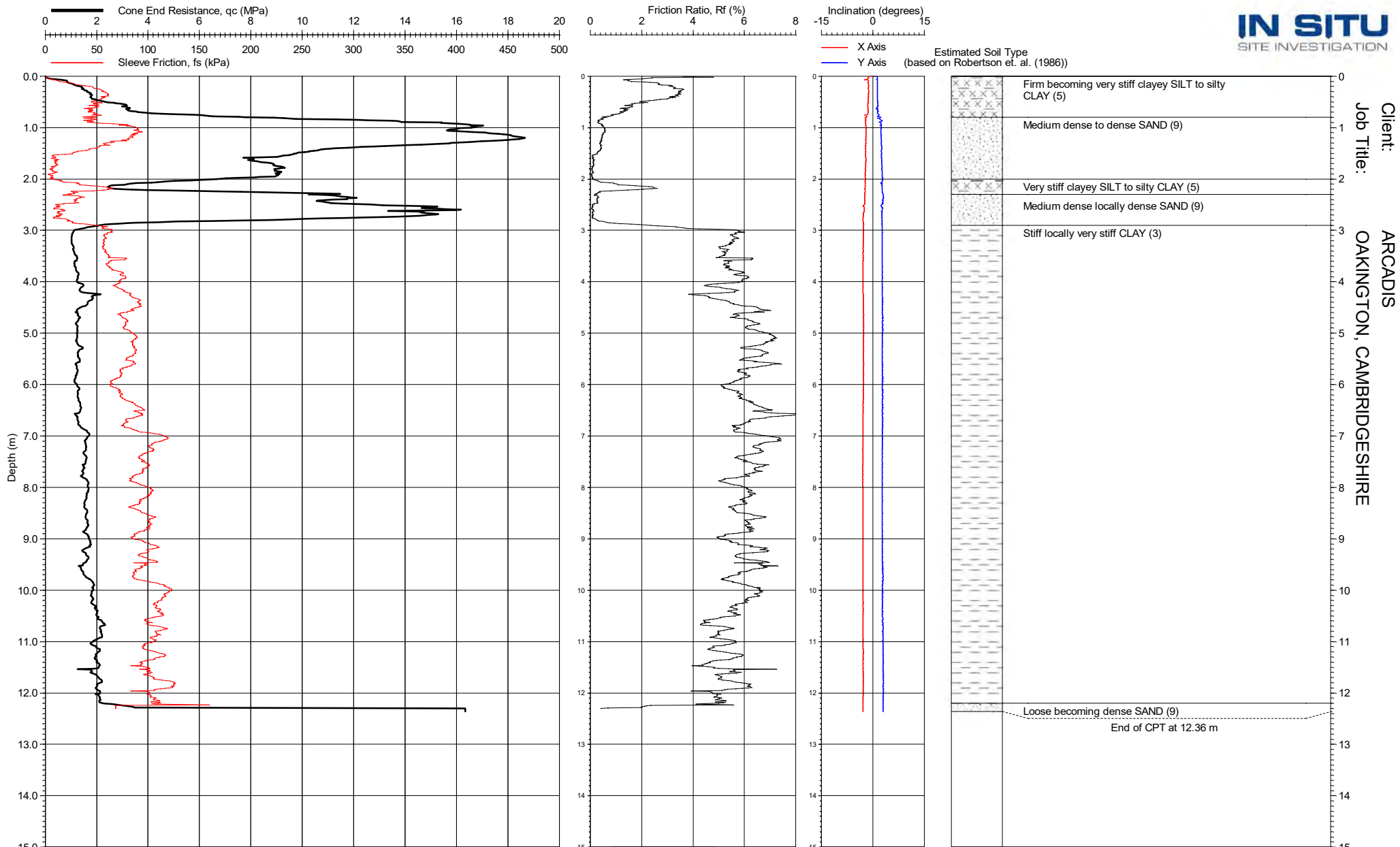
Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
Date of Plot: 10/01/2017
File Name: 1160427 - CPT 609
Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 304 mV	Tip Zero Post: 303 mV	Tip Zero Difference: 0 %
Sleeve Zero Pre: 288 mV	Sleeve Zero Post: 287 mV	Sleeve Zero Difference: 0 %
Pore Pressure Zero Pre: 357 mV	Pore Pressure Zero Post: 366 mV	Pore Pressure Difference: -2 %
X Inclinator Zero Pre: 2630 mV	X Inclinator Zero Post: 2458 mV	X Inclinator Difference: 7 %
Y Inclinator Zero Pre: 2630 mV	Y Inclinator Zero Post: 2458 mV	Y Inclinator Difference: 7 %

PIEZO CONE PENETRATION TEST
CPT 609
insitusi.com
Form: CPT0001



Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**

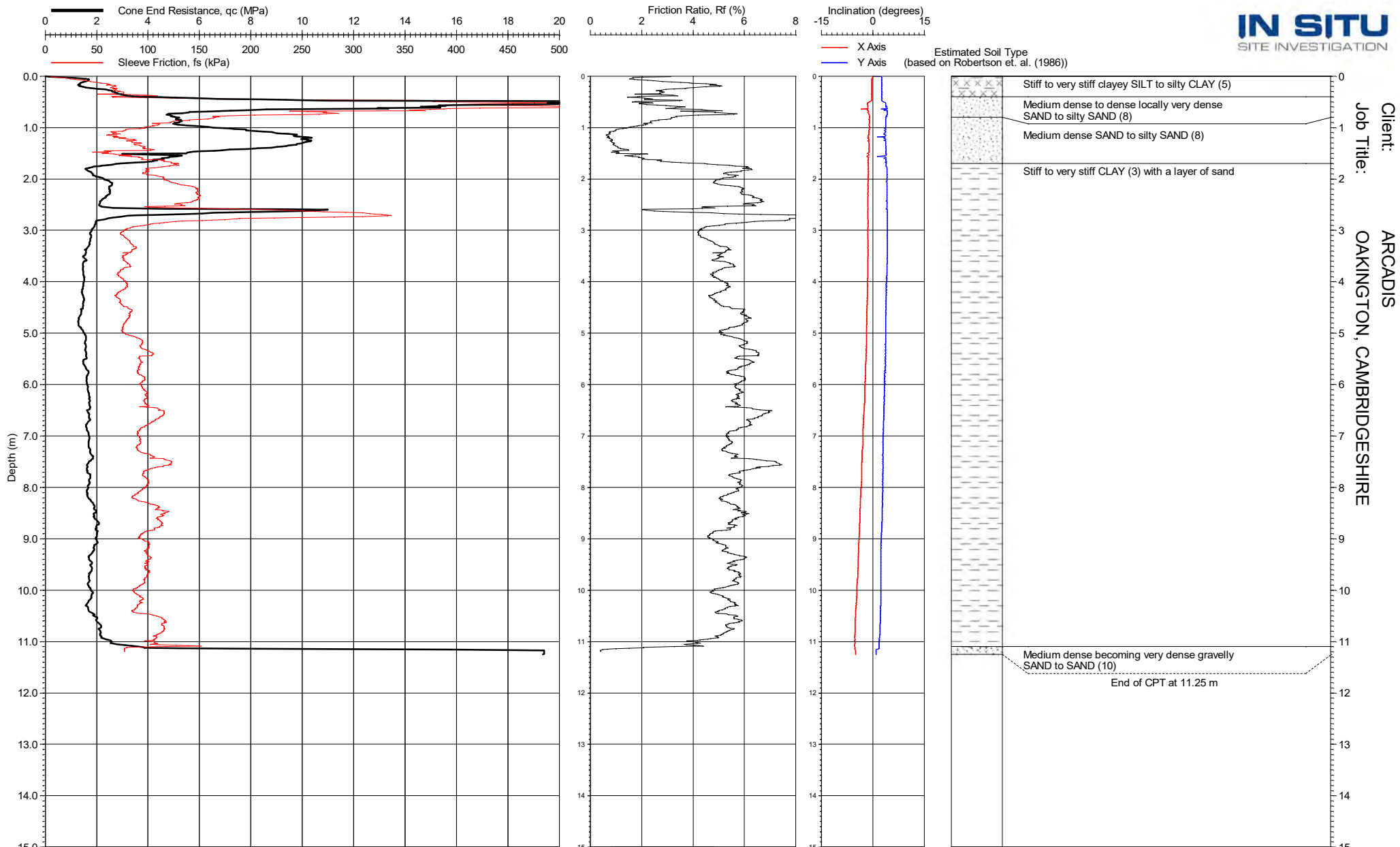
Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
 Date of Plot: 10/01/2017
 File Name: 1160427 - CPT 610
 Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 303 mV	Tip Zero Post: 300 mV	Tip Zero Difference: 1 %
Sleeve Zero Pre: 289 mV	Sleeve Zero Post: 284 mV	Sleeve Zero Difference: 2 %
Pore Pressure Zero Pre: 367 mV	Pore Pressure Zero Post: 352 mV	Pore Pressure Difference: 4 %
X Inclinator Zero Pre: 2400 mV	X Inclinator Zero Post: 2374 mV	X Inclinator Difference: 1 %
Y Inclinator Zero Pre: 2400 mV	Y Inclinator Zero Post: 2374 mV	Y Inclinator Difference: 1 %

PIEZO CONE PENETRATION TEST
CPT 610
insitusi.com
 Form: CPT0001



Client: **ARCADIS**
Job Title: **OAKINGTON, CAMBRIDGESHIRE**

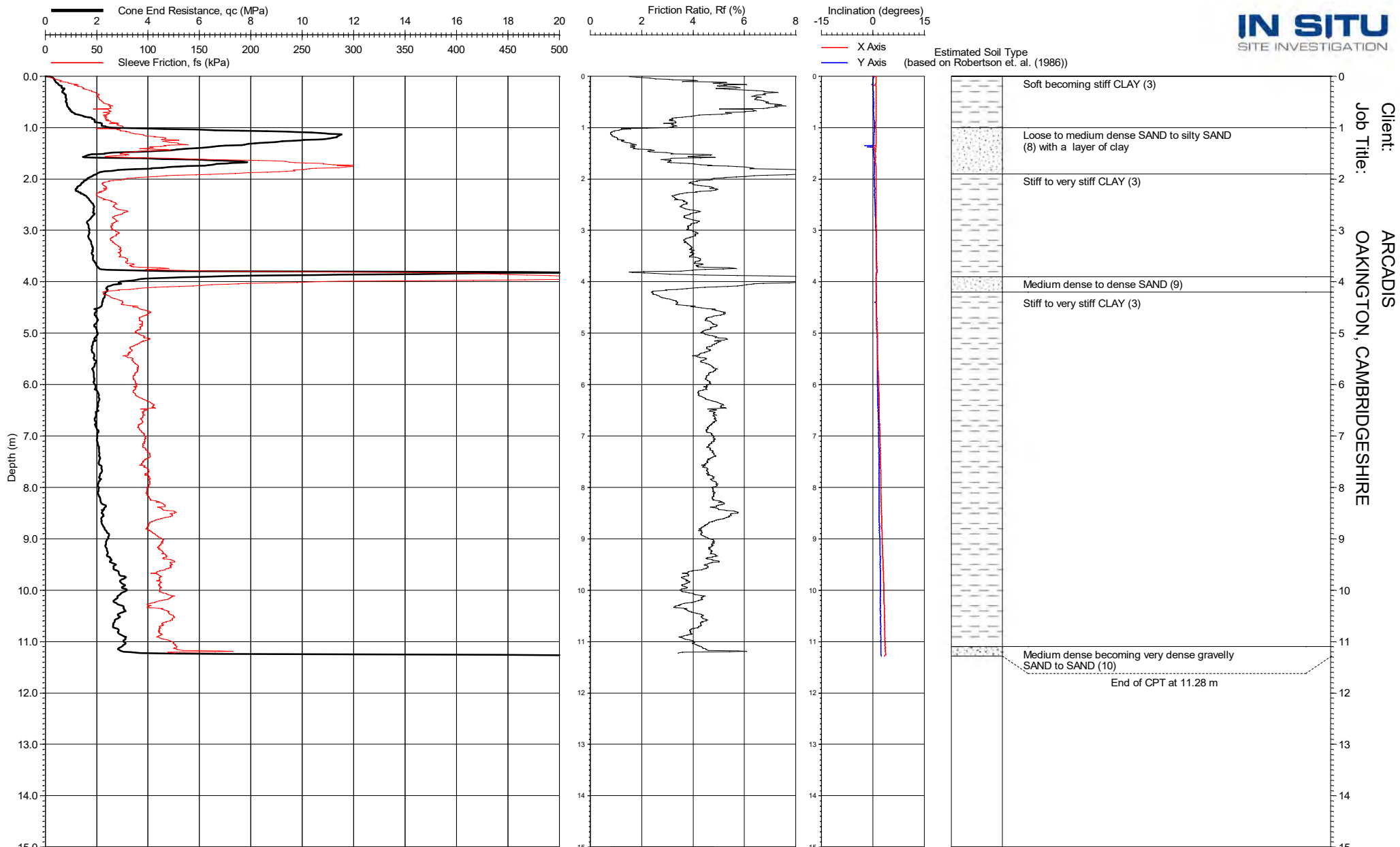
Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
Date of Plot: 10/01/2017
File Name: 1160427 - CPT 611
Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 304 mV	Tip Zero Post: 304 mV	Tip Zero Difference: 0 %
Sleeve Zero Pre: 288 mV	Sleeve Zero Post: 287 mV	Sleeve Zero Difference: 0 %
Pore Pressure Zero Pre: 354 mV	Pore Pressure Zero Post: 410 mV	Pore Pressure Difference: -14 %
X Inclinator Zero Pre: 2512 mV	X Inclinator Zero Post: 2567 mV	X Inclinator Difference: -2 %
Y Inclinator Zero Pre: 2512 mV	Y Inclinator Zero Post: 2567 mV	Y Inclinator Difference: -2 %

PIEZO CONE PENETRATION TEST
CPT 611
insitusi.com
Form: CPT0001



Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**

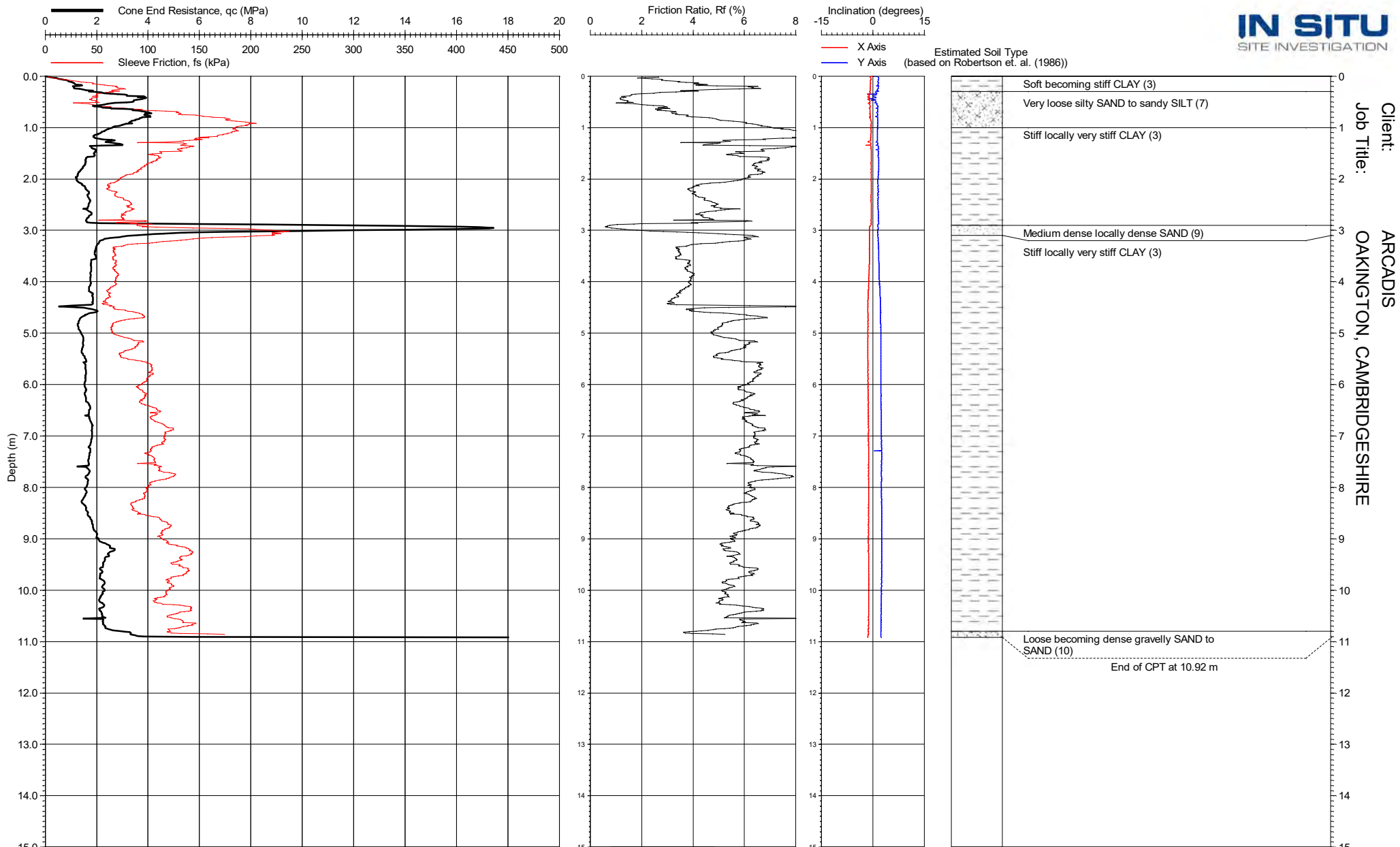
Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
 Date of Plot: 10/01/2017
 File Name: 1160427 - CPT 612
 Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 303 mV	Tip Zero Post: 298 mV	Tip Zero Difference: 2 %
Sleeve Zero Pre: 286 mV	Sleeve Zero Post: 283 mV	Sleeve Zero Difference: 1 %
Pore Pressure Zero Pre: 358 mV	Pore Pressure Zero Post: 334 mV	Pore Pressure Difference: 7 %
X Inclinator Zero Pre: 2587 mV	X Inclinator Zero Post: 2615 mV	X Inclinator Difference: -1 %
Y Inclinator Zero Pre: 2587 mV	Y Inclinator Zero Post: 2615 mV	Y Inclinator Difference: -1 %

PIEZO CONE PENETRATION TEST
CPT 612
 insitusi.com
 Form: CPT0001



Client: **ARCADIS**
Job Title: **OAKINGTON, CAMBRIDGESHIRE**

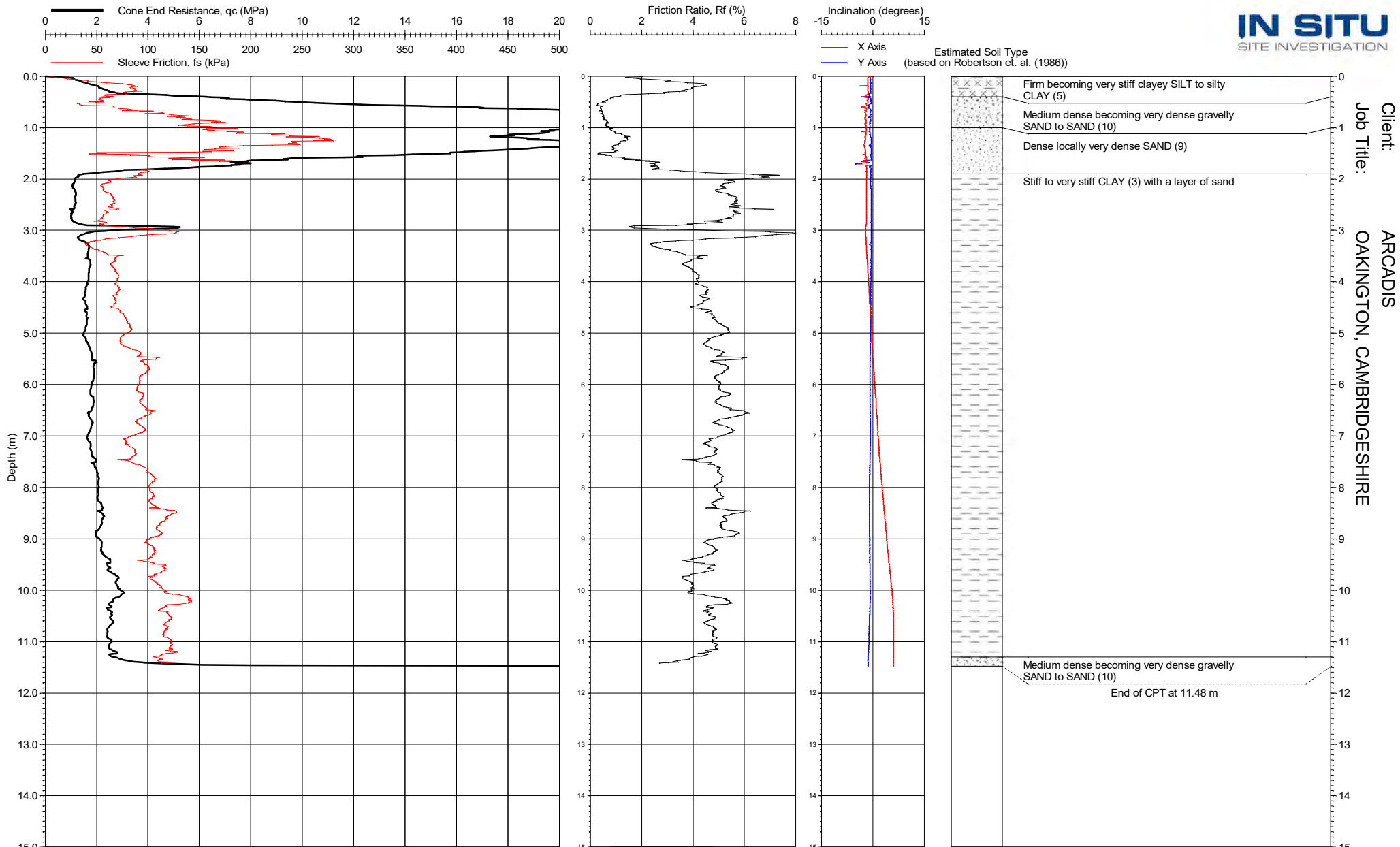
Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
Date of Plot: 10/01/2017
File Name: 1160427 - CPT 613
Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 303 mV	Tip Zero Post: 300 mV	Tip Zero Difference: 1 %
Sleeve Zero Pre: 287 mV	Sleeve Zero Post: 284 mV	Sleeve Zero Difference: 1 %
Pore Pressure Zero Pre: 351 mV	Pore Pressure Zero Post: 352 mV	Pore Pressure Difference: 0 %
X Inclinator Zero Pre: 2452 mV	X Inclinator Zero Post: 2429 mV	X Inclinator Difference: 1 %
Y Inclinator Zero Pre: 2452 mV	Y Inclinator Zero Post: 2429 mV	Y Inclinator Difference: 1 %

PIEZO CONE PENETRATION TEST
CPT 613
insitusi.com
Form: CPT0001



Client: ARCADIS
Job Title: OAKINGTON, CAMBRIDGESHIRE

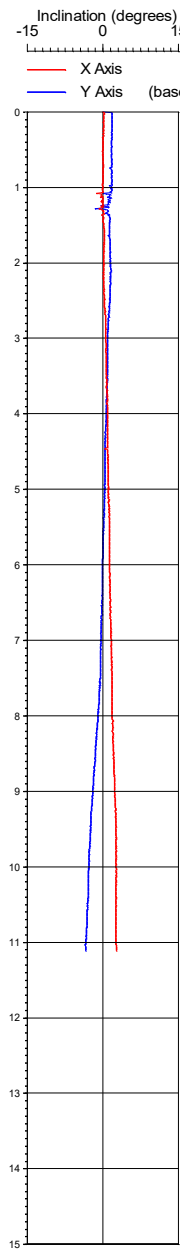
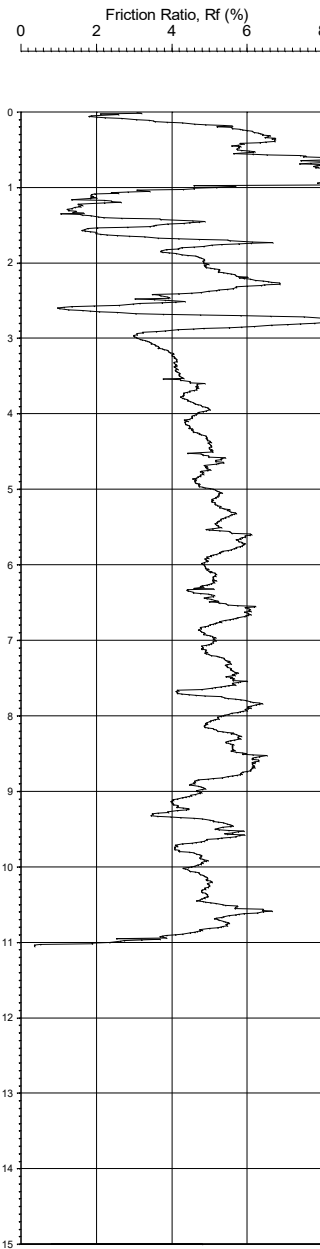
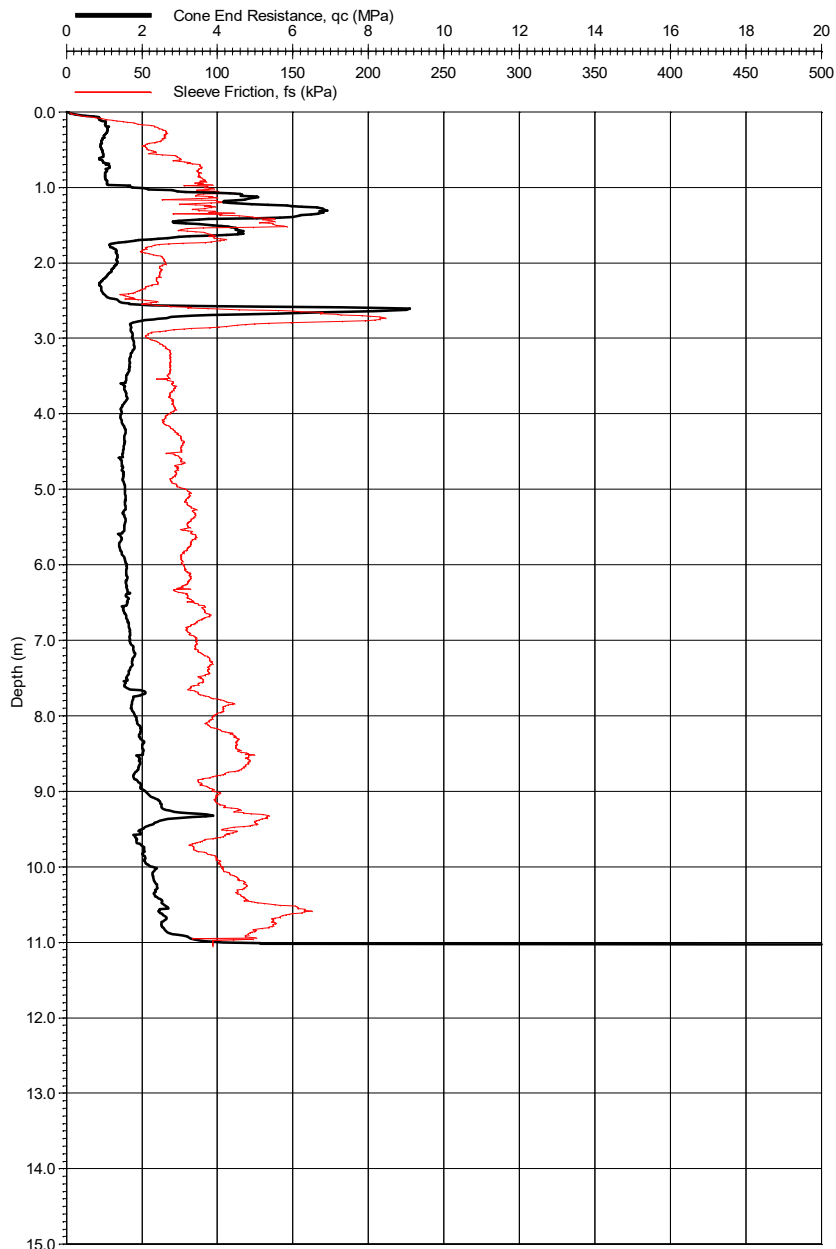
Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
Date of Plot: 10/01/2017
File Name: 1160427 - CPT 614
Checked By: **reg. 13**

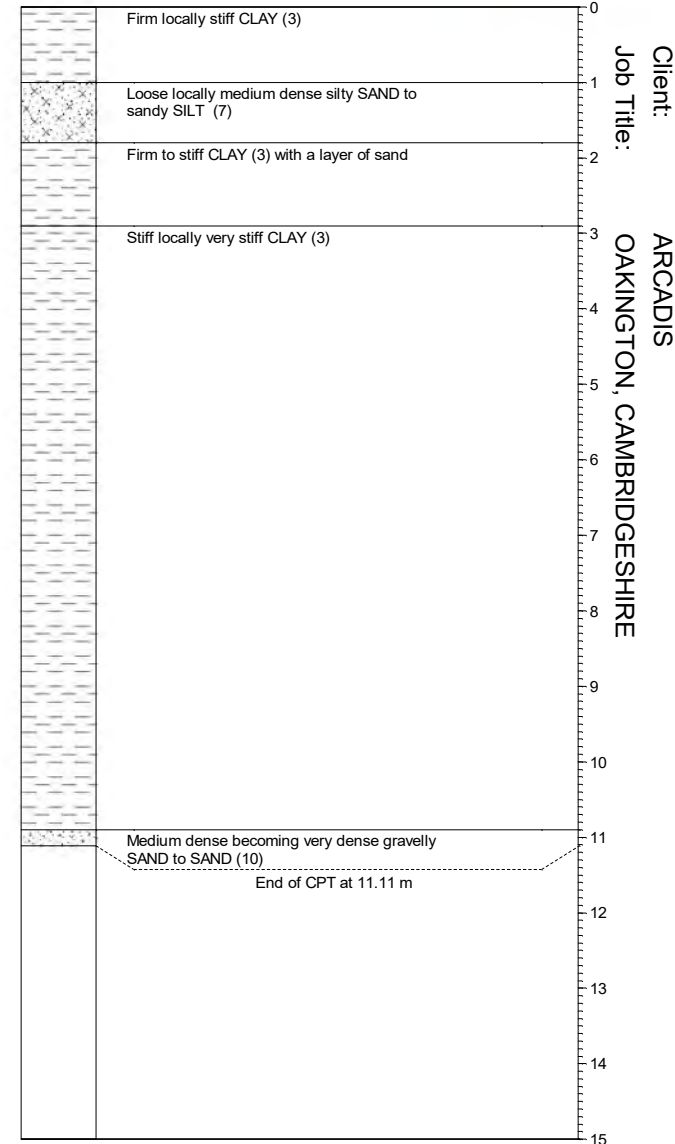
PCPT Zero Values

Tip Zero Pre: 303 mV	Tip Zero Post: 303 mV	Tip Zero Difference: 0 %
Sleeve Zero Pre: 287 mV	Sleeve Zero Post: 288 mV	Sleeve Zero Difference: 0 %
Pore Pressure Zero Pre: 377 mV	Pore Pressure Zero Post: 371 mV	Pore Pressure Difference: 2 %
X Inclinator Zero Pre: 2400 mV	X Inclinator Zero Post: 2516 mV	X Inclinator Difference: -5 %
Y Inclinator Zero Pre: 2400 mV	Y Inclinator Zero Post: 2516 mV	Y Inclinator Difference: -5 %

PIEZO CONE PENETRATION TEST
CPT 614
insitusi.com
Form: CPT0001



Estimated Soil Type
(based on Robertson et. al. (1986))



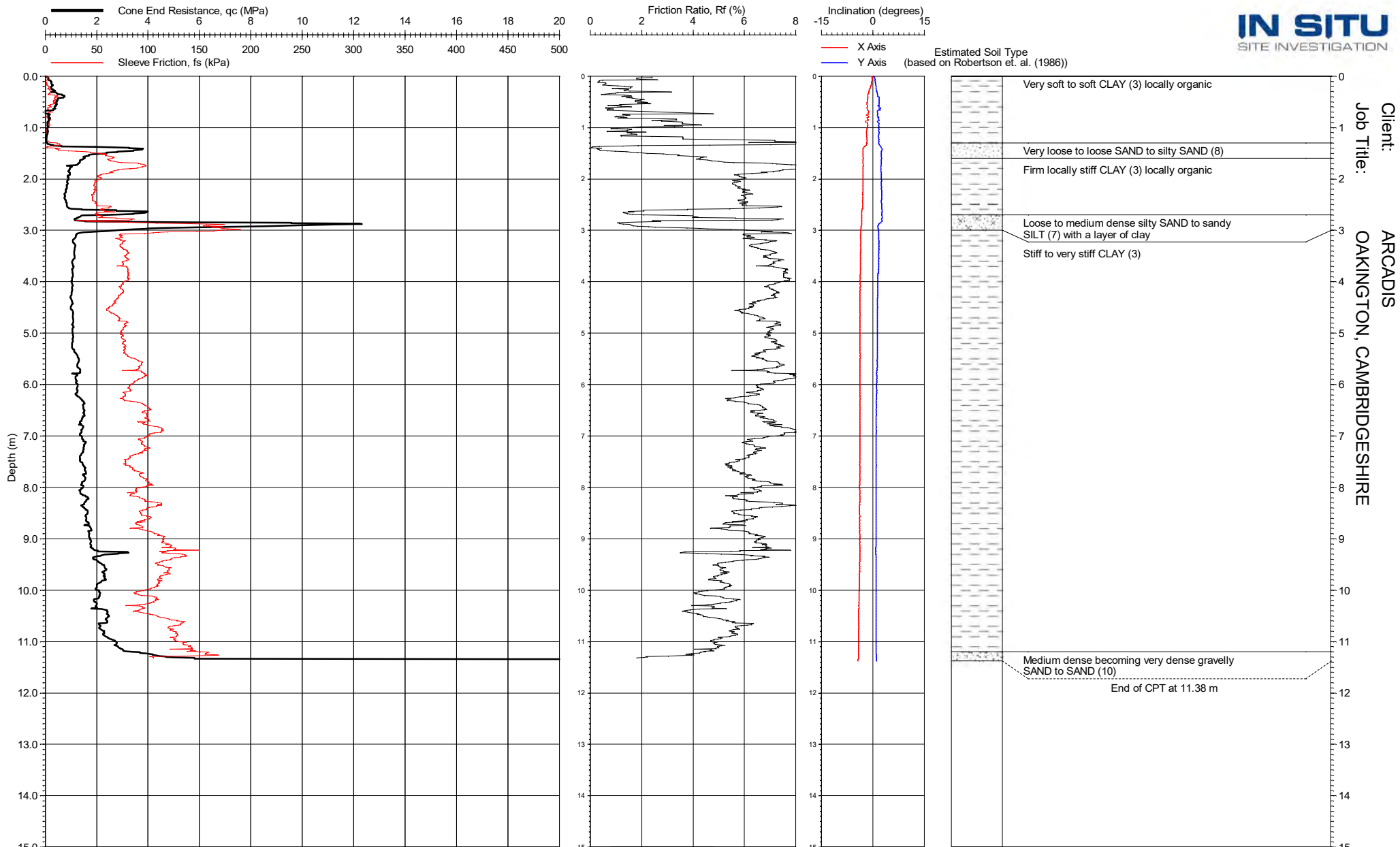
Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
Date of Plot: 10/01/2017
File Name: 1160427 - CPT 615
Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 303 mV	Tip Zero Post: 2592 mV	Tip Zero Difference: -88 %
Sleeve Zero Pre: 288 mV	Sleeve Zero Post: 2777 mV	Sleeve Zero Difference: -90 %
Pore Pressure Zero Pre: 363 mV	Pore Pressure Zero Post: 608 mV	Pore Pressure Difference: -40 %
X Inclinator Zero Pre: 2620 mV	X Inclinator Zero Post: 2790 mV	X Inclinator Difference: -6 %
Y Inclinator Zero Pre: 2620 mV	Y Inclinator Zero Post: 2790 mV	Y Inclinator Difference: -6 %

