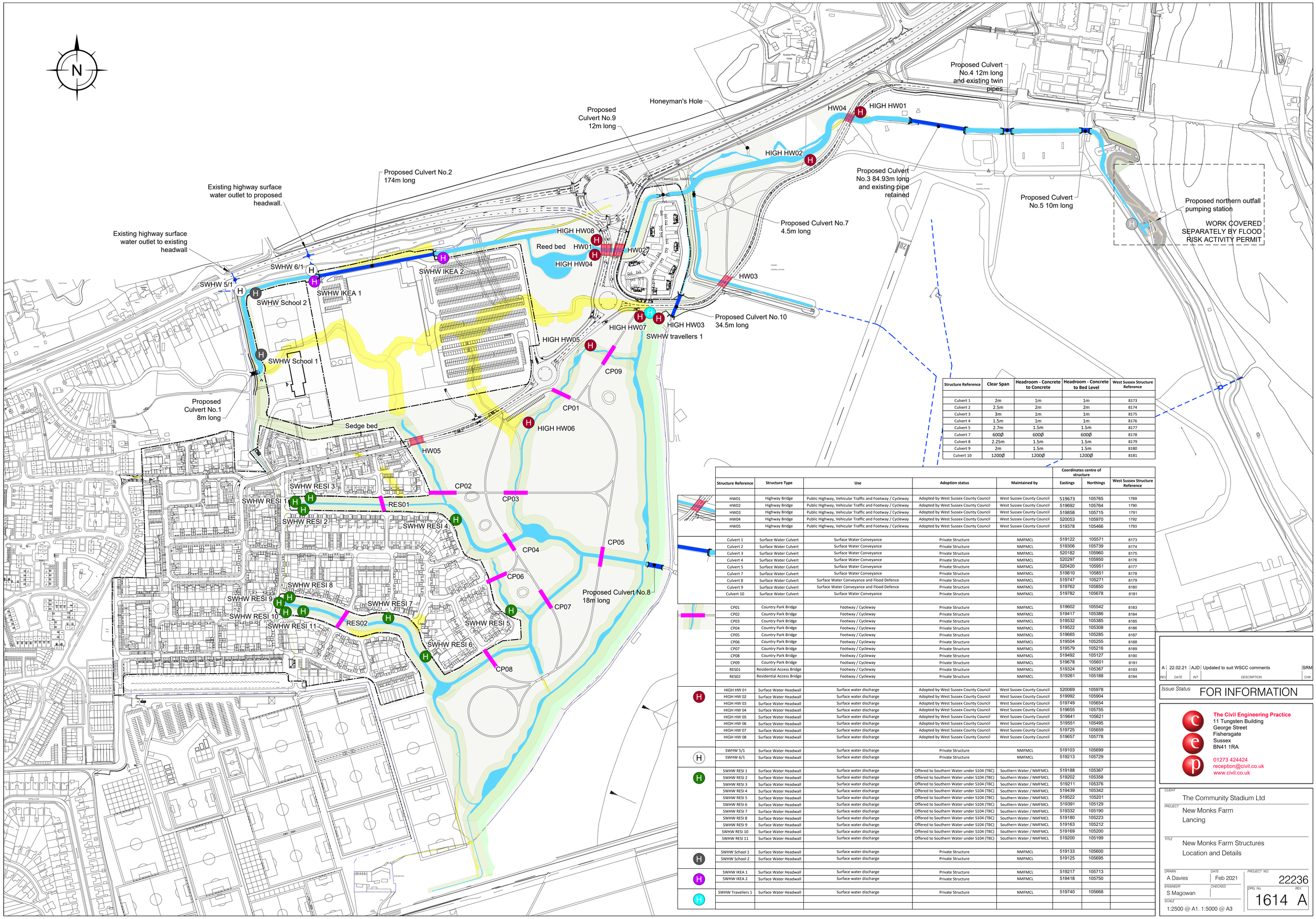

Structure Reference	Clear Span	Headroom - Concrete to Concrete	Headroom - Concrete to Bed Level	West Sussex Structure Reference
Culvert 1	2m	1m	1m	8173
Culvert 2	2.5m	2m	2m	8174
Culvert 3	3m	1m	1m	8175
Culvert 4	1.5m	1m	1m	8176
Culvert 5	2.7m	1.5m	1.5m	8177
Culvert 7	600Ø	600Ø	600Ø	8178
Culvert 8	2.25m	1.5m	1.5m	8179
Culvert 9	2m	1.5m	1.5m	8180
Culvert 10	1200Ø	1200Ø	1200Ø	8181

	Structure Reference	Structure Type	Use	Adoption status	Maintained by	Coordinates centre of structure		West Sussex Structure Reference
						Eastings	Northings	
	HW01	Highway Bridge	Public Highway, Vehicular Traffic and Footway / Cycleway	Adopted by West Sussex County Council	West Sussex County Council	519673	105765	1789
	HW02	Highway Bridge	Public Highway, Vehicular Traffic and Footway / Cycleway	Adopted by West Sussex County Council	West Sussex County Council	519692	105764	1790
	HW03	Highway Bridge	Public Highway, Vehicular Traffic and Footway / Cycleway	Adopted by West Sussex County Council	West Sussex County Council	519858	105715	1791
	HW04	Highway Bridge	Public Highway, Vehicular Traffic and Footway / Cycleway	Adopted by West Sussex County Council	West Sussex County Council	520053	105970	1792
	HW05	Highway Bridge	Public Highway, Vehicular Traffic and Footway / Cycleway	Adopted by West Sussex County Council	West Sussex County Council	519378	105466	1793
	Culvert 1	Surface Water Culvert	Surface Water Conveyance	Private Structure	NMFMCL	519122	105571	8173
	Culvert 2	Surface Water Culvert	Surface Water Conveyance	Private Structure	NMFMCL	519306	105739	8174
	Culvert 3	Surface Water Culvert	Surface Water Conveyance	Private Structure	NMFMCL	520182	105960	8175
	Culvert 4	Surface Water Culvert	Surface Water Conveyance	Private Structure	NMFMCL	520297	105950	8176
	Culvert 5	Surface Water Culvert	Surface Water Conveyance	Private Structure	NMFMCL	520420	105951	8177
	Culvert 7	Surface Water Culvert	Surface Water Conveyance	Private Structure	NMFMCL	519810	105851	8178
	Culvert 8	Surface Water Culvert	Surface Water Conveyance and Flood Defence	Private Structure	NMFMCL	519747	105271	8179
	Culvert 9	Surface Water Culvert	Surface Water Conveyance and Flood Defence	Private Structure	NMFMCL	519762	105850	8180
	Culvert 10	Surface Water Culvert	Surface Water Conveyance	Private Structure	NMFMCL	519782	105678	8181
	CP01	Country Park Bridge	Footway / Cycleway	Private Structure	NMFMCL	519602	105542	8183
	CP02	Country Park Bridge	Footway / Cycleway	Private Structure	NMFMCL	519417	105386	8184
	CP03	Country Park Bridge	Footway / Cycleway	Private Structure	NMFMCL	519532	105385	8185
	CP04	Country Park Bridge	Footway / Cycleway	Private Structure	NMFMCL	519522	105308	8186
	CP05	Country Park Bridge	Footway / Cycleway	Private Structure	NMFMCL	519665	105285	8187
	CP06	Country Park Bridge	Footway / Cycleway	Private Structure	NMFMCL	519504	105255	8188
	CP07	Country Park Bridge	Footway / Cycleway	Private Structure	NMFMCL	519579	105216	8189
	CP08	Country Park Bridge	Footway / Cycleway	Private Structure	NMFMCL	519492	105127	8190
	CP09	Country Park Bridge	Footway / Cycleway	Private Structure	NMFMCL	519678	105601	8191
	RES01	Residential Access Bridge	Footway / Cycleway	Private Structure	NMFMCL	519324	105367	8193
	RES02	Residential Access Bridge	Footway / Cycleway	Private Structure	NMFMCL	519261	105188	8194
H	HIGH HW 01	Surface Water Headwall	Surface water discharge	Adopted by West Sussex County Council	West Sussex County Council	520069	105978	
	HIGH HW 02	Surface Water Headwall	Surface water discharge	Adopted by West Sussex County Council	West Sussex County Council	519992	105904	
	HIGH HW 03	Surface Water Headwall	Surface water discharge	Adopted by West Sussex County Council	West Sussex County Council	519749	105654	
	HIGH HW 04	Surface Water Headwall	Surface water discharge	Adopted by West Sussex County Council	West Sussex County Council	519655	105755	
	HIGH HW 05	Surface Water Headwall	Surface water discharge	Adopted by West Sussex County Council	West Sussex County Council	519641	105821	
	HIGH HW 06	Surface Water Headwall	Surface water discharge	Adopted by West Sussex County Council	West Sussex County Council	519551	105495	
	HIGH HW 07	Surface Water Headwall	Surface water discharge	Adopted by West Sussex County Council	West Sussex County Council	519725	105659	
	HIGH HW 08	Surface Water Headwall	Surface water discharge	Adopted by West Sussex County Council	West Sussex County Council	519657	105778	
H	SWHW 5/1	Surface Water Headwall	Surface water discharge	Private Structure	NMFMCL	519103	105699	
	SWHW 6/1	Surface Water Headwall	Surface water discharge	Private Structure	NMFMCL	519213	105729	
H	SWHW RESI 1	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519188	105367	
	SWHW RESI 2	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519202	105358	
	SWHW RESI 3	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519211	105376	
	SWHW RESI 4	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519439	105342	
	SWHW RESI 5	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519522	105201	
	SWHW RESI 6	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519391	105129	
	SWHW RESI 7	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519332	105190	
	SWHW RESI 8	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519180	105223	
	SWHW RESI 9	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519163	105212	
	SWHW RESI 10	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519169	105200	
	SWHW RESI 11	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519200	105199	
H	SWHW School 1	Surface Water Headwall	Surface water discharge	Private Structure	NMFMCL	519133	105600	
	SWHW School 2	Surface Water Headwall	Surface water discharge	Private Structure	NMFMCL	519125	105695	
H	SWHW IKEA 1	Surface Water Headwall	Surface water discharge	Private Structure	NMFMCL	519217	105713	
	SWHW IKEA 2	Surface Water Headwall	Surface water discharge	Private Structure	NMFMCL	519418	105750	
H	SWHW Travellers 1	Surface Water Headwall	Surface water discharge	Private Structure	NMFMCL	519740	105668	

REV	DATE	INT	DESCRIPTION	CHK
A	22.02.21	AJD	Updated to suit WSCC comments	SRM

Issue Status: FOR INFORMATION

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CLIENT: The Community Stadium Ltd

PROJECT: New Monks Farm
Lancing

TITLE: New Monks Farm Structures
Location and Details

DRAWN	DATE	PROJECT NO.
A Davies	Feb 2021	22236
ENGINEER: S Magowan	CHECKED	
SCALE: 1:2500 @ A1. 1:5000 @ A3	DRG. No. 1614	REV. A

APPENDIX C – IDEALISED STRUCTURE

The following idealised structure is considered (output from LUSAS bridge).

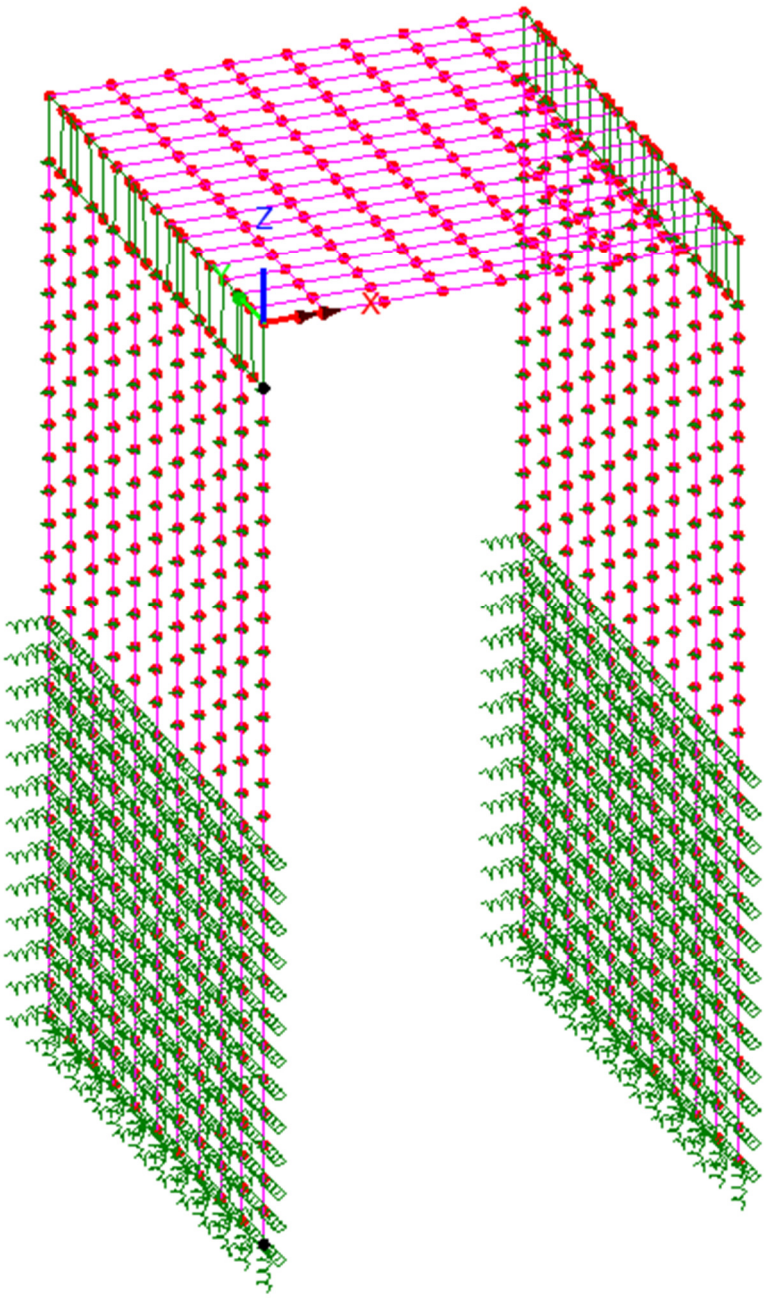


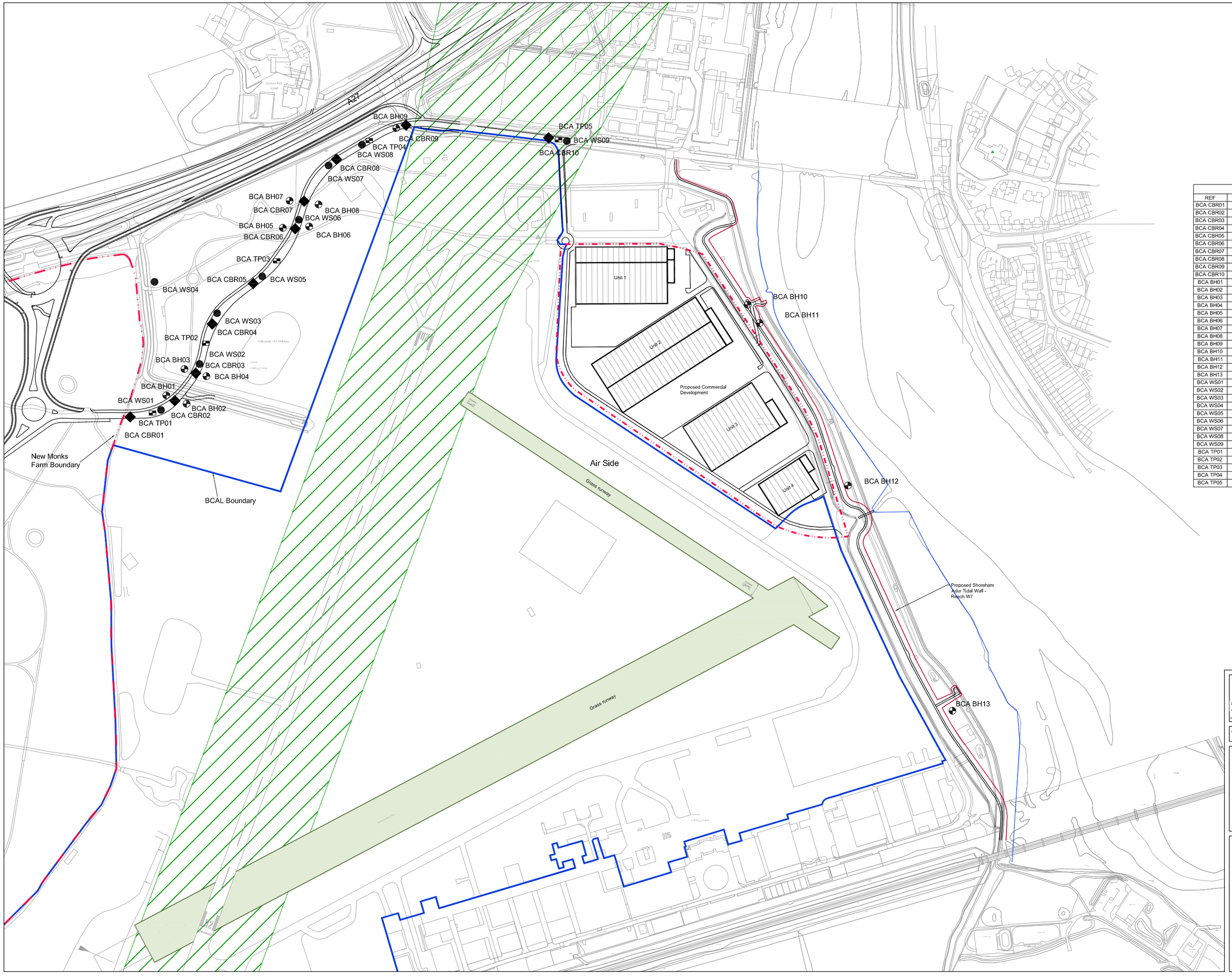
Figure 1 – Model output from LUSAS Bridge.