PIEZO CONE PENETRATION TEST
CPT 615
insitusi.com
Form: CPT0001



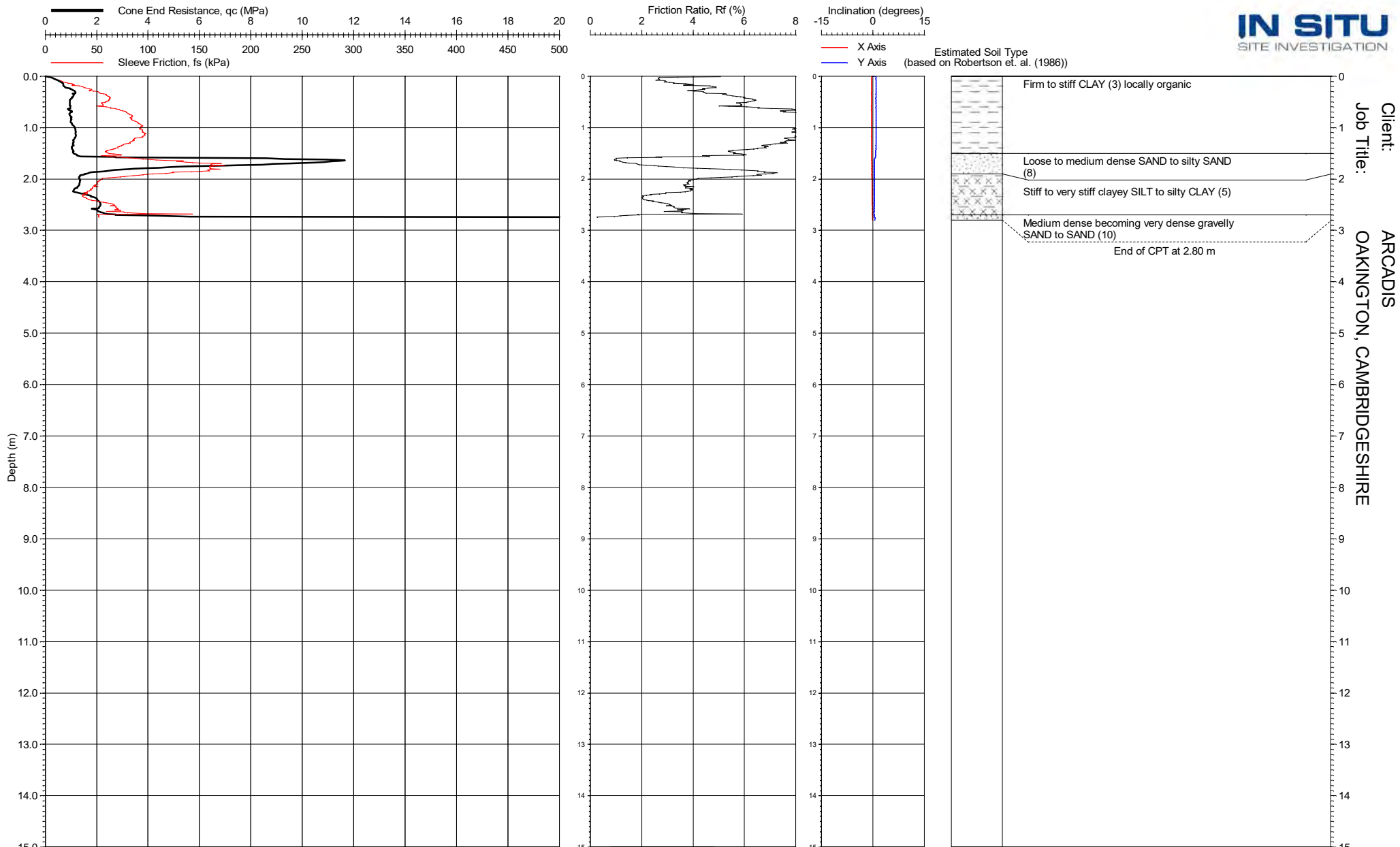
Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
 Date of Plot: 10/01/2017
 File Name: 1160427 - CPT 616
 Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 301 mV	Tip Zero Post: 301 mV	Tip Zero Difference: 0 %
Sleeve Zero Pre: 286 mV	Sleeve Zero Post: 285 mV	Sleeve Zero Difference: 0 %
Pore Pressure Zero Pre: 356 mV	Pore Pressure Zero Post: 324 mV	Pore Pressure Difference: 10 %
X Inclinator Zero Pre: 2504 mV	X Inclinator Zero Post: 2578 mV	X Inclinator Difference: -3 %
Y Inclinator Zero Pre: 2504 mV	Y Inclinator Zero Post: 2578 mV	Y Inclinator Difference: -3 %

PIEZO CONE PENETRATION TEST
CPT 616
 insitusi.com
 Form: CPT0001



Client: ARCADIS
Job Title: OAKINGTON, CAMBRIDGESHIRE

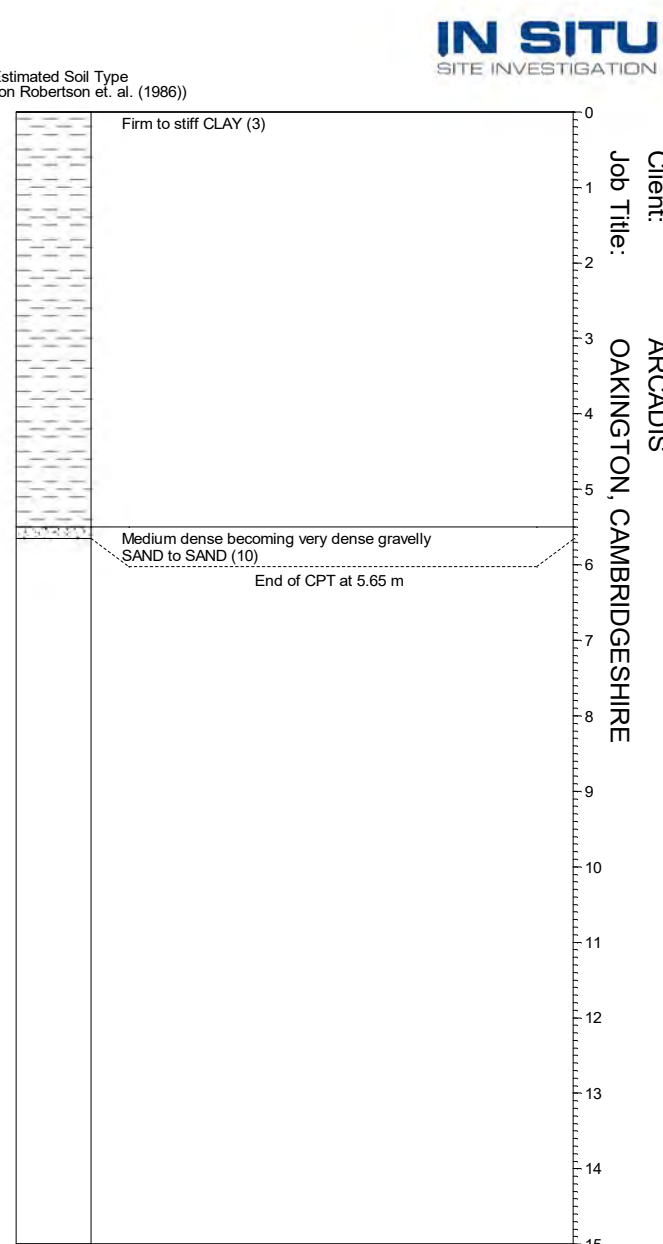
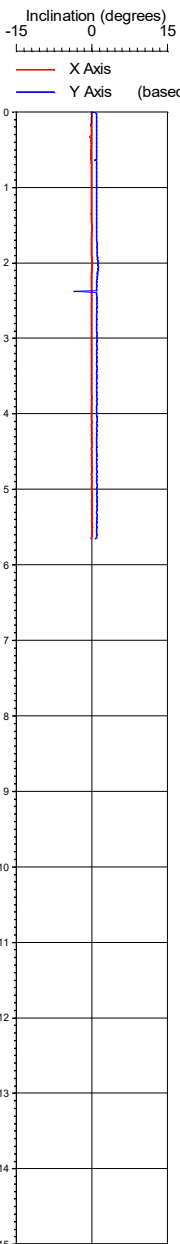
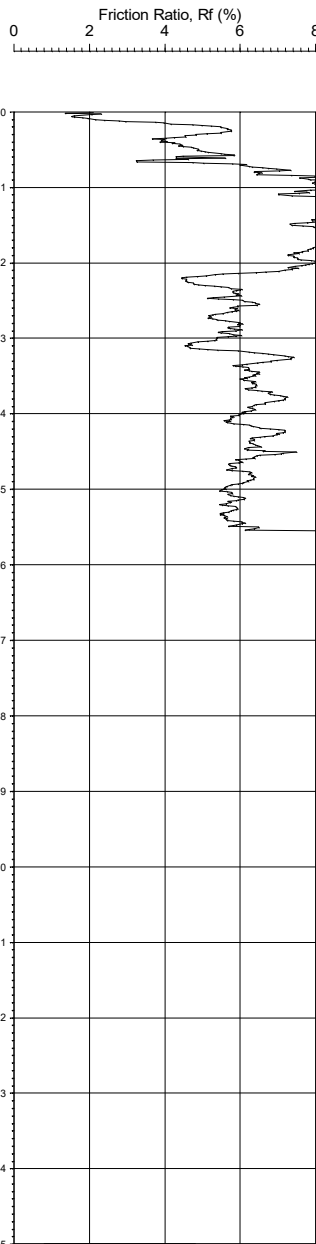
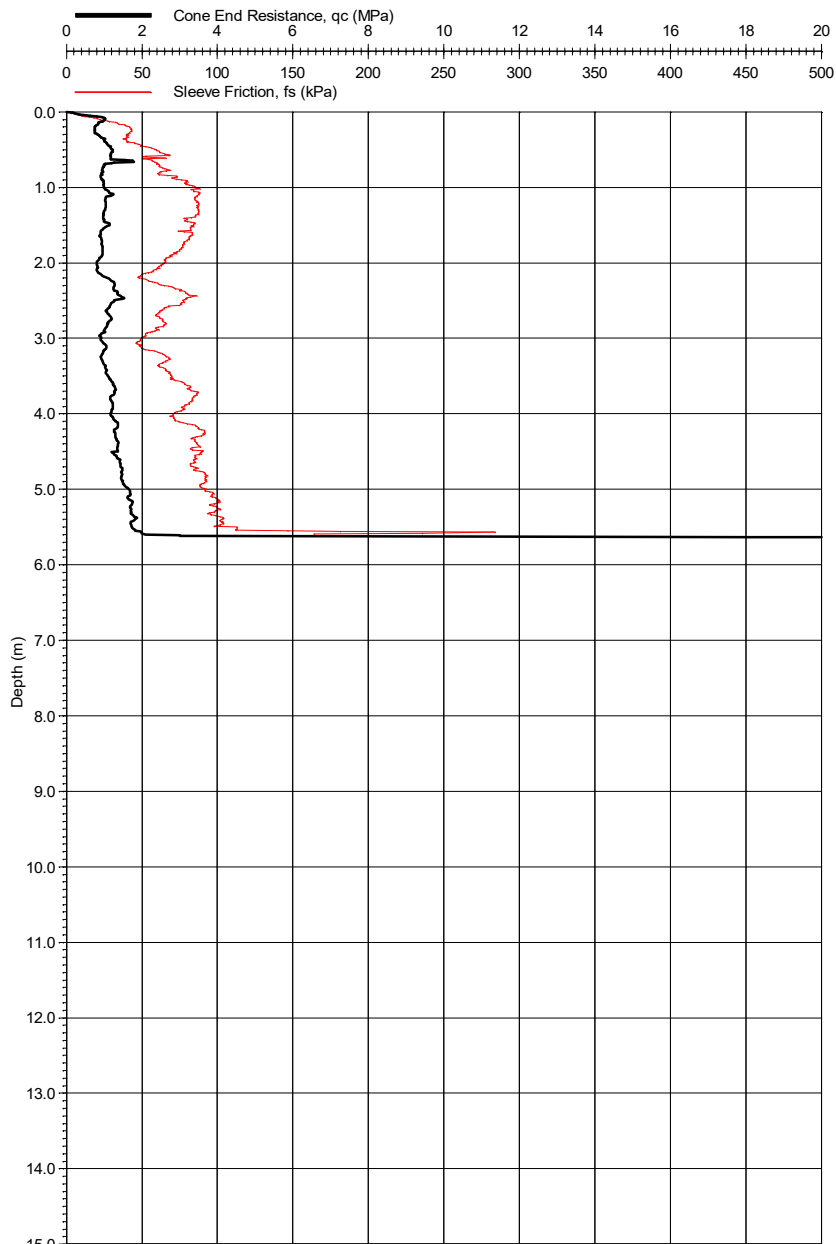
Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
Date of Plot: 10/01/2017
File Name: 1160427 - CPT 617
Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 303 mV	Tip Zero Post: 300 mV	Tip Zero Difference: 1 %
Sleeve Zero Pre: 286 mV	Sleeve Zero Post: 284 mV	Sleeve Zero Difference: 1 %
Pore Pressure Zero Pre: 342 mV	Pore Pressure Zero Post: 336 mV	Pore Pressure Difference: 2 %
X Inclinator Zero Pre: 2506 mV	X Inclinator Zero Post: 2493 mV	X Inclinator Difference: 1 %
Y Inclinator Zero Pre: 2506 mV	Y Inclinator Zero Post: 2493 mV	Y Inclinator Difference: 1 %

PIEZO CONE PENETRATION TEST
CPT 617
insitusi.com
Form: CPT0001



Client: **ARCADIS**
Job Title: **OAKINGTON, CAMBRIDGESHIRE**

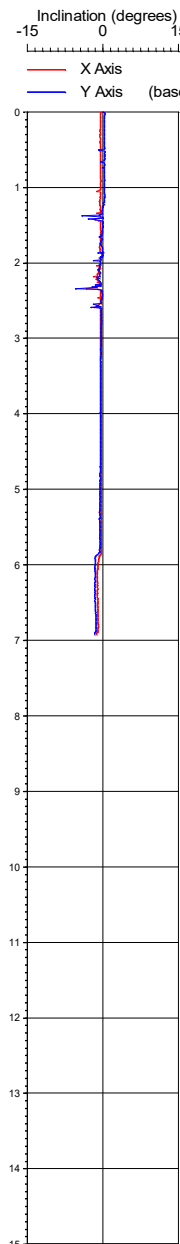
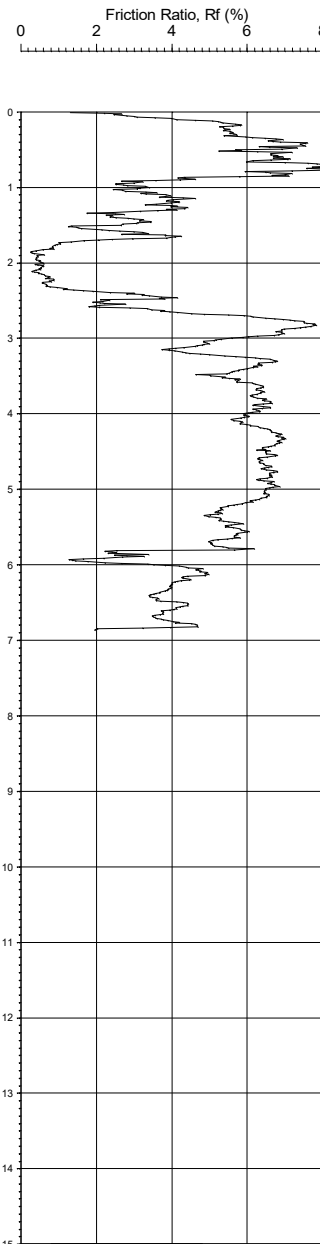
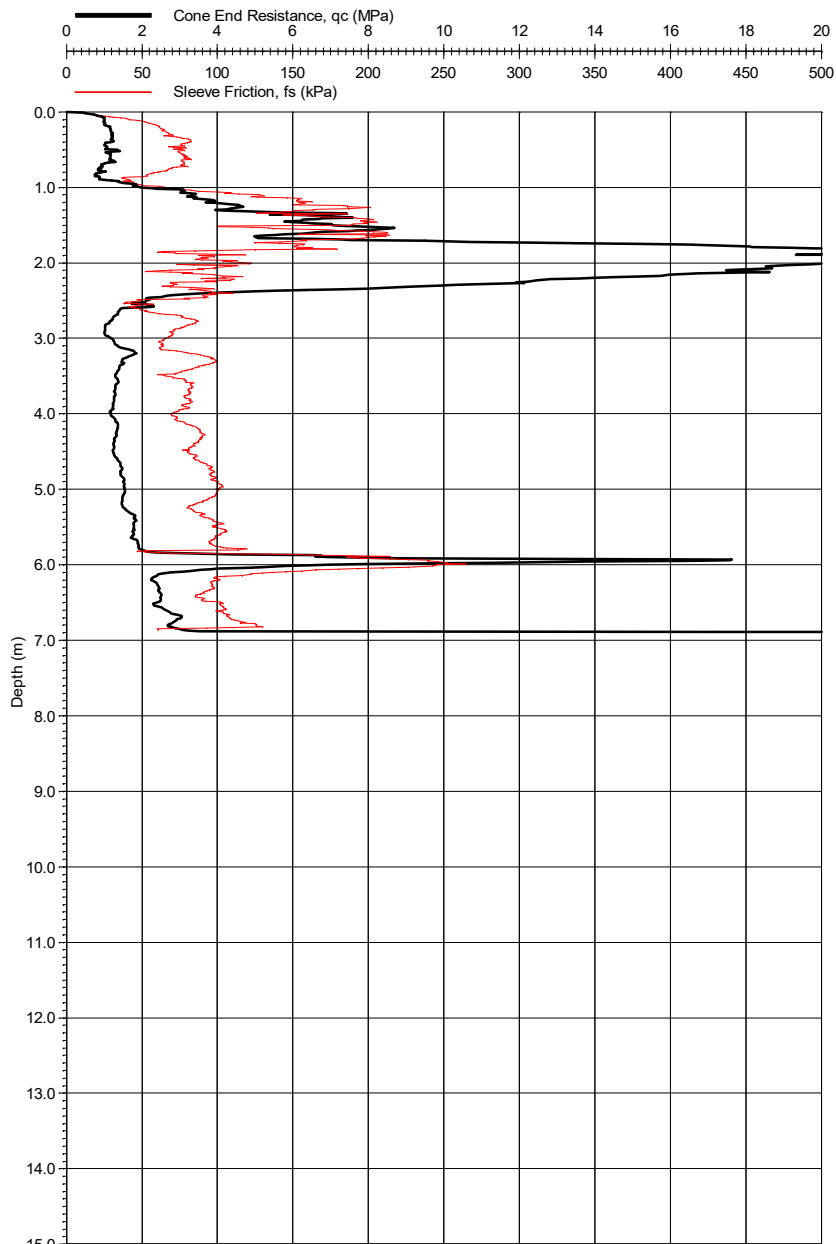
Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 23/12/2016
 Date of Plot: 10/01/2017
 File Name: 1160427 - CPT 1203
 Checked By: **reg. 13**

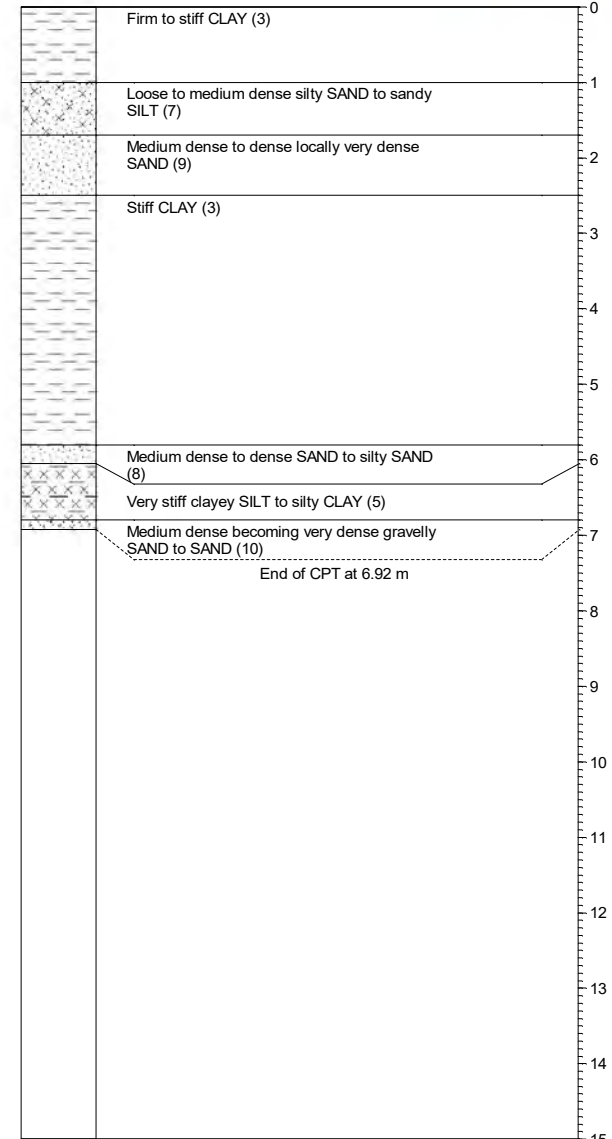
PCPT Zero Values

Tip Zero Pre: 303 mV	Tip Zero Post: 300 mV	Tip Zero Difference: 1 %
Sleeve Zero Pre: 287 mV	Sleeve Zero Post: 285 mV	Sleeve Zero Difference: 1 %
Pore Pressure Zero Pre: 369 mV	Pore Pressure Zero Post: 406 mV	Pore Pressure Difference: -9 %
X Inclinator Zero Pre: 2711 mV	X Inclinator Zero Post: 2518 mV	X Inclinator Difference: 8 %
Y Inclinator Zero Pre: 2711 mV	Y Inclinator Zero Post: 2518 mV	Y Inclinator Difference: 8 %

PIEZO CONE PENETRATION TEST
CPT 1203
insitusi.com
 Form: CPT0001



Estimated Soil Type
(based on Robertson et. al. (1986))



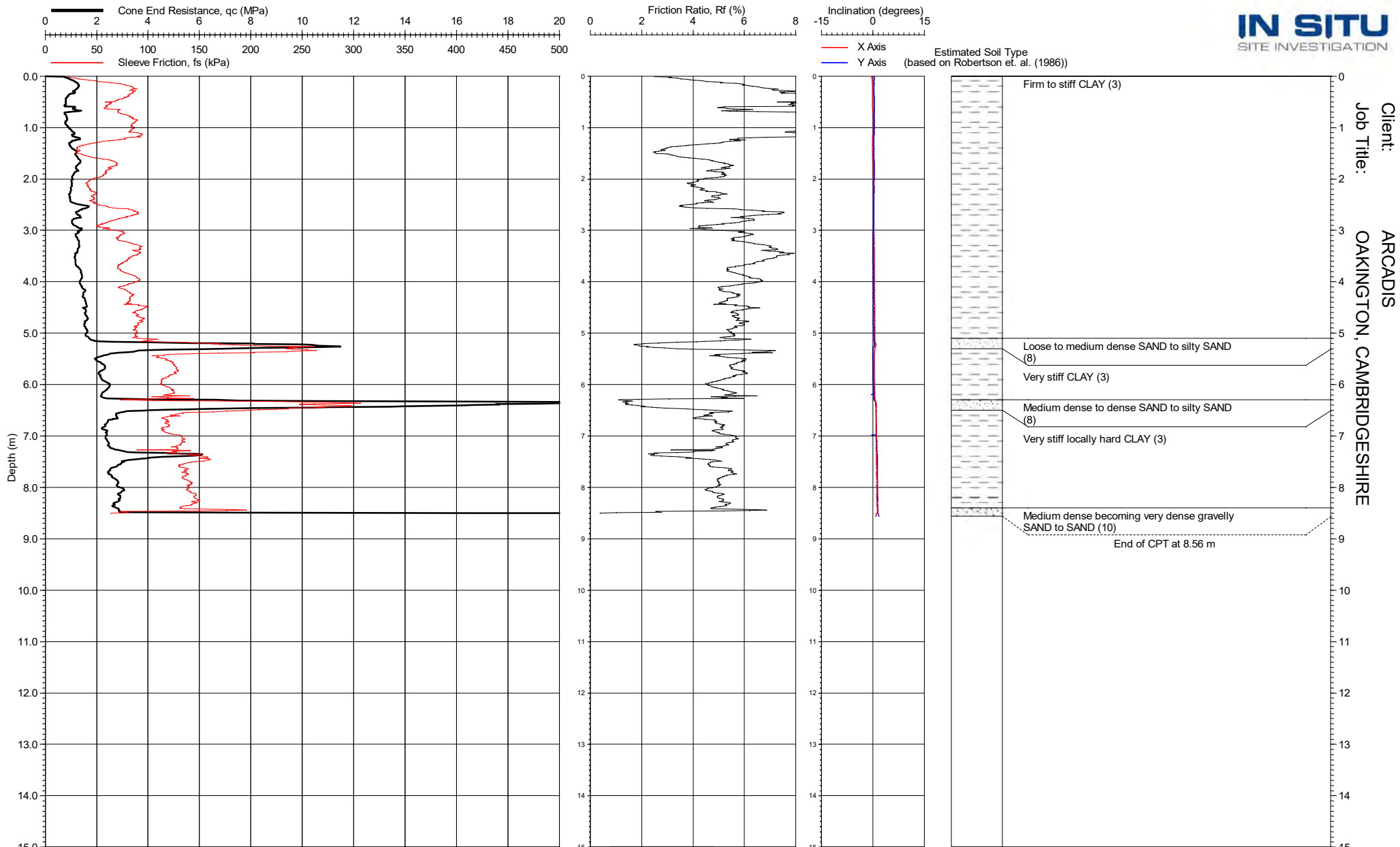
Client: **ARCADIS**
Job Title: **OAKINGTON, CAMBRIDGESHIRE**

Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 22/12/2016
Date of Plot: 10/01/2017
File Name: 1160427 - CPT 1204
Checked By: **reg. 13**

PCPT Zero Values		
Tip Zero Pre: 302 mV	Tip Zero Post: 300 mV	Tip Zero Difference: 1 %
Sleeve Zero Pre: 286 mV	Sleeve Zero Post: 285 mV	Sleeve Zero Difference: 0 %
Pore Pressure Zero Pre: 364 mV	Pore Pressure Zero Post: 334 mV	Pore Pressure Difference: 9 %
X Inclinator Zero Pre: 2489 mV	X Inclinator Zero Post: 2495 mV	X Inclinator Difference: 0 %
Y Inclinator Zero Pre: 2489 mV	Y Inclinator Zero Post: 2495 mV	Y Inclinator Difference: 0 %

PIEZO CONE PENETRATION TEST
CPT 1204
insitusi.com
Form: CPT0001



Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**

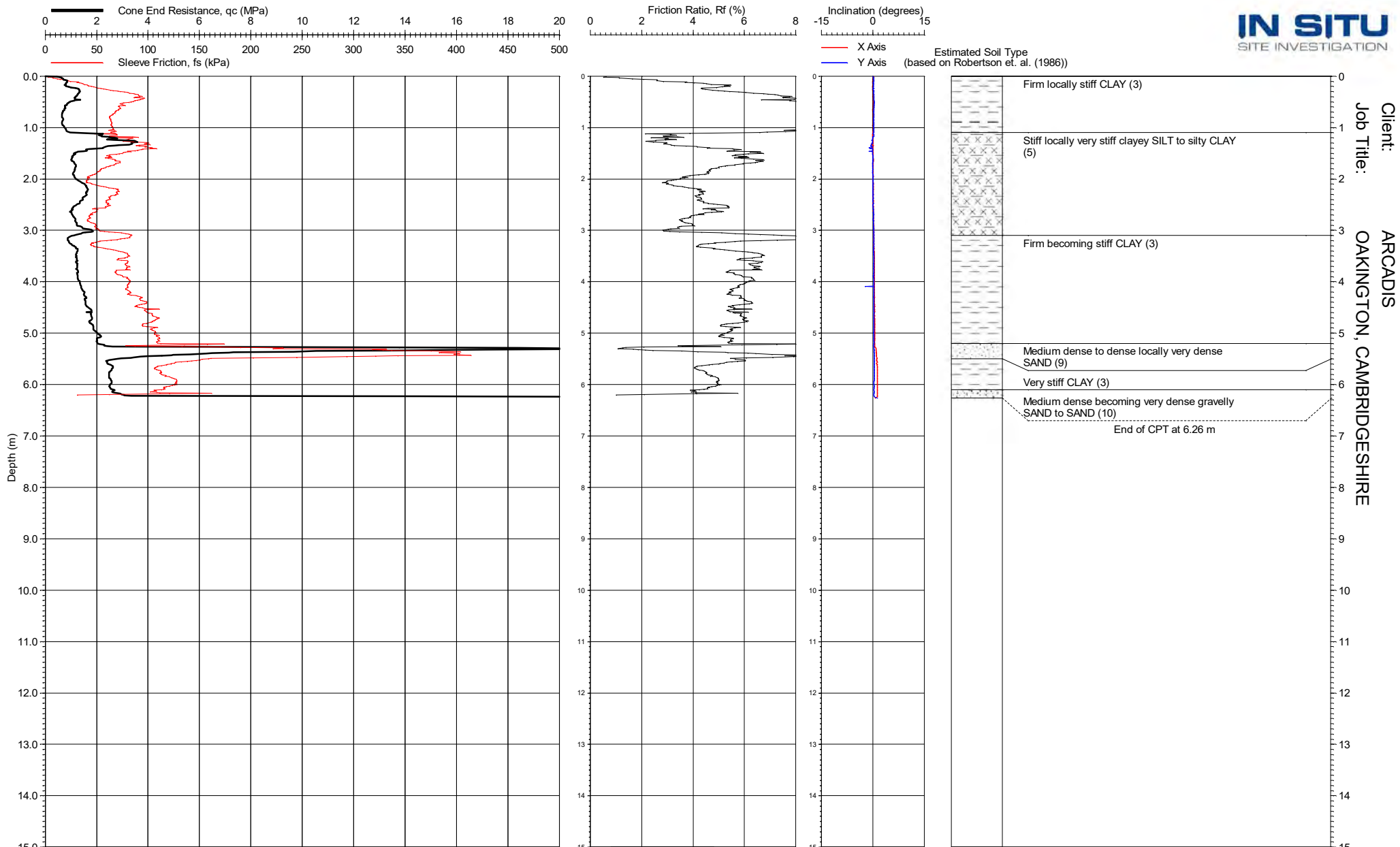
Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 22/12/2016
 Date of Plot: 10/01/2017
 File Name: 1160427 - CPT 1205
 Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 302 mV	Tip Zero Post: 300 mV	Tip Zero Difference: 1 %
Sleeve Zero Pre: 285 mV	Sleeve Zero Post: 284 mV	Sleeve Zero Difference: 0 %
Pore Pressure Zero Pre: 332 mV	Pore Pressure Zero Post: 373 mV	Pore Pressure Difference: -11 %
X Inclinator Zero Pre: 2493 mV	X Inclinator Zero Post: 2500 mV	X Inclinator Difference: 0 %
Y Inclinator Zero Pre: 2493 mV	Y Inclinator Zero Post: 2500 mV	Y Inclinator Difference: 0 %

PIEZO CONE PENETRATION TEST
CPT 1205
insitusi.com
 Form: CPT0001



Client: **ARCADIS**
Job Title: **OAKINGTON, CAMBRIDGESHIRE**

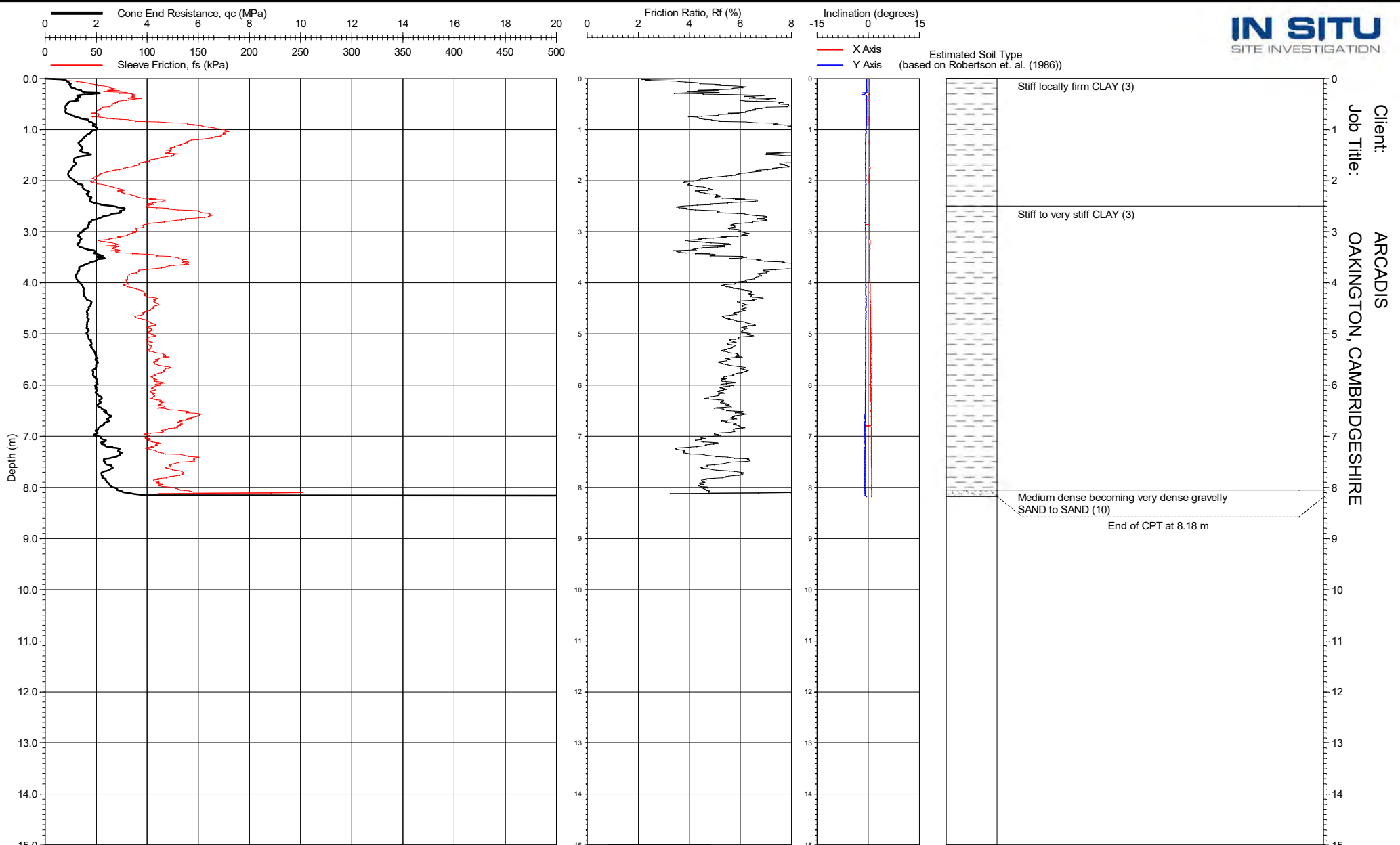
Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 22/12/2016
Date of Plot: 10/01/2017
File Name: 1160427 - CPT 1206
Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 302 mV	Tip Zero Post: 299 mV	Tip Zero Difference: 1 %
Sleeve Zero Pre: 288 mV	Sleeve Zero Post: 282 mV	Sleeve Zero Difference: 2 %
Pore Pressure Zero Pre: 366 mV	Pore Pressure Zero Post: 295 mV	Pore Pressure Difference: 24 %
X Inclinator Zero Pre: 2591 mV	X Inclinator Zero Post: 2560 mV	X Inclinator Difference: 1 %
Y Inclinator Zero Pre: 2591 mV	Y Inclinator Zero Post: 2560 mV	Y Inclinator Difference: 1 %

PIEZO CONE PENETRATION TEST
CPT 1206
insitusi.com
Form: CPT0001



Client: **ARCADIS**
Job Title: **OAKINGTON, CAMBRIDGESHIRE**

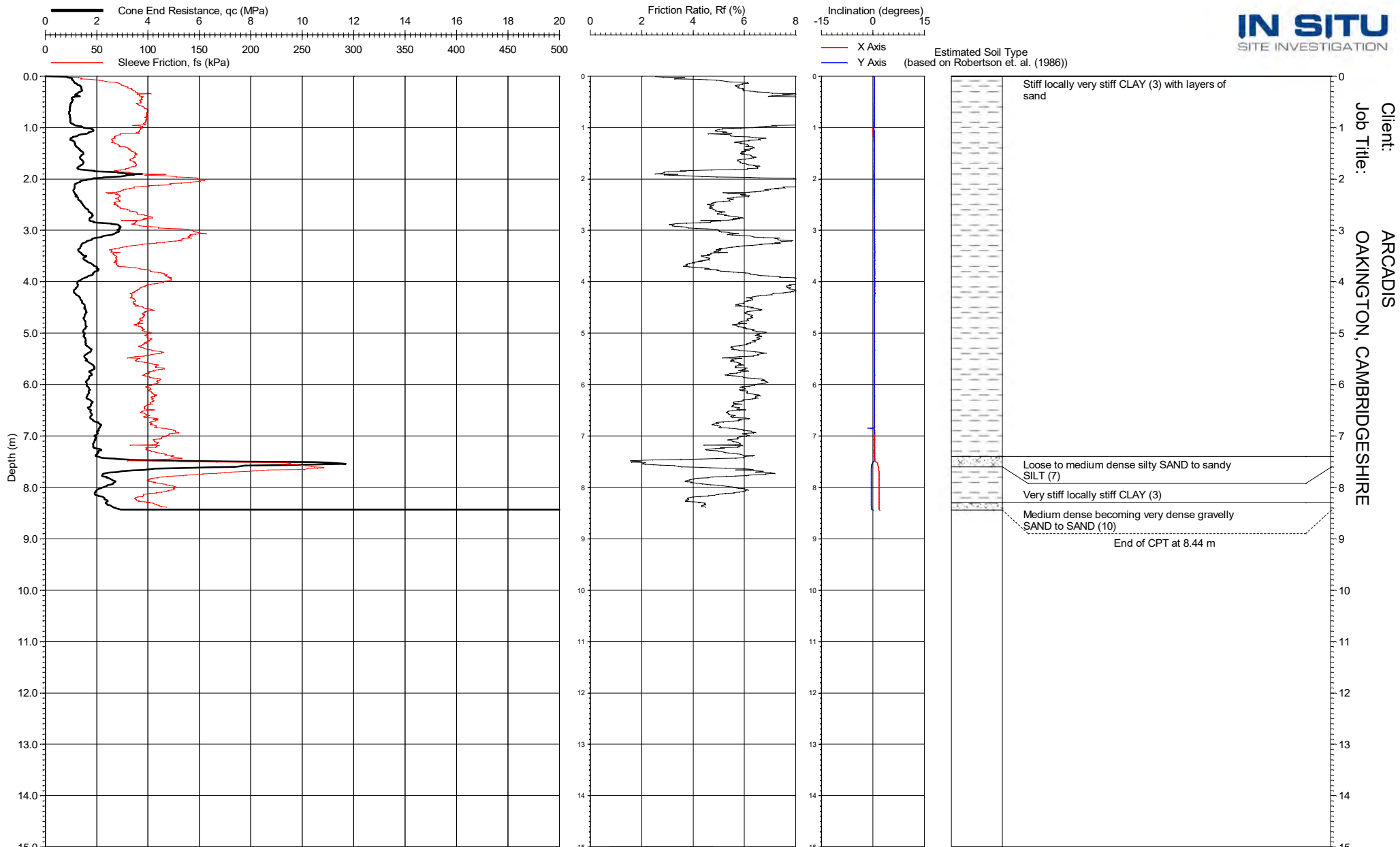
Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 22/12/2016
Date of Plot: 10/01/2017
File Name: 1160427 - CPT 1207
Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 301 mV	Tip Zero Post: 300 mV	Tip Zero Difference: 0 %
Sleeve Zero Pre: 284 mV	Sleeve Zero Post: 284 mV	Sleeve Zero Difference: 0 %
Pore Pressure Zero Pre: 430 mV	Pore Pressure Zero Post: 396 mV	Pore Pressure Difference: 9 %
X Inclinator Zero Pre: 2575 mV	X Inclinator Zero Post: 2537 mV	X Inclinator Difference: 1 %
Y Inclinator Zero Pre: 2575 mV	Y Inclinator Zero Post: 2537 mV	Y Inclinator Difference: 1 %