APPENDIX D – GEOTECHNICAL REPORT

Supplementary Investigation Report 18452/SIR_R27 dated September 2020:

i. Borehole log for BH06 (BCA);
ii. CPT record for CPT 203 & 204;
iii. Report wording extract.

Further details on request.



REF	TYPE	EASTING	NORTHING
BCA CBR01	CBR Test	519789,102	105676,275
BCA CBR02	CBR Test	519841,633	105695,328
BCA CBR03	CBR Test	519866,290	105727,632
BCA CBR04	CBR Test	519885,632	105785,511
BCA CBR05	CBR Test	519933,936	105833,164
BCA CBR06	CBR Test	519983,336	105897,522
BCA CBR07	CBR Test	519993,810	105929,994
BCA CBR08	CBR Test	520031,942	105979,293
BCA CBR09	CBR Test	520113,875	106019,376
BCA CBR10	CBR Test	520281,671	106004,462
BCA BH01	Borehole	519831,599	105701,643
BCA BH02	Borehole	519855,473	105691,718
BCA BH03	Borehole	519852,965	105732,534
BCA BH04	Borehole	519878,873	105724,064
BCA BH05	Borehole	519968,739	105898,603
BCA BH06	Borehole	519999,820	105900,184
BCA BH07	Borehole	519976,819	105930,543
BCA BH08	Borehole	520010,795	105926,169
BCA BH09	Borehole	520102,301	106015,970
BCA BH10	Borehole	520516,089	105808,248
BCA BH11	Borehole	520530,064	105786,738
BCA BH12	Borehole	520634,057	105595,540
BCA BH13	Borehole	520757,077	105330,546
BCA WS01	Window sample	519825,357	105684,405
BCA WS02	Window sample	519870,779	105738,502
BCA WS03	Window sample	519891,352	105798,262
BCA WS04	Window sample	519817,771	105835,147
BCA WS05	Window sample	519944,533	105841,589
BCA WS06	Window sample	519987,547	105908,122
BCA WS07	Window sample	520022,638	105971,980
BCA WS08	Window sample	520061,992	105996,434
BCA WS09	Window sample	520303,091	106000,796
BCA TP01	Trial pit	519815,293	105680,806
BCA TP02	Trial pit	519877,978	105762,911
BCA TP03	Trial pit	519961,538	105859,815
BCA TP04	Trial pit	520070,524	106001,327
BCA TP05	Trial pit	520293,440	106002,107

BCA BH — Location of proposed 30m deep boreholes

BCA WS — Location of proposed window samples

BCA CBR — Location of proposed CBR tests

BCA TP — Location of proposed trial pits

REV	DATE	INT	DESCRIPTION	CHK
B	27.03.17	AJD	Updated to suit Soils comments	
A	17.03.17	AJD	Updated to suit Soils comments	

Issue Status: PRELIMINARY

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the civil engineering practice

CLIENT: New Monks Farm Development Ltd

PROJECT: New Monks Farm
Lancing

TITLE: Site Layout
Site Investigation

DRAWN: A Davies | DATE: Mar 2017 | PROJECT NO: 22236

ENGINEER: G Waller | CHECKED:

SCALE: 1:2000 @ A1 1:4000 @ A3 | DRG. NO: 2606 | REV: B

Table 2.2 Ground Conditions

Strata	Epoch	Depth Encountered (m bgl)		Typical Thickness (m)	Typical Description
		Top	Base		
TS	Recent	G.L.	0.20–0.30	0.30	Dark brown slightly clayey fine to medium SAND
MG	Recent	G.L.	1.00–4.50	2.85	**Interbedded** **Granular:** Light brown slightly clayey gravelly SAND. Gravel was fine to medium sub-angular chalk, brick, concrete, tarmacadam and flint. Occasional organic material and odour **Cohesive:** Light orangey brown sandy slightly gravelly CLAY**.** Gravel was fine to medium sub-angular chalk, brick, concrete, tarmacadam and flint.
ALV (1)	Holocene	0.20–3.60	0.60–5.80	1.50	Light brown slightly gravelly sandy SILT. Gravel was fine to medium angular flint.
ALV (2)	Holocene	0.60–5.80	3.60[1]–26.50	15.30	Greyish brown slightly silty SAND.
ALV (U)	Holocene	9.00–24.70	10.50–26.70	5.60	**Interbedded** **Granular:** light brown slightly silty slightly sandy fine to coarse angular chalk and flint GRAVEL. **Cohesive:** Soft greyish brown slightly sandy SILT.
BTFU	Quaternary	0.30–1.70	10.50–12.60	11.60	**Granular:** Very loose to medium dense greyish slightly silty fine to medium SAND **Cohesive:** Soft greyish brown sandy SILT.
NCK	Santonian	10.50–12.60	18.00[1]–36.50[1]	Not Proven	Off white to white structureless CHALK recovering as fine to medium intact block chalk and rare fine to coarse angular flint in a slightly sandy clayey matrix.

Note: [1] Final depth of trial hole. [2] Base of strata not encountered

2.3 Ground Conditions Encountered in Trial Holes

The ground conditions encountered in trial holes have been described below in descending order. The engineering logs are presented in Appendix A.1.

2.3.1 Made Ground and Topsoil

Soils described as Made Ground were encountered in seventeen out of the twenty-one trial holes from ground level to depths ranging between 1.00 (BCA BH11) and 4.50m bgl (BCA BH01).

moisture slowly returns to the ground, can be substantial. The rate at which the ground recovers is very difficult to predict and if there is any doubt that recovery is complete then bored pile foundations with suspended beams and floors should be used".

Whilst not wholly applicable to non-residential buildings, such as those proposed on this part of the site, the guidance contained within NHBC Standards Chapter 4.2 is considered to represent good practice. The stated intention of the NHBC is to ensure that shrinkage and swelling of plastic soils does not adversely affect the structural integrity of foundations to such a degree that remedial works would be required to restore the serviceability of the building. It must be borne in mind that adherence to the NHBC tables and design recommendations may not, in all cases, totally prevent foundation movement and cracking of brickwork might occur.

The BRE Digest 240 suggests: *"Two courses of action are open:*

Estimate the potential for swelling or shrinkage and try to avoid large changes in the water content, for example by not planting trees near the foundations.

Accept that swelling or shrinkage will occur and take account of it. The foundations can be designed to resist resulting ground movements or the superstructure can be designed to accommodate movement without damage."

The design of foundations suitable to withstand movements is presented in BRE Digest 241 "Low-rise buildings on shrinkable clay soils: Part 2"

4.3 Foundation Scheme

Foundations **must not** be constructed within any Made Ground/Topsoil due to the likely variability and potential for large load induced settlements both total and differential.

Roots/rootlets were encountered in 10No. out of the twenty-one trial holes and persist to a depth of 4.00m bgl. If roots are encountered during the construction phase foundations **must not be placed within any live root penetrated** or desiccated **cohesive soils or those with a volume change potential**. Should the foundation excavations reveal such materials, the excavations **must** be extended to greater depth in order to bypass these unsuitable soils. Excavations must be checked by a suitable person prior to concrete being poured.

Considering the type of development, a piled foundation solution was considered the most suitable for both the proposed road bridges and for the proposed Pumping Station.

Although not strictly applicable to non-residential structures, the proposed Pumping Station development is likely to be both light and brittle. It is therefore considered that foundation design is undertaken using NHBC Standards Chapter 4.2. Given that soils with no volume change potential were found to overly those with a volume change

potential Clause 4.2-D6(f) should be used to assist in establishing the required foundation depth.

A foundation design of the commercial development has not be included as part of this report as this lay outside of the scope of this investigation. If required, a preliminary pile design could be undertaken for the proposed commercial development using information obtained from boreholes BCA BH10, BH11 and BH12 which were located close to the proposed commercial development.

4.3.1 Proposed Road Bridge 1

The proposed location of Road Bridge 1 was investigated by cable percussion boreholes BCA BH01, BH02, BH03 and BH04.

Where adopted, piled foundations must be taken through any Made Ground, Alluvium and Raised Beach Deposits, if encountered, into suitable strength soils of the Newhaven Chalk Formation.

The construction of a piled foundation is a specialist job with the actual pile working load depending on the pile type and installation method. Prior to finalising the foundation design the advice from a reputable contractor who is familiar with the ground and groundwater conditions present at the site should be sought.

The vertical load capacities are provided for varying diameters and lengths of bored piles taken into the Newhaven Chalk Formation, based on SPT “N” values and must only be used for preliminary design purposes. These values have been calculated for the worst-case scenario, which modelled the granular soils of Alluvium overlying the Newhaven Chalk Formation, encountered at variable depth, as the surface of the chalk was observed dipping downwards from east to west.

The depth of Made Ground was observed to be frequently greater than 3.50m bgl. Alluvium is likely to increase the load on the pile due to negative skin friction (NSF), this is due to potential large settlements within the Alluvium arising after any loading, including changes in effective stress, which due to adhesion between the soil and the shaft of the pile, increases the load on the pile. The NSF must be factored into the pile working loads with no factors of safety applied.

A multilayer approach was adopted for the calculation of the expected bearing capacity of piles, with granular soils of Alluvium considered overlying the Newhaven Chalk Formation.

A factor of safely of 3.0 was applied to the shaft within the Alluvium, while 1.5 was considered for the shaft where chalk was encountered; and a factor of safety of 3 was also applied to the base within the Alluvium, while a factor of 10 was applied to the base and depicted by the design lines outlined in Appendix C.1.

The bearing values given in Appendix C.1 are applicable to single piles. Where piles are to be constructed in groups the bearing value of each individual pile should be reduced by a factor of about 0.8 and a calculation made to check the factor of safety against block failure.

An example of preliminary pile service capacities, for the proposed Road Bridge 1, taken from the table presented in Appendix C.1 is as follows:

For a pile of 37.00m in length and 0.45m in diameter, a preliminary service capacity of approximately 1300kN has been calculated.

The results of the site investigation, however, showed that the depth to suitable soils of Newhaven Chalk Formation can be very variable, as the top of the layer was observed, where encountered, at depths ranging between 4.20m and 16.50m bgl. This evidence clearly indicates that considerable variability of the bearing capacity can be obtained across the site.

Actual pile working loads, therefore, will be dependent upon the piling technique adopted and on the characteristics of the soils in the particular location chosen for the construction of foundations. Dedicated analyses must therefore be carried out and values of bearing capacity valid for the whole site cannot be provided.

To prevent necking of the green concrete, temporary casing may be required where the pile passes through the Made Ground or Alluvium and below the groundwater table (if encountered). To achieve the full bearing value a pile should penetrate the bearing stratum by at least five times the pile diameter.

No allowance has been made for negative skin friction that could be generated where piles pass through Made Ground and Alluvium deposits underlying the site. The negative skin friction must be applied to the pile working load and must not be factored.

4.3.2 Proposed Road Bridge 2

The proposed location of Road Bridge 2 was investigated by cable percussion boreholes BCA BH05, BH06 and BH08.

Where adopted, piled foundations must be taken through any Made Ground, Alluvium and Raised Beach Deposits, if encountered, into suitable strength soils of the Newhaven Chalk Formation.

The construction of a piled foundation is a specialist job with the actual pile working load depending on the pile type and installation method. Prior to finalising the foundation design the advice from a reputable contractor who is familiar with the ground and groundwater conditions present at the site should be sought.

The vertical load capacities are provided for varying diameters and lengths of bored piles taken into the Newhaven Chalk Formation, based on SPT “N” values and must only be used for preliminary design purposes. These values have been calculated for the worst-case scenario, which modelled the granular soils of Alluvium overlying the Newhaven Chalk Formation, encountered at variable depth, as the surface of the chalk was observed dipping downwards from east to west.

The depth of Made Ground was observed to be frequently greater than 3.00m bgl. Alluvium is likely to increase the load on the pile due to negative skin friction (NSF), this is due to potential large settlements within the Alluvium arising after any loading, including changes in effective stress, which due to adhesion between the soil and the shaft of the pile, increases the load on the pile. The NSF must be factored into the pile working loads with no factors of safety applied.

A multilayer approach was adopted for the calculation of the expected bearing capacity of piles, with granular soils of Alluvium considered overlying the Newhaven Chalk Formation.

A factor of safely of 3.0 was applied to the shaft within the Alluvium, while 1.5 was considered for the shaft where chalk was encountered; a factor of safety of 3 was also applied to the base within the Alluvium, while a factor of 10 was applied to the base and depicted by the design lines outlined in Appendix C.12.

The bearing values given in Appendix C.1 are applicable to single piles. Where piles are to be constructed in groups the bearing value of each individual pile should be reduced by a factor of about 0.8 and a calculation made to check the factor of safety against block failure.

An example of preliminary pile service capacities, for the proposed Road Bridge 2, taken from the table presented in Appendix C.2 is as follows:

For a pile of 34.00m in length and 0.45m in diameter, a preliminary service capacity of 1085kN has been calculated.

The results of the site investigation, however, showed that the depth to suitable soils of Newhaven Chalk Formation can be very variable, as the top of the layer was observed, where encountered, at depths ranging between 4.20m and 16.50m bgl. This evidence clearly indicates that considerable variability of the bearing capacity can be obtained across the site.

Actual pile working loads, therefore, will be dependent upon the piling technique adopted and on the characteristics of the soils in the particular location chosen for the construction of foundations. Dedicated analyses must therefore be carried out and values of bearing capacity valid for the whole site cannot be provided.

To prevent necking of the green concrete, temporary casing may be required where the pile passes through the Made Ground or Alluvium and below the groundwater table (if encountered). To achieve the full bearing value a pile should penetrate the bearing stratum by at least five times the pile diameter.

No allowance has been made for negative skin friction that could be generated where piles pass through Made Ground and Alluvium deposits underlying the site. The negative skin friction must be applied to the pile working load and must not be factored.

4.3.3 Proposed Pumping Station

The proposed location of the Pumping Station was investigated by cable percussion boreholes BCA BH10 and BH11.

Where adopted, piled foundations must be taken through any Made Ground, Alluvium and Raised Beach Deposits, if encountered, into suitable strength soils of the Newhaven Chalk Formation.

The construction of a piled foundation is a specialist job with the actual pile working load depending on the pile type and installation method. Prior to finalising the foundation design the advice from a reputable contractor who is familiar with the ground and groundwater conditions present at the site should be sought.

The vertical load capacities are provided for varying diameters and lengths of bored piles taken into the Newhaven Chalk Formation, based on SPT “N” values and must only be used for preliminary design purposes. These values have been calculated for the worst-case scenario, which modelled the granular soils of Alluvium overlying the Newhaven Chalk Formation, encountered at variable depth, as the surface of the chalk was observed dipping downwards from east to west.

The depth of Made Ground was observed to be of the order of 1.00m bgl. Alluvium is likely to increase the load on the pile due to negative skin friction (NSF), this is due to potential large settlements within the Alluvium arising after any loading, including changes in effective stress, which due to adhesion between the soil and the shaft of the pile, increases the load on the pile. The NSF must be factored into the pile working loads with no factors of safety applied.

A multilayer approach was adopted for the calculation of the expected bearing capacity of piles, with granular soils of Alluvium considered overlying the Newhaven Chalk Formation.

A factor of safely of 3.0 was applied to the shaft within the Alluvium, while 1.5 was considered for the shaft where chalk was encountered; a factor of safety of 3 was also applied to the base within the Alluvium, while a factor of 10 was applied to the base and depicted by the design lines outlined in Appendix C.13.

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Newton House, Cross Road, Tadworth KT20 5SR
Tel: 01737 814221 Email: admin@soilslimited.co.uk

Borehole Log

Borehole No. **BCA01**
Sheet 1 of 4

Project Name: BCAL - S38	Project No.: 16141 - BCAL - BH	Co-ords: E519838.06 N105682.02	Hole Type BH
Location: Brighton City Airport		Level: 4.20m AOD	Scale 1:50
Client: Brighton City Airport Limited		Dates: 02/05/2017	Logged By CB

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m AOD)	Legend	Stratum Description
		0.25	D					Light brown clayey sand with fragments of brick and ash. MADE GROUND
		0.50	D		0.50	3.70		
		0.50 - 1.00	B					Off white weathered chalk with fragments of brick. MADE GROUND.
		1.00	D					
		1.50	S		1.50	2.70		
		1.50	SPT	N=21 (1,3/7,5,4,5)				Light brown clayey gravelly sand with fragments of brick and concrete. MADE GROUND
		2.00	D					
		2.50	D					
		2.50	SPT	N=20 (4,6/6,5,5,4)				
		3.00	S					
		3.50	D					
		3.50	SPT	N=2 (1,0/1,0,1,0)				
		4.00	D					
		4.50	S		4.50	-0.30		
		4.50	SPT	N=1 (4,0/0,1,0,0)				Very loose light greyish brown slightly silty fine to course SAND. ALLUVIUM (2).
		5.00	D					
		6.00	S		6.00	-1.80		
		6.00	SPT	N=7 (1,0/0,2,3,2)				Loose light greyish brown silty SAND. ALLUVIUM (2).
		7.00	D					
		7.50	S					
		7.50	SPT	N=4 (1,1/1,1,1,1)				
		8.00	D					
		9.00	S					
		9.00	SPT	N=10 (2,2/3,3,2,2)				
		10.00	D					

Continued on Next Sheet

General Remarks:

Moved to area outside of the gas easement. Hand dug inspection pit to 1.20m. Water added throughout to aid drilling. Borehole was cased to 36.00m bgl.

Groundwater Remarks:

Groundwater strike was not observed.

Borehole Type
CP: Cable Percussive
WS: Windowless Sampler
RC: Rotary Cored

Sample Types
D: Disturbed
B: Bulk
J: Jar
W: Water
U: Undisturbed

In-Situ Testing
SPT: Split spoon - Standard Penetration Test
CPT: Cone - Standard Penetration Test

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Borehole Log

Borehole No.
BCA01
Sheet 2 of 4

Project Name: BCAL - S38	Project No.: 16141 - BCAL - BH	Co-ords: E519838.06 N105682.02	Hole Type BH
Location: Brighton City Airport		Level: 4.20m AOD	Scale 1:50
Client: Brighton City Airport Limited		Dates: 02/05/2017	Logged By CB

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		10.50	S					Loose light greyish brown silty SAND. ALLUVIUM (2).
		10.50	SPT	N=5 (2,1/1,2,1,1)				
		11.00	D					
		12.00	S					
		12.00	SPT	N=5 (1,1/1,1,2,1)				
		13.00	D					
		13.50	S		13.50	-9.30		
		13.50	SPT	N=6 (1,1/1,2,1,2)				Loose to medium dense light greyish brown silty SAND. ALLUVIUM (2).
		14.00	D					
		15.00	S					
		15.00	SPT	N=5 (2,1/1,1,2,1)				
		16.00	D					
		16.50	S					
		16.50	SPT	N=5 (1,2/1,1,1,2)				
		17.00	D					
		18.00	S					
		18.00	SPT	N=5 (1,1/1,1,1,2)				
		19.00	D					
		19.50	SPT	N=4 (1,2/1,1,1,1)				
		20.00	S					

Continued on Next Sheet

General Remarks:

Moved to area outside of the gas easement. Hand dug inspection pit to 1.20m. Water added throughout to aid drilling. Borehole was cased to 36.00m bgl.

Groundwater Remarks:

Groundwater strike was not observed.

Borehole Type
CP: Cable Percussive
WS: Windowless Sampler
RC: Rotary Cored

Sample Types
D: Disturbed
B: Bulk
J: Jar
W: Water
U: Undisturbed

In-Situ Testing
SPT: Split spoon - Standard Penetration Test
CPT: Cone - Standard Penetration Test

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Borehole Log

Borehole No. **BCA01** Sheet 3 of 4

Project Name: BCAL - S38	Project No.: 16141 - BCAL - BH	Co-ords: E519838.06 N105682.02	Hole Type BH
Location: Brighton City Airport		Level: 4.20m AOD	Scale 1:50
Client: Brighton City Airport Limited		Dates: 02/05/2017	Logged By CB

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m AOD)	Legend	Stratum Description
								Loose to medium dense light greyish brown silty SAND. ALLUVIUM (2).
		21.00 21.00	D SPT	N=8 (1,1/1,2,2,3)				
		22.00	S					
		22.50 22.50	D SPT	N=5 (1,2/1,1,1,2)				
		24.00 24.00	S SPT	N=13 (1,1/1,2,3,7)				
		24.40	B		24.40	-20.20		Medium dense light brown slight silty slightly sandy GRAVEL. Gravels are fine to coarse, angular chalk and flint. ALLUVIUM (2).
		25.00	D					
		25.50 25.50	B CPT	N=23 (3,4/6,5,6,6)				
		26.50	B		26.50	-22.30		Off white to white CHALK recovering as sandy gravel with slight clayey matrix. Occasional cobbles of weak chalk. Few fine to course angular flints. Grade Dm. NEWHAVEN CHALK FORMATION.
		27.00 27.00	S SPT	N=19 (3,2/2,4,5,8)				
		28.00	D		28.00	-23.80		Off white to white CHALK recovering as sandy gravel with slight clayey matrix. Occasional cobbles of weak chalk. Few fine to course angular flints. Grade Dc. NEWHAVEN CHALK FORMATION.
		28.50 28.50	S SPT	N=24 (4,4/5,6,5,8)				
		29.00	D					
		30.00 30.00	S SPT	N=42 (5,5/7,6,10,19)				

Continued on Next Sheet

General Remarks:

Moved to area outside of the gas easement. Hand dug inspection pit to 1.20m. Water added throughout to aid drilling. Borehole was cased to 36.00m bgl.

Groundwater Remarks:

Groundwater strike was not observed.

Borehole Type
CP: Cable Percussive
WS: Windowless Sampler
RC: Rotary Cored

Sample Types
D: Disturbed
B: Bulk
J: Jar
W: Water
U: Undisturbed

In-Situ Testing
SPT: Split spoon - Standard Penetration Test
CPT: Cone - Standard Penetration Test

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Borehole Log

Borehole No. **BCA01**
Sheet 4 of 4

Project Name: BCAL - S38	Project No.: 16141 - BCAL - BH	Co-ords: E519838.06 N105682.02	Hole Type BH
Location: Brighton City Airport		Level: 4.20m AOD	Scale 1:50
Client: Brighton City Airport Limited		Dates: 02/05/2017	Logged By CB

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Off white to white CHALK recovering as sandy gravel with slight clayey matrix. Occasional cobbles of weak chalk. Few fine to course angular flints. Grade Dc. NEWHAVEN CHALK FORMATION.
		31.00	D					
		31.50 31.50	S SPT	N=22 (4,5/5,6,5,6)				
		32.00	D					
		33.00 33.00	S SPT	N=22 (5,5/5,5,6,6)				
		34.00	D					
		34.50 34.50	S SPT	18 (4,4/5,6,7,)				
		35.00	D					
		36.00 36.00	S SPT	N=60 (7,14/60 for 280mm)				
					36.50	-32.30		End of Borehole at 36.50m

General Remarks:

Moved to area outside of the gas easement. Hand dug inspection pit to 1.20m. Water added throughout to aid drilling. Borehole was cased to 36.00m bgl.

Groundwater Remarks:

Groundwater strike was not observed.

Borehole Type
CP: Cable Percussive
WS: Windowless Sampler
RC: Rotary Cored

Sample Types
D: Disturbed
B: Bulk
J: Jar
W: Water
U: Undisturbed

In-Situ Testing
SPT: Split spoon - Standard Penetration Test
CPT: Cone - Standard Penetration Test

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Borehole Log

Borehole No. **BCA02**
Sheet 1 of 4

Project Name: BCAL - S38	Project No.: 16141 - BCAL - BH	Co-ords: E519857.35 N105675.39	Hole Type BH
Location: Brighton City Airport		Level: 4.21m AOD	Scale 1:50
Client: Brighton City Airport Limited		Dates: 03/05/2017 - 04/05/2017	Logged By CB

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.25	D					Soft light brown sandy slightly gravelly CLAY. Gravels are fine to to medium, angular chalk and flint. Frequent fragments of brick and concrete. MADE GROUND.
		0.50 - 1.00	B					
		1.20	S					
		1.20	SPT	N=14 (2,3/4,5,3,2)				
		1.50	D					
		2.00	S					
		2.00	SPT	N=17 (4,7/8,4,2,3)				
		2.50	D					
		3.00	S					
		3.00	SPT	N=15 (4,3/4,7,2,2)				
		3.50	D					
					3.60	0.61		Soft light brown sandy slightly gravelly SILT. Gravels are fine to medium, angular flint. ALLUVIUM (1).
		4.00	S					
		4.00	SPT	4 (1,/,2,1,1)				
		4.50	D					
		5.00	S					
		5.00	SPT	3 (1,1/1,1,1,)				
					5.80	-1.59		Loose to medium dense greyish brown slightly silty SAND. ALLUVIUM (2).
		6.00	D					
		6.50	S					
		6.50	SPT	N=10 (1,2/2,3,2,3)				
		7.50	D					
		8.00	S					
		8.00	SPT	N=8 (1,/1,2,2,3)				
		9.00	D					
		9.50	S					
		9.50	SPT	N=11 (2,2/3,3,2,3)				

Continued on Next Sheet

General Remarks:
Hand Pit ground level to 1.2m BH complete backfill with arisings. Casing from 5.5m to 30.5m 150mm SPT Hammer 04

Groundwater Remarks:
Fast rate of inflow

Borehole Type
CP: Cable Percussive
WS: Windowless Sampler
RC: Rotary Cored

Sample Types
D: Disturbed
B: Bulk
J: Jar
W: Water
U: Undisturbed

In-Situ Testing
SPT: Split spoon - Standard Penetration Test
CPT: Cone - Standard Penetration Test

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Borehole Log

Borehole No. **BCA02**
Sheet 2 of 4

Project Name: BCAL - S38	Project No.: 16141 - BCAL - BH	Co-ords: E519857.35 N105675.39	Hole Type BH
Location: Brighton City Airport		Level: 4.21m AOD	Scale 1:50
Client: Brighton City Airport Limited		Dates: 03/05/2017 - 04/05/2017	Logged By CB

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		10.50	D					Loose to medium dense greyish brown slightly silty SAND. ALLUVIUM (2).
		11.00 11.00	S SPT	N=10 (1,2/2,3,2,3)				
		12.00	D		11.80	-7.59		Loose to medium dense greyish brown silty SAND. Intermittent pockets of sandy silt. ALLUVIUM (2).
		12.50 12.50	S SPT	N=12 (2,2/3,4,3,2)				
		13.50	D					
		14.00 14.00	S SPT	N=9 (1,/2,2,3,2)				
		15.00	D					
		15.50 15.50	S SPT	N=9 (2,2/1,2,3,3)				
		16.50	D					
		17.00 17.00	S SPT	N=8 (1,2/2,1,2,3)				
		18.00	D					
		18.50 18.50	S SPT	N=9 (2,2/3,2,2,2)				
		19.50	D					
		20.00 20.00	S SPT	N=7 (1,1/2,1,2,2)				Continued on Next Sheet

General Remarks:
Hand Pit ground level to 1.2m BH complete backfill with arisings. Casing from 5.5m to 30.5m 150mm SPT Hammer 04

Groundwater Remarks:
Fast rate of inflow

Borehole Type
CP: Cable Percussive
WS: Windowless Sampler
RC: Rotary Cored

Sample Types
D: Disturbed
B: Bulk
J: Jar
W: Water
U: Undisturbed

In-Situ Testing
SPT: Split spoon - Standard Penetration Test
CPT: Cone - Standard Penetration Test

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Borehole Log

Borehole No. **BCA02**
Sheet 3 of 4

Project Name: BCAL - S38	Project No.: 16141 - BCAL - BH	Co-ords: E519857.35 N105675.39	Hole Type BH
Location: Brighton City Airport		Level: 4.21m AOD	Scale 1:50
Client: Brighton City Airport Limited		Dates: 03/05/2017 - 04/05/2017	Logged By CB

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Loose to medium dense greyish brown silty SAND. Intermittent pockets of sandy silt. ALLUVIUM (2).
		21.00	D					
		21.50 21.50	S SPT	N=12 (2,2/3,3,4,2)				
		22.50	D					
		23.00	S					
		24.00	D					
	▽	24.50 24.50	S SPT	N=8 (2,2/3,2,1,2)	24.70	-20.49		
								Medium dense light brown slightly sandy GRAVEL. Gravels are fine to coarse, angular flint and chalk. ALLUVIUM (2).
		26.00 26.00 26.00	B+C D CPT	N=23 (3,4/5,7,4,7)				
		26.70	S		26.70	-22.49		
								Off white to white structureless CHALK recovering as sandy gravel with slightly clayey matrix. Occasional cobbles of weak chalk. Grade Dc. NEWHAVEN CHALK FORMATION.
		27.50	SPT	N=9 (2,2/2,2,2,3)				
		28.50	D					
		29.00 29.00	S SPT	N=24 (3,4/5,7,5,7)				
		30.00	D					
								Continued on Next Sheet

General Remarks:
Hand Pit ground level to 1.2m BH complete backfill with arisings. Casing from 5.5m to 30.5m 150mm SPT Hammer 04

Groundwater Remarks:
Fast rate of inflow

Borehole Type
CP: Cable Percussive
WS: Windowless Sampler
RC: Rotary Cored

Sample Types
D: Disturbed
B: Bulk
J: Jar
W: Water
U: Undisturbed

In-Situ Testing
SPT: Split spoon - Standard Penetration Test
CPT: Cone - Standard Penetration Test

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Borehole Log

Borehole No. **BCA02** Sheet 4 of 4

Project Name: BCAL - S38	Project No.: 16141 - BCAL - BH	Co-ords: E519857.35 N105675.39	Hole Type BH
Location: Brighton City Airport		Level: 4.21m AOD	Scale 1:50
Client: Brighton City Airport Limited		Dates: 03/05/2017 - 04/05/2017	Logged By CB