PIEZO CONE PENETRATION TEST
CPT 1207
insitusi.com
Form: CPT0001



Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**

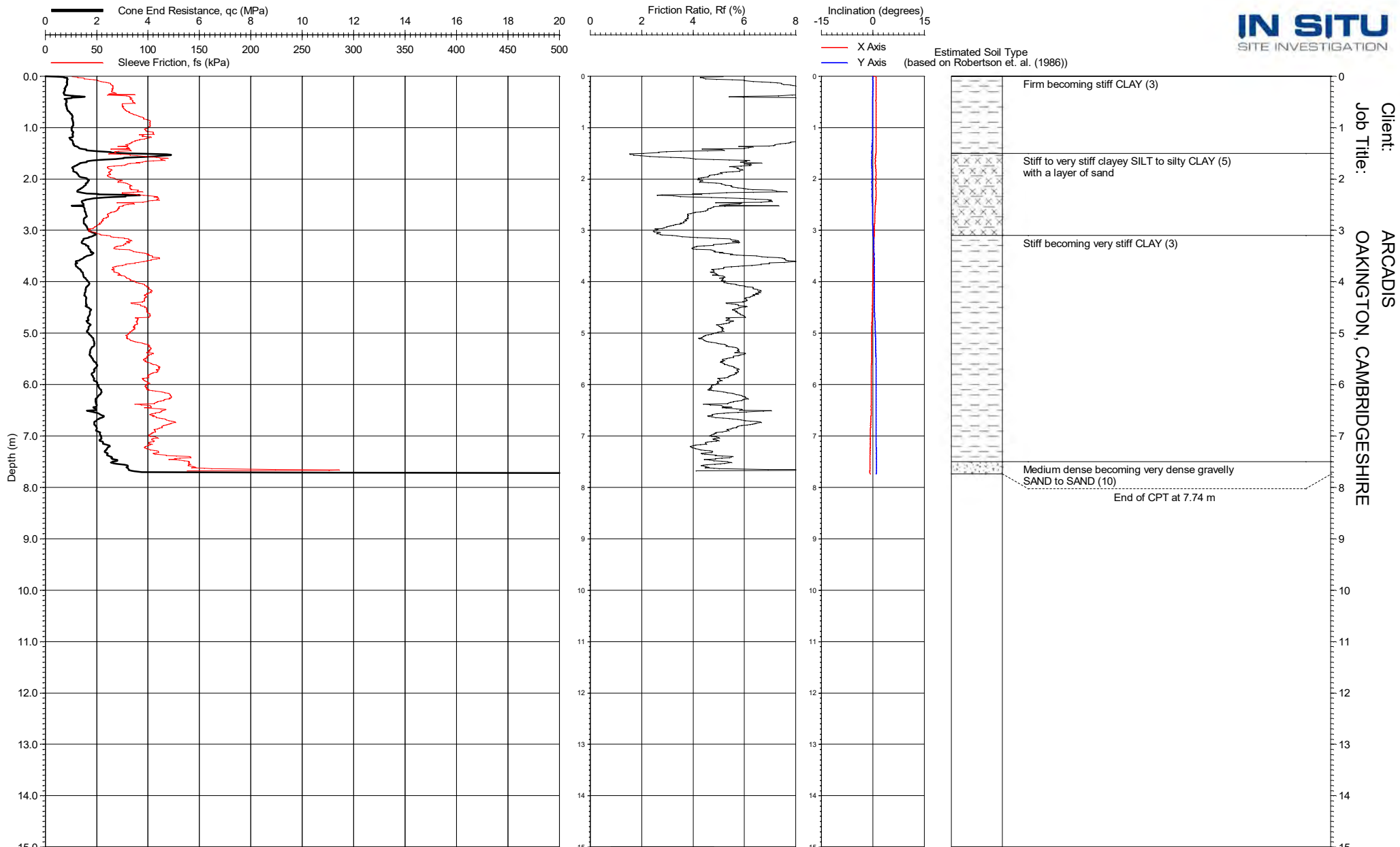
Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 22/12/2016
 Date of Plot: 10/01/2017
 File Name: 1160427 - CPT 1208
 Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 314 mV	Tip Zero Post: 298 mV	Tip Zero Difference: 5 %
Sleeve Zero Pre: 300 mV	Sleeve Zero Post: 282 mV	Sleeve Zero Difference: 6 %
Pore Pressure Zero Pre: 450 mV	Pore Pressure Zero Post: 409 mV	Pore Pressure Difference: 10 %
X Inclinator Zero Pre: 2571 mV	X Inclinator Zero Post: 2554 mV	X Inclinator Difference: 1 %
Y Inclinator Zero Pre: 2571 mV	Y Inclinator Zero Post: 2554 mV	Y Inclinator Difference: 1 %

PIEZO CONE PENETRATION TEST
CPT 1208
insitusi.com
 Form: CPT0001



Client: ARCADIS
Job Title: OAKINGTON, CAMBRIDGESHIRE

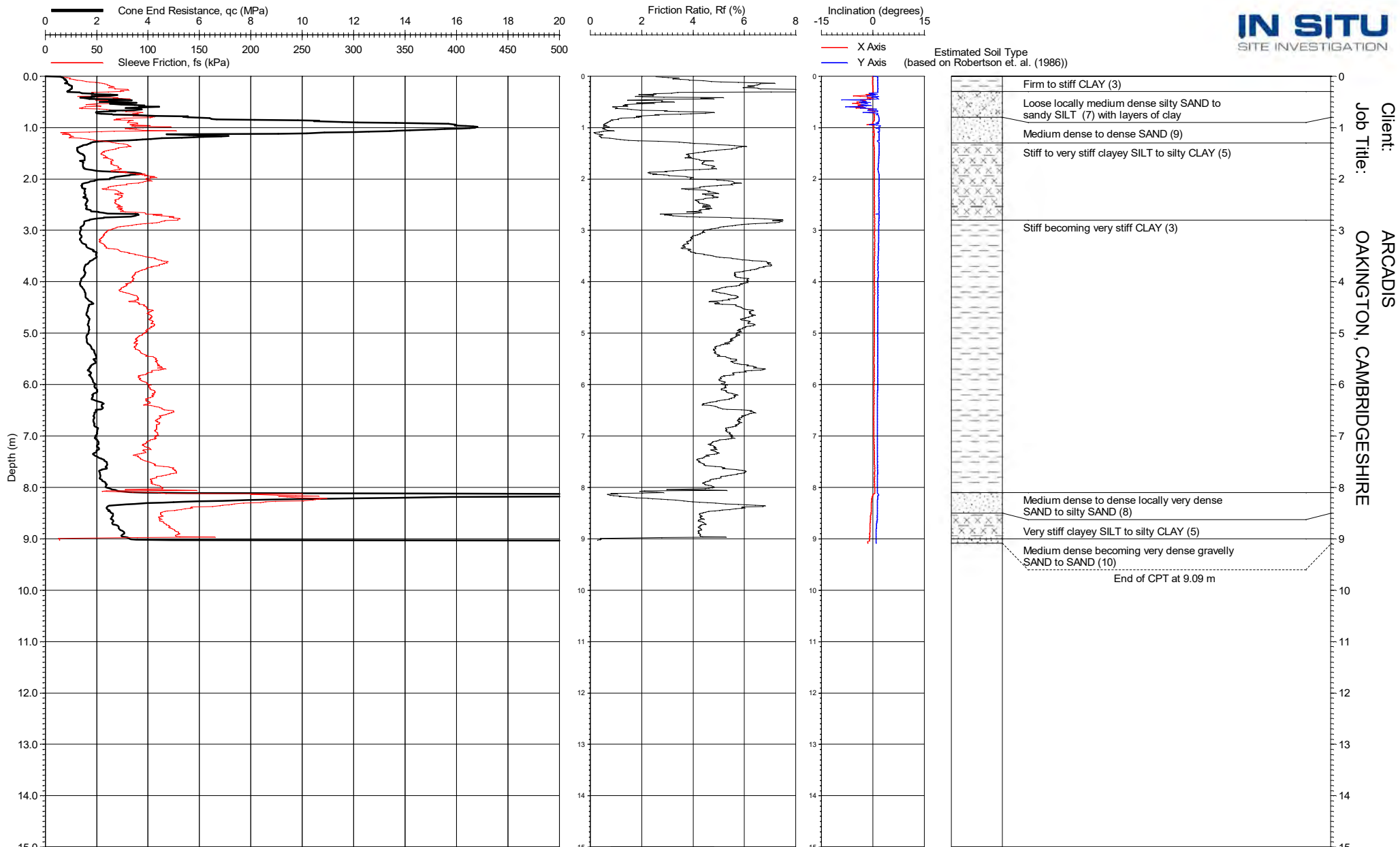
Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 22/12/2016
Date of Plot: 10/01/2017
File Name: 1160427 - CPT 1209
Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 302 mV	Tip Zero Post: 299 mV	Tip Zero Difference: 1 %
Sleeve Zero Pre: 287 mV	Sleeve Zero Post: 284 mV	Sleeve Zero Difference: 1 %
Pore Pressure Zero Pre: 396 mV	Pore Pressure Zero Post: 396 mV	Pore Pressure Difference: 0 %
X Inclinator Zero Pre: 2581 mV	X Inclinator Zero Post: 2550 mV	X Inclinator Difference: 1 %
Y Inclinator Zero Pre: 2581 mV	Y Inclinator Zero Post: 2550 mV	Y Inclinator Difference: 1 %

PIEZO CONE PENETRATION TEST
CPT 1209
insitusi.com
Form: CPT0001



Client: **ARCADIS**
Job Title: **OAKINGTON, CAMBRIDGESHIRE**

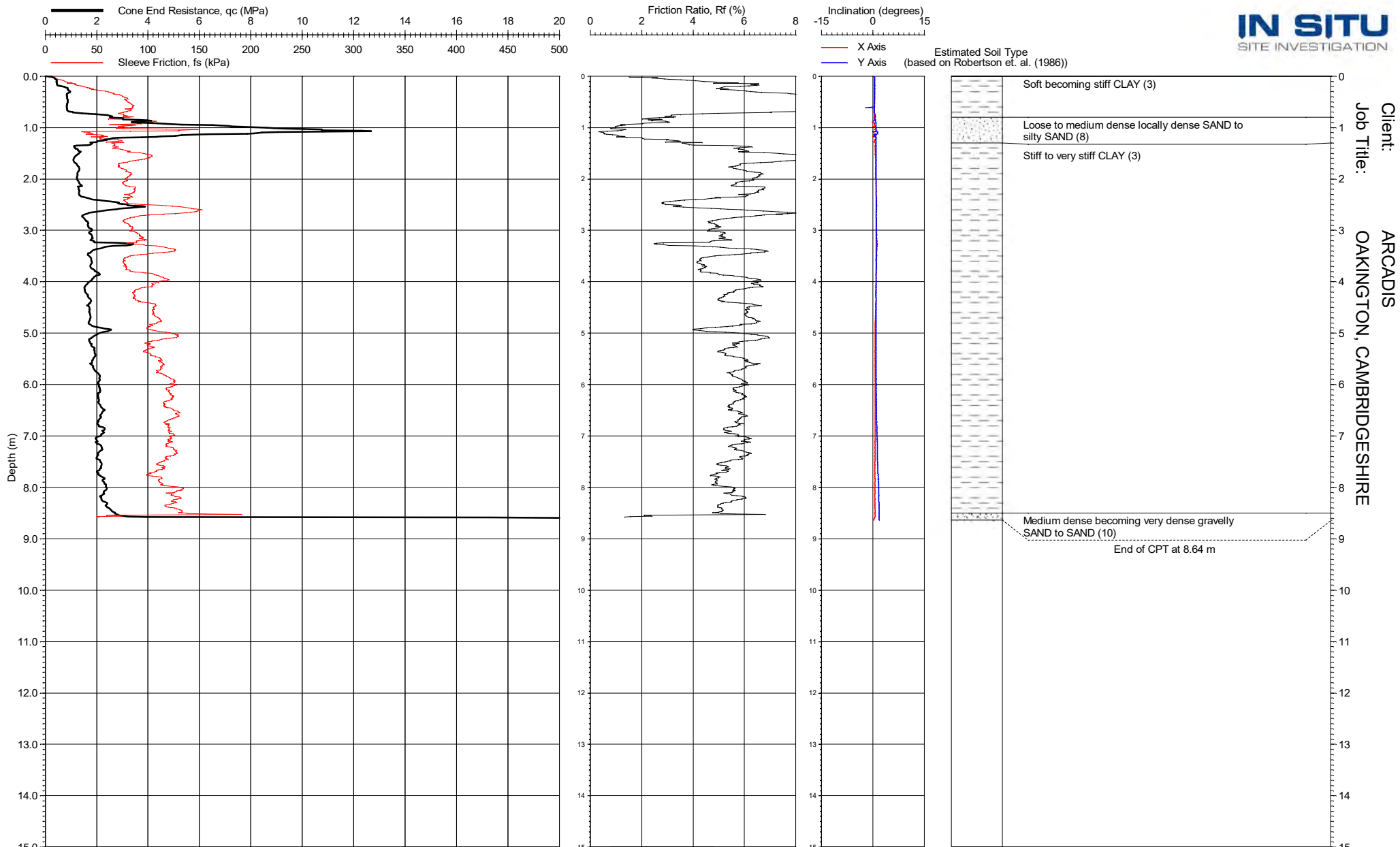
Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 22/12/2016
Date of Plot: 10/01/2017
File Name: 1160427 - CPT 1210
Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 303 mV	Tip Zero Post: 298 mV	Tip Zero Difference: 2 %
Sleeve Zero Pre: 287 mV	Sleeve Zero Post: 282 mV	Sleeve Zero Difference: 2 %
Pore Pressure Zero Pre: 378 mV	Pore Pressure Zero Post: 411 mV	Pore Pressure Difference: -8 %
X Inclinator Zero Pre: 2541 mV	X Inclinator Zero Post: 2541 mV	X Inclinator Difference: 0 %
Y Inclinator Zero Pre: 2541 mV	Y Inclinator Zero Post: 2541 mV	Y Inclinator Difference: 0 %

PIEZO CONE PENETRATION TEST
CPT 1210
insitusi.com
Form: CPT0001



Client: **ARCADIS**
Job Title: **OAKINGTON, CAMBRIDGESHIRE**

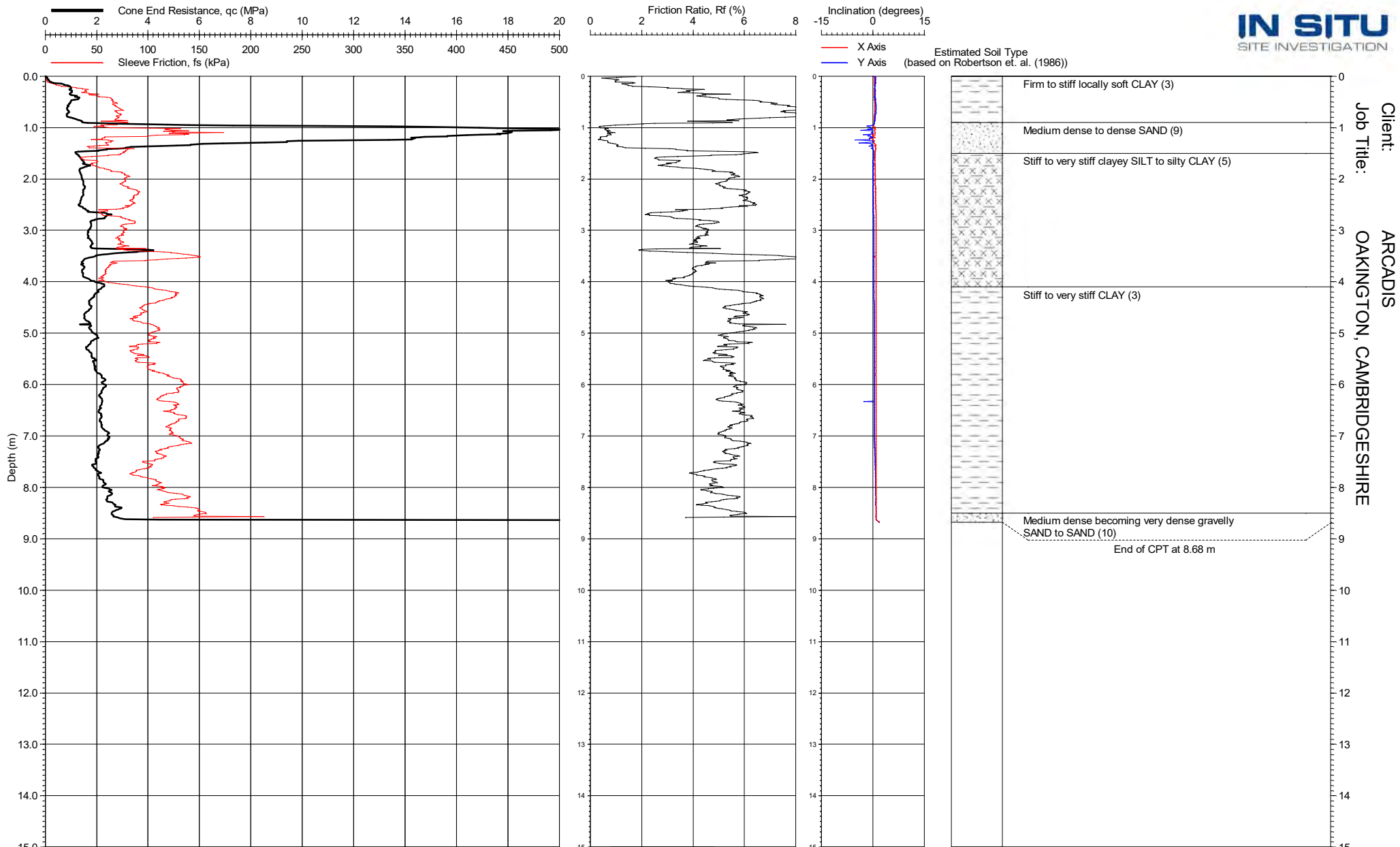
Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 22/12/2016
Date of Plot: 10/01/2017
File Name: 1160427 - CPT 1211
Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 303 mV	Tip Zero Post: 2875 mV	Tip Zero Difference: -89 %
Sleeve Zero Pre: 287 mV	Sleeve Zero Post: 3020 mV	Sleeve Zero Difference: -90 %
Pore Pressure Zero Pre: 388 mV	Pore Pressure Zero Post: 779 mV	Pore Pressure Difference: -50 %
X Inclinator Zero Pre: 2579 mV	X Inclinator Zero Post: 2544 mV	X Inclinator Difference: 1 %
Y Inclinator Zero Pre: 2579 mV	Y Inclinator Zero Post: 2544 mV	Y Inclinator Difference: 1 %

PIEZO CONE PENETRATION TEST
CPT 1211
insitusi.com
Form: CPT0001



Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**

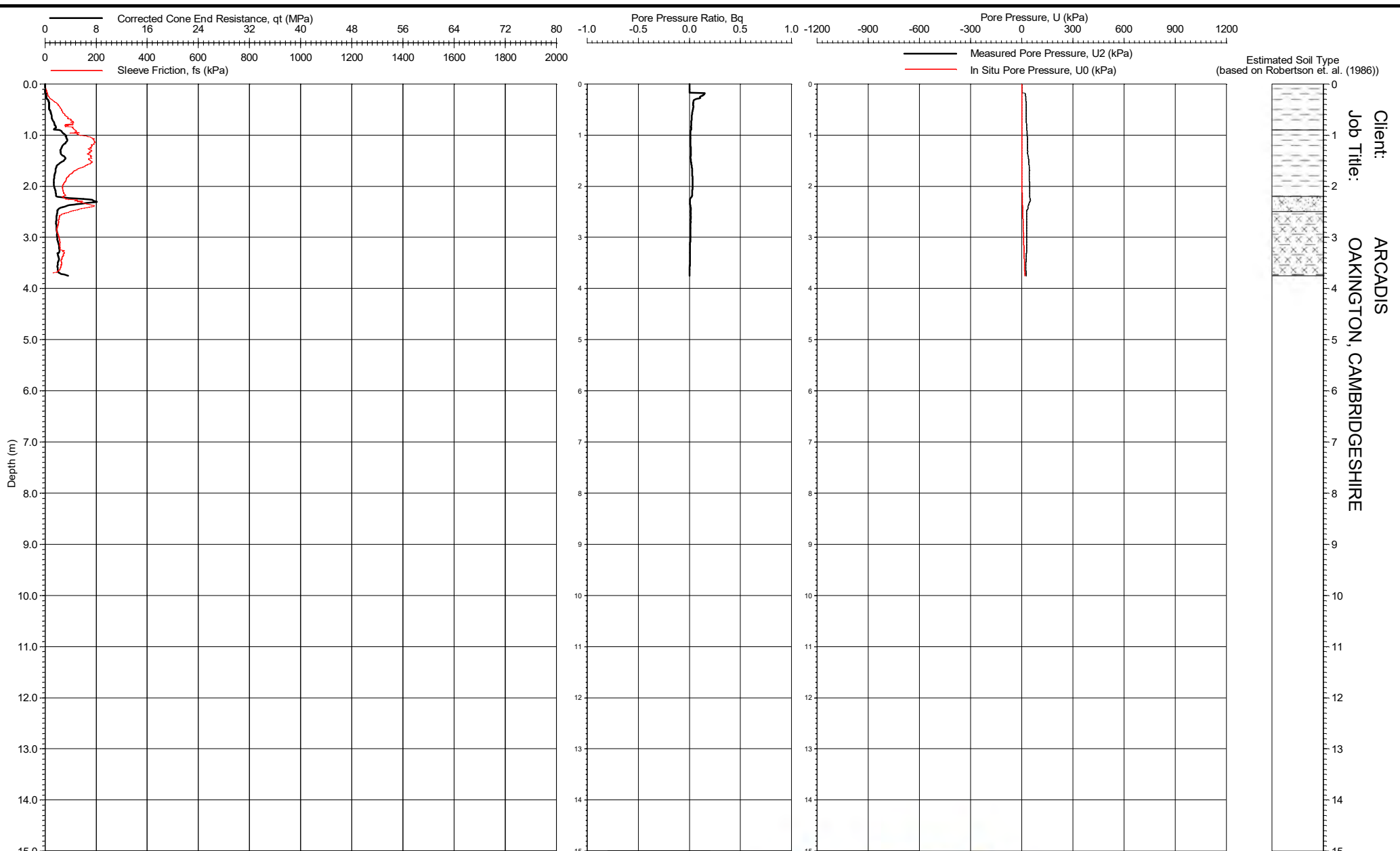
Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 22/12/2016
 Date of Plot: 10/01/2017
 File Name: 1160427 - CPT 1212
 Checked By: **reg. 13**

PCPT Zero Values

Tip Zero Pre: 303 mV	Tip Zero Post: 297 mV	Tip Zero Difference: 2 %
Sleeve Zero Pre: 290 mV	Sleeve Zero Post: 282 mV	Sleeve Zero Difference: 3 %
Pore Pressure Zero Pre: 364 mV	Pore Pressure Zero Post: 398 mV	Pore Pressure Difference: -9 %
X Inclinator Zero Pre: 2558 mV	X Inclinator Zero Post: 2566 mV	X Inclinator Difference: 0 %
Y Inclinator Zero Pre: 2558 mV	Y Inclinator Zero Post: 2566 mV	Y Inclinator Difference: 0 %

PIEZO CONE PENETRATION TEST
CPT 1212
insitushi.com
 Form: CPT0001



Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**

Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1032 - CPT 001
 Remarks: Test refused on total pressure.

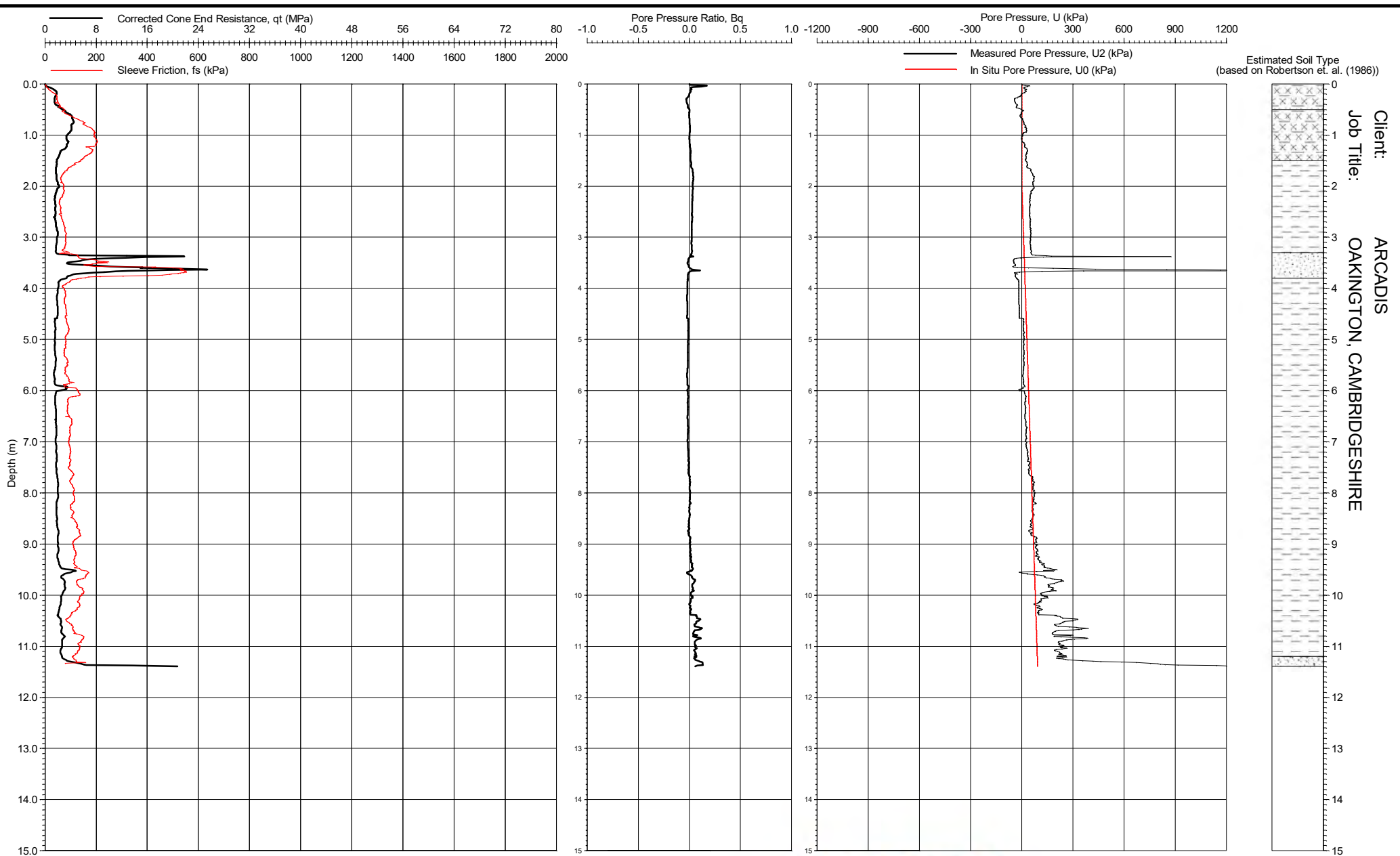
Date of Test: 19/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 601
 Checked By:

reg. 13

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 INSITUSI.COM

PIEZO CONE PENETRATION TEST
CPT 601

Form: CPT0002



Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**

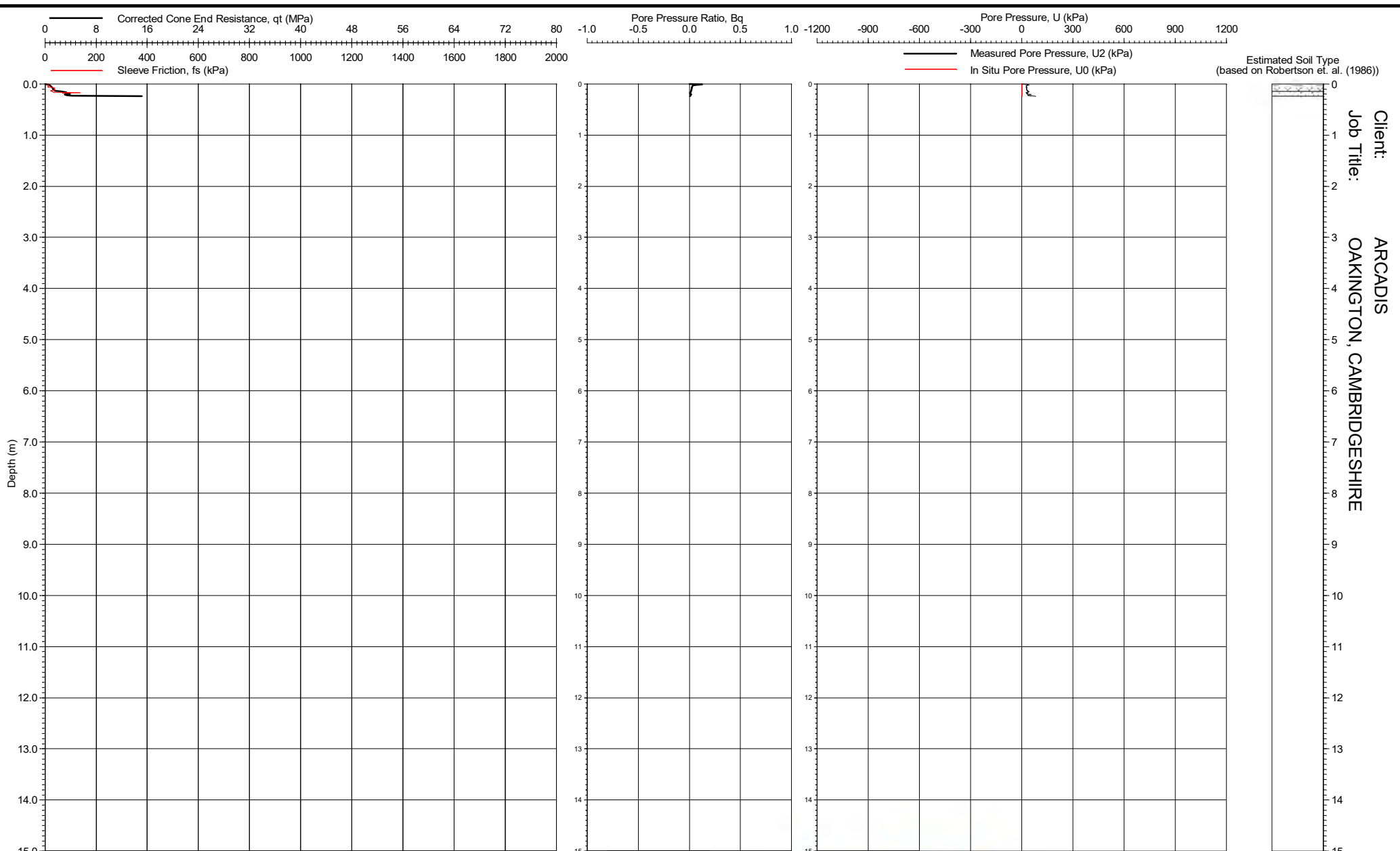
Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 601A
 Checked By: **reg. 13**

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 SITE INVESTIGATION
 INSITUSI.COM

PIEZO CONE PENETRATION TEST
CPT 601A

Form: CPT0002



Client: ARCADIS
 Job Title: OAKINGTON, CAMBRIDGESHIRE

Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

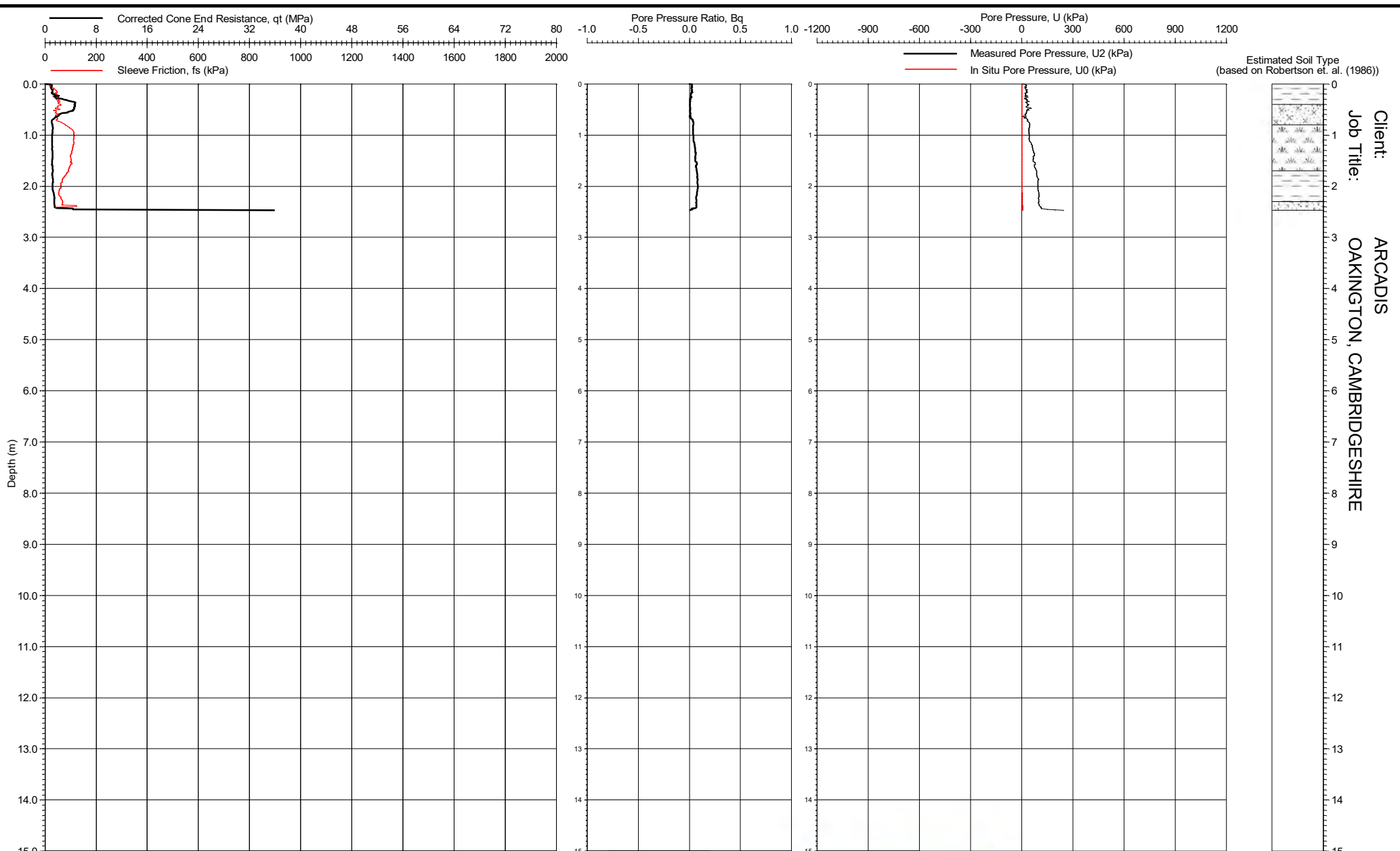
Date of Test: 20/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 602
 Checked By:

reg. 13

IN SITU
 SITE INVESTIGATION
 INSITUSI.COM

PIEZO CONE PENETRATION TEST
CPT 602

Form: CPT0002

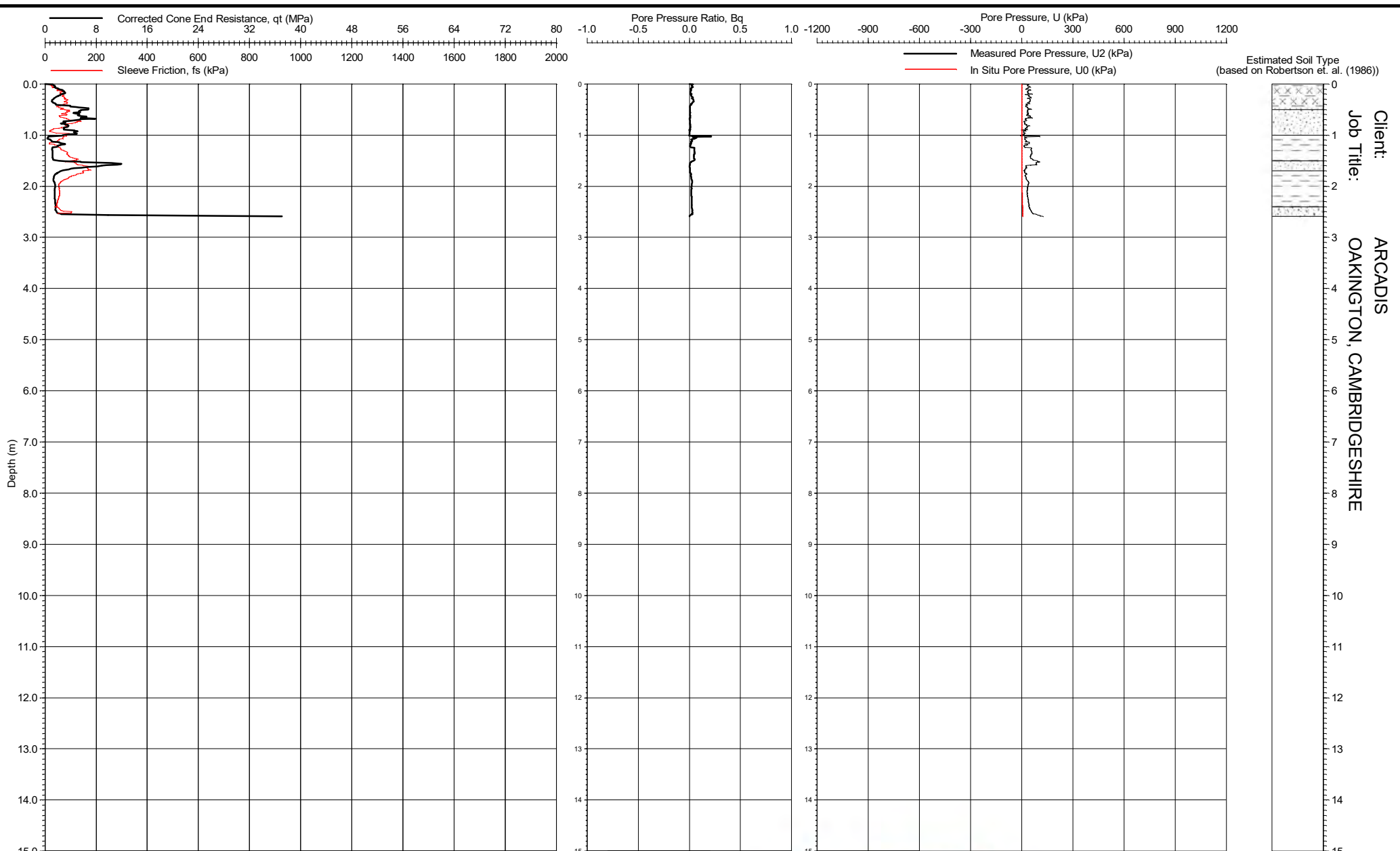


Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 602A
 Checked By: **reg. 13**