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m AOD)	Legend	Stratum Description
		30.50 30.50	S SPT	N=41 (4,7/9,11,12,9)				Off white to white structureless CHALK recovering as sandy gravel with slightly clayey matrix. Occasional cobbles of weak chalk. Grade Dc. NEWHAVEN CHALK FORMATION.
		31.00	D		31.00	-26.79		End of Borehole at 31.00m

31 32 33 34 35 36 37 38 39 40

General Remarks:
Hand Pit ground level to 1.2m BH complete backfill with arisings. Casing from 5.5m to 30.5m 150mm SPT Hammer 04

Groundwater Remarks:
Fast rate of inflow

Borehole Type
CP: Cable Percussive
WS: Windowless Sampler
RC: Rotary Cored

Sample Types
D: Disturbed
B: Bulk
J: Jar
W: Water
U: Undisturbed

In-Situ Testing
SPT: Split spoon - Standard Penetration Test
CPT: Cone - Standard Penetration Test

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Borehole Log

Borehole No. **BCA03**
Sheet 1 of 4

Project Name: BCAL - S38	Project No.: 16141 - BCAL - BH	Co-ords: E519852.84 N105732.53	Hole Type BH
Location: Brighton City Airport		Level: 3.87m AOD	Scale 1:50
Client: Brighton City Airport Limited		Dates: 04/05/2017	Logged By CB

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.25	D					Medium dense light brown slightly clayey gravelly SAND. Gravels are fine to medium, sub-angular chalk and flint. Fragments of brick and concrete. MADE GROUND.
		0.50 - 1.00	B					
		1.20	S					
		1.20	SPT	N=7 (1,2/1,2,3,1)				
		1.50	D					
		2.00	S					
		2.00	SPT	3 (1,/,1,2,)	2.10	1.77		Soft to firm brown mottled blue sandy slightly gravelly CLAY. Gravels are fine, angular chalk and flint. MADE GROUND.
		2.50	D					
		3.00	S					
		3.00	SPT	2 (1,/,1,,1)				
		3.50	D		3.50	0.37		Soft to firm light brown mottled blue sandy CLAY. ALLUVIUM (1).
		4.00 - 4.45	U	Ublow=15				
		4.50	D		4.20	-0.33		Very loose to medium dense greyish brown silty SAND. Intermittent pockets of silty slightly clayey. ALLUVIUM (2).
		5.00	S					
		5.00	SPT	2 (1,/,1,,1)				
		6.00	D					
		6.50	S					
		6.50	SPT	3 (1,/1,,1,1)				
		7.50	D					
		8.00	S					
		8.00	SPT	4 (1,/1,2,1,)				
		9.00	D					
		9.50	S					
		9.50	SPT	N=7 (1,1/1,2,2,2)				

Continued on Next Sheet

General Remarks:

Hand Pit from ground level to 1.2m. Borehole backfilled with arisings upon completion. Borehole cased to 30.4m. SPT Hammer number 04

Groundwater Remarks:

Groundwater strike was not observed. Groundwater standing @ 6.20 m bgl at start of shift on 05/05/17.

Borehole Type
CP: Cable Percussive
WS: Windowless Sampler
RC: Rotary Cored

Sample Types
D: Disturbed
B: Bulk
J: Jar
W: Water
U: Undisturbed

In-Situ Testing
SPT: Split spoon - Standard Penetration Test
CPT: Cone - Standard Penetration Test

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Borehole Log

Borehole No.
BCA03
Sheet 2 of 4

Project Name: BCAL - S38	Project No.: 16141 - BCAL - BH	Co-ords: E519852.84 N105732.53	Hole Type BH
Location: Brighton City Airport		Level: 3.87m AOD	Scale 1:50
Client: Brighton City Airport Limited		Dates: 04/05/2017	Logged By CB

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Very loose to medium dense greyish brown silty SAND. Intermittent pockets of silty slightly clayey. ALLUVIUM (2).
		10.50	D					
		11.00 11.00	S SPT	N=6 (1,2/1,2,1,2)				
		12.00	D					
		12.50 12.50	S SPT	N=8 (1,2/2,3,2,1)				
		13.50	D					
		14.00 14.00	S SPT	N=10 (2,2/3,3,2,2)				
		15.00	D					
		15.50 15.50	S SPT	N=9 (1,1/1,2,3,3)				
		16.50	D					
		17.00 17.00	S SPT	N=10 (1,2/2,3,2,3)				
		18.00	D					
		18.50	SPT	N=10 (2,2/3,3,2,2)				
		19.50	D					
		20.00 20.00	S SPT	N=8 (2,1/2,2,1,3)				

Continued on Next Sheet

11 12 13 14 15 16 17 18 19 20

General Remarks:

Hand Pit from ground level to 1.2m. Borehole backfilled with arisings upon completion. Borehole cased to 30.4m. SPT Hammer number 04

Groundwater Remarks:

Groundwater strike was not observed. Groundwater standing @ 6.20 m bgl at start of shift on 05/05/17.

Borehole Type
CP: Cable Percussive
WS: Windowless Sampler
RC: Rotary Cored

Sample Types
D: Disturbed
B: Bulk
J: Jar
W: Water
U: Undisturbed

In-Situ Testing
SPT: Split spoon - Standard Penetration Test
CPT: Cone - Standard Penetration Test

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Borehole Log

Borehole No. **BCA03** Sheet 3 of 4

Project Name: BCAL - S38	Project No.: 16141 - BCAL - BH	Co-ords: E519852.84 N105732.53	Hole Type BH
Location: Brighton City Airport		Level: 3.87m AOD	Scale 1:50
Client: Brighton City Airport Limited		Dates: 04/05/2017	Logged By CB

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		21.00	D					Very loose to medium dense greyish brown silty SAND. Intermittent pockets of silty slightly clayey. ALLUVIUM (2).
		21.50 21.50	S SPT	N=9 (2,2/2,2,3,2)				
		22.50	D		22.50	-18.63		Soft greyish brown slightly sandy SILT. ALLUVIUM (UNDIFFERENTIATED).
		23.00 23.00	S SPT	N=9 (1,2/2,3,2,2)				
		24.00	D					
		24.50 - 25.00 24.50	B CPT	N=12 (2,3/2,3,4,3)	24.30	-20.43		Medium dense light brown slightly silty slightly sandy GRAVEL. Gravels are fine to coarse, angular chalk and flints. ALLUVIUM (UNDIFFERENTIATE).
		26.00 - 26.50 26.00	B CPT	N=23 (3,4/5,7,4,7)				
		27.20	D		26.70	-22.83		Off white to white structureless CHALK recovering as gravelly cobbles with sandy clay matrix. With frequent cobbles of weak to moderate chalk. Grade Dc. NEWHAVEN CHALK FORMATION.
		27.50 27.50	S SPT	N=24 (3,9/6,5,7,6)				
		28.50	D					
		29.00 29.00	S SPT	N=24 (7,8/7,4,6,7)				
		30.00	D					Continued on Next Sheet

21 22 23 24 25 26 27 28 29 30

General Remarks:

Hand Pit from ground level to 1.2m. Borehole backfilled with arisings upon completion. Borehole cased to 30.4m. SPT Hammer number 04

Groundwater Remarks:

Groundwater strike was not observed. Groundwater standing @ 6.20 m bgl at start of shift on 05/05/17.

Borehole Type
CP: Cable Percussive
WS: Windowless Sampler
RC: Rotary Cored

Sample Types
D: Disturbed
B: Bulk
J: Jar
W: Water
U: Undisturbed

In-Situ Testing
SPT: Split spoon - Standard Penetration Test
CPT: Cone - Standard Penetration Test

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Borehole Log

Borehole No.
BCA03
Sheet 4 of 4

Project Name: BCAL - S38	Project No.: 16141 - BCAL - BH	Co-ords: E519852.84 N105732.53	Hole Type BH
Location: Brighton City Airport		Level: 3.87m AOD	Scale 1:50
Client: Brighton City Airport Limited		Dates: 04/05/2017	Logged By CB

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		30.50 30.50	S SPT	N=32 (7,8/9,8,7,8)	30.50	-26.63		Off white to white structureless CHALK recovering as gravelly cobbles with sandy clay matrix. With frequent cobbles of weak to moderate chalk. Grade Dc. NEWHAVEN CHALK FORMATION. End of Borehole at 30.50m

31
32
33
34
35
36
37
38
39
40

General Remarks:

Hand Pit from ground level to 1.2m. Borehole backfilled with arisings upon completion. Borehole cased to 30.4m. SPT Hammer number 04

Groundwater Remarks:

Groundwater strike was not observed. Groundwater standing @ 6.20 m bgl at start of shift on 05/05/17.

Borehole Type
CP: Cable Percussive
WS: Windowless Sampler
RC: Rotary Cored

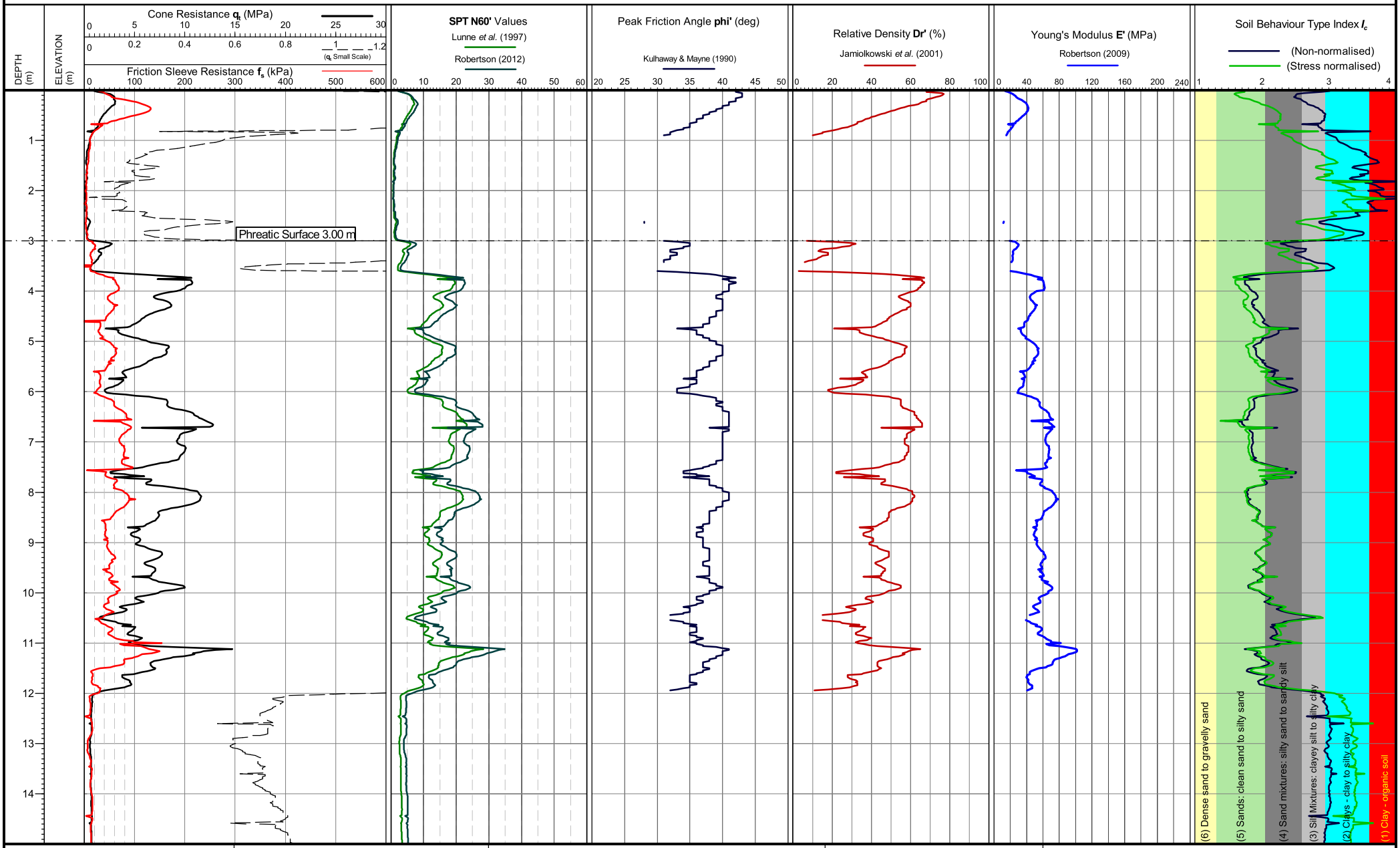
Sample Types
D: Disturbed
B: Bulk
J: Jar
W: Water
U: Undisturbed

In-Situ Testing
SPT: Split spoon - Standard Penetration Test
CPT: Cone - Standard Penetration Test

LANKELMA

Project: NEW MONKS FARM

Client: SOILS LIMITED



Cone area (mm2):1500
Cone ID: S15-CFIPM(100).1431
Operator: Gerard Balp
Date of test: 22/07/2020 14:28:00

Location: West Sussex, UK
Coordinates: ,
Elevation:
Coordinate system:

Both drained and undrained parameters are calculated for mixed SBTs = Ic 2.40-2.70. See report text for methods and discussion of parameter evaluation.

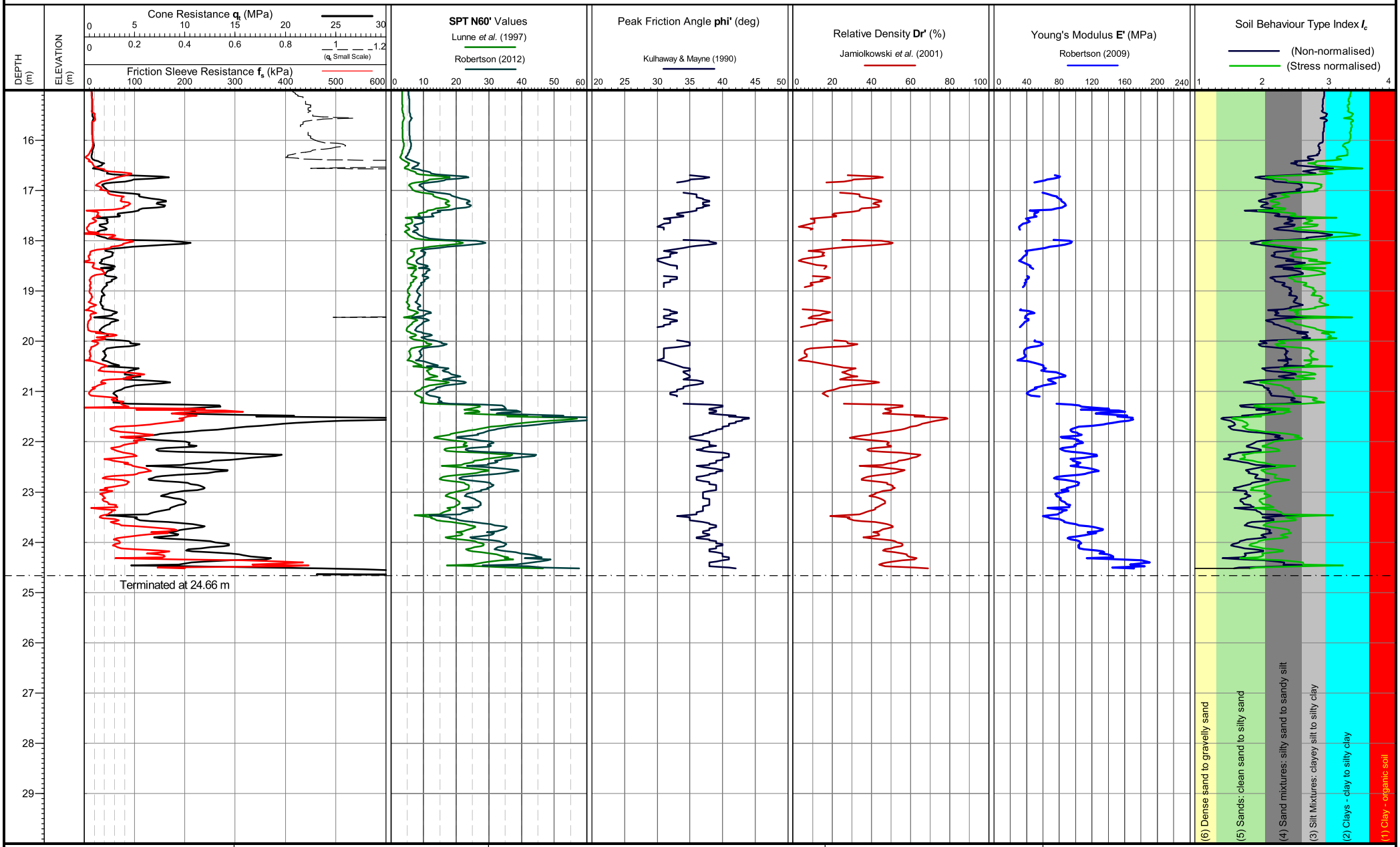
Date of plot: 23-07-20
Checked by: Chris Player

Lankelma Project Ref: P-107502-7

TEST ID: CPT203

Project: NEW MONKS FARM

Client: SOILS LIMITED



Cone area (mm2):1500
Cone ID: S15-CFIPM(100).1431
Operator: Gerard Balp
Date of test: 22/07/2020 14:28:00

Location: West Sussex, UK
Coordinates: ,
Elevation:
Coordinate system:

Both drained and undrained parameters are calculated for mixed SBTs = Ic 2.40-2.70. See report text for methods and discussion of parameter evaluation.

Date of plot: 23-07-20
Checked by: Chris Player

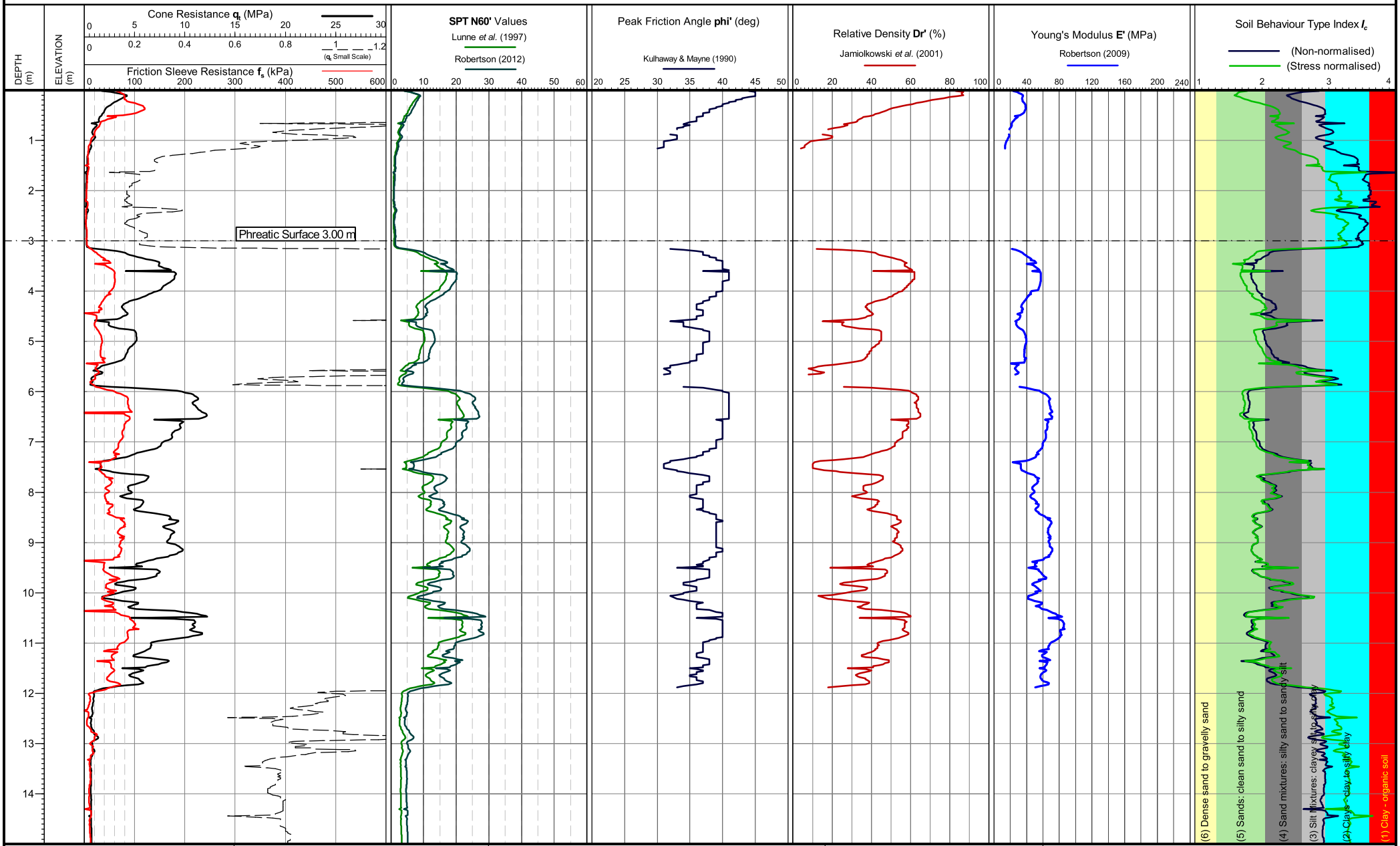
Lankelma Project Ref: P-107502-7

TEST ID: CPT203

LANKELMA

Project: NEW MONKS FARM

Client: SOILS LIMITED



Cone area (mm2):1500
Cone ID: S15-CFIPM(100).1431
Operator: Gerard Balp
Date of test: 22/07/2020 15:38:00

Location: West Sussex, UK
Coordinates: ,
Elevation:
Coordinate system:

Both drained and undrained parameters are calculated for mixed SBTs = Ic 2.40-2.70. See report text for methods and discussion of parameter evaluation.

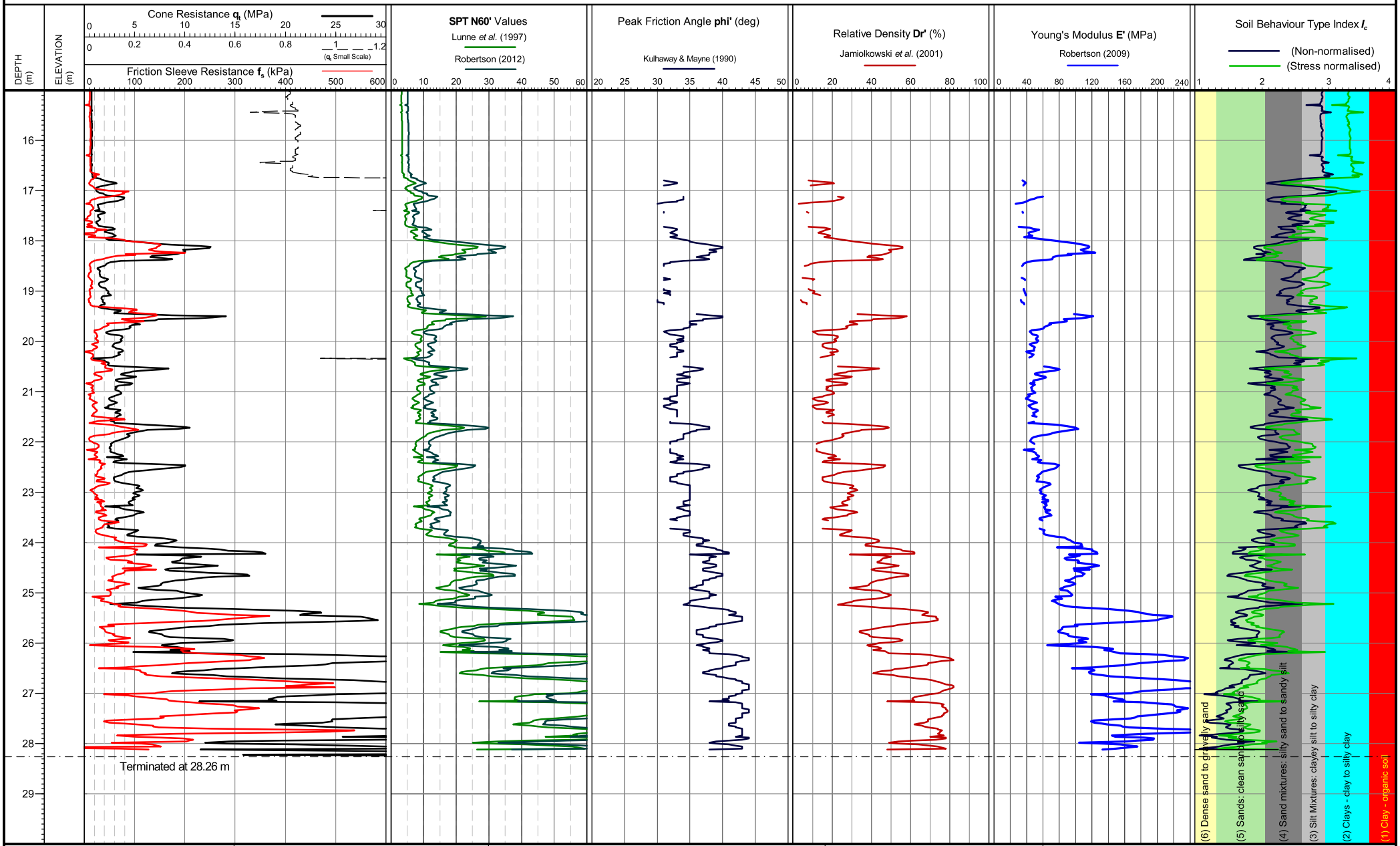
Date of plot: 23-07-20
Checked by: Chris Player

Lankelma Project Ref: P-107502-7

TEST ID: CPT204

Project: NEW MONKS FARM

Client: SOILS LIMITED



Cone area (mm2):1500
Cone ID: S15-CFIPM(100).1431
Operator: Gerard Balp
Date of test: 22/07/2020 15:38:00

Location: West Sussex, UK
Coordinates: ,
Elevation:
Coordinate system:

Both drained and undrained parameters are calculated for mixed SBTs = Ic 2.40-2.70. See report text for methods and discussion of parameter evaluation.

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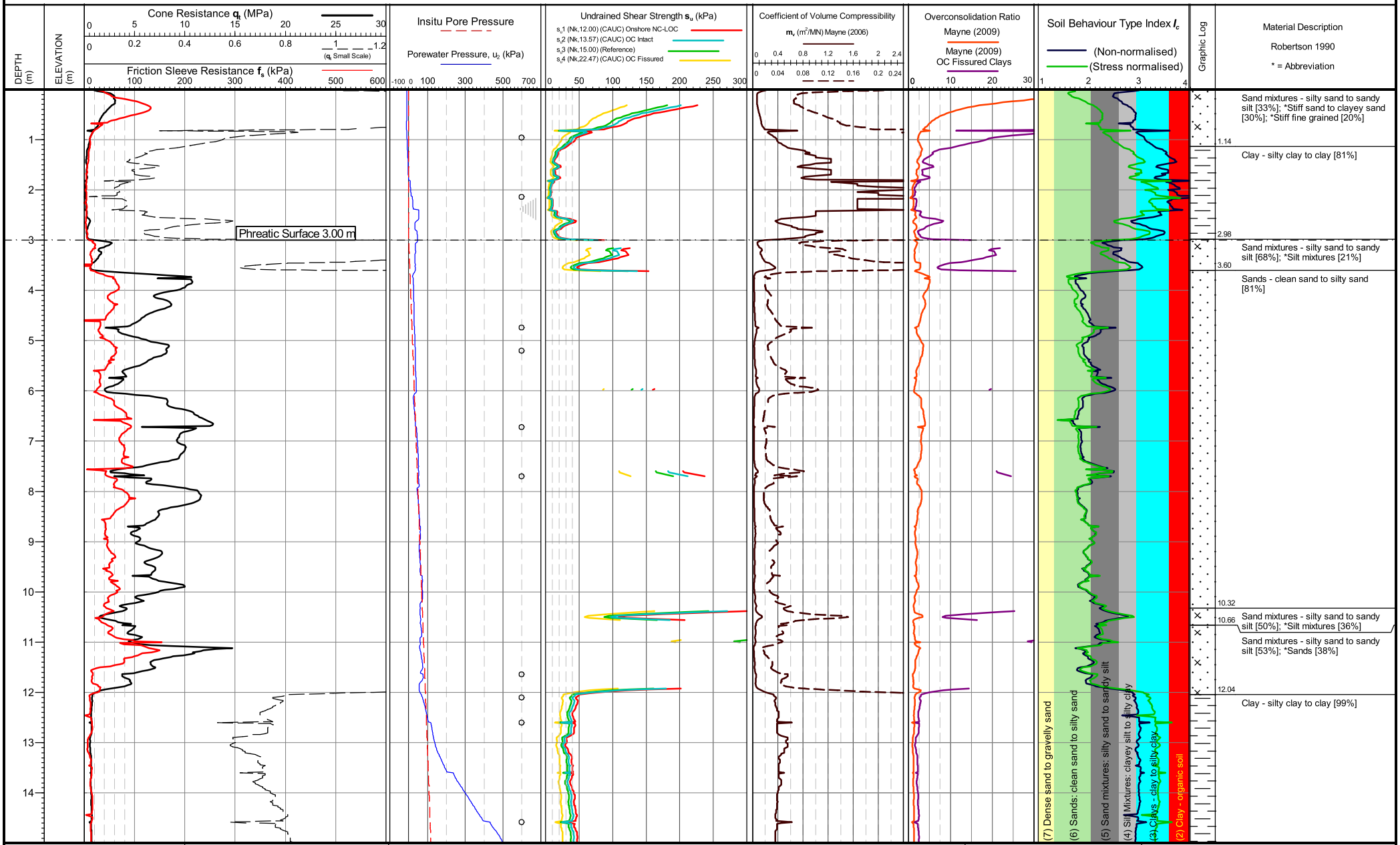
Project: NEW MONKS FARM

Client: SOILS LIMITED



Cone area (mm2):1500
ConeID: S15-CFIPM(100).1431
Operator: Gerard Balp
Rig Used: UK22
Date of test: 22/07/2020 14:28:00

Location: West Sussex, UK
Coordinates: ,
Elevation:
Coordinate system:

Remarks: *Phreatic surface origin: Arbitrary value

Termination Remark:
Lateral support

Internal QA Diss.
Dissipation Test
Penetration Pause (<1cm/s)

Both drained and undrained parameters are calculated for mixed SBTs = Ic 2.40-2.70. See report text for methods and discussion of parameter evaluation.