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 INSITUSI.COM

PIEZO CONE PENETRATION TEST
CPT 602A



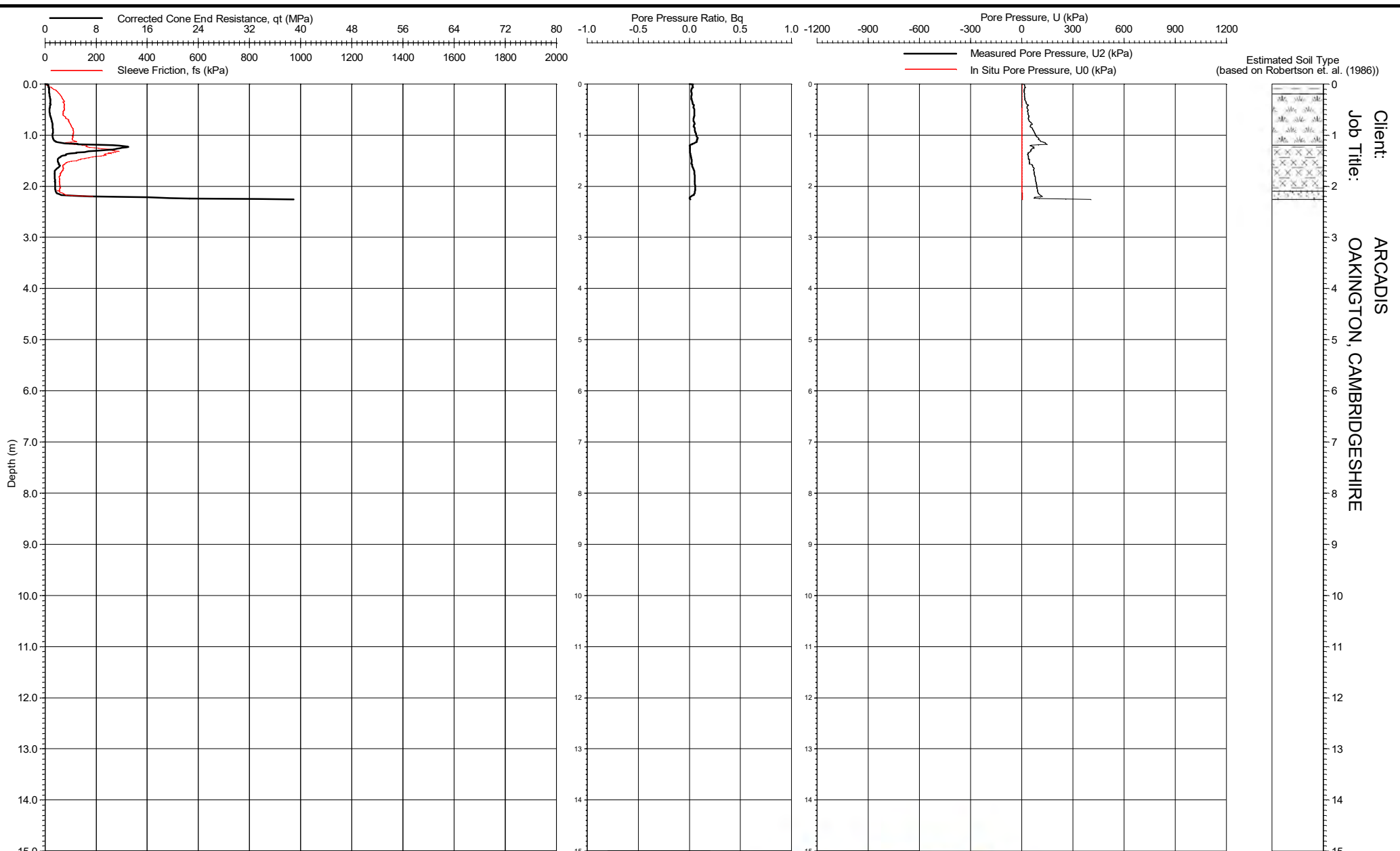
Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 602B
 Checked By: **reg. 13**

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 SITE INVESTIGATION
 INSITUSI.COM

PIEZO CONE PENETRATION TEST
CPT 602B

Form: CPT0002



Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

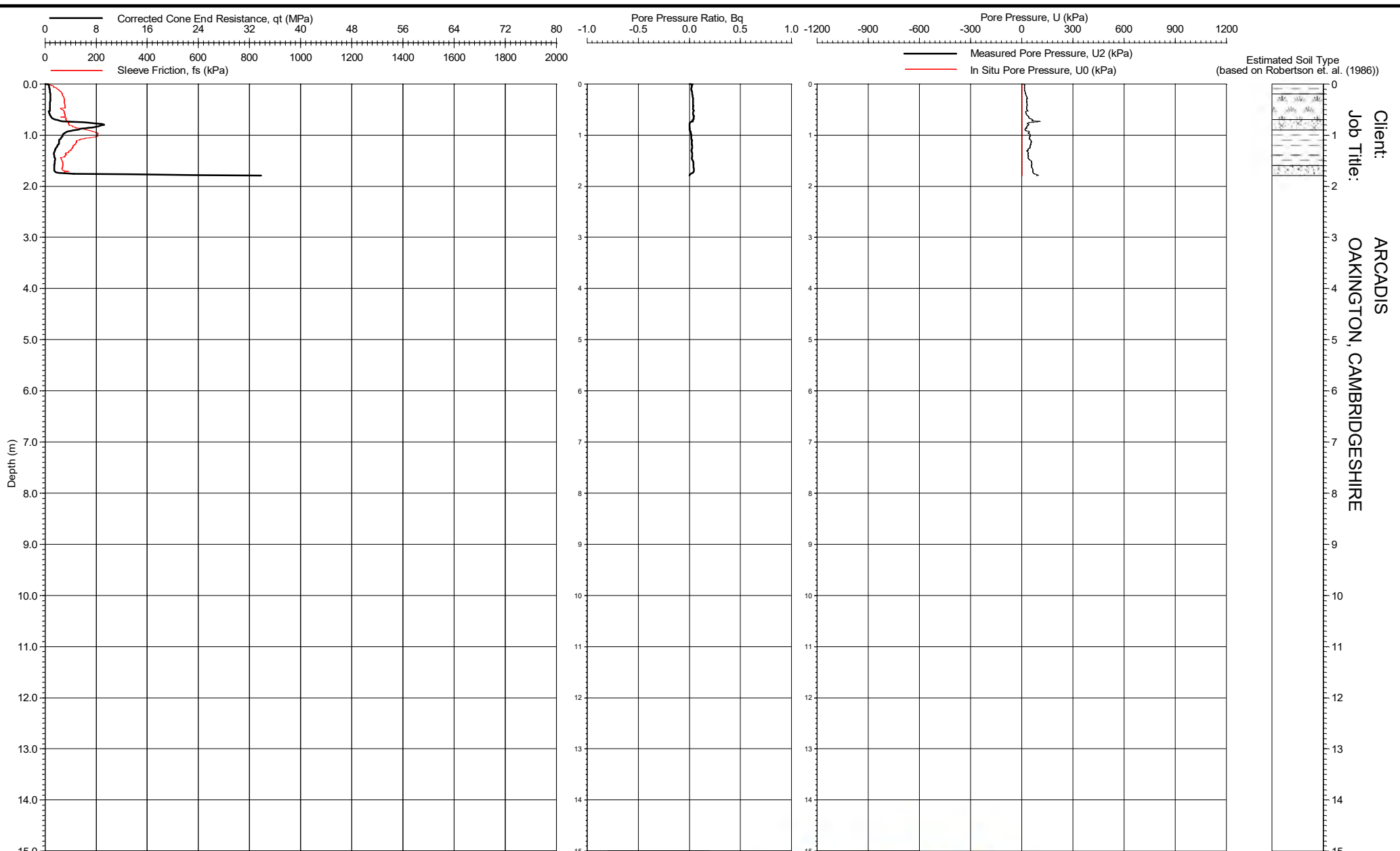
Date of Test: 20/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 603
 Checked By:

reg. 13

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 INSITUSI.COM

PIEZO CONE PENETRATION TEST
CPT 603

Form: CPT0002



Estimated Soil Type
(based on Robertson et. al. (1986))

Client: ARCADIS
Job Title: OAKINGTON, CAMBRIDGESHIRE

Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

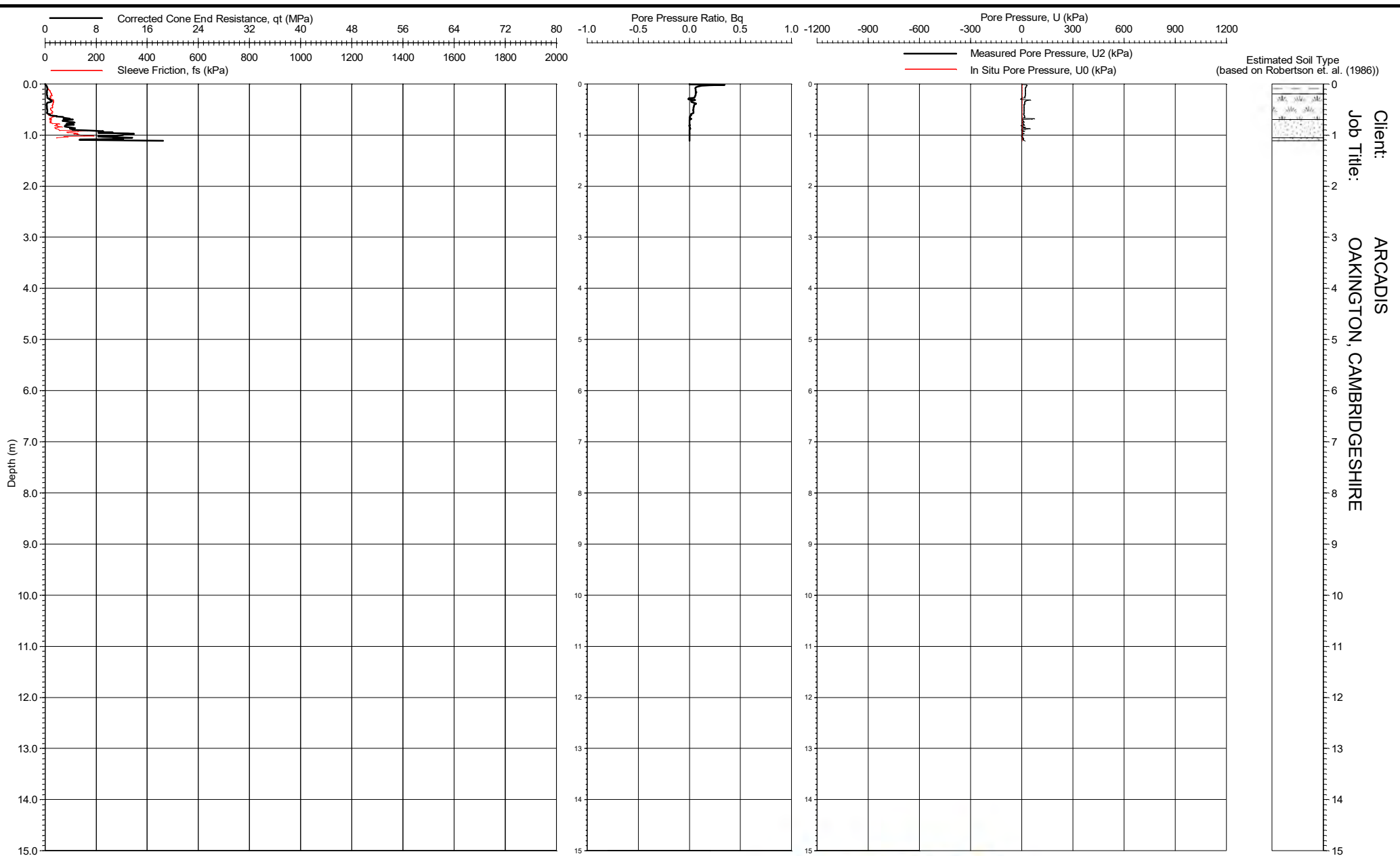
Date of Test: 20/12/2016
Date of Plot: 11/01/2017
File Name: 1160427 - CPT 603A
Checked By:

reg. 13

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INSITUSI.COM

PIEZO CONE PENETRATION TEST
CPT 603A

Form: CPT0002

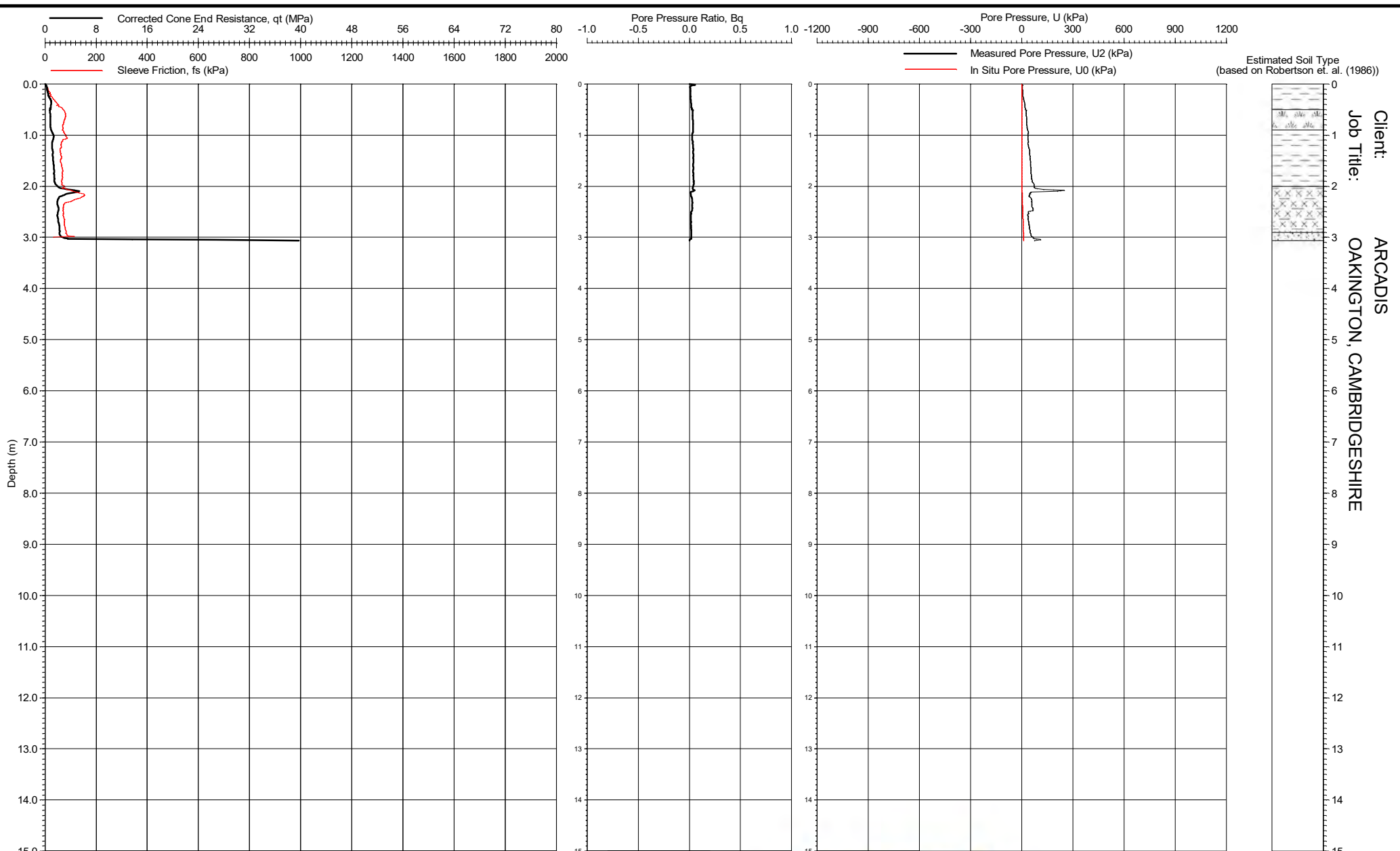


Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 604
 Checked By: **reg. 13**

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 INSITUSI.COM

PIEZO CONE PENETRATION TEST
CPT 604



Estimated Soil Type
(based on Robertson et. al. (1986))

Client: ARCADIS
Job Title: OAKINGTON, CAMBRIDGESHIRE

Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

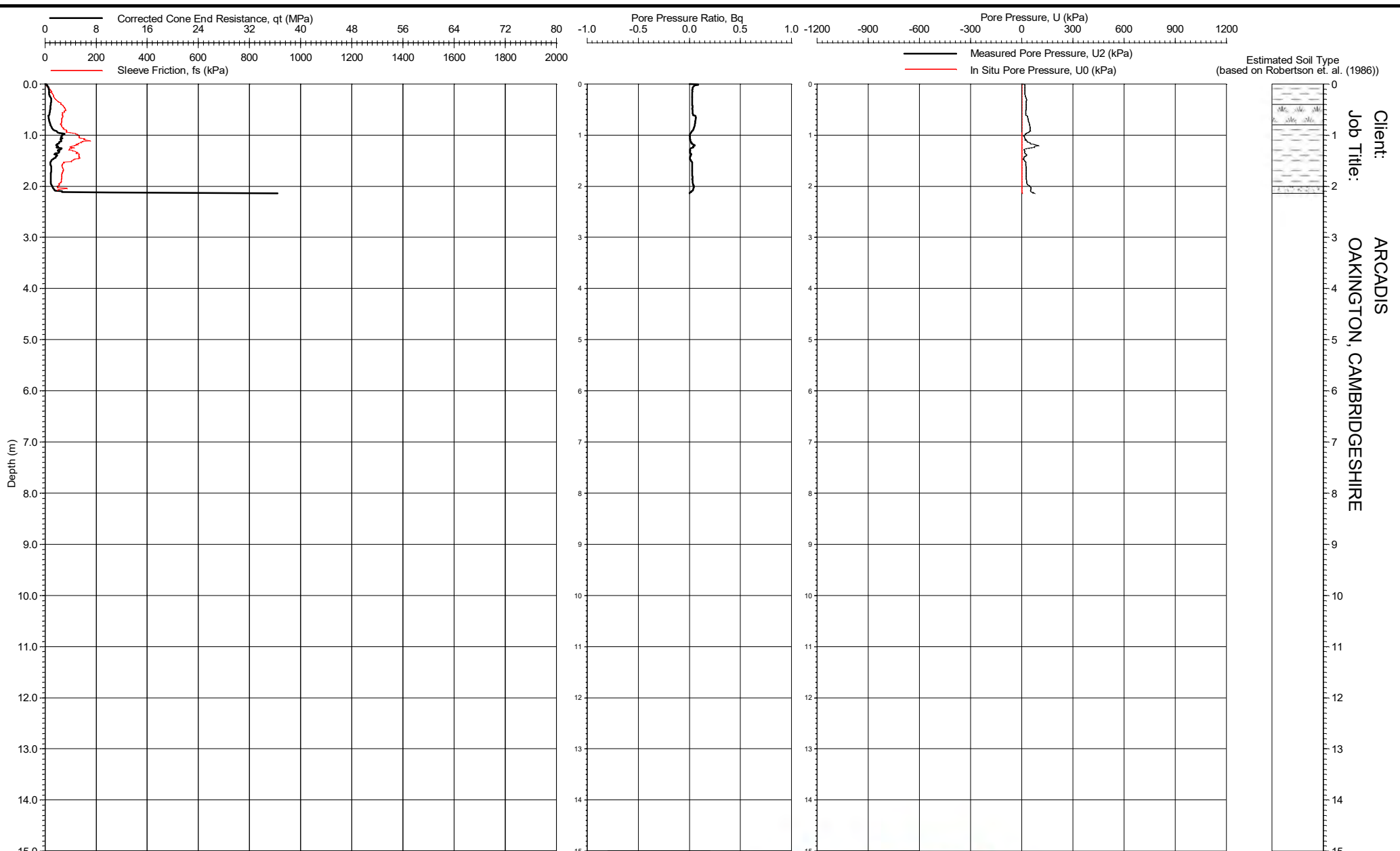
Date of Test: 20/12/2016
Date of Plot: 11/01/2017
File Name: 1160427 - CPT 606
Checked By:

reg. 13

IN SITU
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INSITUSI.COM

PIEZO CONE PENETRATION TEST
CPT 606

Form: CPT0002



Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 607
 Checked By:

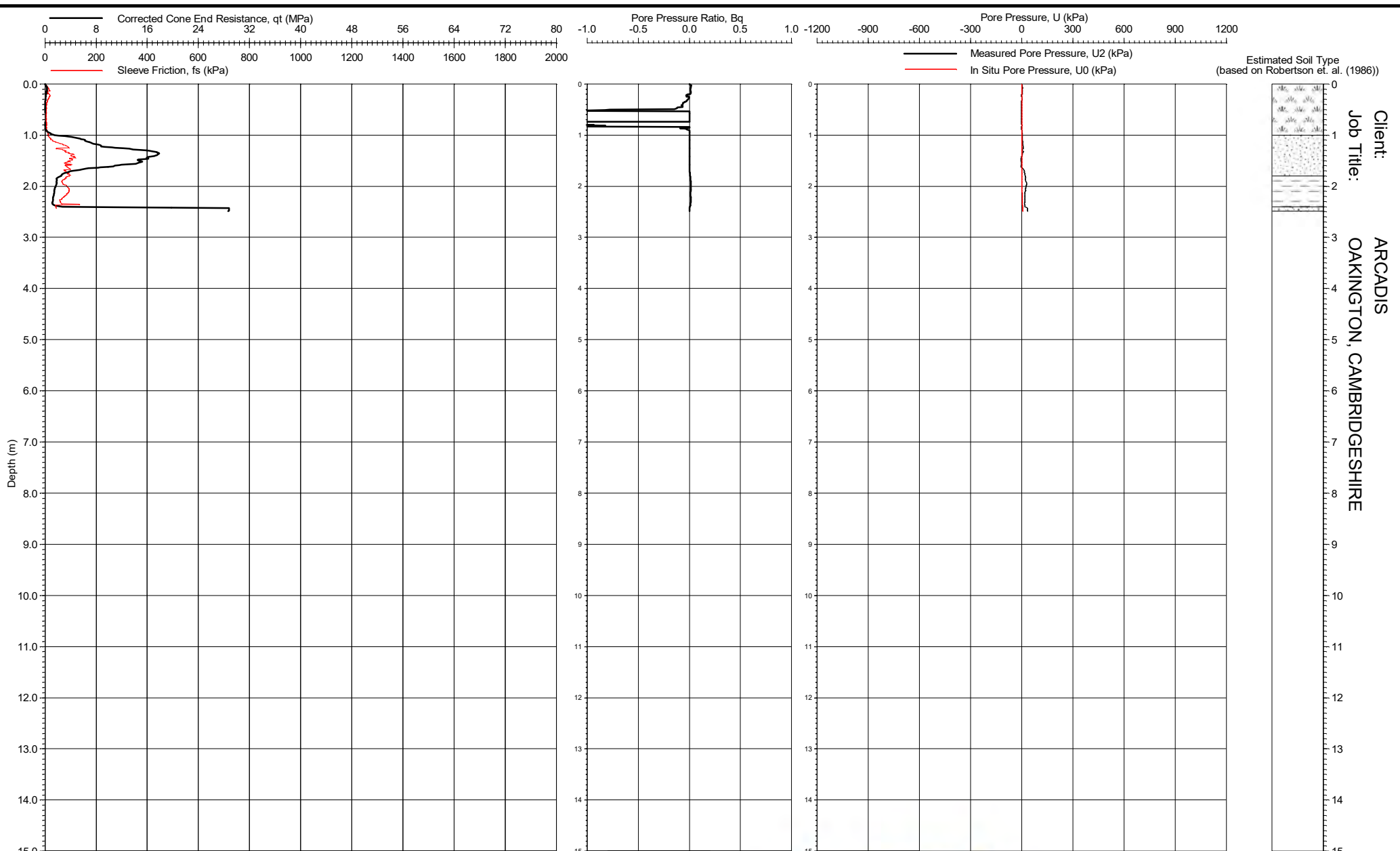
reg. 13

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 INSITUSI.COM

PIEZO CONE PENETRATION TEST
CPT 607

Form: CPT0002

Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**



Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**

Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

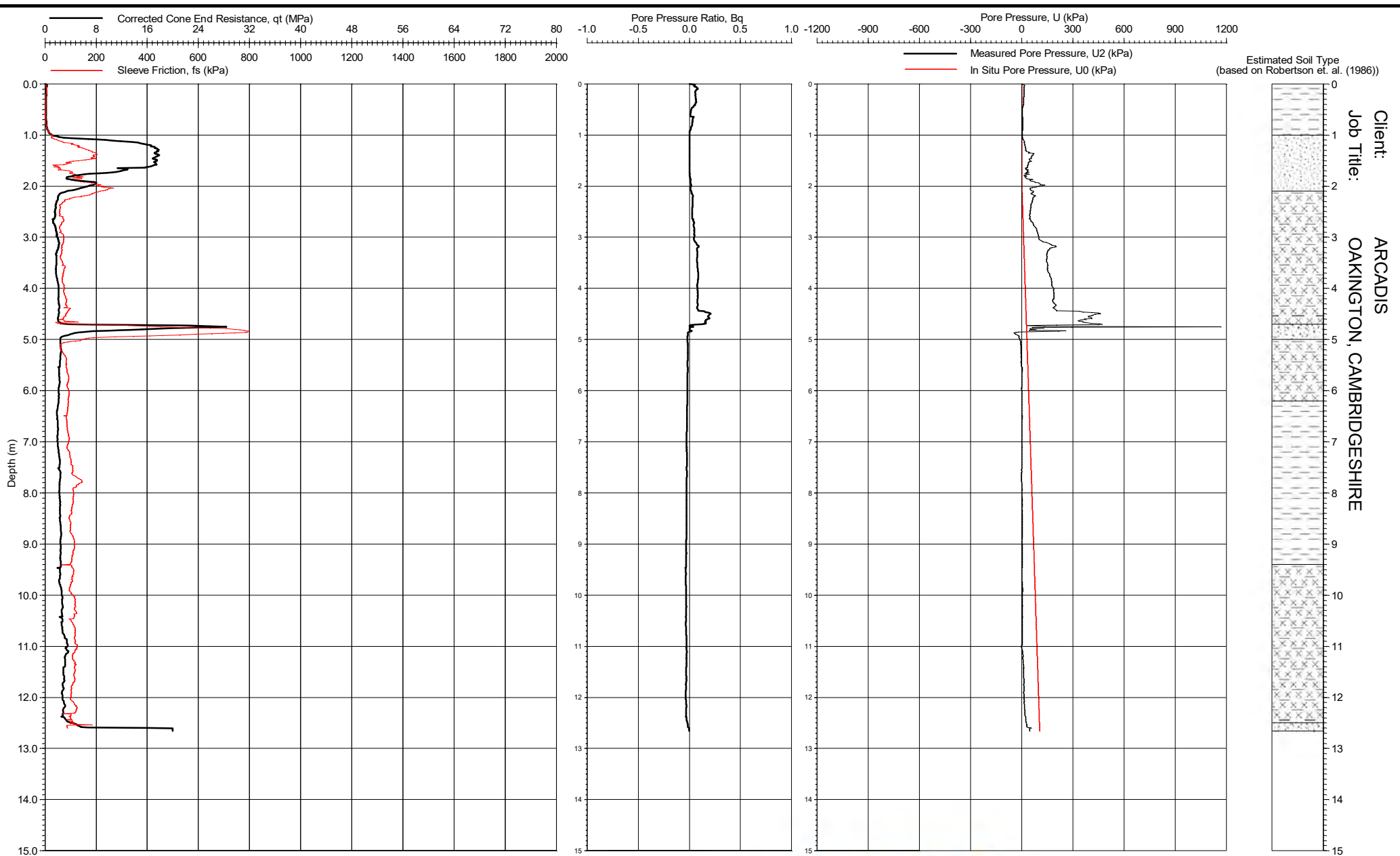
Date of Test: 21/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 608
 Checked By:

reg. 13

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 INSITUSI.COM

PIEZO CONE PENETRATION TEST
CPT 608

Form: CPT0002



Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**

Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

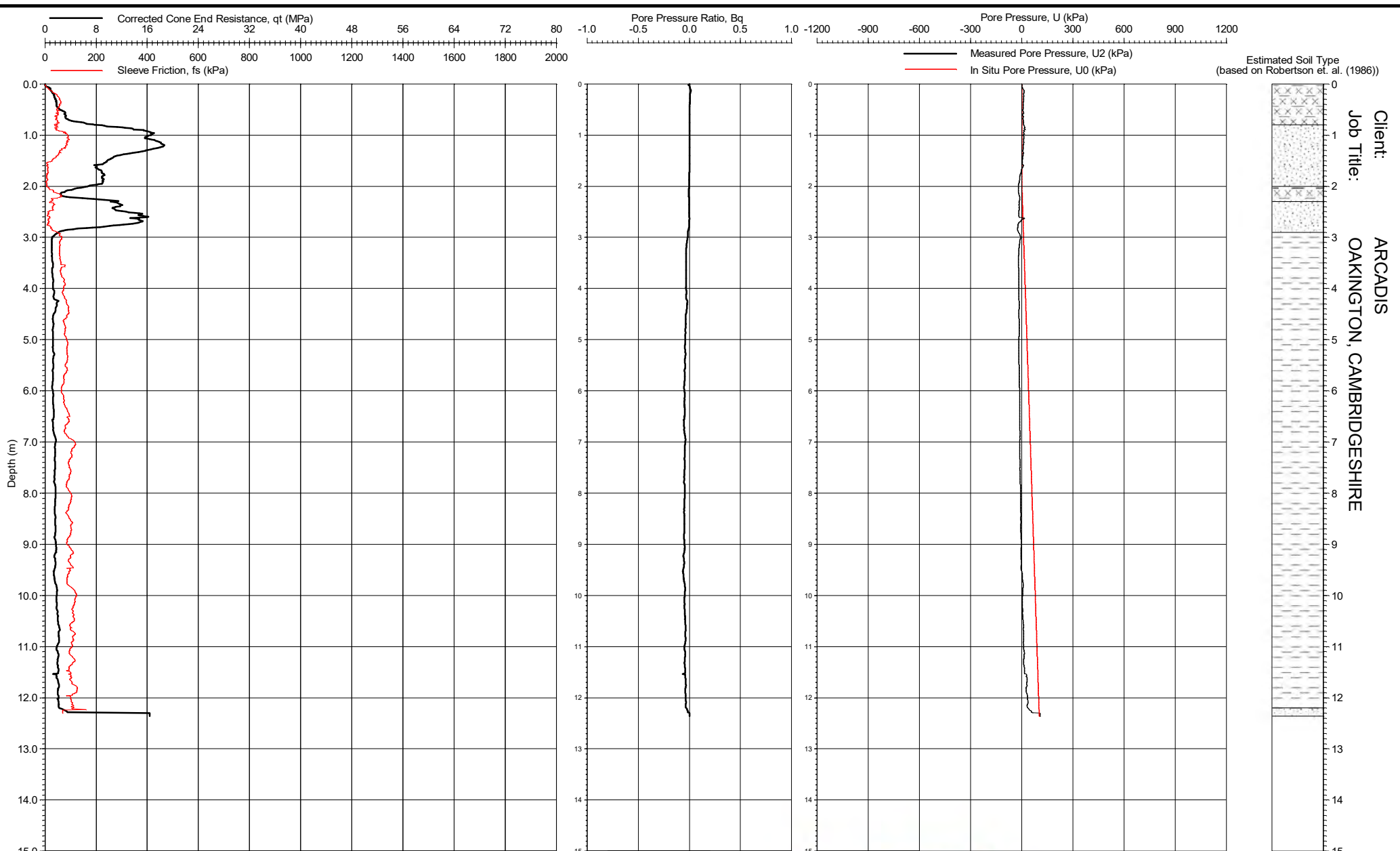
Date of Test: 20/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 609
 Checked By:

reg. 13

IN SITU
 SITE INVESTIGATION
 INSITUSI.COM

PIEZO CONE PENETRATION TEST
CPT 609

Form: CPT0002



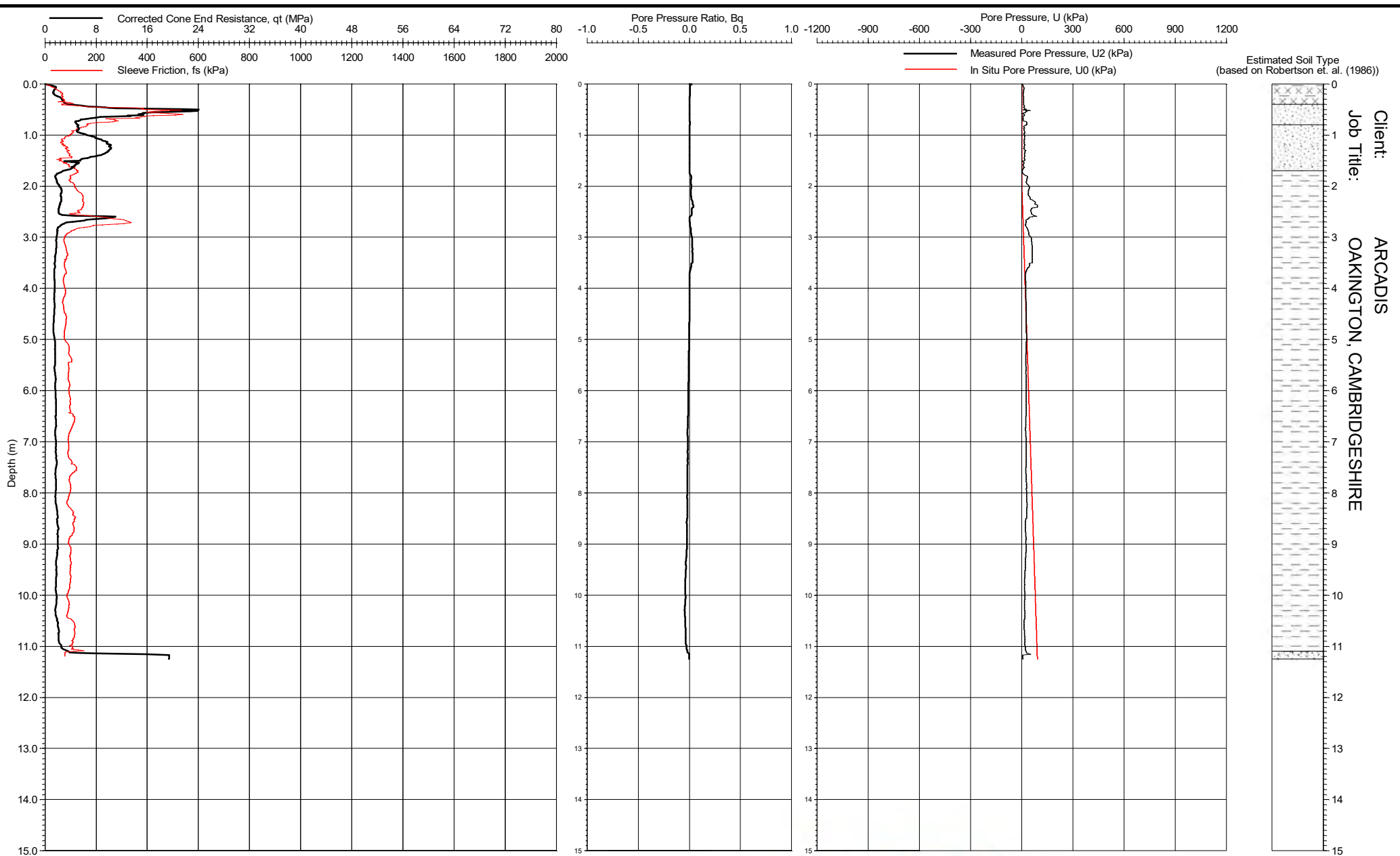
Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 610
 Checked By: reg. 13

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 SITE INVESTIGATION
 INSITUSI.COM

PIEZO CONE PENETRATION TEST
CPT 610

Form: CPT0002



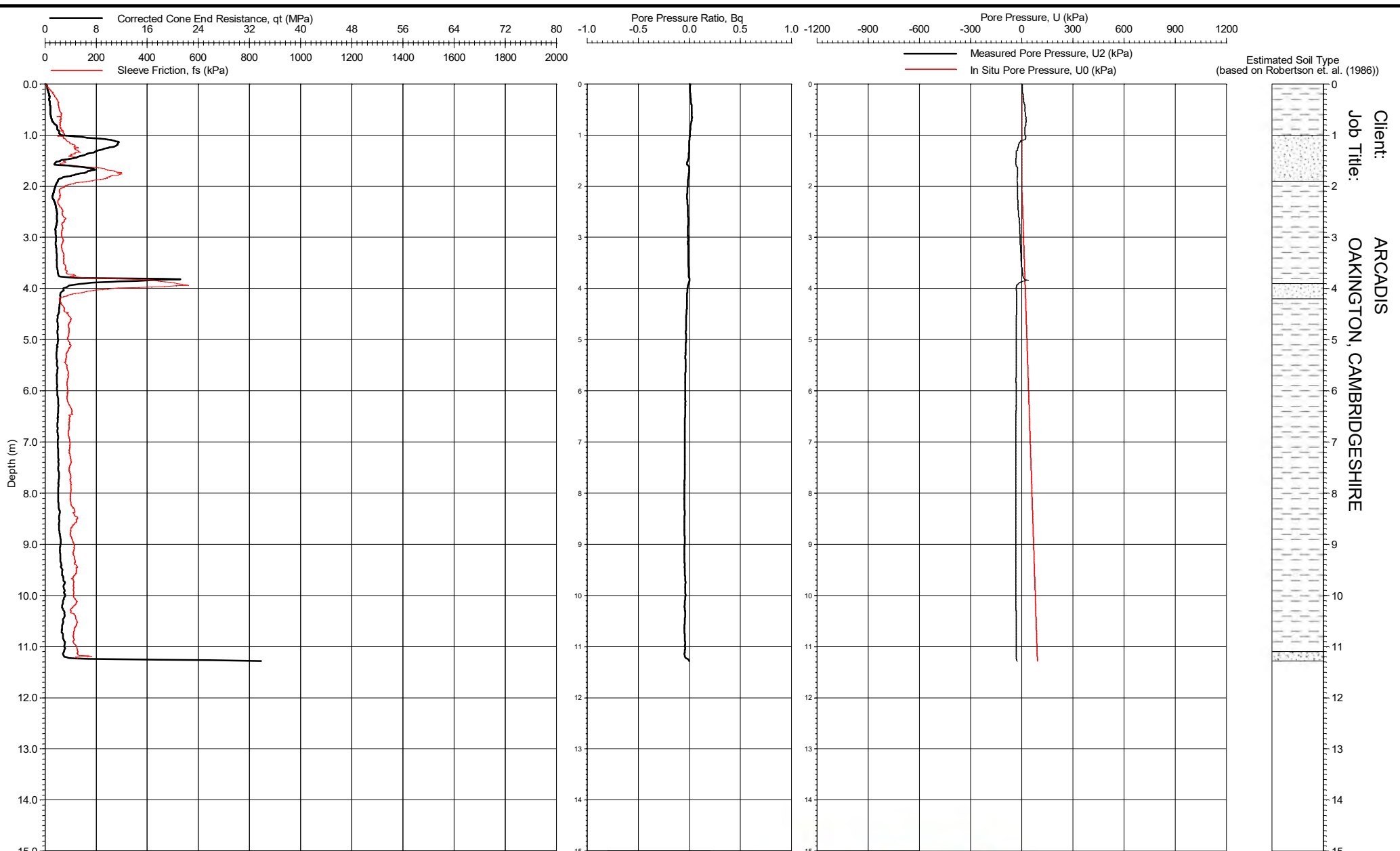
Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 611
 Checked By: reg. 13

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PIEZO CONE PENETRATION TEST
CPT 611

Form: CPT0002



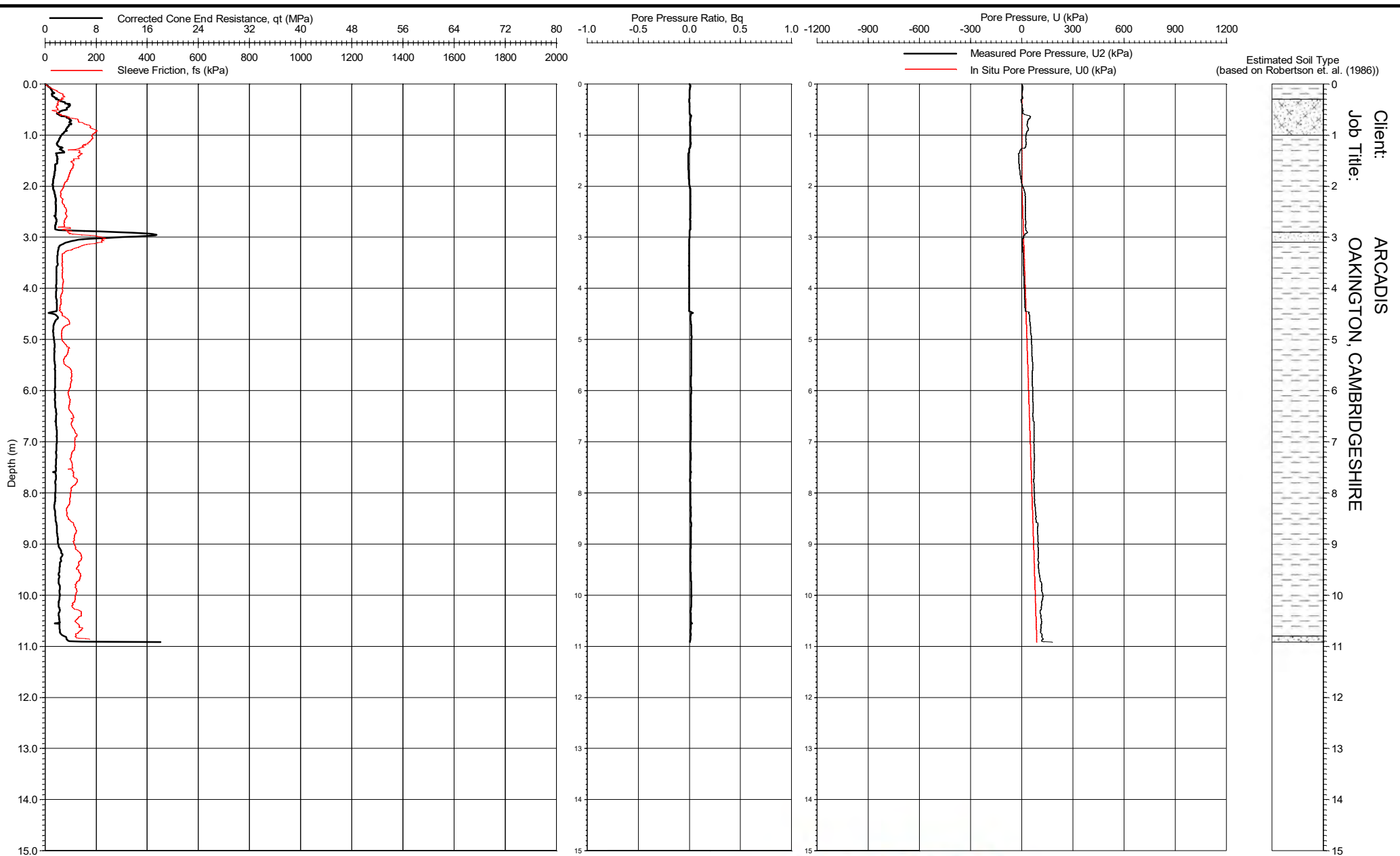
Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 612
 Checked By: **reg. 13**

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PIEZO CONE PENETRATION TEST
CPT 612

Form: CPT0002



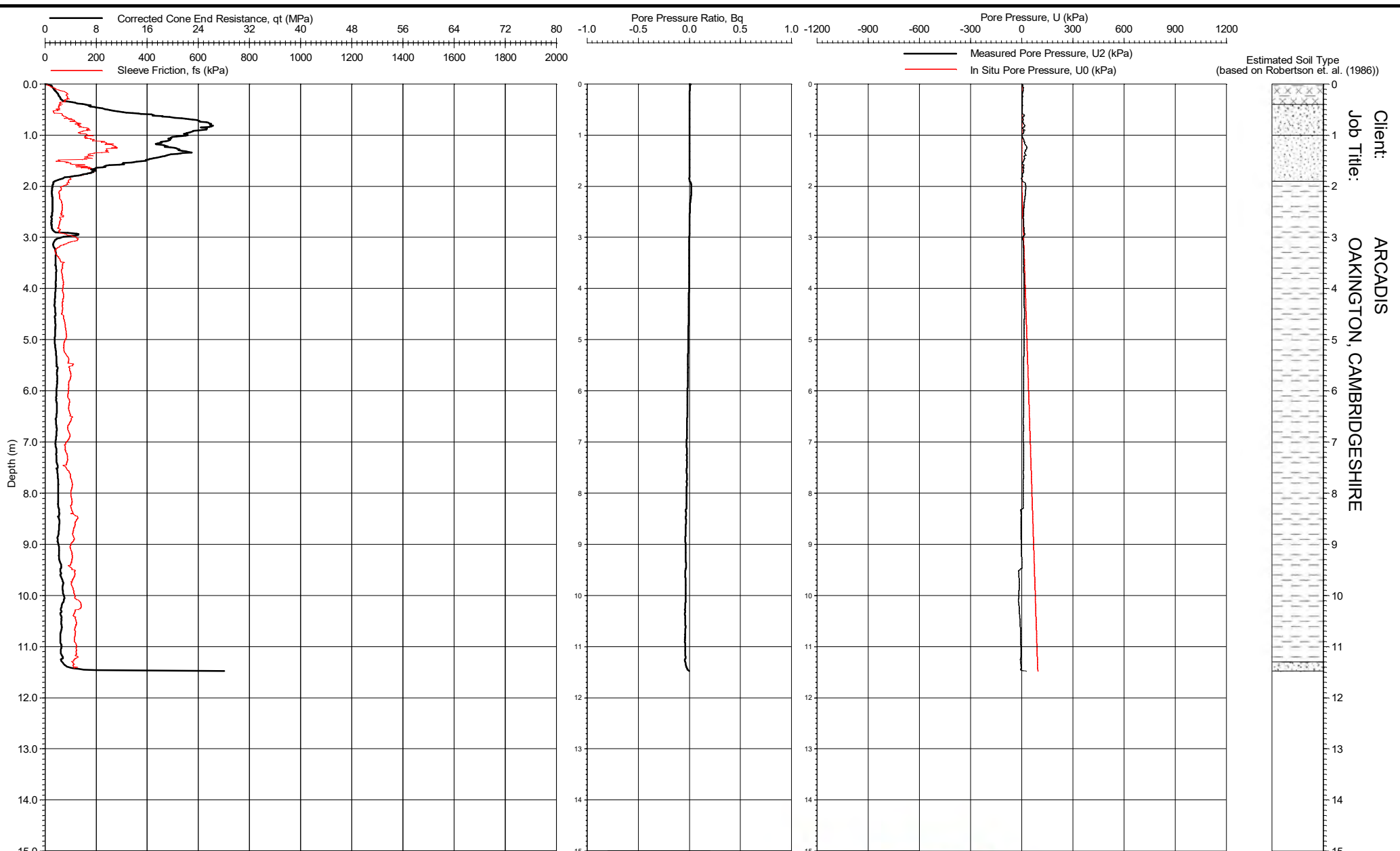
Client: ARCADIS
 Job Title: OAKINGTON, CAMBRIDGESHIRE

Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 613
 Checked By: reg. 13

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PIEZO CONE PENETRATION TEST
CPT 613



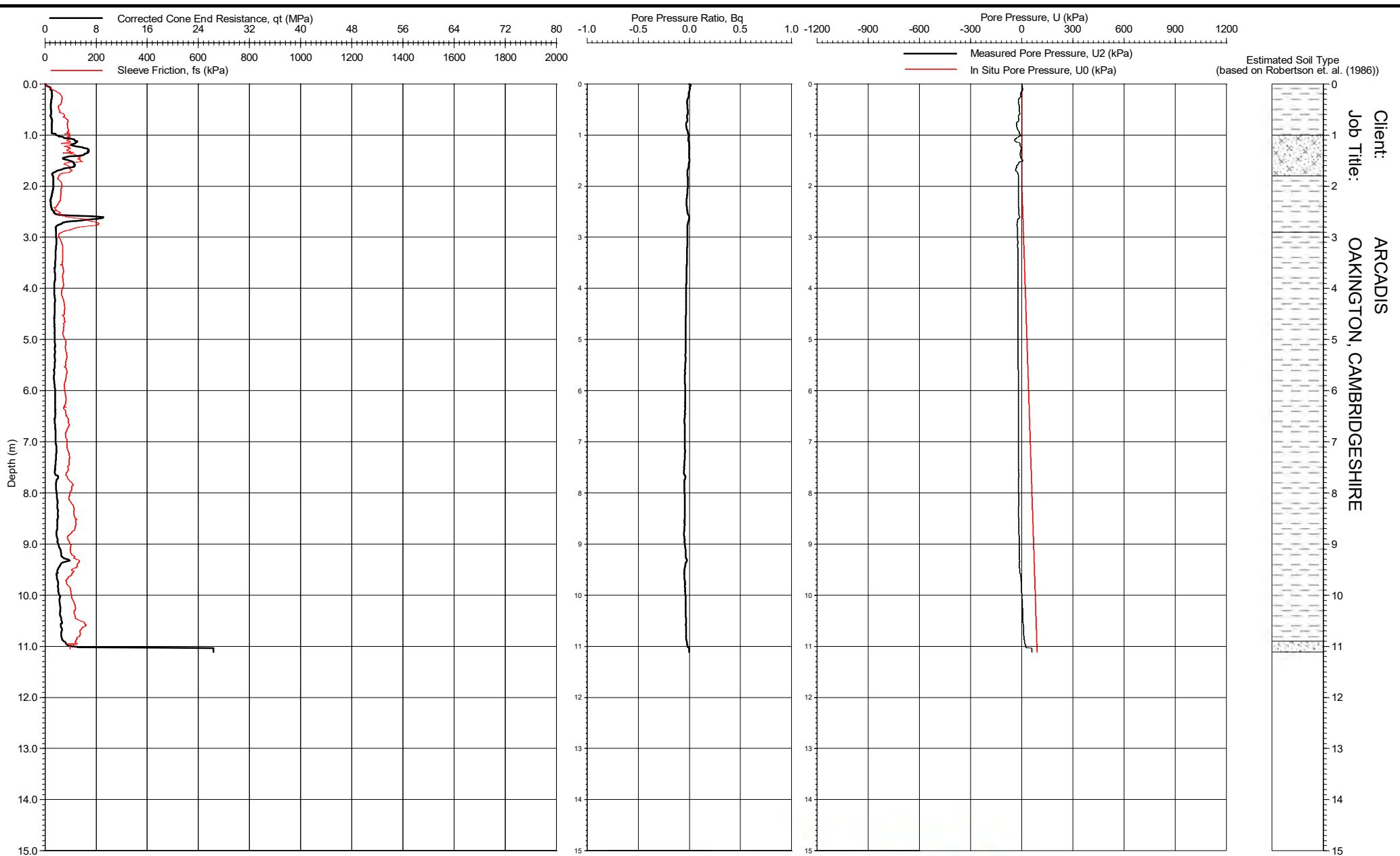
Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**

Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 614
 Checked By: **reg. 13**

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 INSITUSI.COM

PIEZO CONE PENETRATION TEST
CPT 614



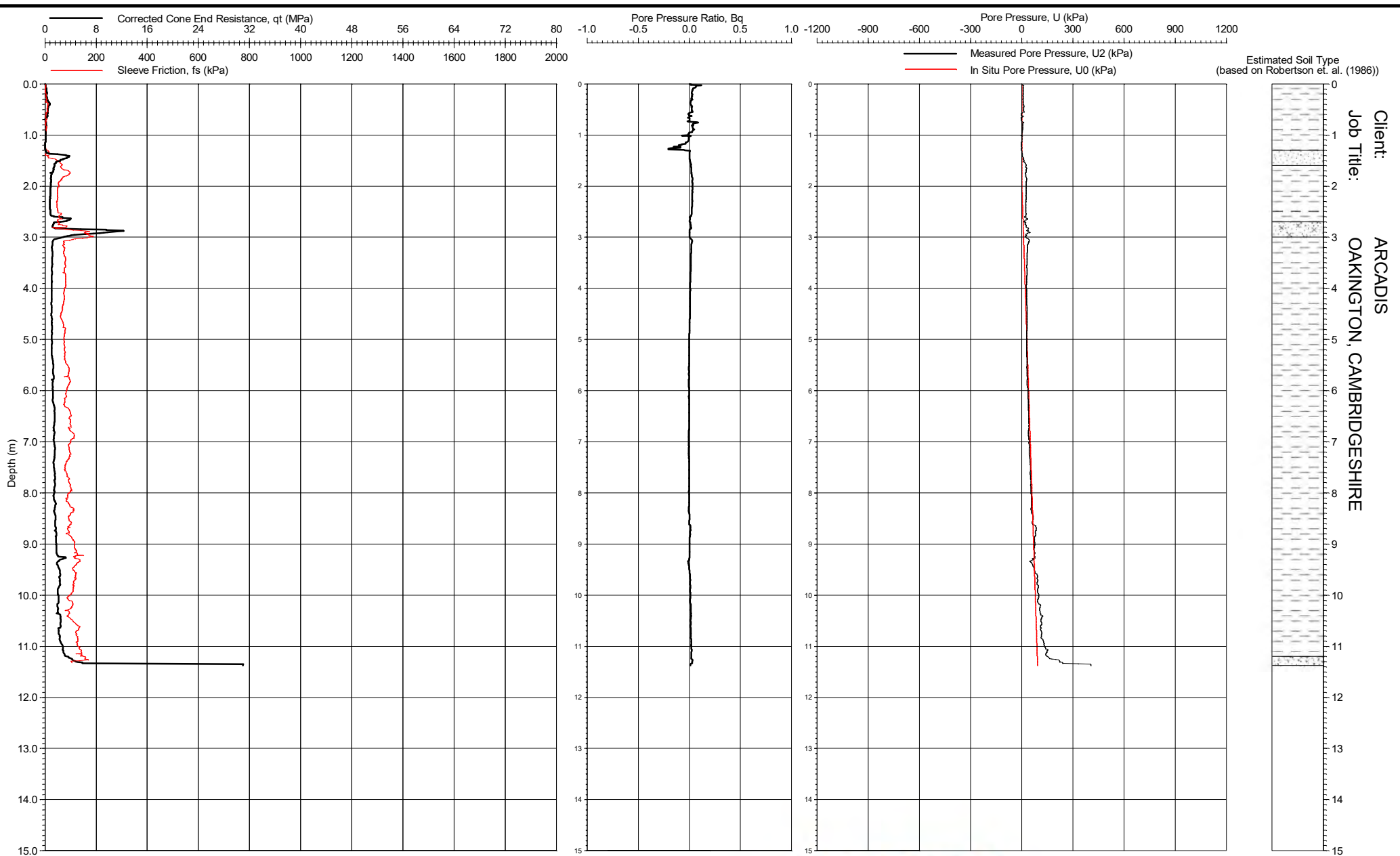
Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**

Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 615
 Checked By: **reg. 13**

IN SITU
 SITE INVESTIGATION
 INSITUSI.COM

PIEZO CONE PENETRATION TEST
CPT 615



Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

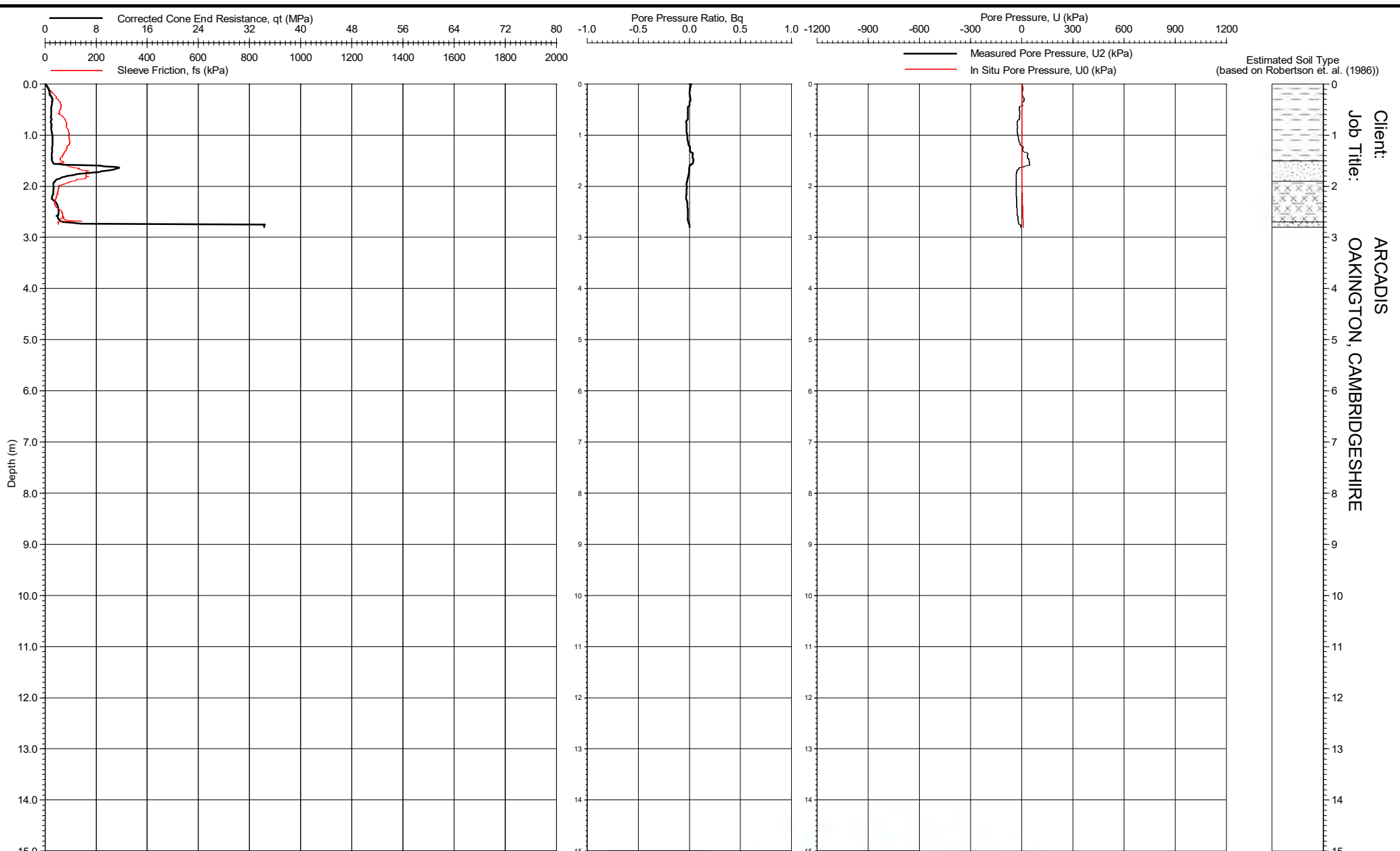
Date of Test: 20/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 616
 Checked By:

reg. 13

IN SITU
 SITE INVESTIGATION
 INSITUSI.COM

PIEZO CONE PENETRATION TEST
CPT 616

Form: CPT0002



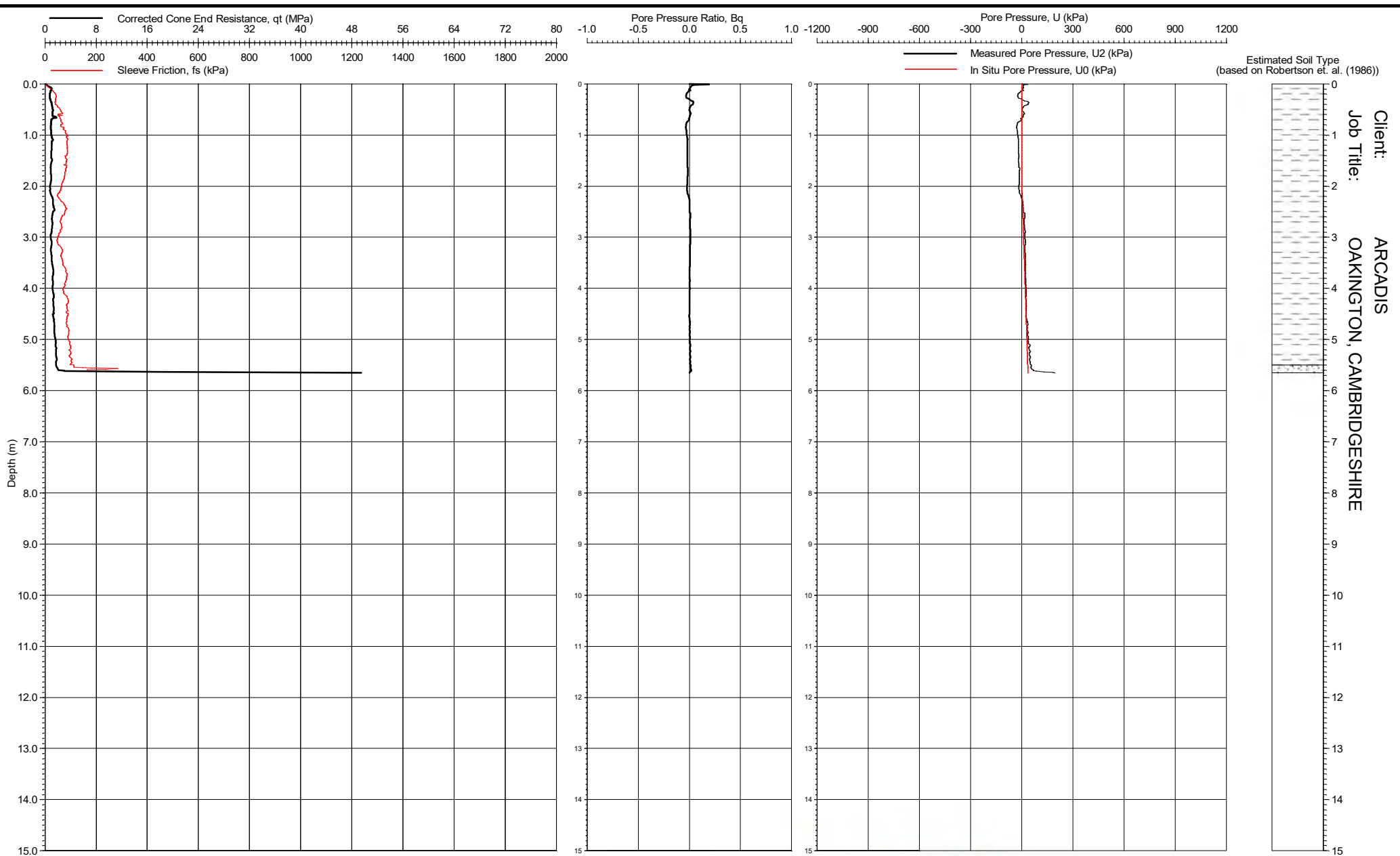
Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**

Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 617
 Checked By: **reg. 13**

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PIEZO CONE PENETRATION TEST
CPT 617



Estimated Soil Type
(based on Robertson et. al. (1986))

Client: ARCADIS
Job Title: OAKINGTON, CAMBRIDGESHIRE

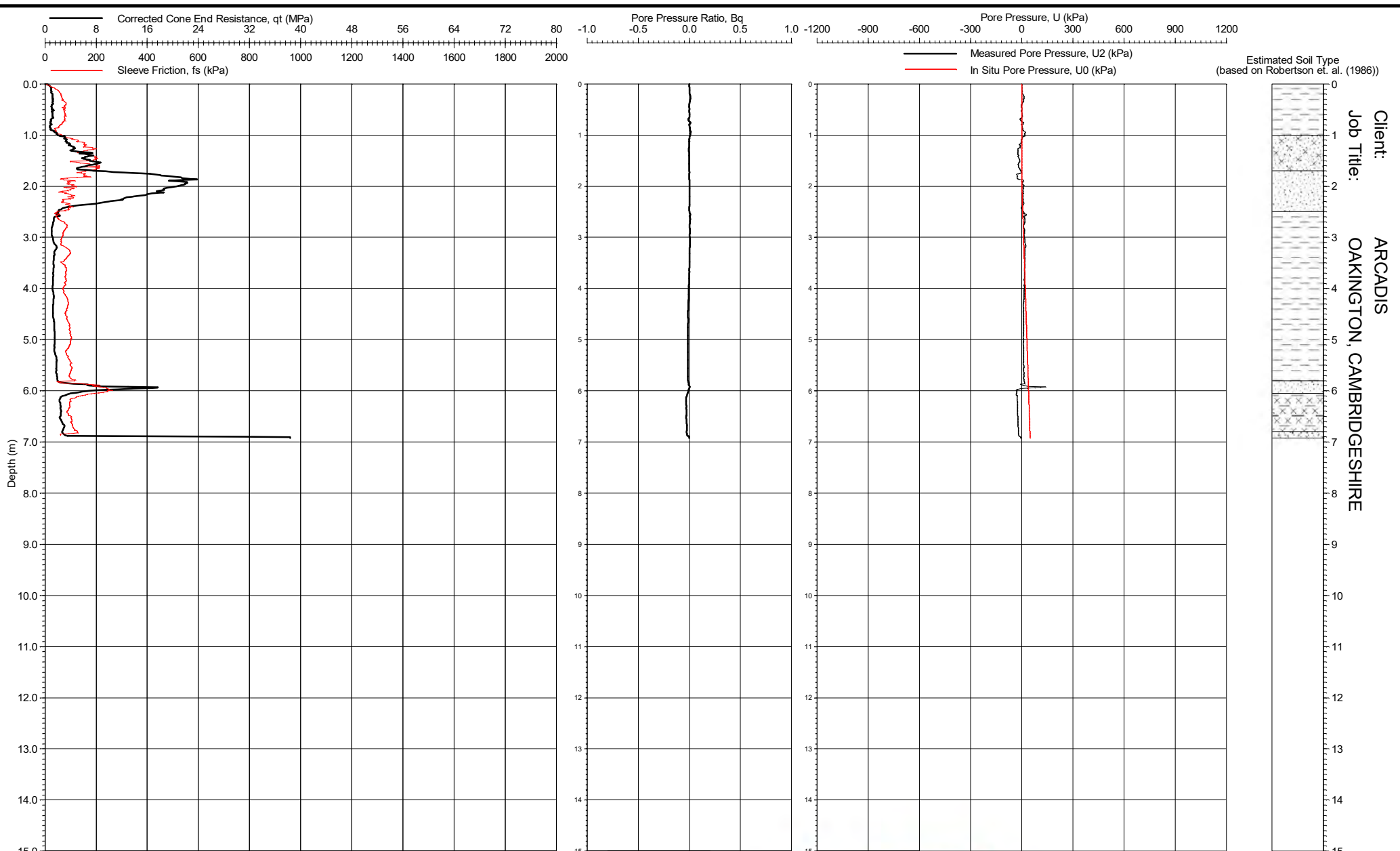
Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 23/12/2016
Date of Plot: 11/01/2017
File Name: 1160427 - CPT 1203
Checked By: reg. 13

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SITE INVESTIGATION
INSITUSI.COM

PIEZO CONE PENETRATION TEST
CPT 1203

Form: CPT0002

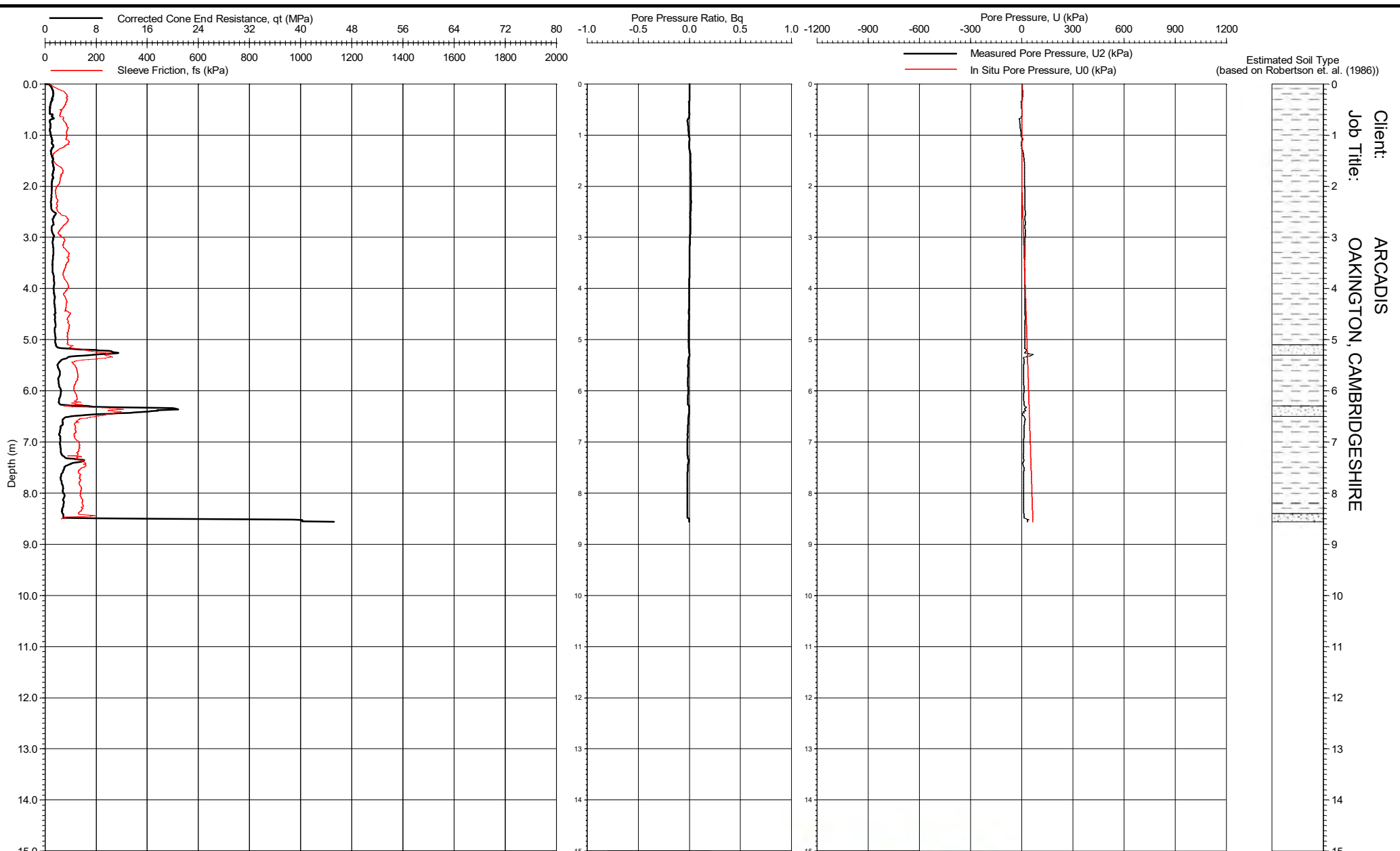


Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 22/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 1204
 Checked By: **reg. 13**

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PIEZO CONE PENETRATION TEST
CPT 1204