Date of plot: 23-07-20

Checked by: Chris Player

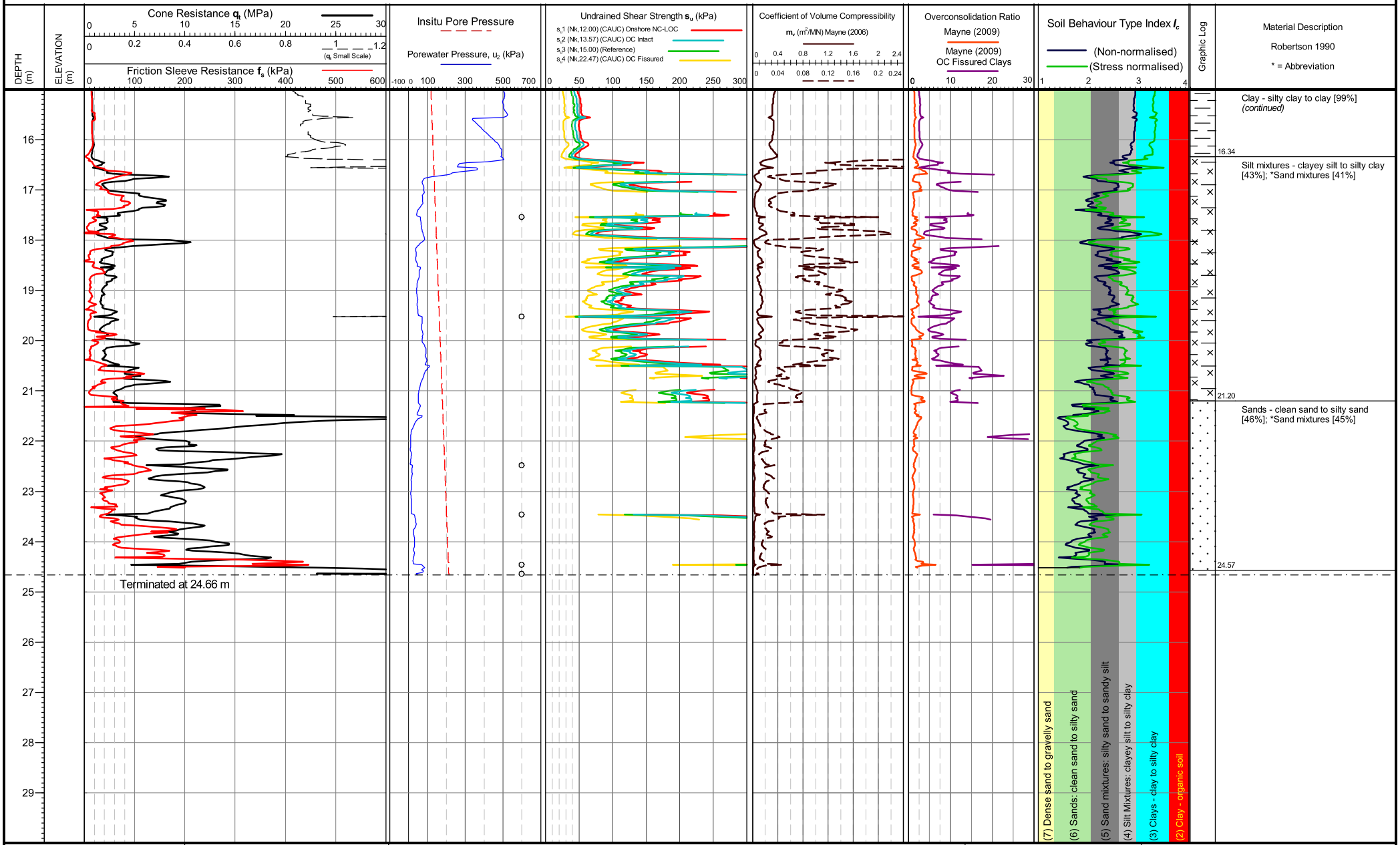
Lankelma Project Ref: P-107502-7

TEST ID: CPT203

LANKELMA

Project: NEW MONKS FARM

Client: SOILS LIMITED



Cone area (mm2):1500
ConeID: S15-CFIPM(100).1431
Operator: Gerard Balp
Rig Used: UK22
Date of test: 22/07/2020 14:28:00

Location: West Sussex, UK
Coordinates: ,
Elevation:
Coordinate system:

Remarks: *Phreatic surface origin: Arbitrary value

Termination Remark:
Lateral support

Internal QA Diss.
Dissipation Test
Penetration Pause (<1cm/s)

Both drained and undrained parameters are calculated for mixed SBTs = Ic 2.40-2.70. See report text for methods and discussion of parameter evaluation.

Date of plot: 23-07-20

Checked by: Chris Player

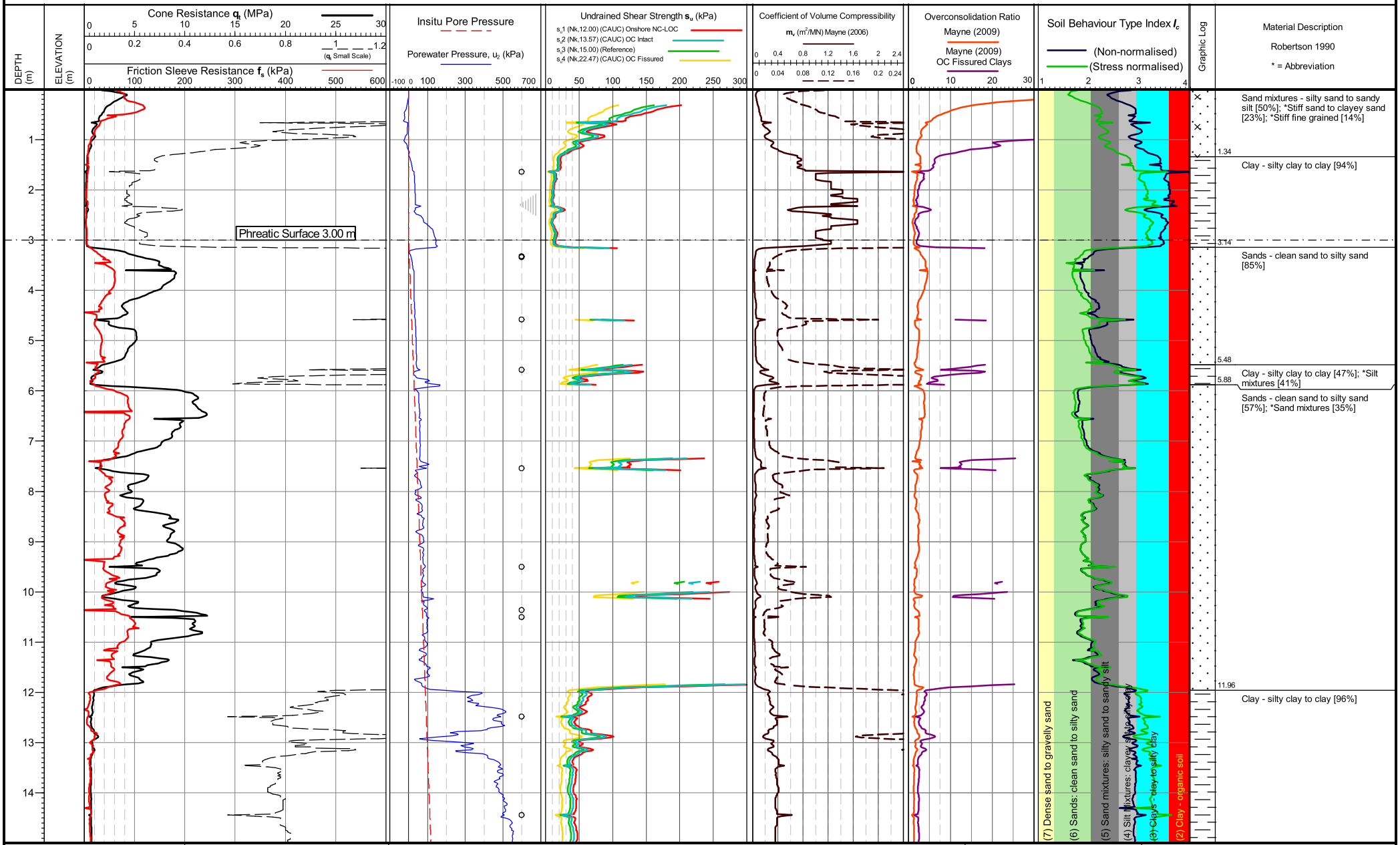
Lankelma Project Ref: P-107502-7

TEST ID: CPT203

LANKELMA

Project: NEW MONKS FARM

Client: SOILS LIMITED



Cone area (mm2):1500
ConeID: S15-CFIPM(100).1431
Operator: Gerard Balp
Rig Used: UK22
Date of test: 22/07/2020 15:38:00

Location: West Sussex, UK
Coordinates: ,
Elevation:
Coordinate system:

Remarks: *Phreatic surface origin: Arbitrary value

Termination Remark:
Lateral support

Internal QA Diss.
Dissipation Test
Penetration Pause (<1cm/s)

Both drained and undrained parameters are calculated for mixed SBTs = Ic 2.40-2.70. See report text for methods and discussion of parameter evaluation.

Date of plot: 23-07-20

Checked by: Chris Player

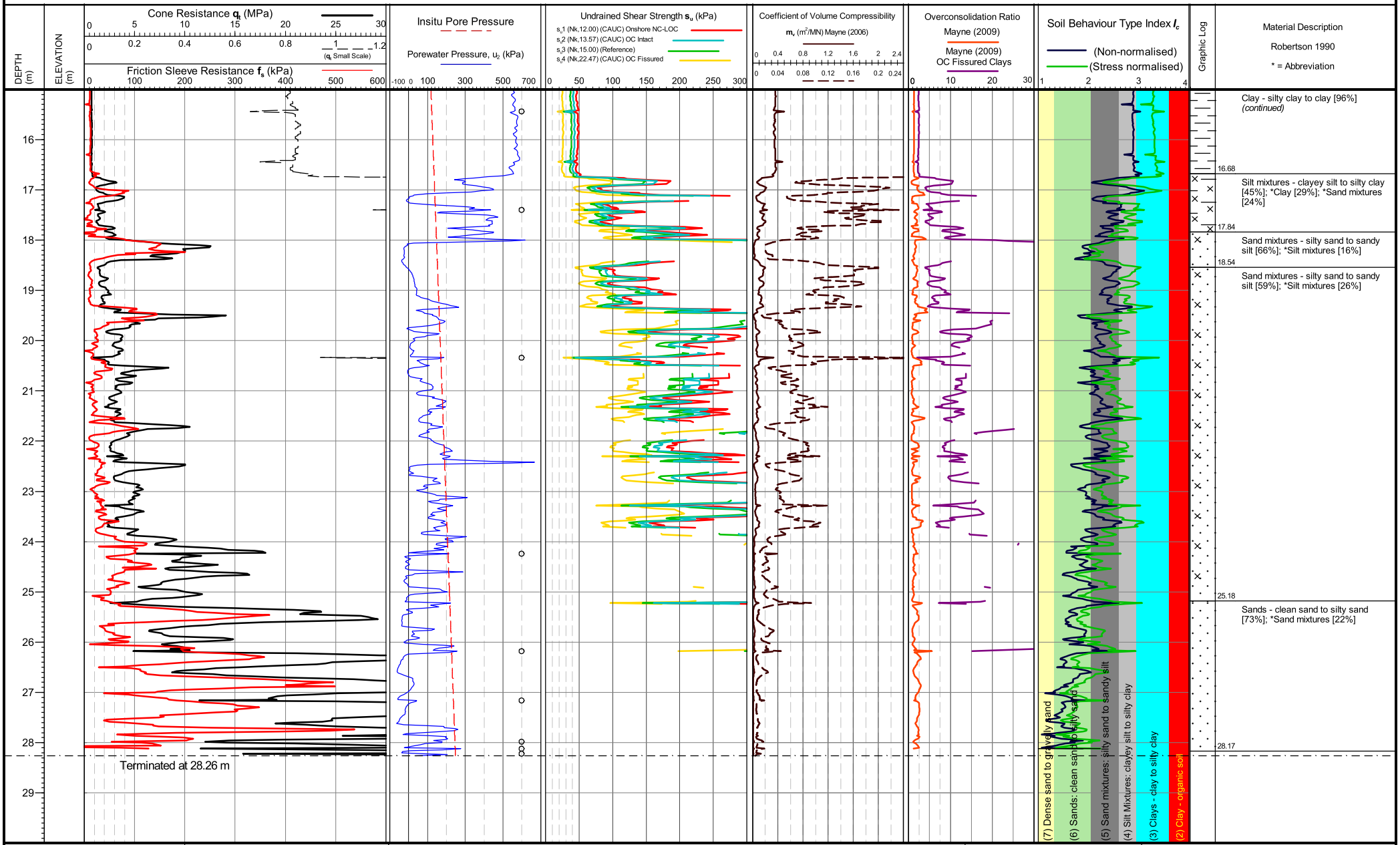
Lankelma Project Ref: P-107502-7

TEST ID: CPT204

LANKELMA

Project: NEW MONKS FARM

Client: SOILS LIMITED



Cone area (mm2):1500
ConeID: S15-CFIPM(100).1431
Operator: Gerard Balp
Rig Used: UK22
Date of test: 22/07/2020 15:38:00

Location: West Sussex, UK
Coordinates: ,
Elevation:
Coordinate system:

Remarks: *Phreatic surface origin: Arbitrary value

Termination Remark:
Lateral support

Internal QA Diss.
Dissipation Test
Penetration Pause (<1cm/s)

Both drained and undrained parameters are calculated for mixed SBTs = Ic 2.40-2.70. See report text for methods and discussion of parameter evaluation.