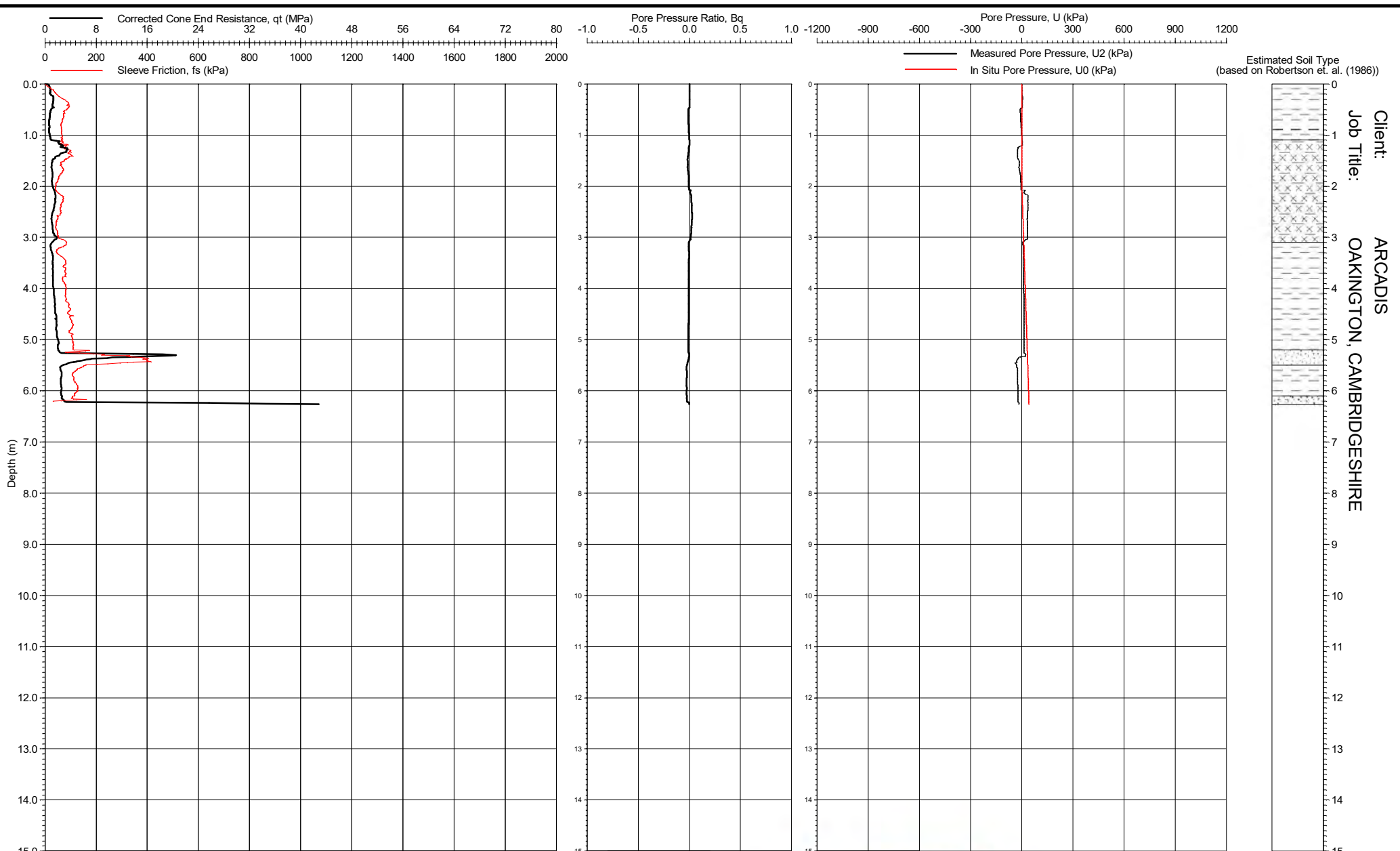


Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 22/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 1205
 Checked By: **reg. 13**

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PIEZO CONE PENETRATION TEST
CPT 1205



Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

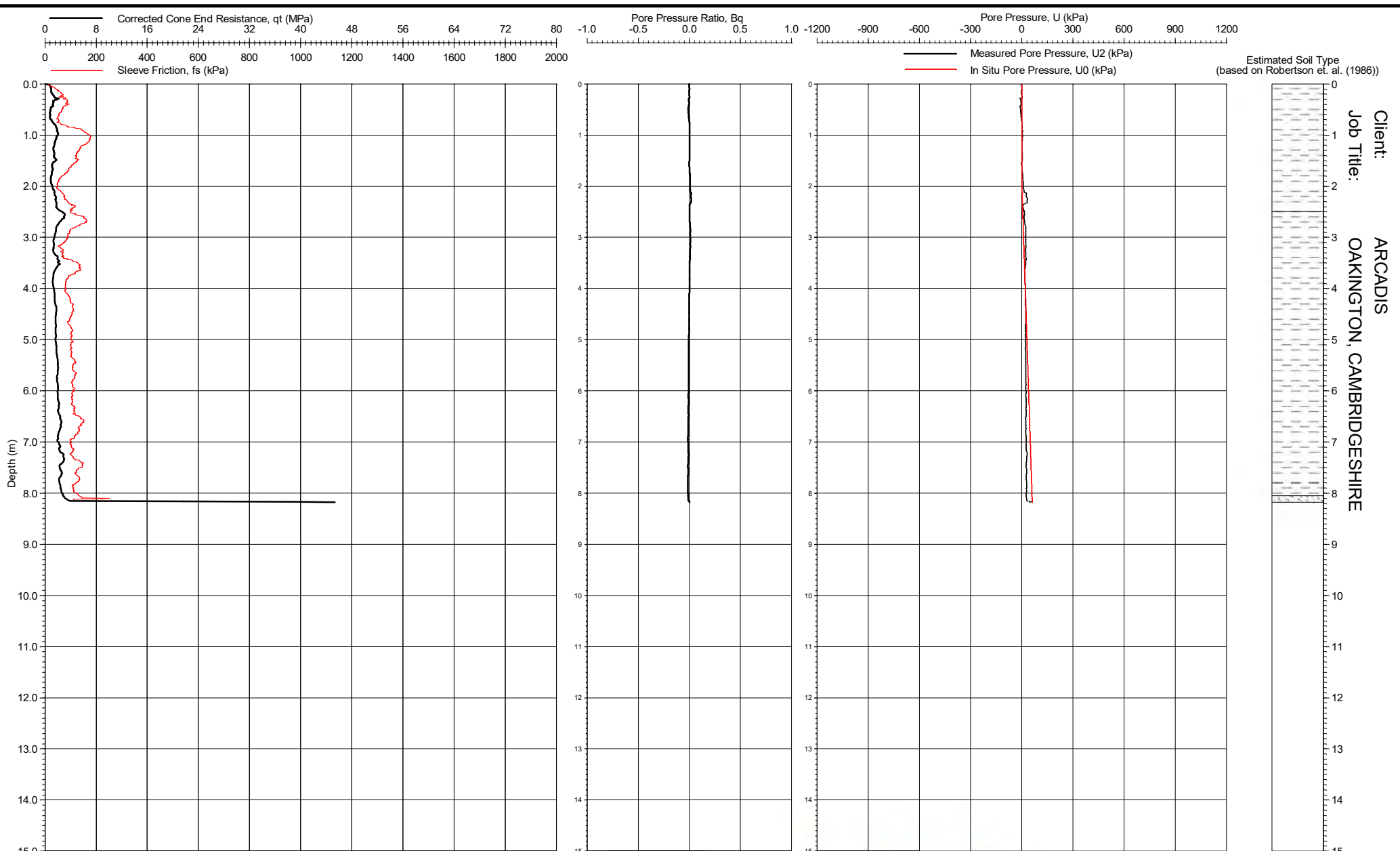
Date of Test: 22/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 1206
 Checked By:

reg. 13

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PIEZO CONE PENETRATION TEST
CPT 1206

Form: CPT0002



Client: ARCADIS
 Job Title: OAKINGTON, CAMBRIDGESHIRE

Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

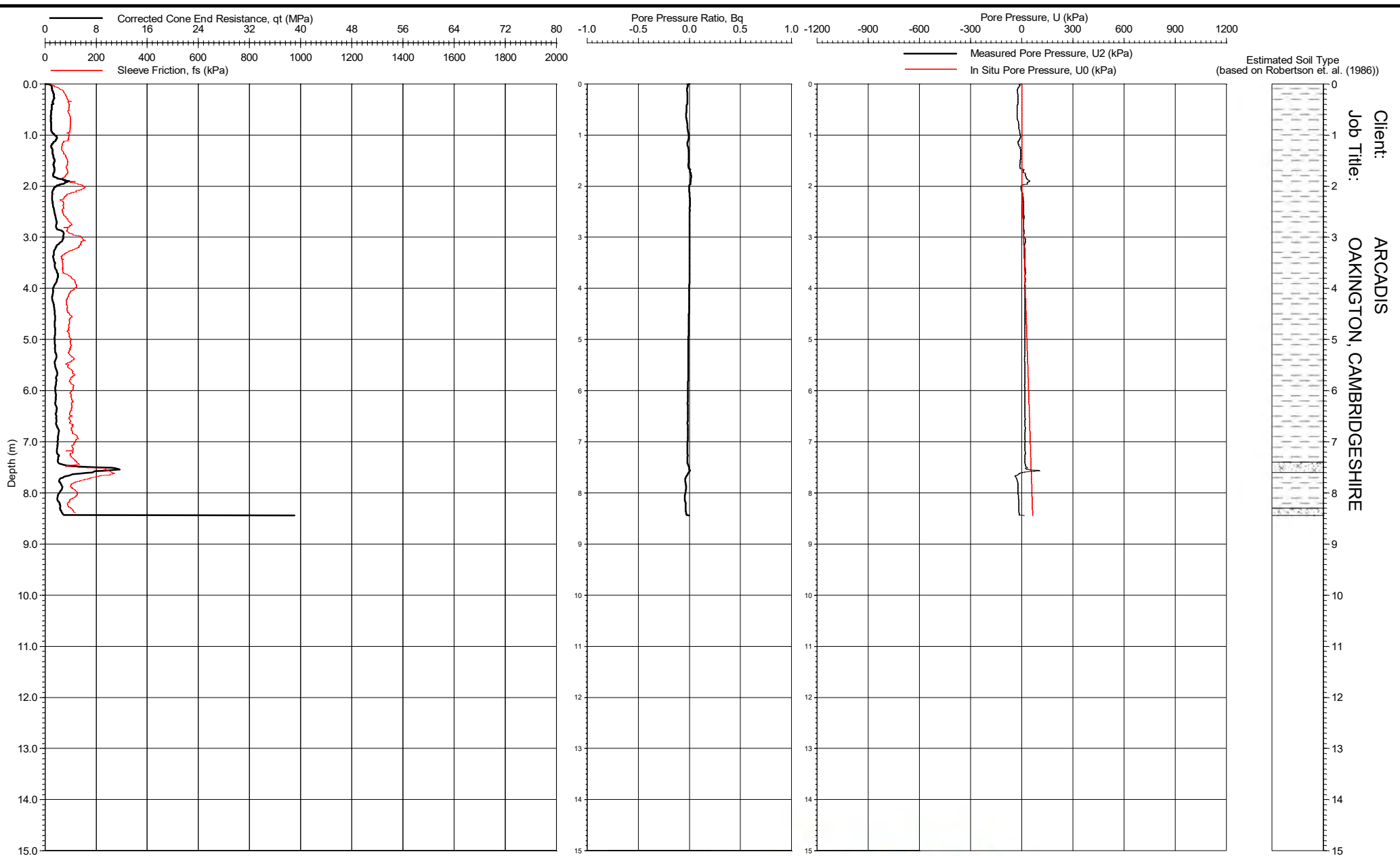
Date of Test: 22/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 1207
 Checked By:

reg. 13

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PIEZO CONE PENETRATION TEST
CPT 1207

Form: CPT0002



Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**

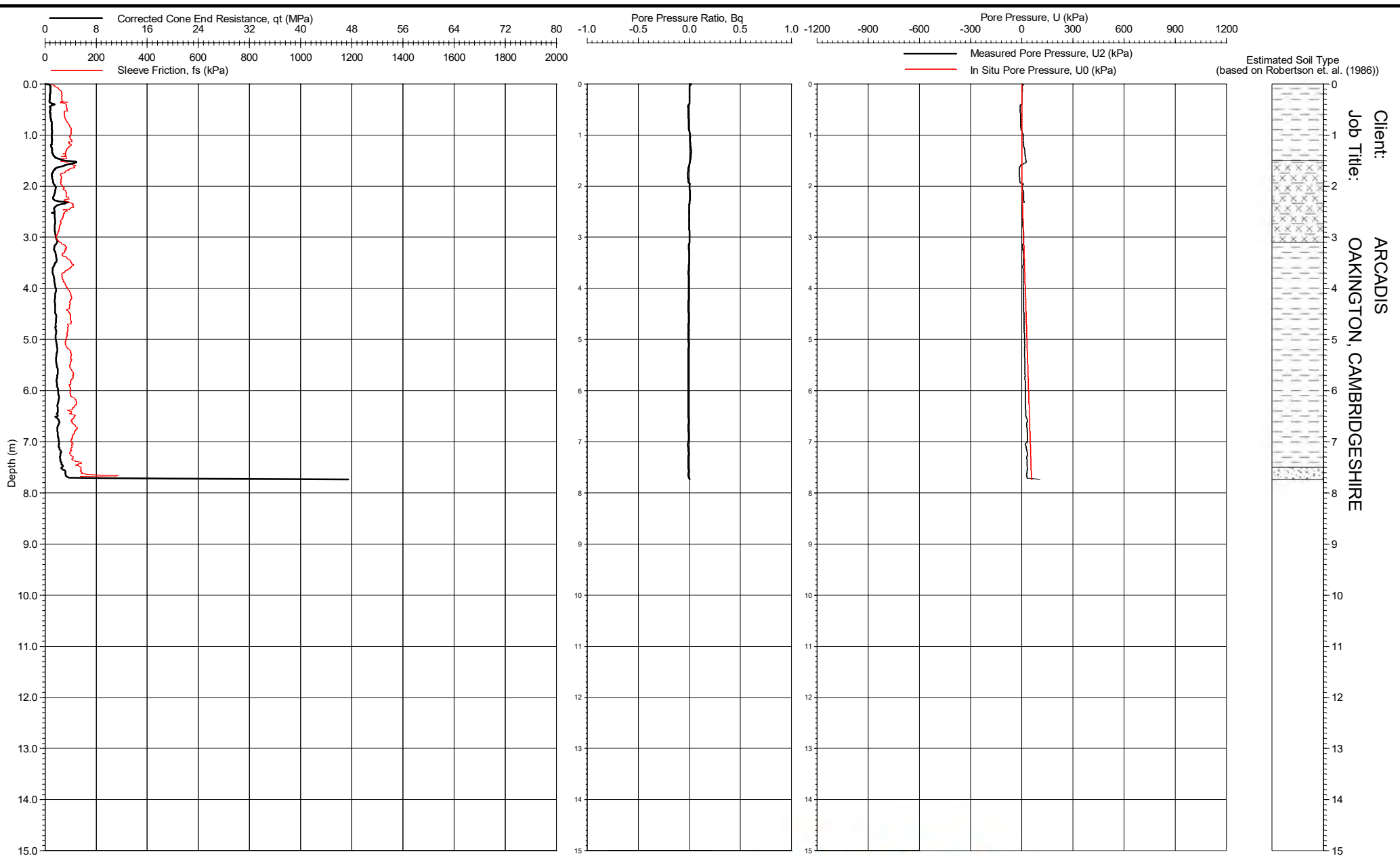
Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 22/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 1208
 Checked By: **reg. 13**

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PIEZO CONE PENETRATION TEST
CPT 1208

Form: CPT0002



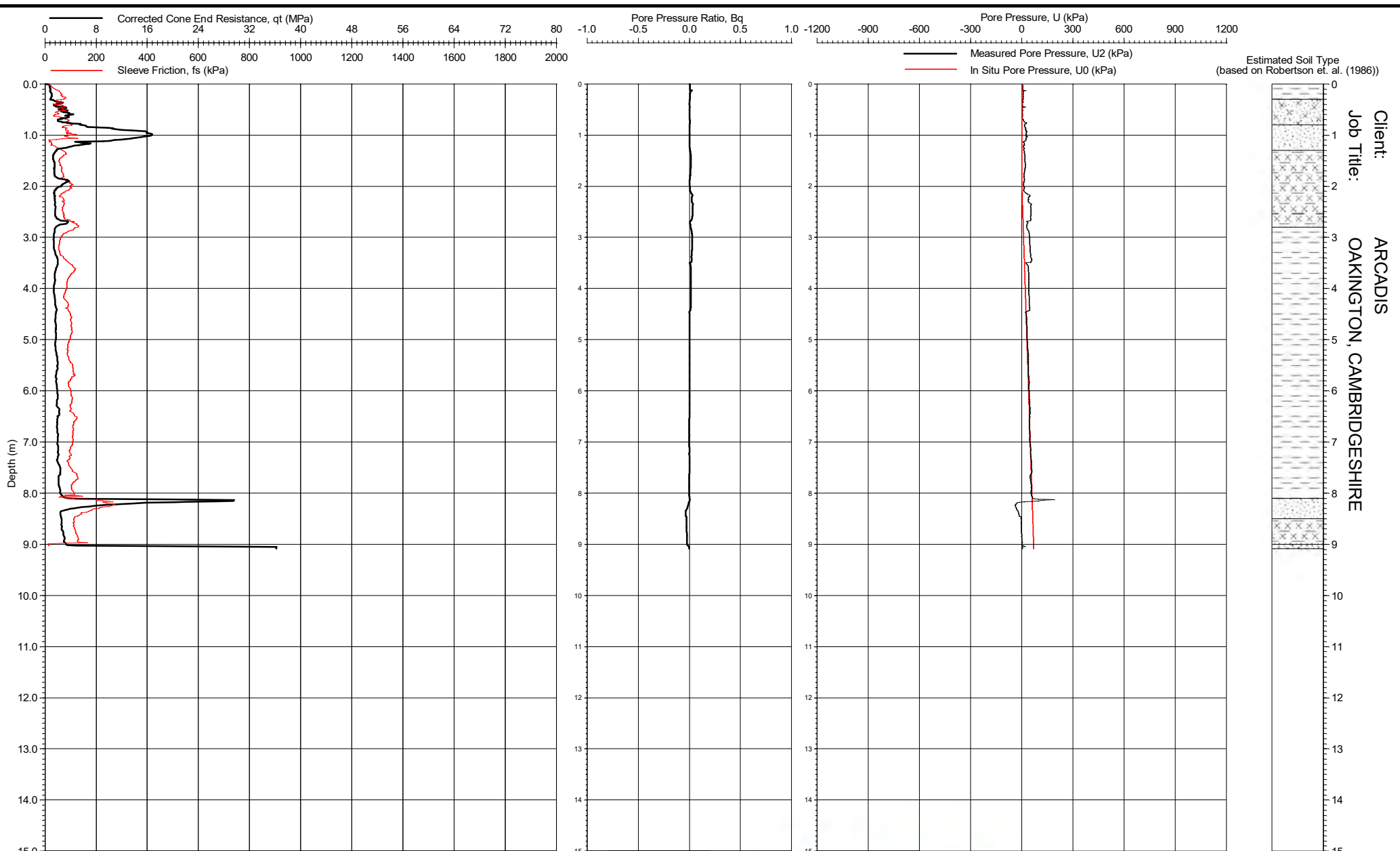
Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 22/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 1209
 Checked By: reg. 13

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PIEZO CONE PENETRATION TEST
CPT 1209

Form: CPT0002

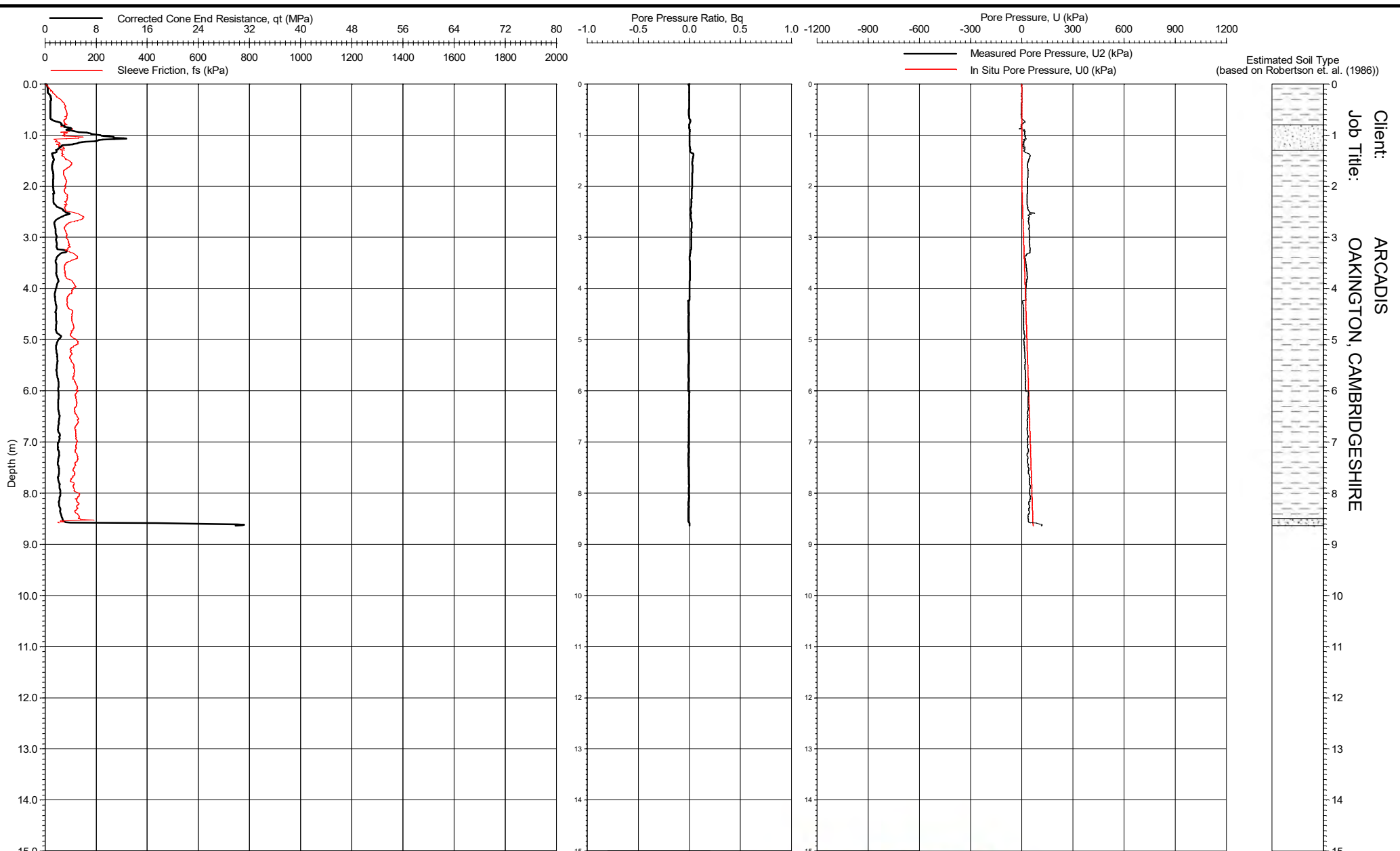


Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 22/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 1210
 Checked By: reg. 13

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PIEZO CONE PENETRATION TEST
CPT 1210



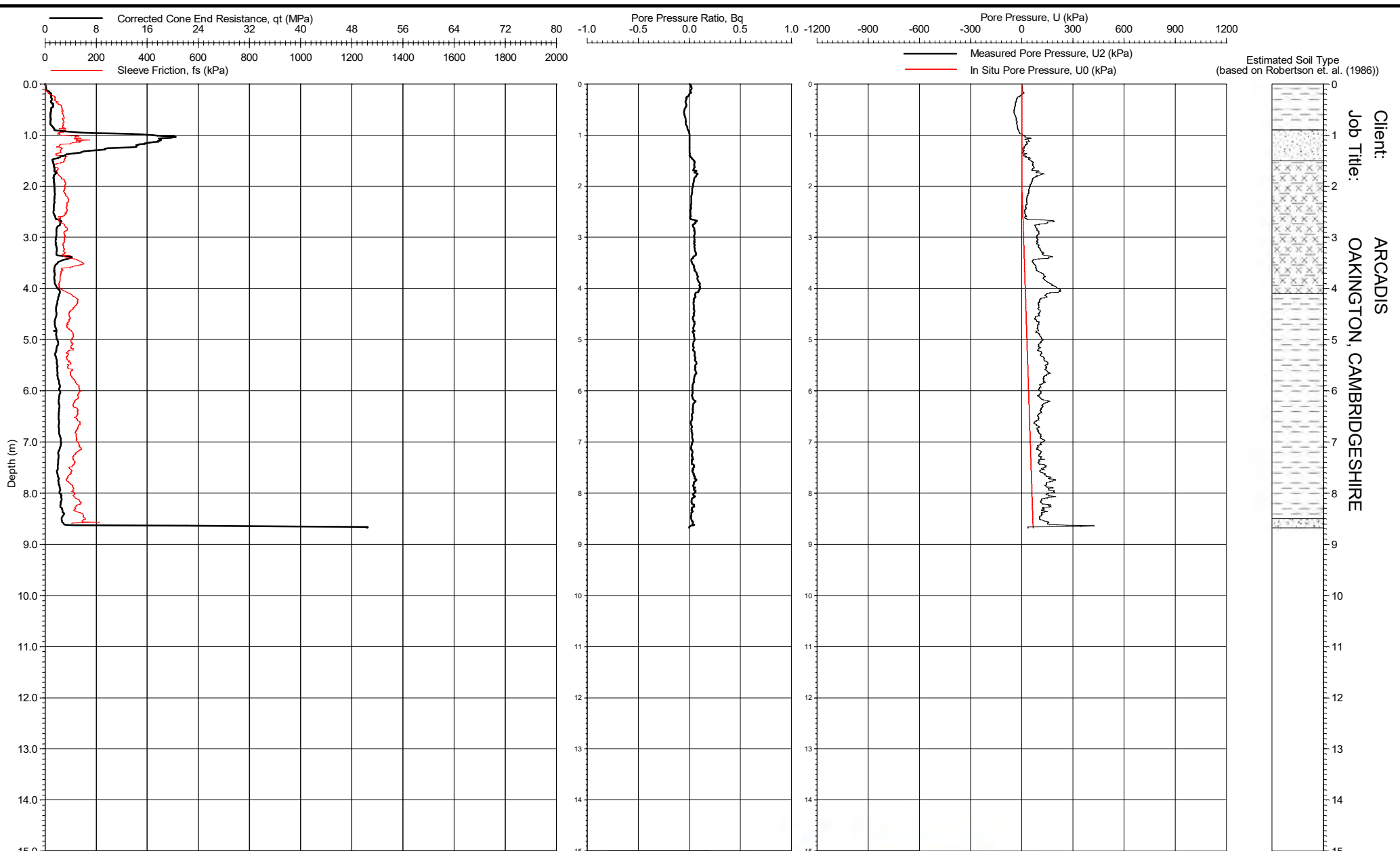
Client: ARCADIS
 Job Title: OAKINGTON, CAMBRIDGESHIRE

Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 22/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 1211
 Checked By: **reg. 13**

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PIEZO CONE PENETRATION TEST
CPT 1211



Estimated Soil Type
(based on Robertson et. al. (1986))

Client: **ARCADIS**
Job Title: **OAKINGTON, CAMBRIDGESHIRE**

Location: Oakington
Coordinates: -
Ground Level: -
Cone & Rig Used: S15-CFIP.1458 - CPT 007
Remarks: Test refused on total pressure.

Date of Test: 22/12/2016
Date of Plot: 11/01/2017
File Name: 1160427 - CPT 1212
Checked By: **reg. 13**

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PIEZO CONE PENETRATION TEST
CPT 1212

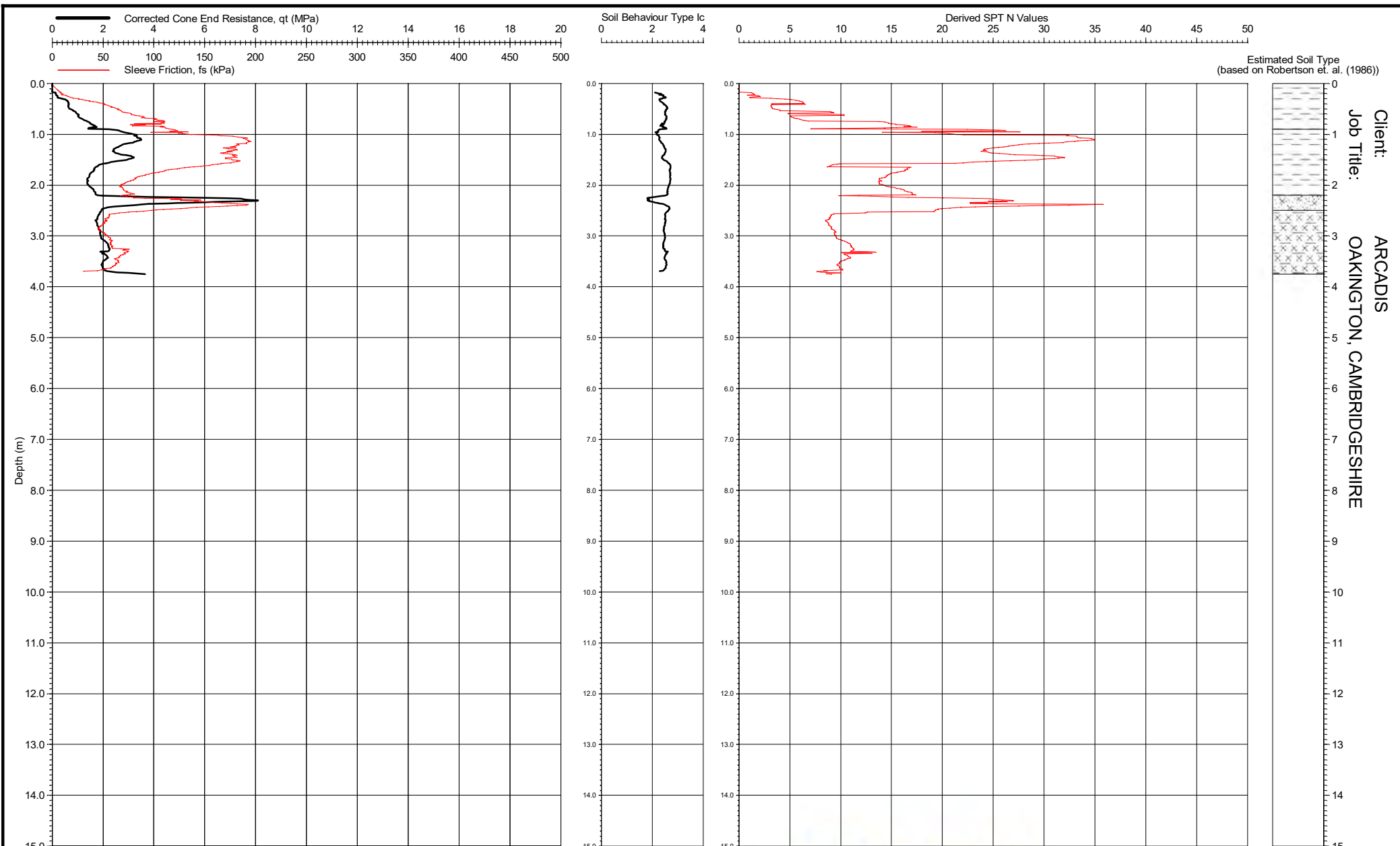
Form: CPT0002

APPENDIX C

CPT DERIVED GEOTECHNICAL PARAMETERS

LIST OF FIGURES

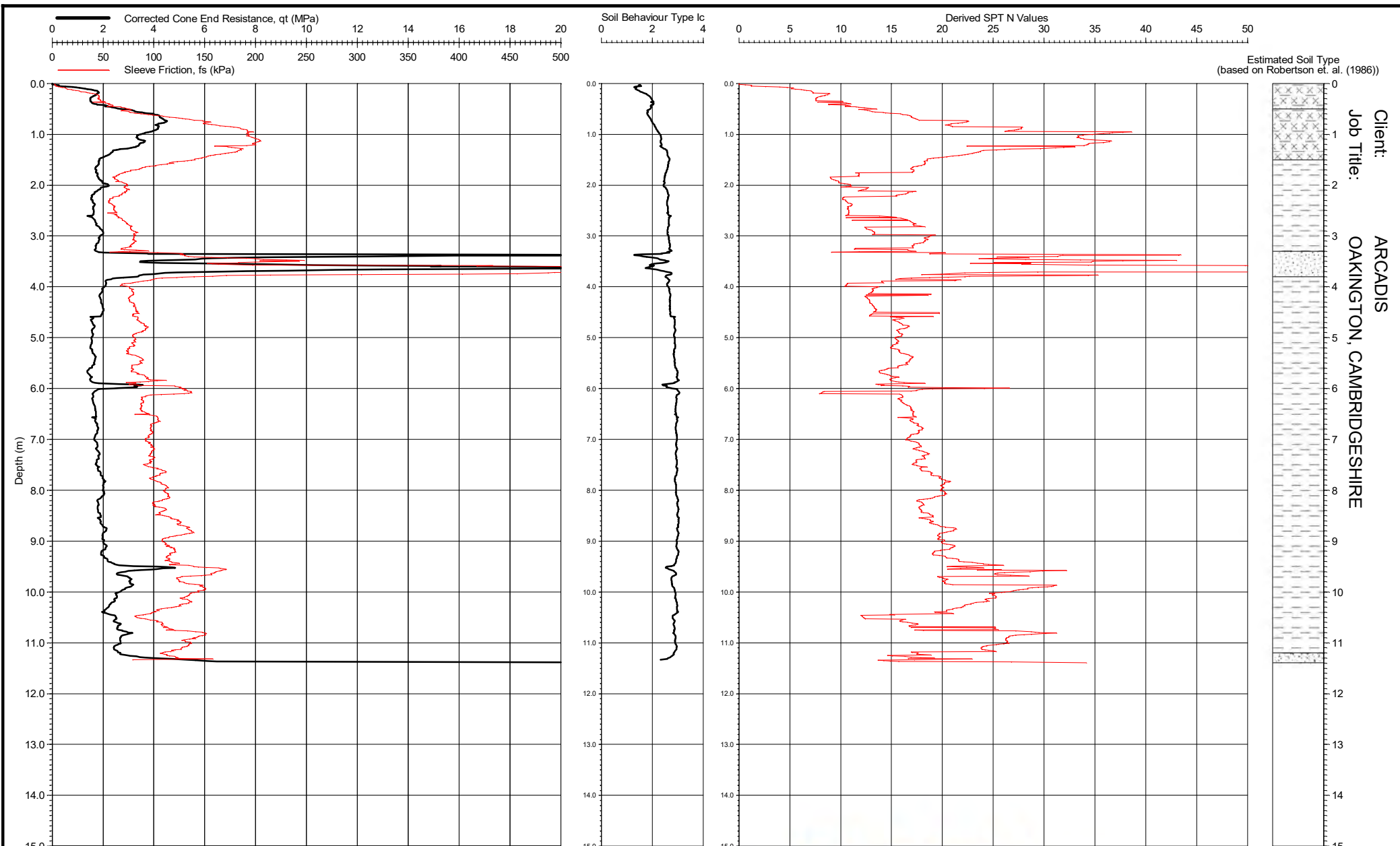
Description	Pages Included
CPT 601 – CPT 1212 (Printed on Form CPT0003) Soil Behaviour Type and N Value	30
CPT 601 – CPT 1212 (Printed on Form CPT0004) Relative Density and Shear Strength	30
CPT 601 – CPT 1212 (Printed on Form CPT0005) Fines Content and Friction Angle	30



Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1032 - CPT 001
 Remarks: Test refused on total pressure.