Date of plot: 23-07-20

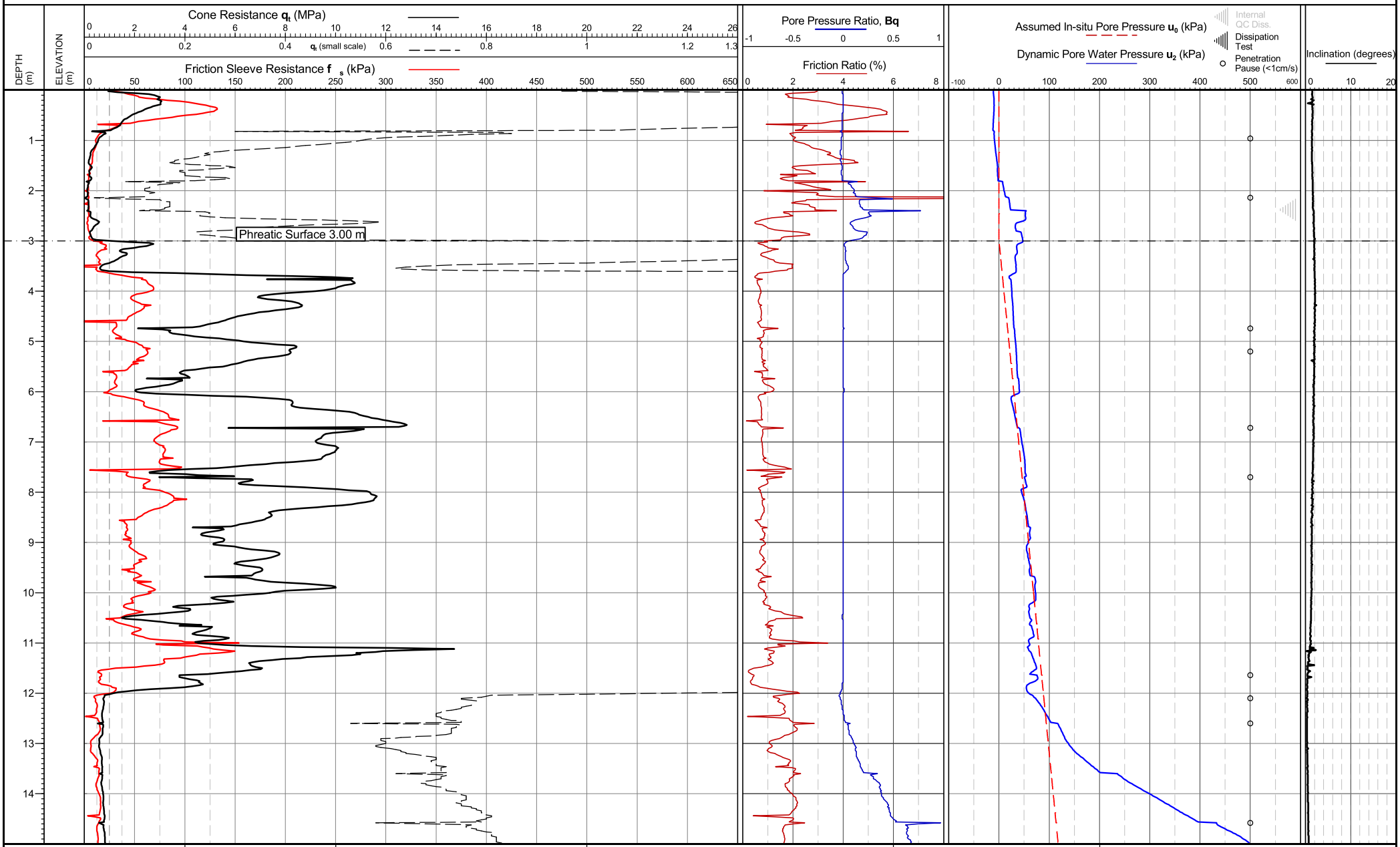
Checked by: Chris Player

Lankelma Project Ref: P-107502-7

TEST ID: CPT204

Project: NEW MONKS FARM

Client: SOILS LIMITED

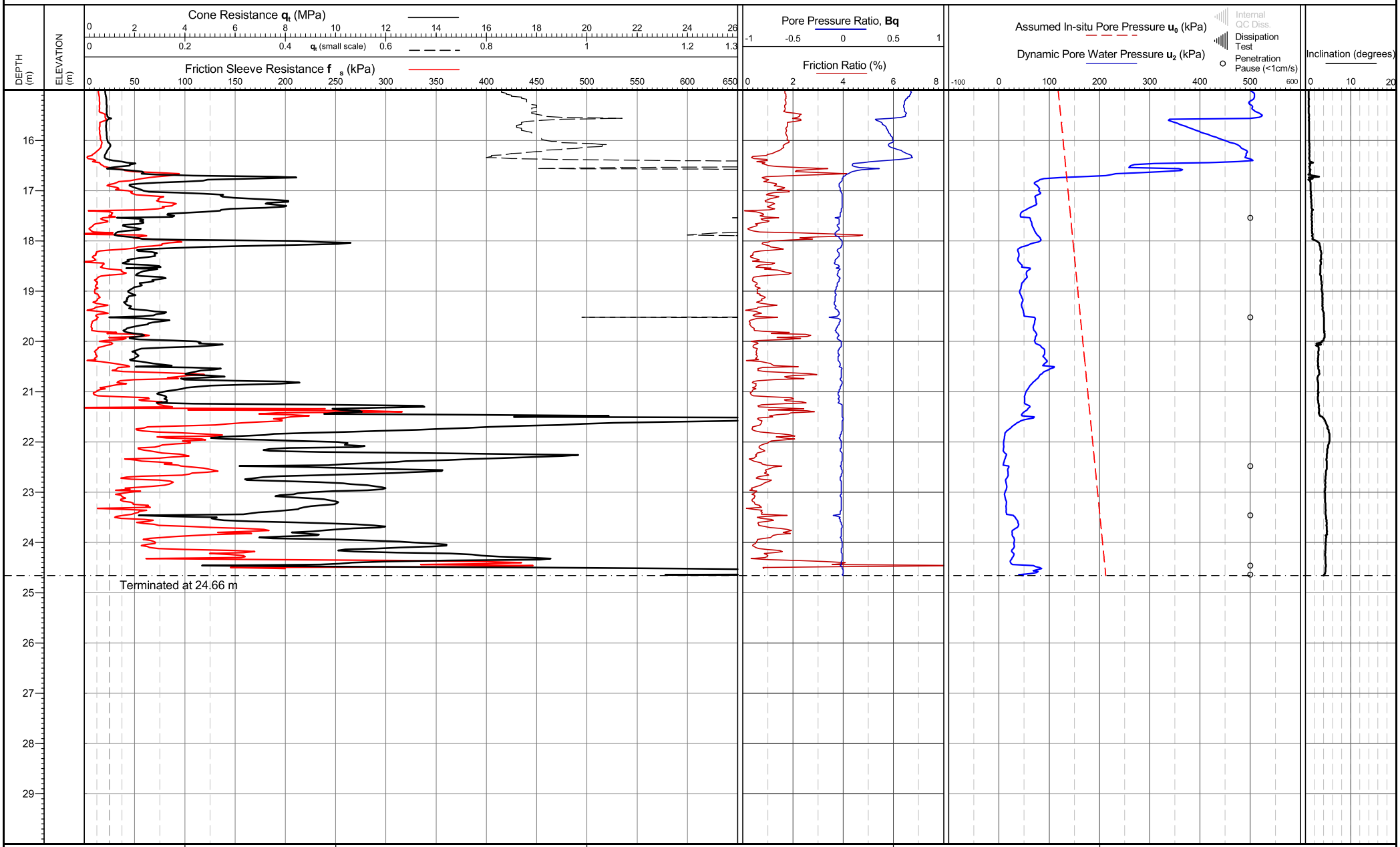


Cone area (mm2):1500 Cone ID: S15-CFIPM(100).1431 Operator: Gerard Balp Rig Used: UK22 Date of test: 22/07/2020 14:28:00	Zero drift (Pre/post test) q_c (kPa): -8.2 f_s (kPa): -7.5 ($f_{s\,drift}$ - $q_{c\,drift}$) U_2 (kPa): -0.5	Location: West Sussex, UK Coordinates: , Elevation: Coordinate system:	Remarks: *Phreatic surface origin: Arbitrary value Termination Remark: Lateral support	Date of plot: 23-07-20 Checked by: Chris Player	Lankelma Project Ref: P-107502-7

TEST ID: CPT203

Project: NEW MONKS FARM

Client: SOILS LIMITED

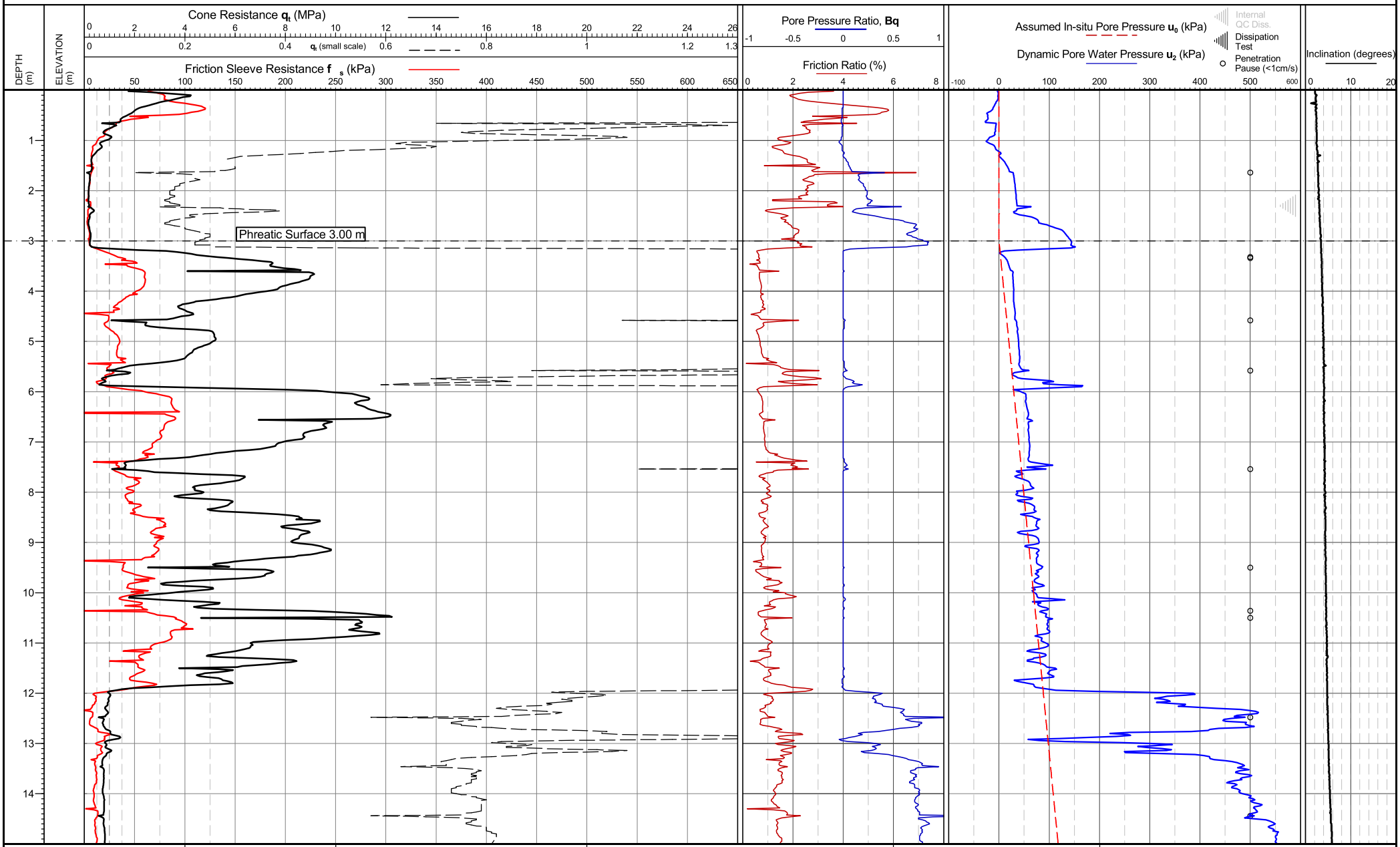


Cone area (mm2):1500 Cone ID: S15-CFIPM(100).1431 Operator: Gerard Balp Rig Used: UK22 Date of test: 22/07/2020 14:28:00	Zero drift (Pre/post test) q_c (kPa): -8.2 f_s (kPa): -7.5 ($f_{s\,drift}$ - $q_{c\,drift}$) U_2 (kPa): -0.5	Location: West Sussex, UK Coordinates: , Elevation: Coordinate system:	Remarks: *Phreatic surface origin: Arbitrary value Termination Remark: Lateral support	Date of plot: 23-07-20 Checked by: Chris Player	Lankelma Project Ref: P-107502-7

TEST ID: CPT203

Project: NEW MONKS FARM

Client: SOILS LIMITED



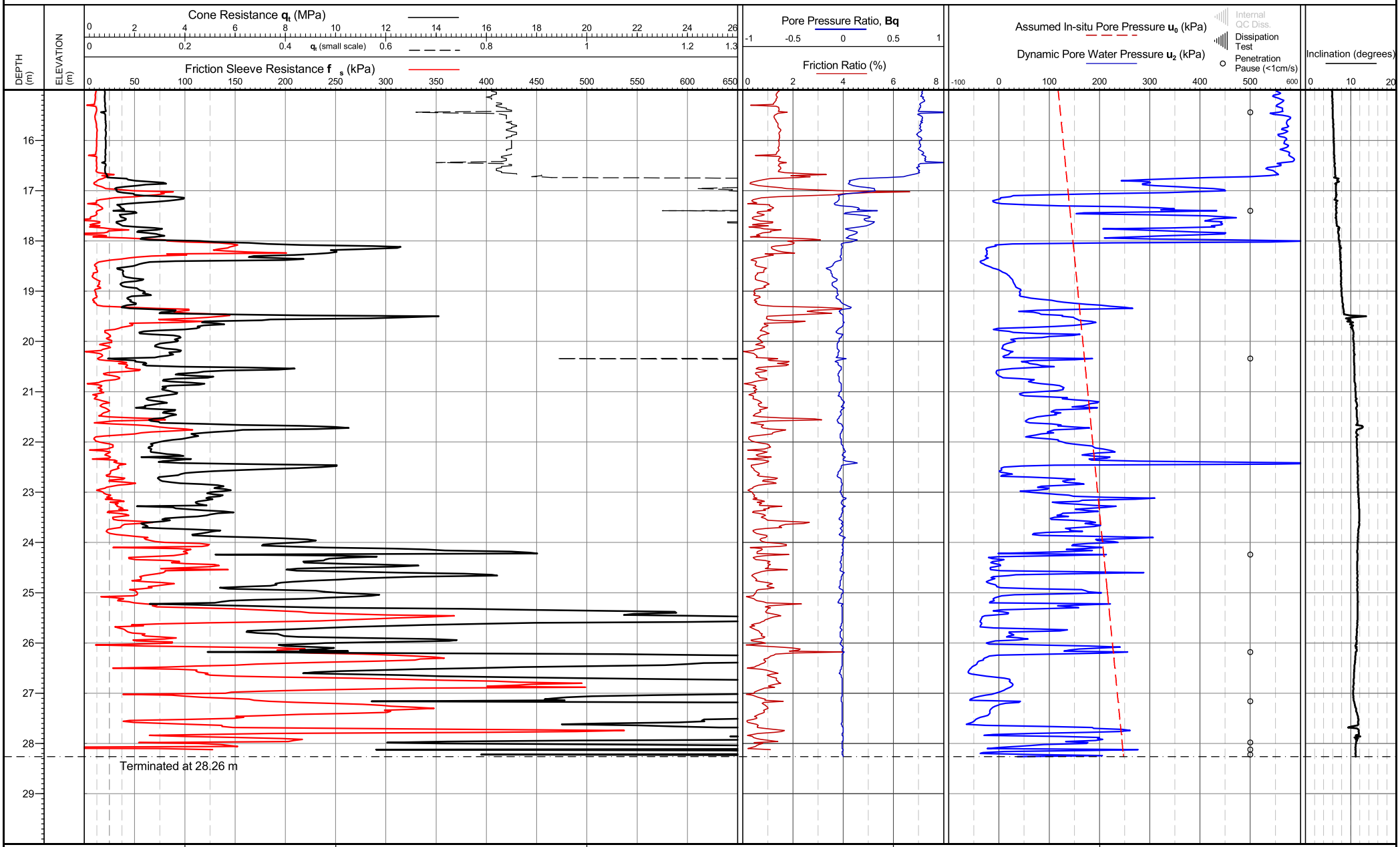
Cone area (mm2):1500 Cone ID: S15-CFIPM(100).1431 Operator: Gerard Balp Rig Used: UK22 Date of test: 22/07/2020 15:38:00	Zero drift (Pre/post test) q_c (kPa): 11.4 f_s (kPa): 2.1 ($f_{s\,drift}$ - $q_{c\,drift}$) U_2 (kPa): -8.6	Location: West Sussex, UK Coordinates: , Elevation: Coordinate system:	Remarks: *Phreatic surface origin: Arbitrary value Termination Remark: Lateral support	Date of plot: 23-07-20 Checked by: Chris Player	Lankelma Project Ref: P-107502-7

TEST ID: CPT204

LANKELMA

Project: NEW MONKS FARM

Client: SOILS LIMITED



Cone area (mm2):1500 Cone ID: S15-CFIPM(100).1431 Operator: Gerard Balp Rig Used: UK22 Date of test: 22/07/2020 15:38:00	Zero drift (Pre/post test) q_c (kPa): 11.4 f_s (kPa): 2.1 ($f_{s\,drift}$ - $q_{c\,drift}$) U_2 (kPa): -8.6	Location: West Sussex, UK Coordinates: , Elevation: Coordinate system:	Remarks: *Phreatic surface origin: Arbitrary value Termination Remark: Lateral support	Date of plot: 23-07-20 Checked by: Chris Player	Lankelma Project Ref: P-107502-7

TEST ID: CPT204

Soils Limited Newton House, Cross Road, Tadworth KT20 5SR Tel: 01737 814221 Email: admin@soilslimited.co.uk	**Borehole Log**	Borehole No. **BCA06** Sheet 1 of 4

Project Name: BCAL - S38	Project No.: 16141 - BCAL - BH	Co-ords: E519999.88 N105900.22	Hole Type BH
Location: Brighton City Airport		Level: 3.05m AOD	Scale 1:50
Client: Brighton City Airport Limited		Dates: 10/04/2017	Logged By CB

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.25	D					Brown silty slightly gravelly SAND. Gravels are fine, angular chalk. Fragments of brick and tarmacadam. MADE GROUND.
		0.50 - 1.00	B					
		1.20 1.20	S SPT	6 (1,/,1,2,3)				
		1.50	D		1.50	1.55		Light greyish brown silty slightly gravelly SAND with fragments of brick and tarmacadam. MADE GROUND.
		2.00 2.00	S SPT	1 (1,/,,1,)				
		2.50	D					
		3.00 3.00	S SPT	2 (,/,1,,1)				
		3.50	D					
		4.00 4.00	S SPT	N=4 (1,/1,1,1,1)	3.70	-0.65		Loose to medium dense light greyish brown silty SAND. ALLUVIUM (2).
		4.50	D					
		5.00 5.00	S SPT	N=5 (1,1/1,2,1,1)				
		6.00	D					
		6.50 6.50	S SPT	N=6 (1,1/2,1,1,2)				
		7.00	D					
		8.00 8.00	S SPT	N=9 (1,1/2,2,2,3)				
		9.00	D					
		9.50 9.50	S SPT	N=11 (1,1/2,2,3,4)				
								Continued on Next Sheet

1 2 3 4 5 6 7 8 9 10

General Remarks:

Hand Pit from ground level to 1.2m. SPT Hammer number 04 used. 50mm HDPE monitoring well installed to the base of the borehole. Borehole cased from ground level to 32m.