Date of Test: 19/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 601
 Checked By: **reg. 13**

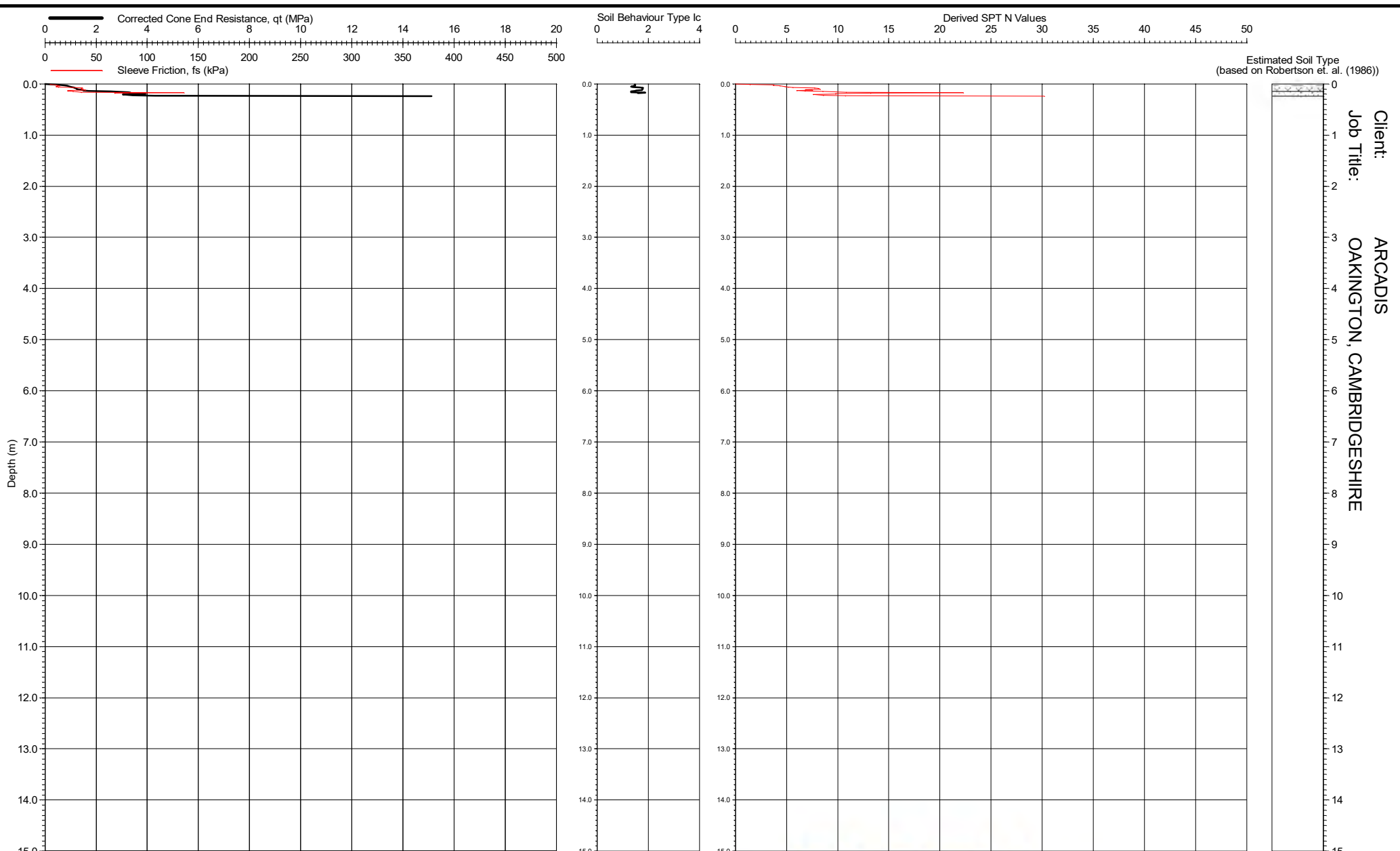
IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION CPT 601
 insitusi.com



Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 601A
 Checked By: **reg. 13**

IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION CPT 601A
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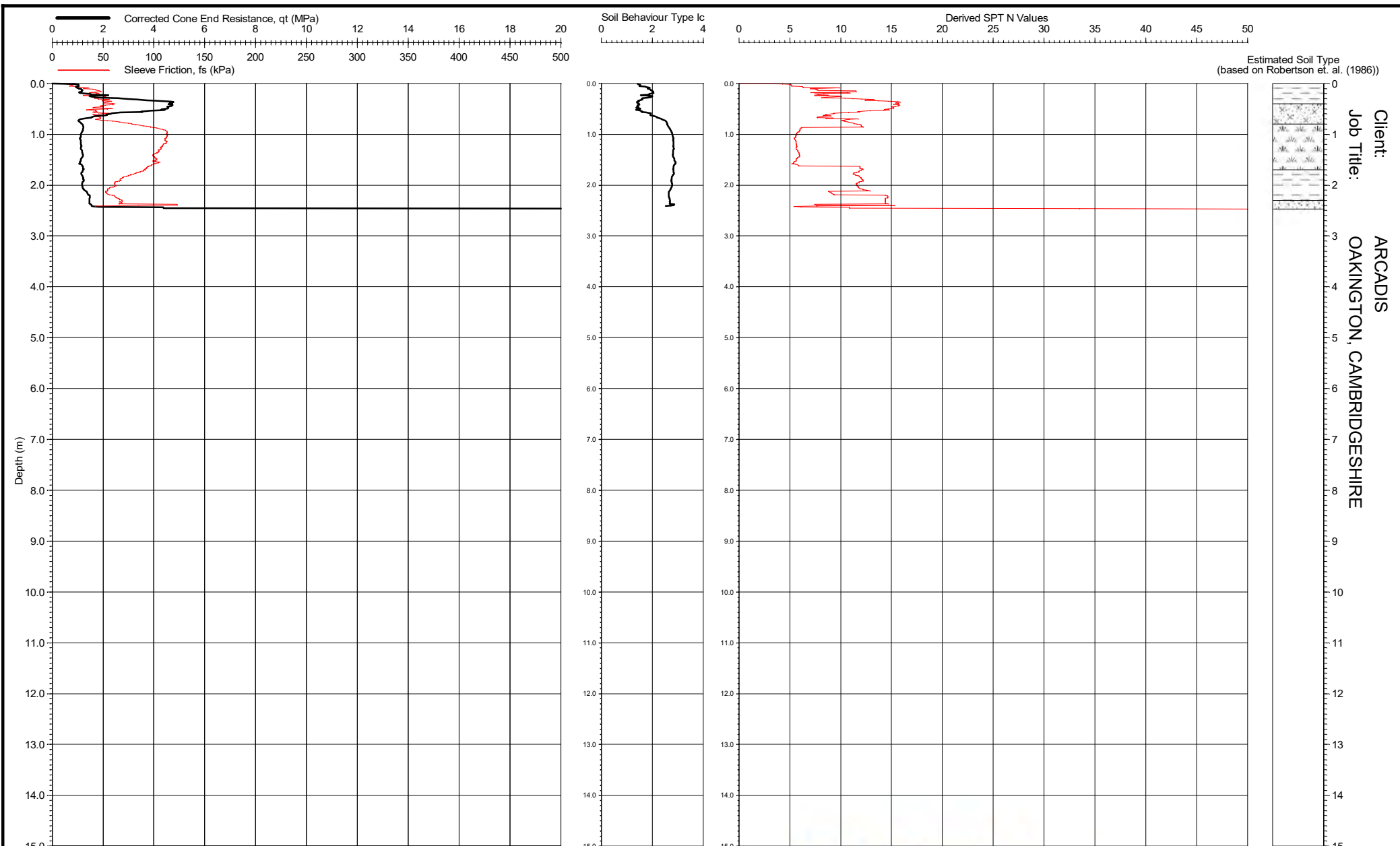


Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**

Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 602
 Checked By: **reg. 13**

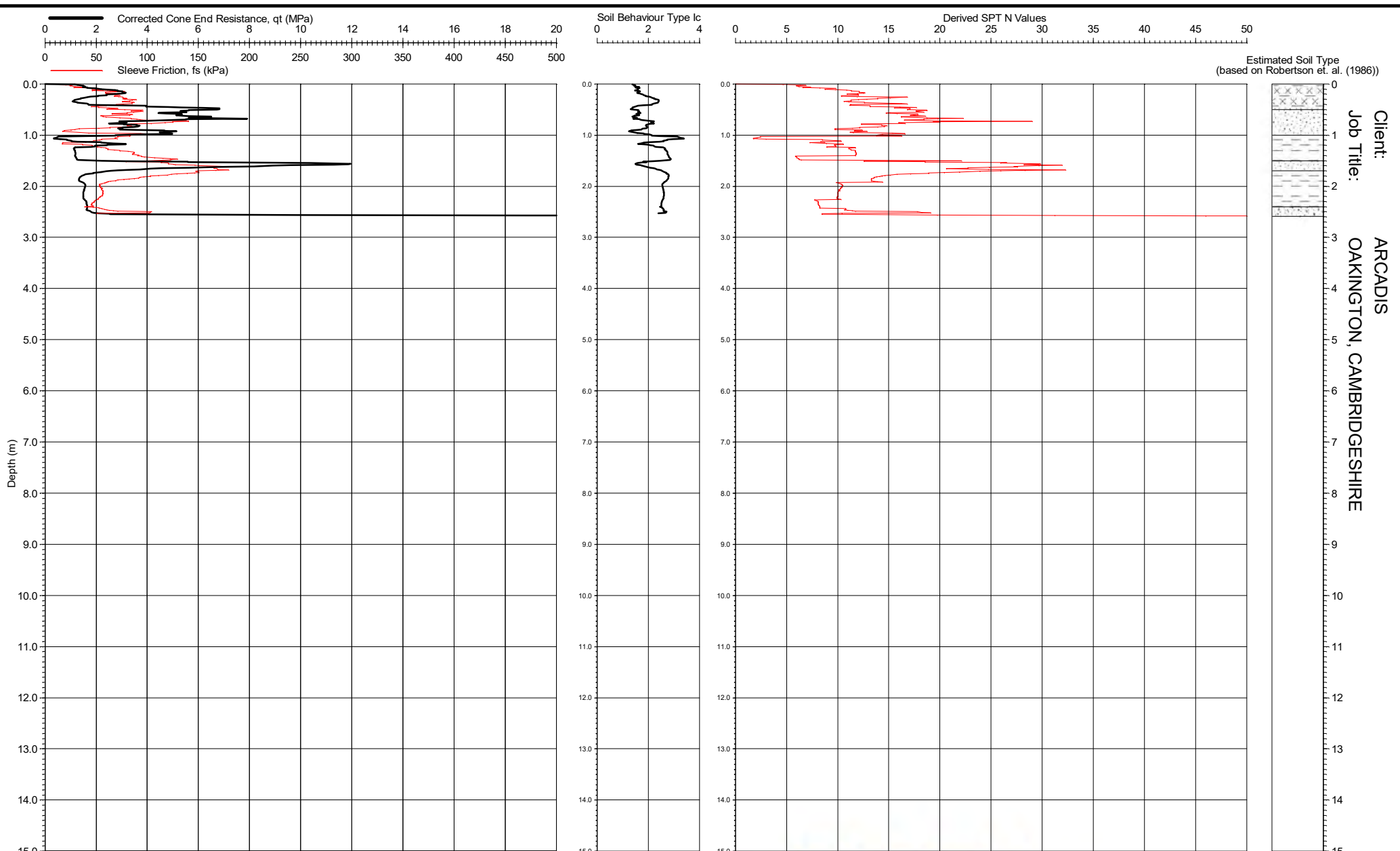
IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION CPT 602
 insitusi.com



Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 602A
 Checked By: **reg. 13**

IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION CPT 602A
 insitushi.com

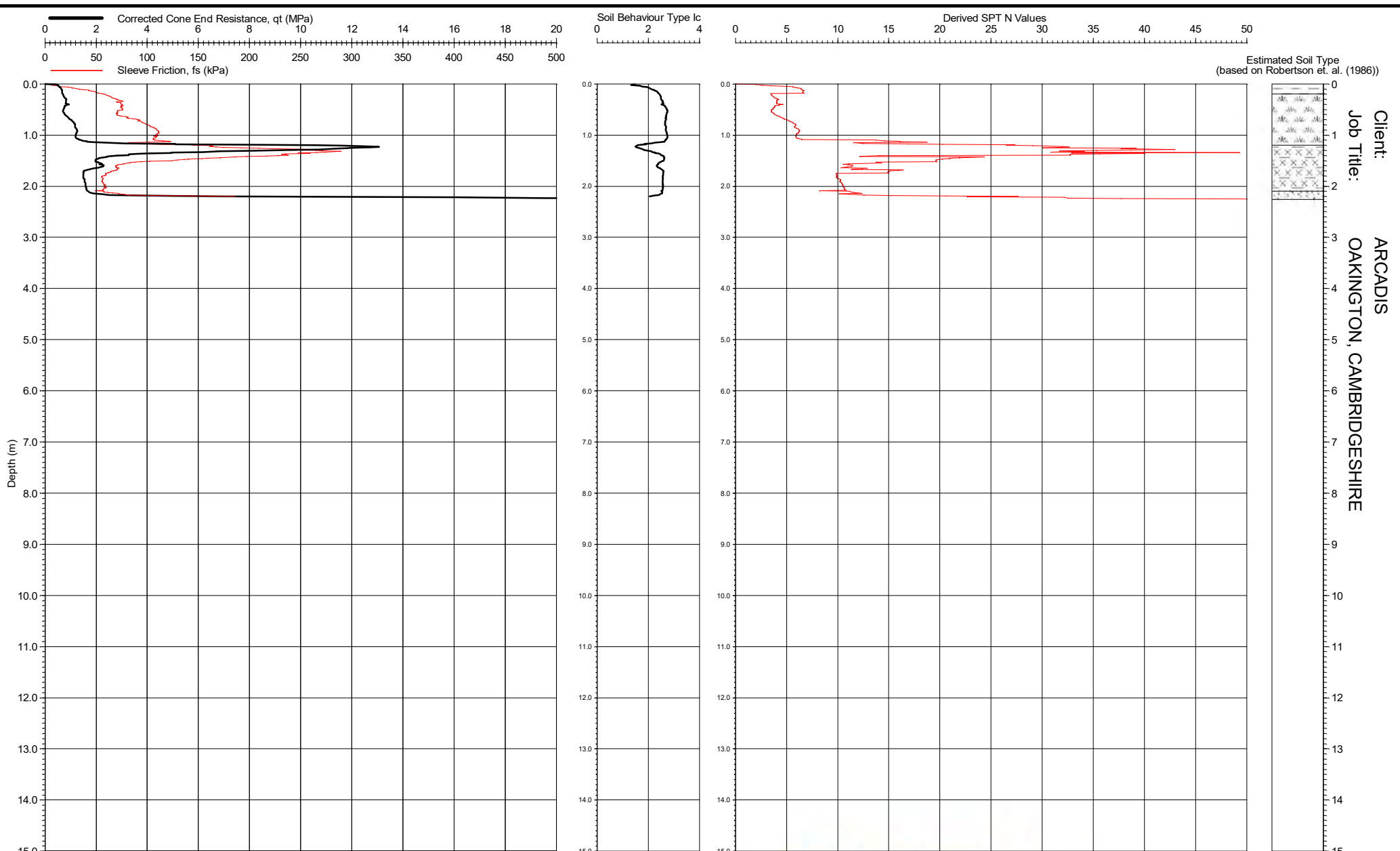


Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 602B
 Checked By: reg. 13

IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION CPT 602B
 insitusi.com

Form: CPT0003



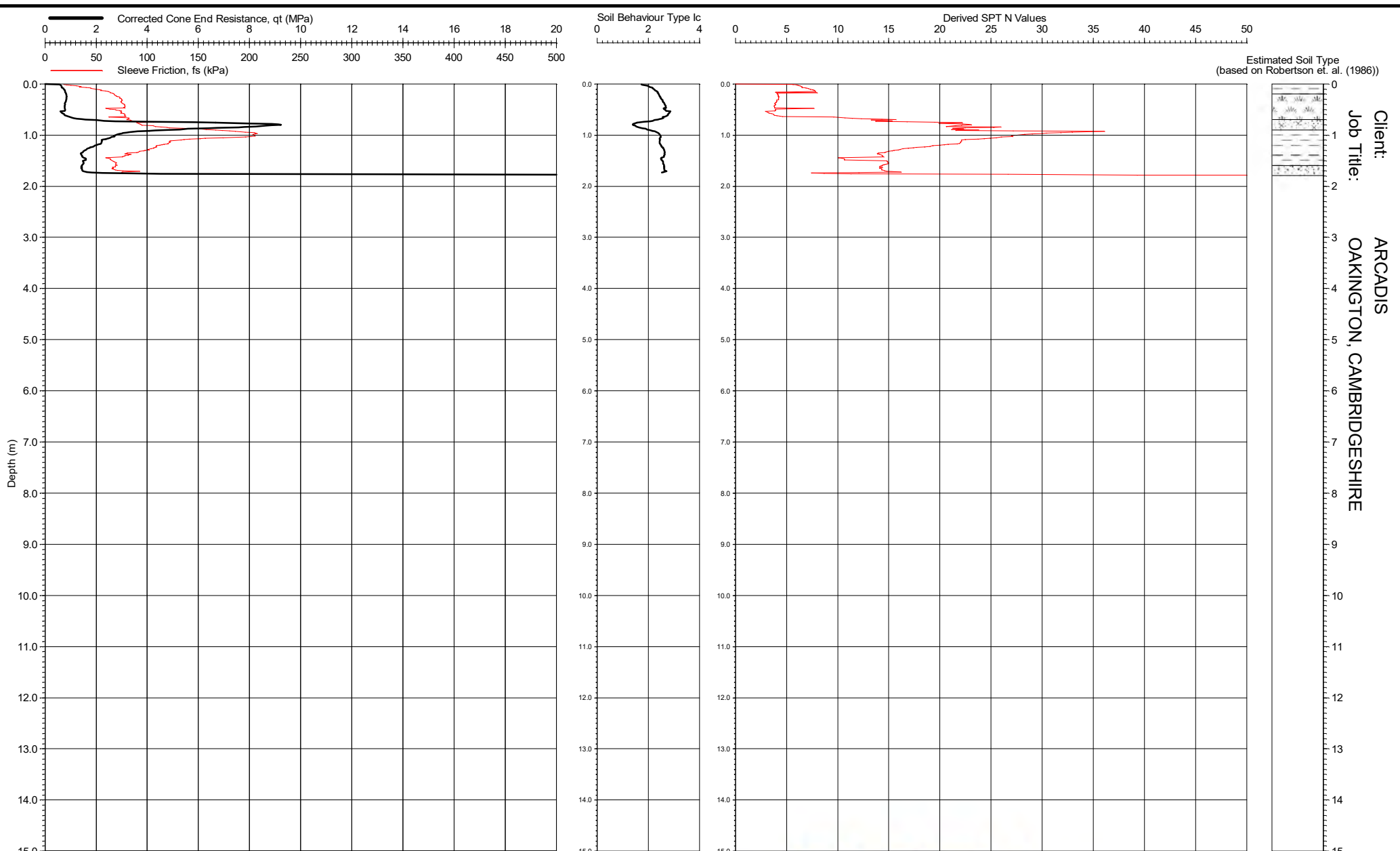
Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 603
 Checked By: **reg. 13**

IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION CPT 603
insitusi.com

Form: CPT0003

Client: ARCADIS
 Job Title: OAKINGTON, CAMBRIDGESHIRE



Location: Oakington

Coordinates: -

Ground Level: -

Cone & Rig Used: S15-CFIP.1458 - CPT 007

Remarks: Test refused on total pressure.

Date of Test: 20/12/2016

Date of Plot: 11/01/2017

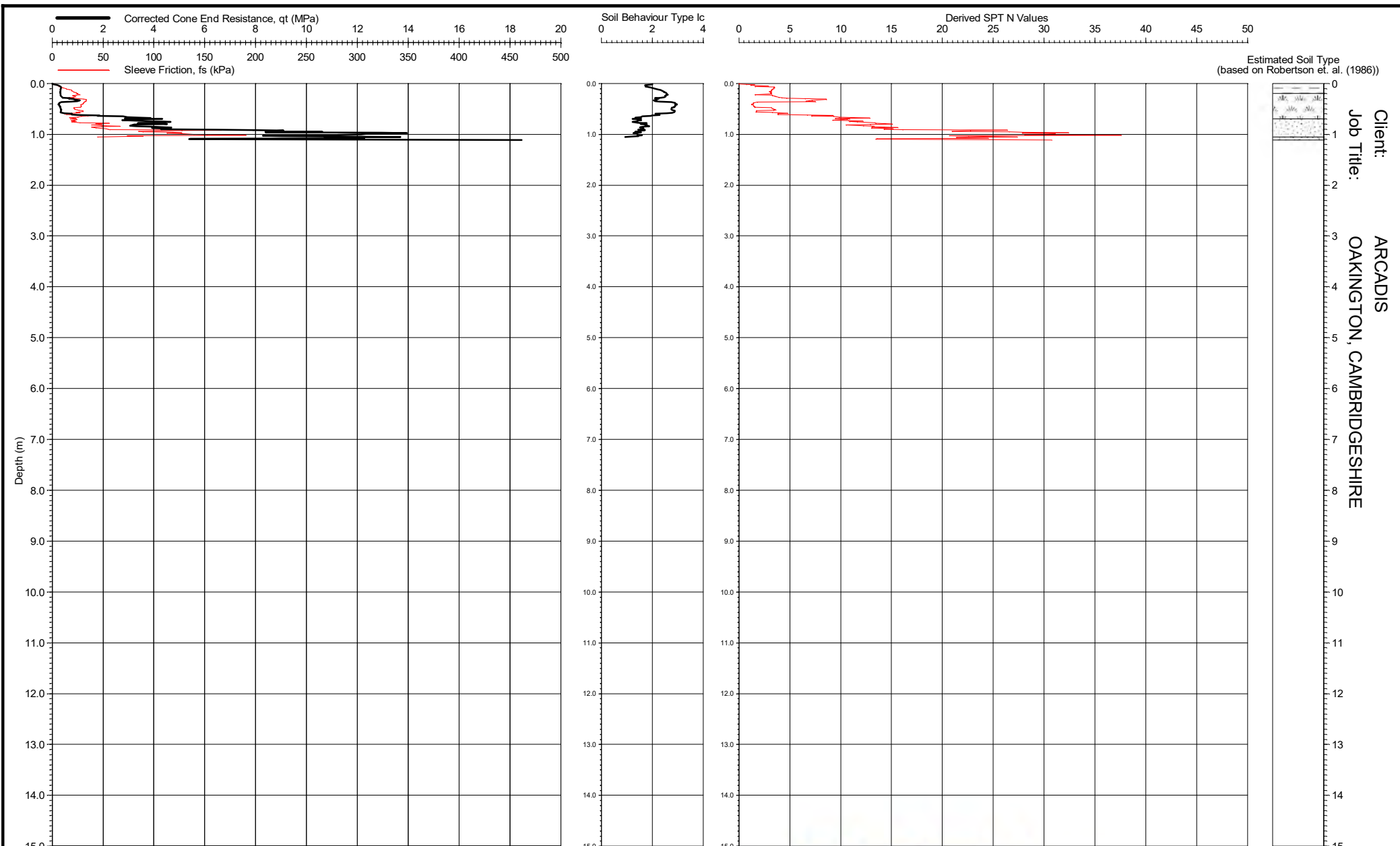
File Name: 1160427 - CPT 603A

Checked By: **reg. 13**

IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION CPT 603A
 insitusi.com

Form: CPT0003

Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**

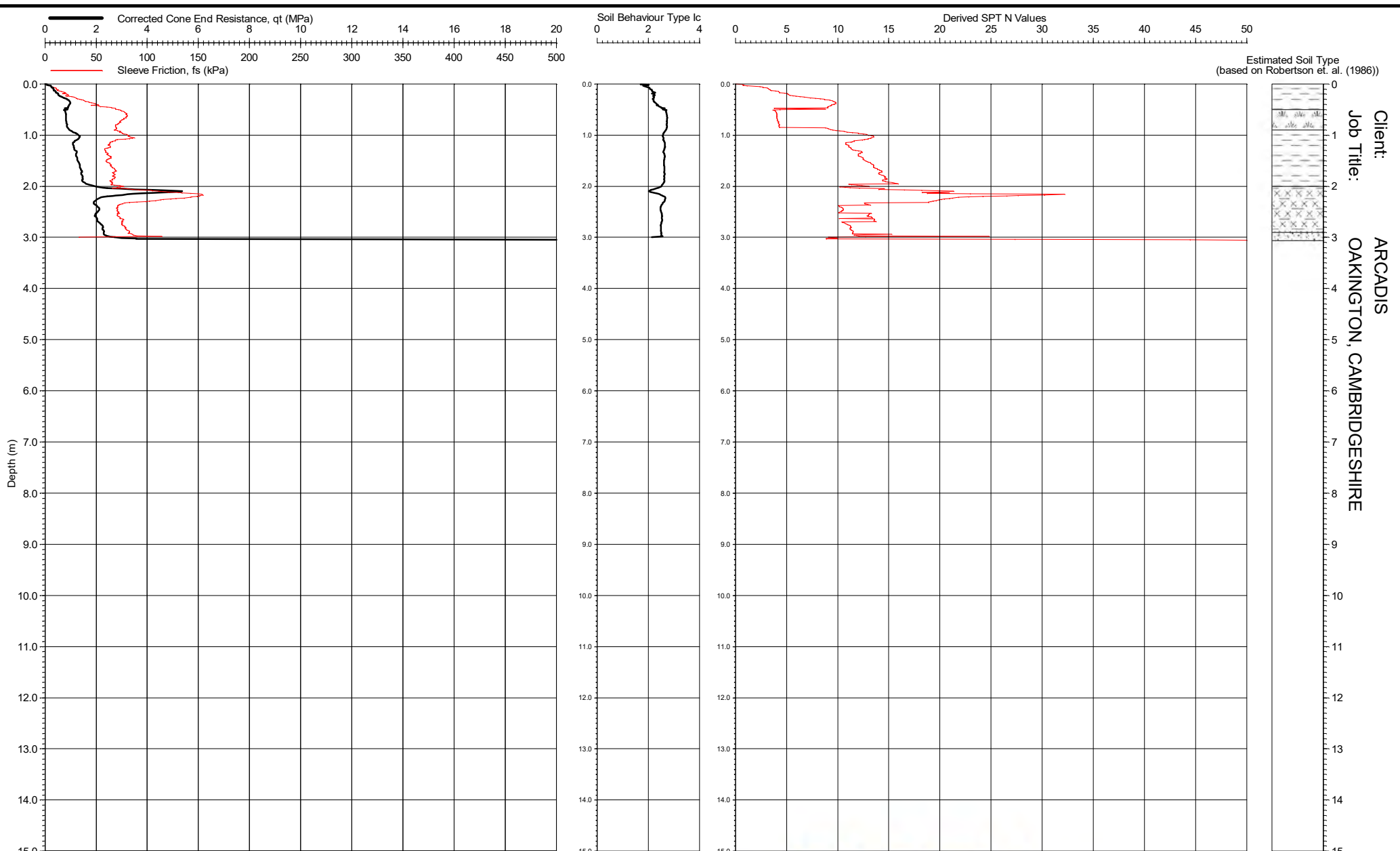


Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**

Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 604
 Checked By: **reg. 13**

IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION CPT 604
 insitusi.com

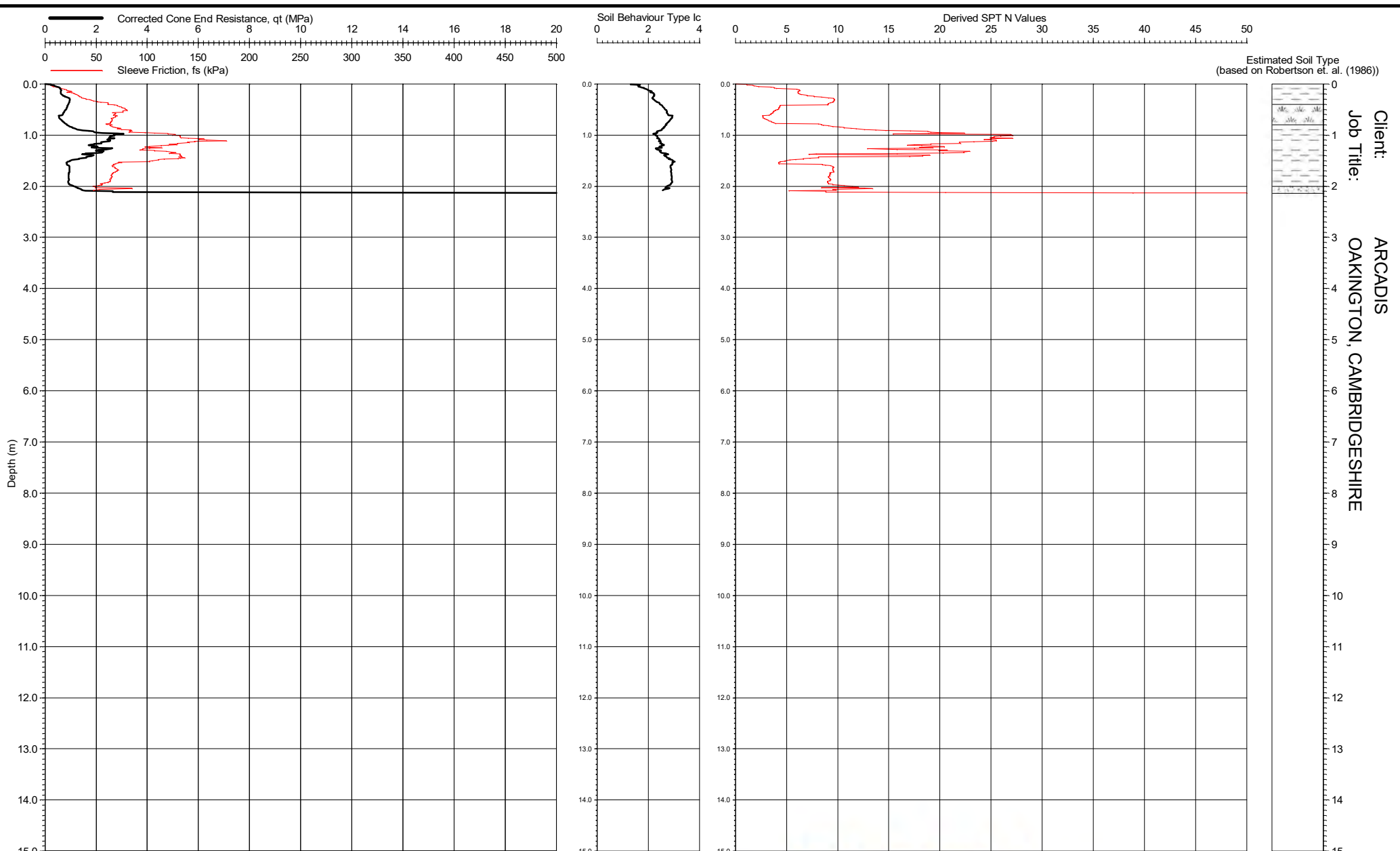


Client: ARCADIS
 Job Title: OAKINGTON, CAMBRIDGESHIRE

Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 606
 Checked By: **reg. 13**

IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION CPT 606
 insitusi.com

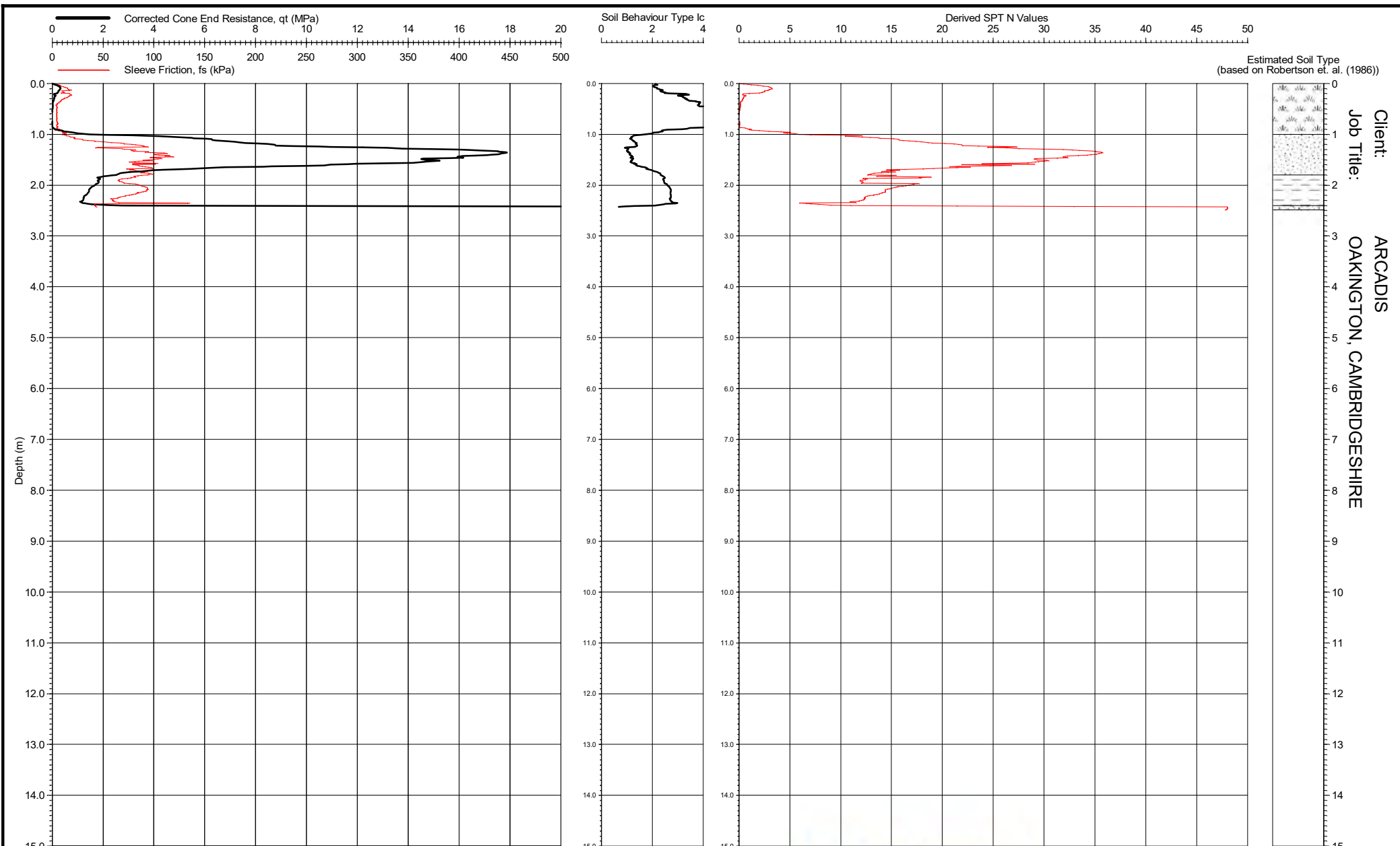


Client: ARCADIS
 Job Title: OAKINGTON, CAMBRIDGESHIRE

Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 607
 Checked By: **reg. 13**

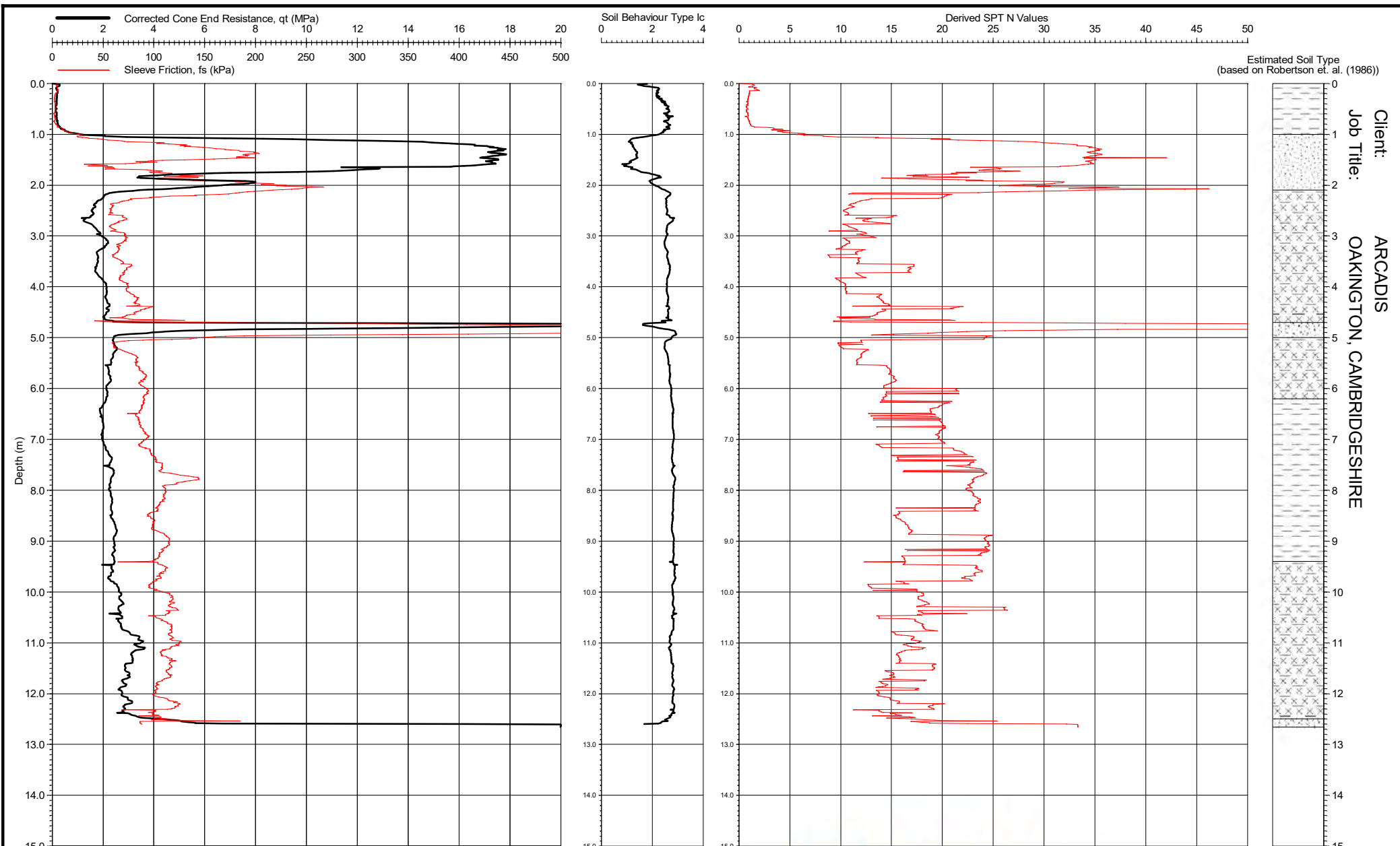
IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION CPT 607
 insitusi.com



Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 608
 Checked By: **reg. 13**

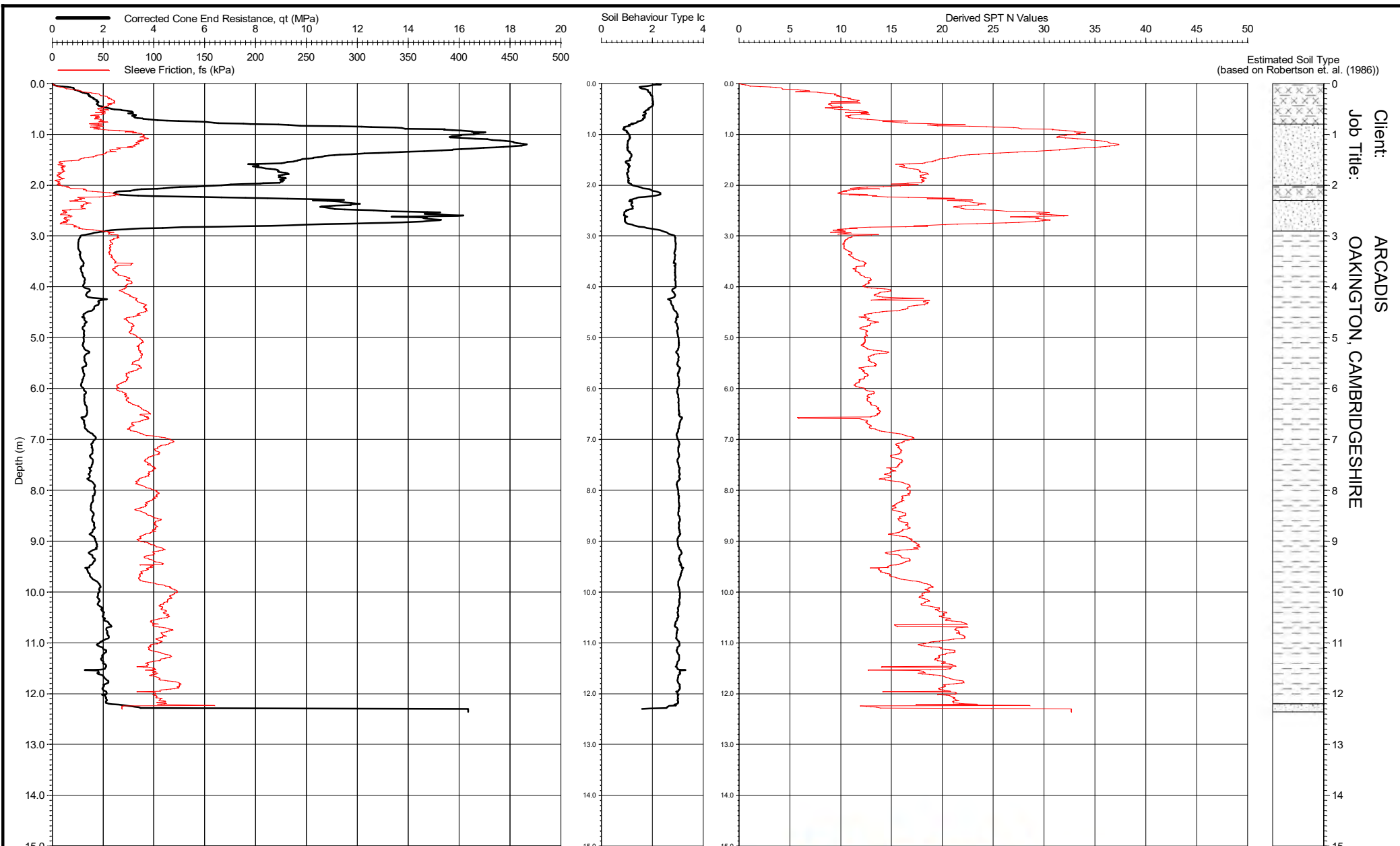
IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION
 insitusi.com
 CPT 608



Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 609
 Checked By: **reg. 13**

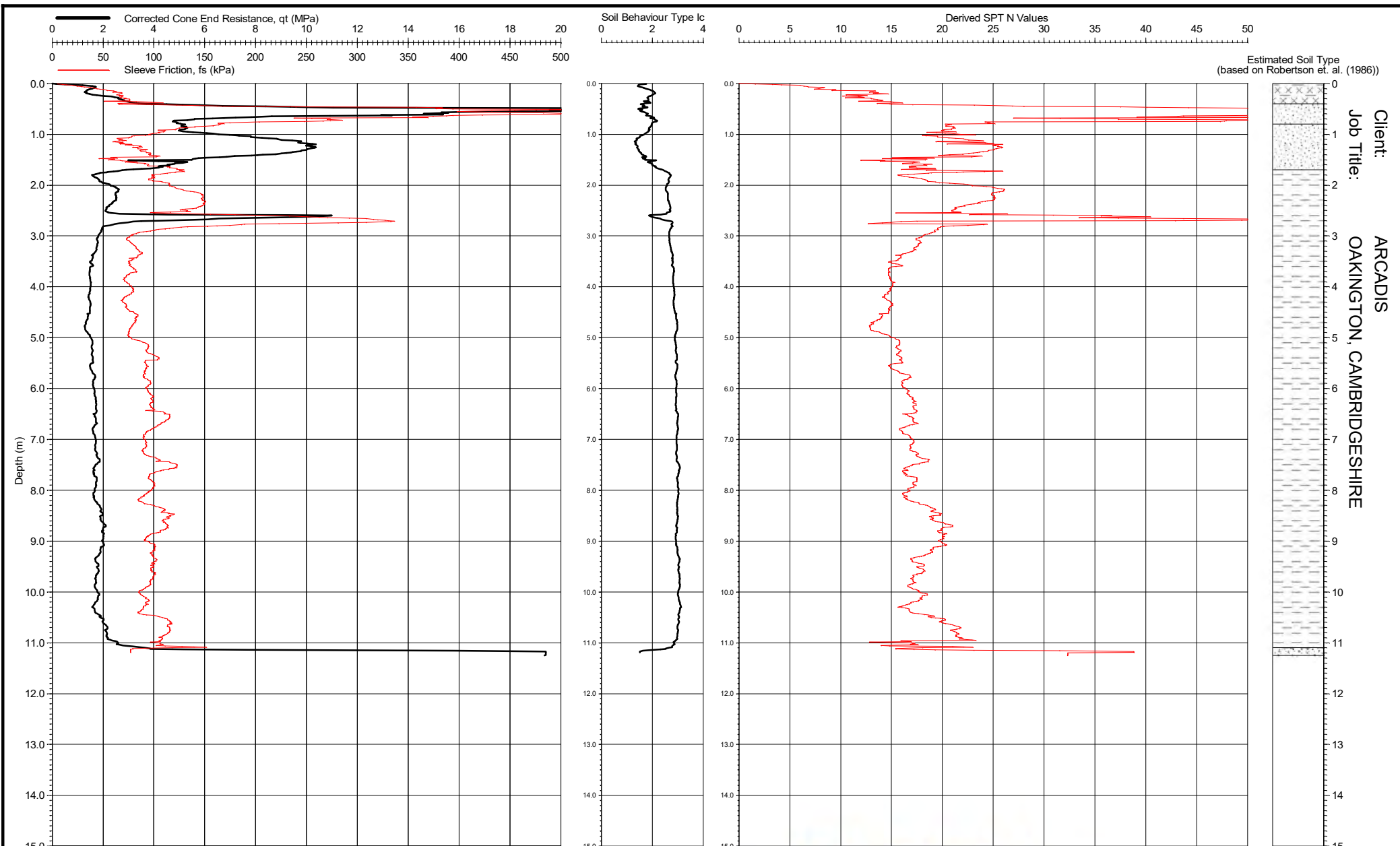
IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION
 insitusi.com
 CPT 609



Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 610
 Checked By: **reg. 13**

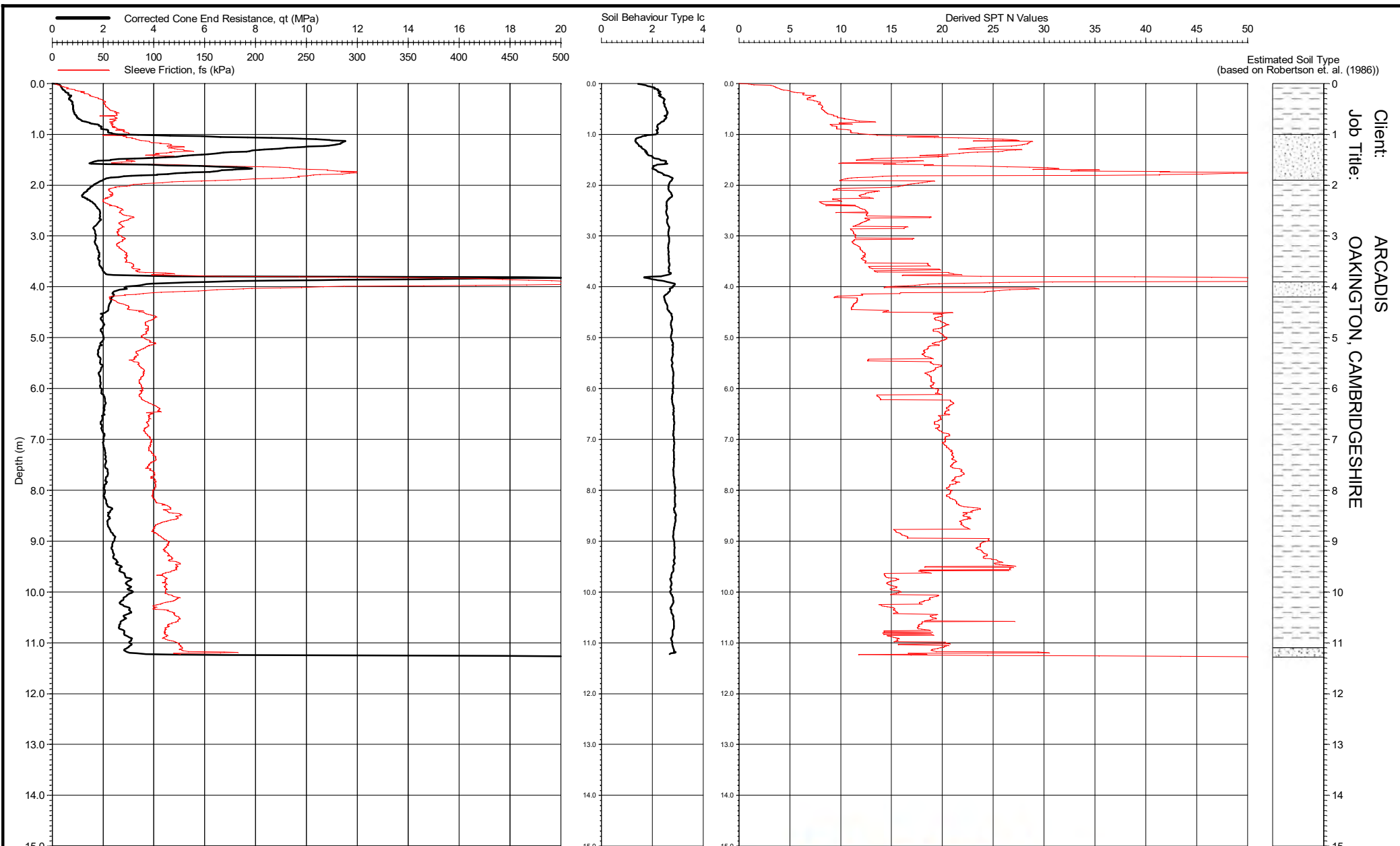
IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION CPT 610
 insitusi.com



Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 611
 Checked By: **reg. 13**

IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION CPT 611
 insitusi.com



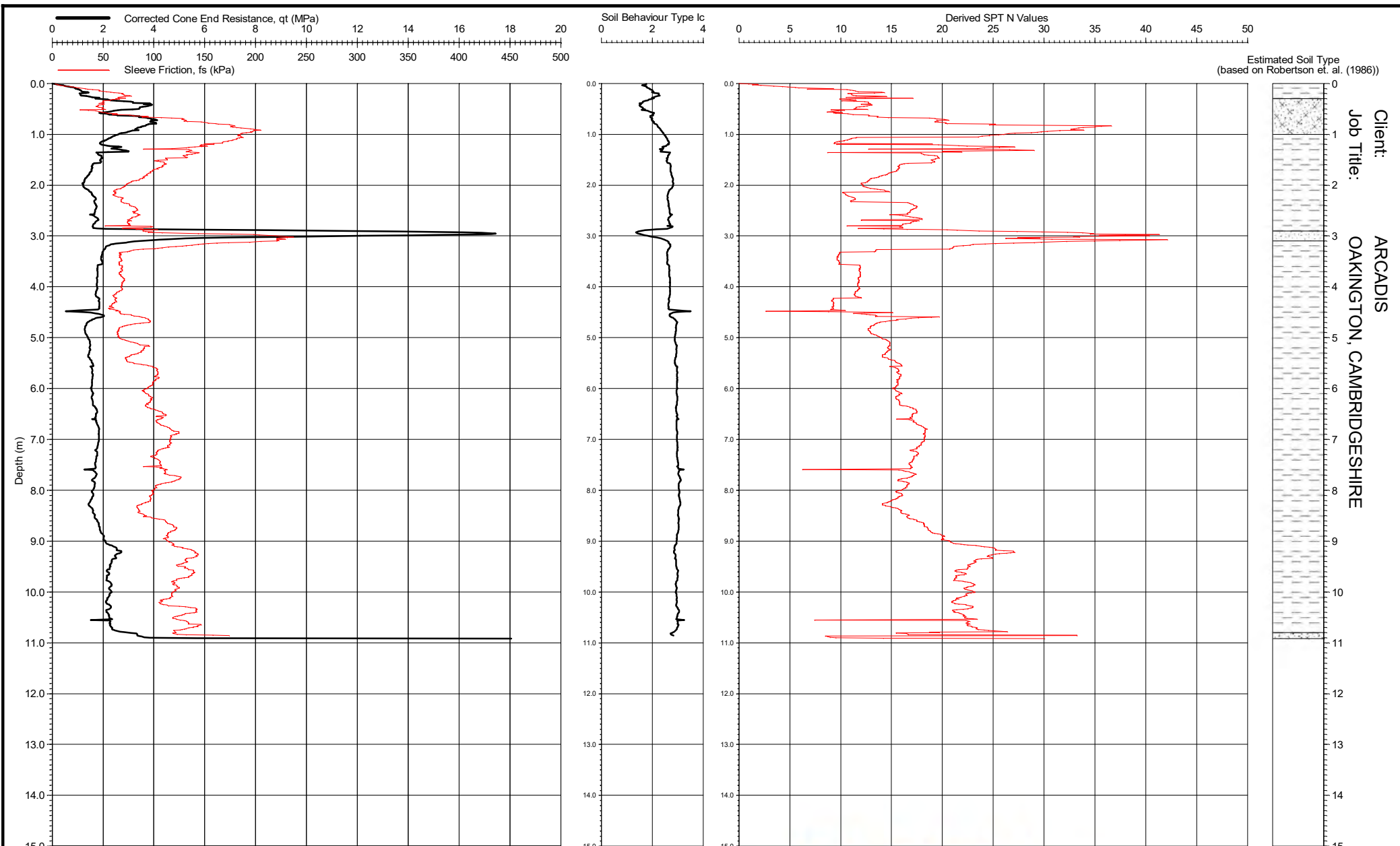
Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 612
 Checked By:

reg. 13

IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION
 insitusi.com
 CPT 612

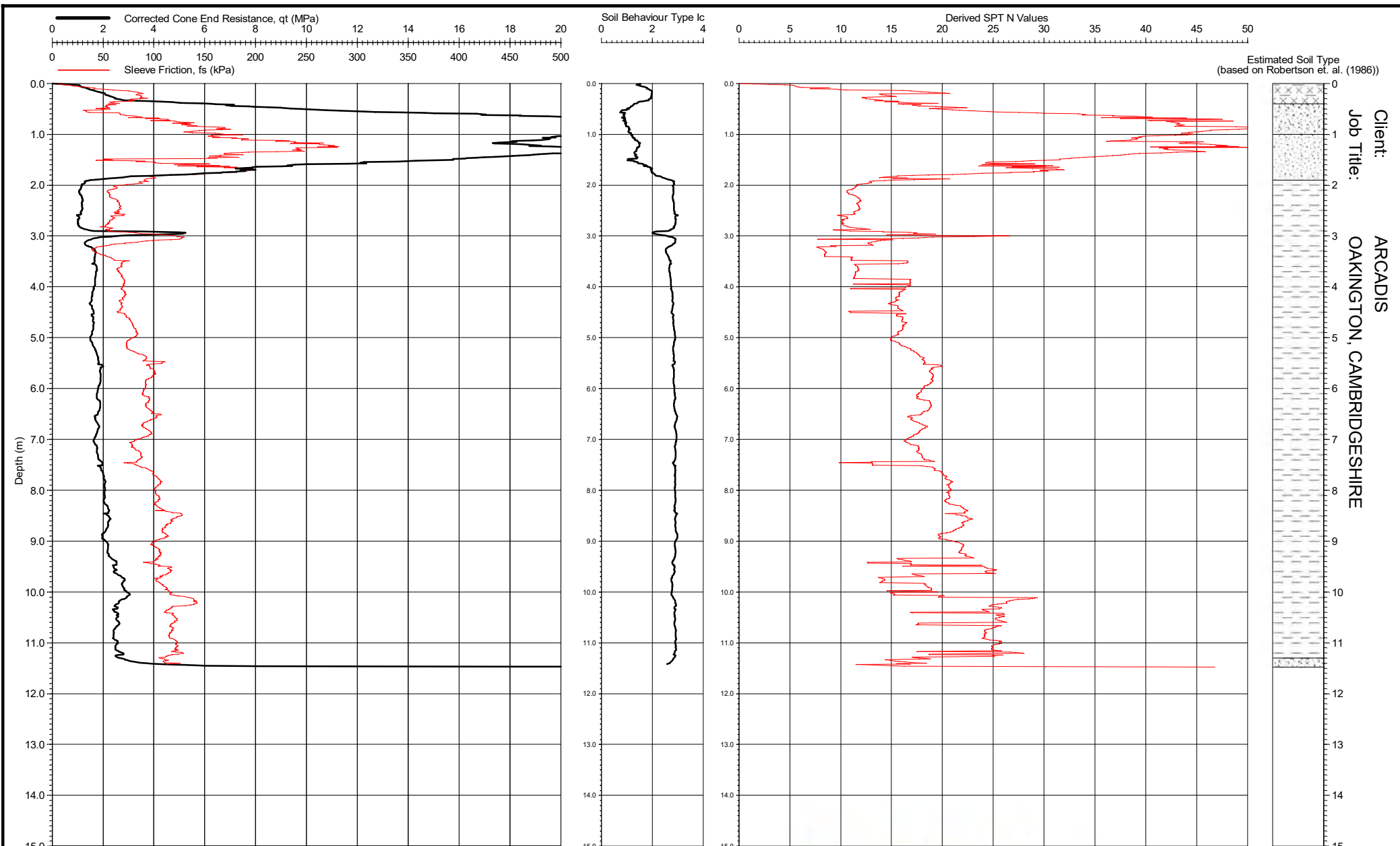
Form: CPT0003



Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 613
 Checked By: **reg. 13**

IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION
 insitusi.com
 CPT 613

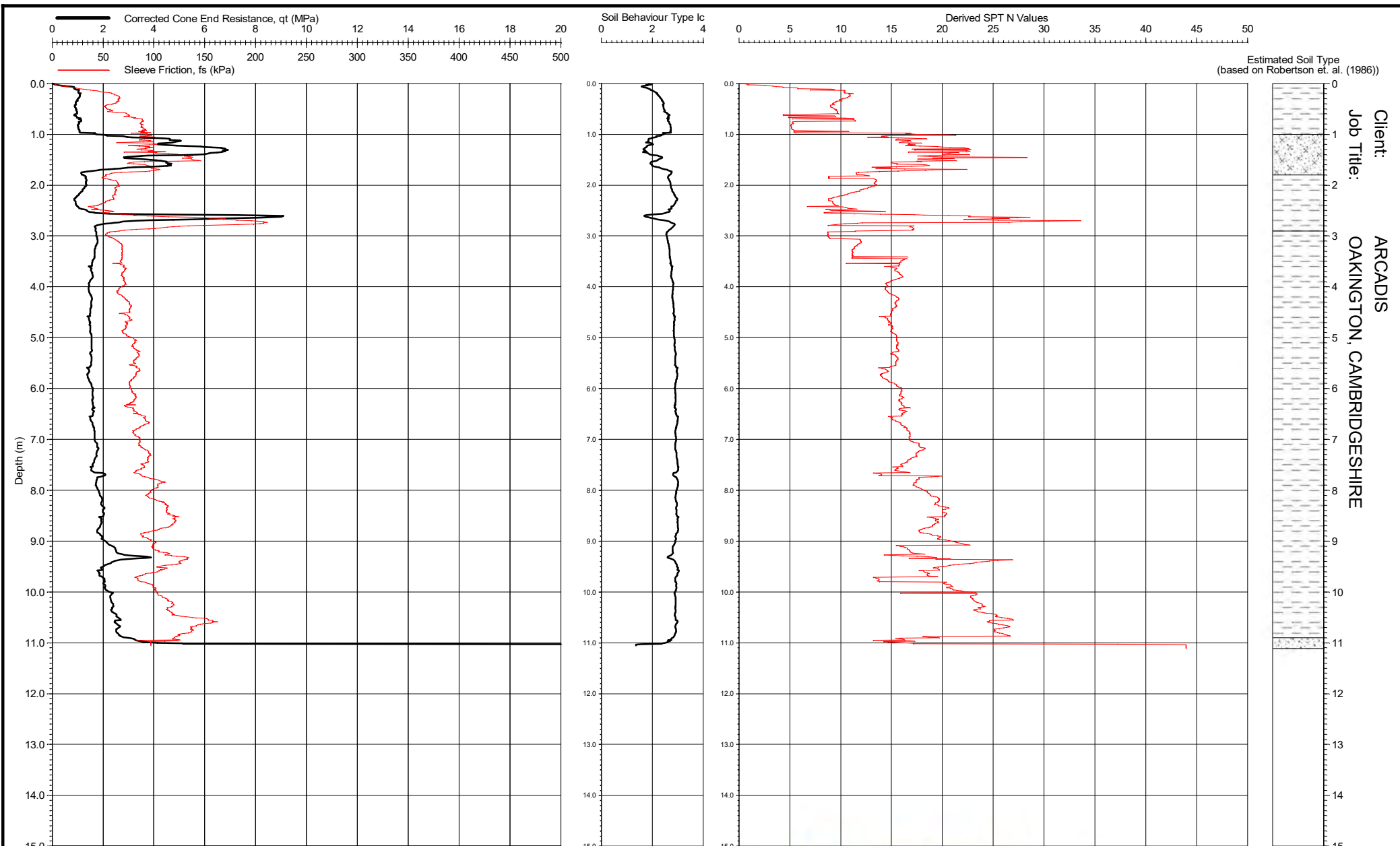


Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 614
 Checked By: **reg. 13**

IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION
 insitusi.com
 CPT 614

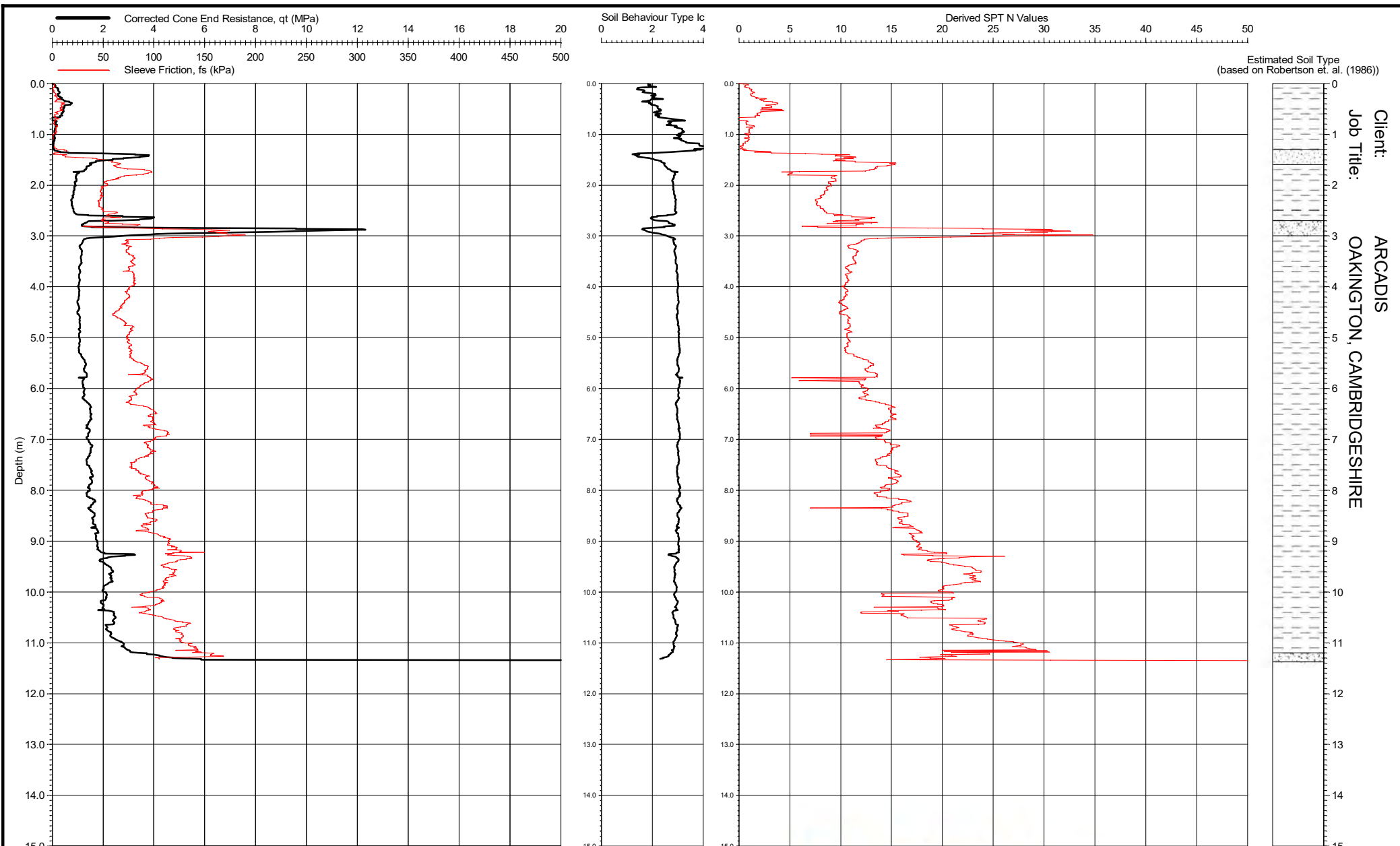
Form: CPT0003



Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 615
 Checked By: **reg. 13**

IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION CPT 615
 insitusi.com

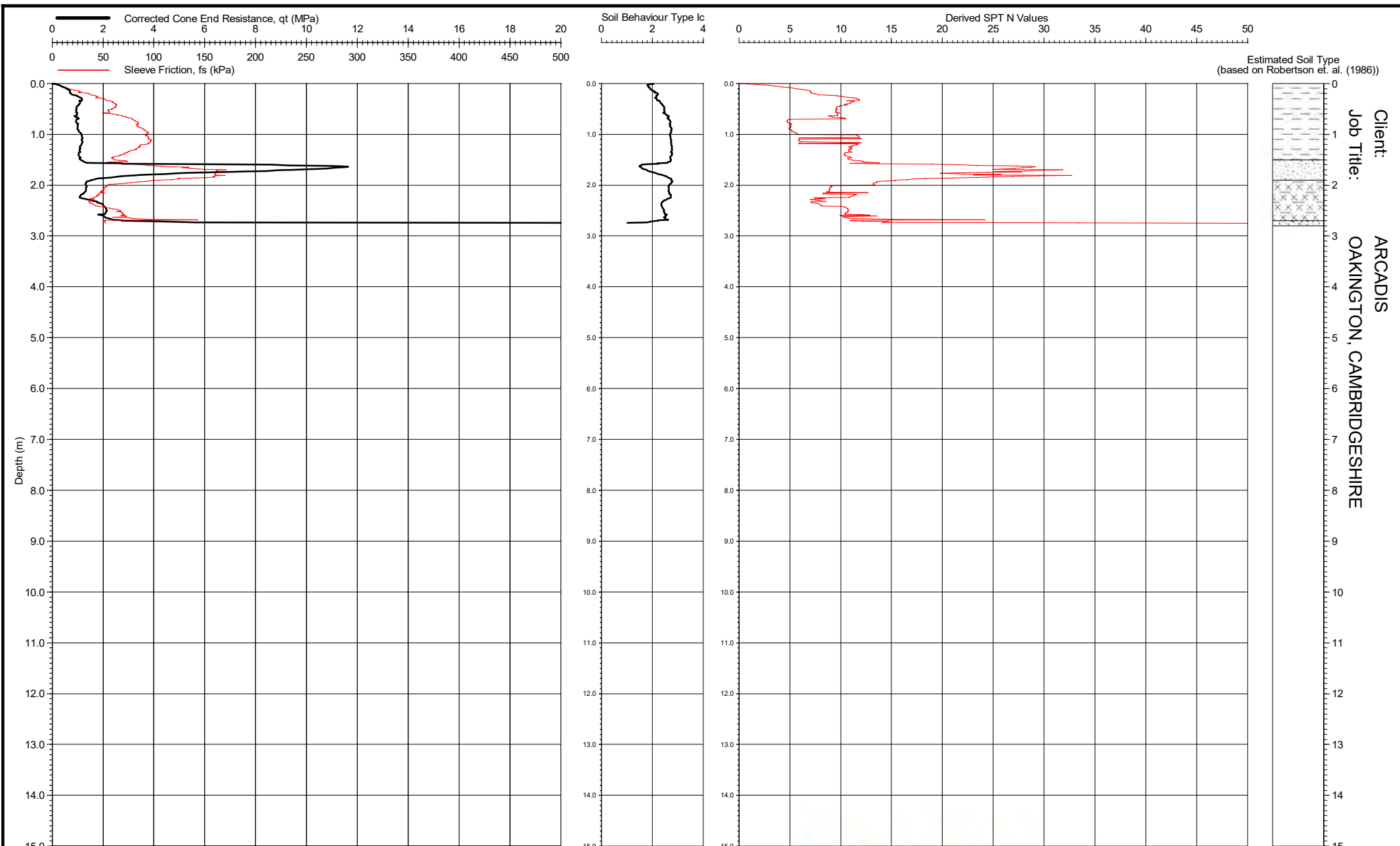


Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 20/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 616
 Checked By: **reg. 13**

IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION
 insitusi.com
 CPT 616

Form: CPT0003

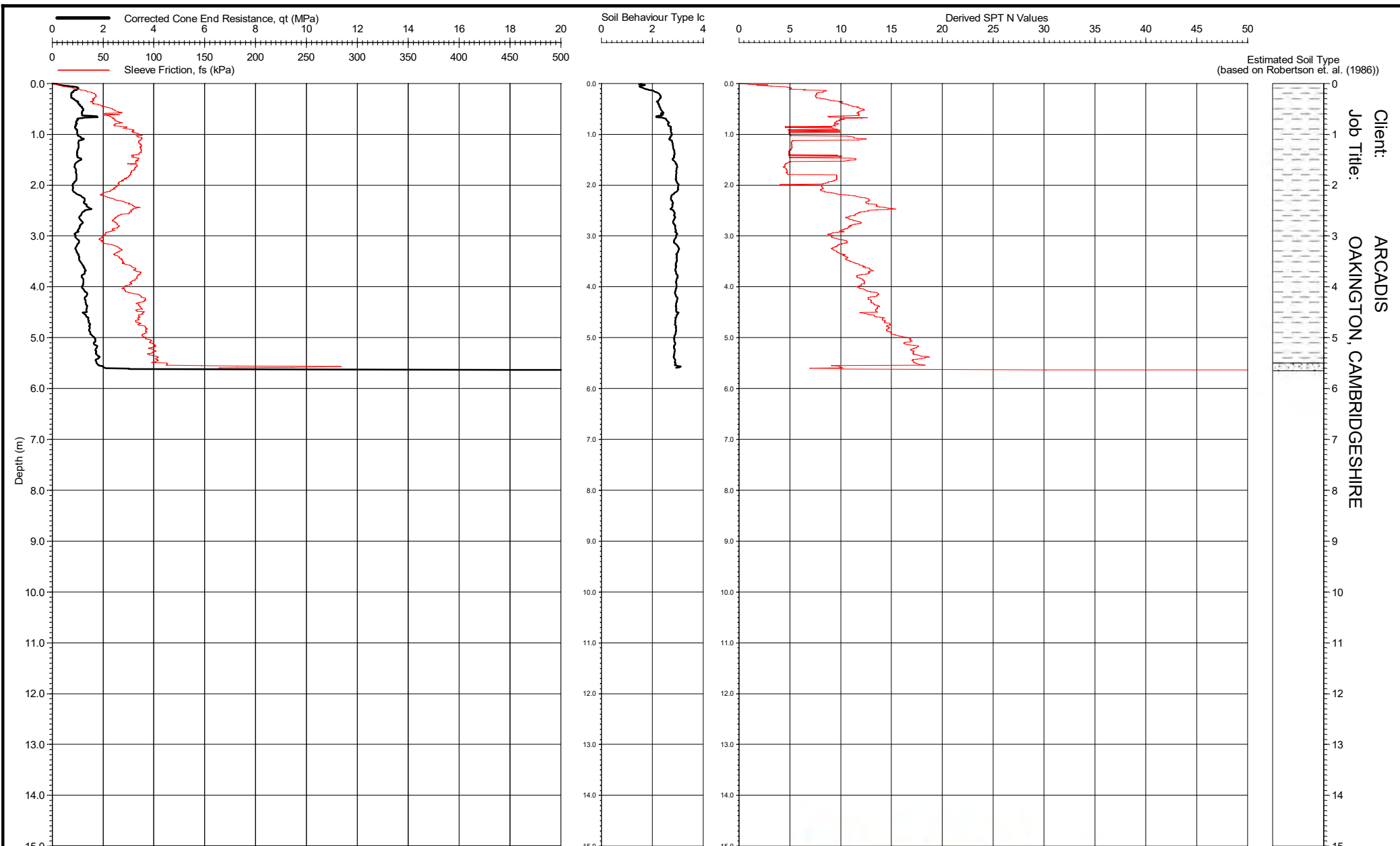


Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**

Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 21/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 617
 Checked By: **reg. 13**

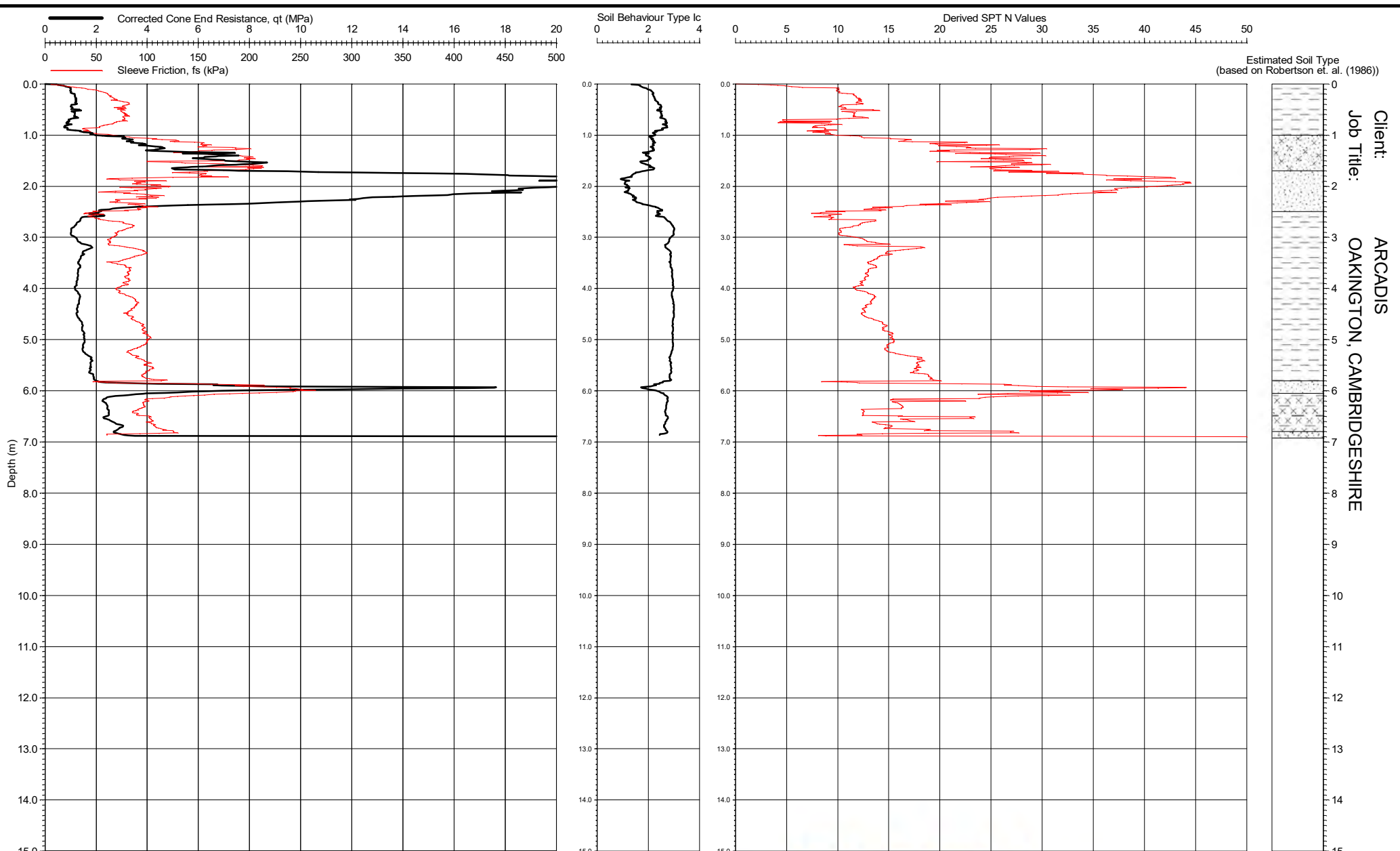
IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION CPT 617
 insitusi.com



Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 23/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 1203
 Checked By: **reg. 13**

IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION CPT 1203
 insitusi.com



Location: Oakington
 Coordinates: -
 Ground Level: -
 Cone & Rig Used: S15-CFIP.1458 - CPT 007
 Remarks: Test refused on total pressure.

Date of Test: 22/12/2016
 Date of Plot: 11/01/2017
 File Name: 1160427 - CPT 1204
 Checked By: **reg. 13**

IN SITU PIEZO CONE PENETRATION TEST
 SITE INVESTIGATION
 insitusi.com

CPT 1204

Form: CPT0003

Client: **ARCADIS**
 Job Title: **OAKINGTON, CAMBRIDGESHIRE**