Groundwater Remarks:

Water added to aid drilling. Groundwater recorded at 5.30m bgl at start of shift on 11.04.17.

Borehole Type
CP: Cable Percussive
WS: Windowless Sampler
RC: Rotary Cored

Sample Types
D: Disturbed
B: Bulk
J: Jar
W: Water
U: Undisturbed

In-Situ Testing
SPT: Split spoon - Standard Penetration Test
CPT: Cone - Standard Penetration Test

Soils Limited Newton House, Cross Road, Tadworth KT20 5SR Tel: 01737 814221 Email: admin@soilslimited.co.uk	**Borehole Log**	Borehole No. **BCA06** Sheet 2 of 4

Project Name: BCAL - S38	Project No.: 16141 - BCAL - BH	Co-ords: E519999.88 N105900.22	Hole Type BH
Location: Brighton City Airport		Level: 3.05m AOD	Scale 1:50
Client: Brighton City Airport Limited		Dates: 10/04/2017	Logged By CB

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		10.50	D					Loose to medium dense light greyish brown silty SAND. ALLUVIUM (2).
		11.00 11.00	S SPT	N=10 (1,/1,2,3,4)				
		12.00	D		12.00	-8.95		Loose to medium dense light greyish brown silty SAND. Fragments of shell. Rare gravels of angular chalk. ALLUVIUM (2).
		12.50 12.50	S SPT	N=8 (1,1/1,2,2,3)				
		13.50	D					
		14.00 14.00	S SPT	N=10 (2,1/2,3,3,2)				
		15.00	D					
		15.50 15.50	S SPT	N=13 (2,2/3,3,4,3)				
					16.00	-12.95		Soft greyish brown sandy SILT. Sand is fine to medium. Frequent shell fragments. ALLUVIUM (UNDIFFERENTIATED).
		16.50	D					
		17.00 17.00	S SPT	N=5 (1,/1,1,2,1)				
		18.00	D					
		18.50 18.50	S SPT	N=5 (1,1/1,1,2,1)				
		19.50	D					
		20.00 20.00	S SPT	N=6 (1,1/2,1,1,2)				

Continued on Next Sheet

General Remarks:

Hand Pit from ground level to 1.2m. SPT Hammer number 04 used. 50mm HDPE monitoring well installed to the base of the borehole. Borehole cased from ground level to 32m.

Groundwater Remarks:

Water added to aid drilling. Groundwater recorded at 5.30m bgl at start of shift on 11.04.17.

Borehole Type
CP: Cable Percussive
WS: Windowless Sampler
RC: Rotary Cored

Sample Types
D: Disturbed
B: Bulk
J: Jar
W: Water
U: Undisturbed

In-Situ Testing
SPT: Split spoon - Standard Penetration Test
CPT: Cone - Standard Penetration Test

soils LIMITED Geotechnical & Environmental Consultants	**Soils Limited** Newton House, Cross Road, Tadworth KT20 5SR Tel: 01737 814221 Email: admin@soilslimited.co.uk	**Borehole Log**	Borehole No. **BCA06** Sheet 3 of 4

Project Name: BCAL - S38	Project No.: 16141 - BCAL - BH	Co-ords: E519999.88 N105900.22	Hole Type BH
Location: Brighton City Airport		Level: 3.05m AOD	Scale 1:50
Client: Brighton City Airport Limited		Dates: 10/04/2017	Logged By CB

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Soft greyish brown sandy SILT. Sand is fine to medium. Frequent shell fragments. ALLUVIUM (UNDIFFERENTIATED).
		21.00	D					
		21.50 21.50	S SPT	N=6 (1,/1,1,2,2)				
		22.50	D		22.50	-19.45		
					22.80	-19.75		Soft greyish brown sandy slightly gravelly SILT. Gravels are fine to coarse and angular. Frequent shell fragments. ALLUVIUM (UNDIFFERENTIATED).
		23.00 23.00	S CPT	N=18 (3,4/5,4,5,4)				Medium dense brown slightly sandy GRAVEL. Gravels are fine to coarse, angular flints and chalk. ALLUVIUM (UNDIFFERENTIATED).
					23.70	-20.65		Off white highly weathered CHALK recovering as gravelly sand with clayey matrix. Gravels are fine to medium, angular flints. Rare chalk gravels. Grade Dm. NEWHAVEN CHALK FORMATION.
		24.00	D					
		24.50 24.50	S SPT	N=27 (3,4/5,7,7,8)				
		25.50	D		25.50	-22.45		Off white to white CHALK recovering as sandy gravels. Occasional cobbles of chalk. Chalk is weak. Grade Dc. NEWHAVEN CHALK FORMATION.
		26.00 26.00	S SPT	N=17 (4,4/4,4,5,4)				
		27.00	D					
		27.50 27.50	S SPT	N=30 (4,5/7,8,7,8)				
		28.50	D					
		29.00 29.00	S SPT	N=50 (4,7/9,11,18,12)				
		30.00	D					

Continued on Next Sheet

General Remarks:

Hand Pit from ground level to 1.2m. SPT Hammer number 04 used. 50mm HDPE monitoring well installed to the base of the borehole. Borehole cased from ground level to 32m.

Groundwater Remarks:

Water added to aid drilling. Groundwater recorded at 5.30m bgl at start of shift on 11.04.17.

Borehole Type
CP: Cable Percussive
WS: Windowless Sampler
RC: Rotary Cored

Sample Types
D: Disturbed
B: Bulk
J: Jar
W: Water
U: Undisturbed

In-Situ Testing
SPT: Split spoon - Standard Penetration Test
CPT: Cone - Standard Penetration Test

Soils Limited
Newton House, Cross Road, Tadworth KT20 5SR
Tel: 01737 814221 Email: admin@soilslimited.co.uk

Borehole Log

Borehole No. **BCA06**
Sheet 4 of 4

Project Name: BCAL - S38	Project No.: 16141 - BCAL - BH	Co-ords: E519999.88 N105900.22	Hole Type BH
Location: Brighton City Airport		Level: 3.05m AOD	Scale 1:50
Client: Brighton City Airport Limited		Dates: 10/04/2017	Logged By CB

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m AOD)	Legend	Stratum Description
		30.50 30.50	S SPT	50 (11,5/11,19,20,)	30.50	-27.45		Off white to white CHALK recovering as sandy gravels. Occasional cobbles of chalk. Chalk is weak. Grade Dc. NEWHAVEN CHALK FORMATION.
		31.50	D					Off white to white weathered CHALK recovering as gravelly sand with sandy clay matrix. Occasional cobbles of weak angular chalk. Grade Dm. NEWHAVEN CHALK FORMATION.
		32.00 32.00	S SPT	50 (15,10/27,23,,)				
		33.00	D					
		33.50 33.50	S SPT	N=40 (8,1/6,7,12,15)				
		34.00	D		34.00	-30.95		End of Borehole at 34.00m

31 32 33 34 35 36 37 38 39 40

General Remarks:

Hand Pit from ground level to 1.2m. SPT Hammer number 04 used. 50mm HDPE monitoring well installed to the base of the borehole. Borehole cased from ground level to 32m.

Groundwater Remarks:

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Borehole Type
CP: Cable Percussive
WS: Windowless Sampler
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Sample Types
D: Disturbed
B: Bulk
J: Jar
W: Water
U: Undisturbed

In-Situ Testing
SPT: Split spoon - Standard Penetration Test
CPT: Cone - Standard Penetration Test

APPENDIX E – RRS Risk Assessment

RRS Risk Assessment

The Civil Engineering Practice
11 Tungsten Building
George Street
Fishersgate
Sussex
BN41 1RA
01273 424424
reception@civil.co.uk
www.civil.co.uk

Project	New Monks Farm, Lancing
Project Number	22236
Area Assessed	Onsite Bridge Approaches
Date	25 February 2021

1 Non Technical Summary

1.1 Planning Permission has been granted for the site which includes a new access from the A27 and new highways to be offered for adoption by West Sussex County Council as the Highway Authority.

1.2 The proposed works commence at the tie in to the A27 works and link the proposed housing site, Ikea and Brighton City Airport to the new A27 Junction. The works include 5 new highway structures to cross the existing and proposed watercourses.

1.3 The proposed highways will all have a maximum 30mph speed limit and therefore fall below the RAAP requirements of Design Manual for Roads and Bridges. All bridges will have N1 minimum parapet barriers. This assessment if further works to the approaches should be applied.

1.4 It is proposed that new N1 barriers to the bridge deck will be constructed.

1.5 This Risk Assessment has been undertaken in accordance with the Department for Transport Design & Maintenance Guidance for Local Authority Roads, Provision of Road Restraint Systems in Local Authority Roads dated October 2011.

1.6 This Risk Assessment evaluates the site as a lower priority site where the level of risk does not require the installation of a Road Restraint System.

2 Site Details

2.1 This risk assessment has been produced to support the design of the proposed onsite highways and structures at the New Monks Farm development on land to the south of the A27(T) on behalf of The Community Stadium Limited.

2.2 This risk assessment should be read in conjunction with the CEP and HOP Design Drawings for the highway and proposed Highway Structures submitted with the Planning Application (Adur and Worthing Council reference AWDM/0961/17).

2.3 A copy of the proposed highway layouts plans are located at the rear of this assessment.

2.4 All the onsite highways will be unclassified roads with a 30mph speed limit. Speed surveys and accident records are unavailable as these are proposed highways.

2.5 The carriageway is approximately 7m in width with a shared footway / cycleway to generally the north side and a verge to the south side.

2.6 The assessment considers the risk on the approaches to each of the 5 proposed highway bridges HW01, HW02, HW03, HW04 and HW05.

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Cert No. 14127180

2.7 Where necessary each bridge has been assessed separately.

3 Risk Scoring

3.1 The risk to this development is not clear cut, there is little evidence to suggest there is anything greater than an extremely low risk of a vehicle leaving the carriageway. There is however a risk albeit small and the low possibility that should an errant vehicle leave the carriageway it could potentially reach watercourse or adjacent bank to the watercourse.

3.2 The risk will therefore be assessed in accordance with Section 6 Risk Scoring of the Department for Transport guidance document Provision of Road Restraint Systems in Local Authority Roads dated October 2011.

3.2.1 Location factor

HW01, HW02, HW03, HW04 and HW05

PRIORITY RANK	RISK FACTOR SCORE	SITE SCORE
0 - All other roads	0	0
1 - Rural U & B roads and urban C roads	1	
2 - Rural A roads[8] and urban B roads	3	
3 - Urban A Roads	6	

Table 6.1 - Location Factor

3.2.2 Layout factor

HW01, HW02, HW03, HW04 and HW05

PRIORITY RANK	RISK FACTOR SCORE	SITE SCORE
0 - Straight alignment and/or complies with TD9	0	0
1 - One step below desirable minimum R with superelevation of 5%	1	
2 - Two steps below desirable minimum R with superelevation of 5%	2	
3 - Three steps below desirable minimum R with superelevation of 5%	3	
4 - Four steps below desirable minimum R with superelevation of 5%	4	
5 - Five steps below desirable minimum R with superelevation of 5%	5	

Table 6.2 - Layout Factor (Part One)

HW01 and HW02

PRIORITY RANK	RISK FACTOR SCORE	SITE SCORE
0 - No reason for lane changing/manoeuvres.	0	
1 - Some potential for lane changing, overtaking, positioning manoeuvres or avoiding action.	2	
2 - High likelihood of lane changing, overtaking, positioning manoeuvres or avoiding action.	3	3

Table 6.3 - Layout Factor (Part Two)

HW03, HW04 and HW05

PRIORITY RANK	RISK FACTOR SCORE	SITE SCORE
0 - No reason for lane changing/manoeuvres.	0	0
1 - Some potential for lane changing, overtaking, positioning manoeuvres or avoiding action.	2	
2 - High likelihood of lane changing, overtaking, positioning manoeuvres or avoiding action.	3	

Table 6.3 - Layout Factor (Part Two)

3.2.3 Collision Factors

HW01, HW02, HW03, HW04 and HW05

PRIORITY RANK	RISK FACTOR SCORE	SITE SCORE
0 – Individual spot hazard	0	
1 – Series of individual hazards less than 50m apart or a longitudinal hazard that might be reached.	1	1
2 – Longitudinal hazard that is highly likely to be reached resulting in harm or a spot hazard downstream of a feature which may guide the vehicle towards the hazard.	2	

Table 6.4 - Collision Factor (Part One)

Site specific note for Table 6.4:

Proposed bridge parapet assessed as a single longitudinal hazard.

HW01, HW02, HW03, HW04 and HW05

PRIORITY RANK	RISK FACTOR SCORE	SITE SCORE
0 - Percentage of KSI for primary hazard < 20%	0	
1 - Percentage of KSI for primary hazard 20 -30%	1	1
2 - Percentage of KSI for primary hazard >30%	2	

Table 6.5 - Collision Factor (Part Two)

Site specific note for Table 6.5:

Reference to Table 3.2 in Provision of Road Restraint Systems in Local Authority Roads dated October 2011 notes for All roads other permanent objects have a KSI of 20.5 which has been applied in this case. Exposed Parapet ends are considered to have the same severity percentage as 'other permanent object'.

3.2.4 Consequential Factors

HW01, HW02, HW03, HW04 and HW05

PRIORITY RANK	RISK FACTOR SCORE	SITE SCORE
0 - No secondary events likely.	0	
1 - When damaged or collapsed the feature could give rise to the risk of secondary vehicular accidents.	1	1

Table 6.6 - Consequential Factor (Part One)

Site specific note for Table 6.6:

Potential risk of leaving the carriageway whilst low could result in vehicles entering the county park or watercourses.

HW01, HW02, HW03, HW04 and HW05

PRIORITY RANK	RISK FACTOR SCORE	SITE SCORE
0 - No impact on network availability.	0	
1 - If hazardous feature was damaged or collapsed this could give rise to network disruption for more than one day.	1	1

Table 6.7 - Consequential Factor (Part Two)

Site specific note for Table 6.7:

If a vehicle left the carriageway it may result in closure for longer than 1 day to facilitate repair. There are options to keep the carriageway open and reduce to single lane operation to remain open. To be robust a score of 1 has been applied.

3.2.5 Cost of damage

HW01, HW02, HW03, HW04 and HW05

PRIORITY RANK	RISK FACTOR SCORE	SITE SCORE
0 - No significant cost implications.	0	0
1 - Significant cost of repair or replacement following collision.	1	

Table 6.8 - Consequential Factor (Part Three)

Site specific note for Table 6.8:

Significant cost of repair is subjective, rebuilding the landscaping or damage to watercourse banks from a vehicle leaving the carriageway is not a significant cost. A score of 1 has been applied to be robust in this assessment.

3.2.6 Risk Ranking Score

TOTAL RISK RANKING SCORE	CATEGORY	OUTCOME
14 or more	Higher Priority	(see Table 5.2)
9-13	Medium Priority	
0-8	Lower Priority	

Table 6.9 - Resultant Risk Categories

HW01 and HW02 Total Score = 7

HW03, HW04 and HW05 Total Score = 4

CATEGORY	RISK LEVEL	OUTCOMES
Lower Priority Site	Level of risk regarded as generally acceptable. Further effort to reduce risk is not likely to be required as resources to reduce risk would be grossly disproportionate to the risk reduction achieved.	Where the risk evaluation identifies a site that is lower priority further appraisal is not required and the level of risk does not normally support installation of a RRS. Simple low cost measures that could reduce the risk can still be considered.

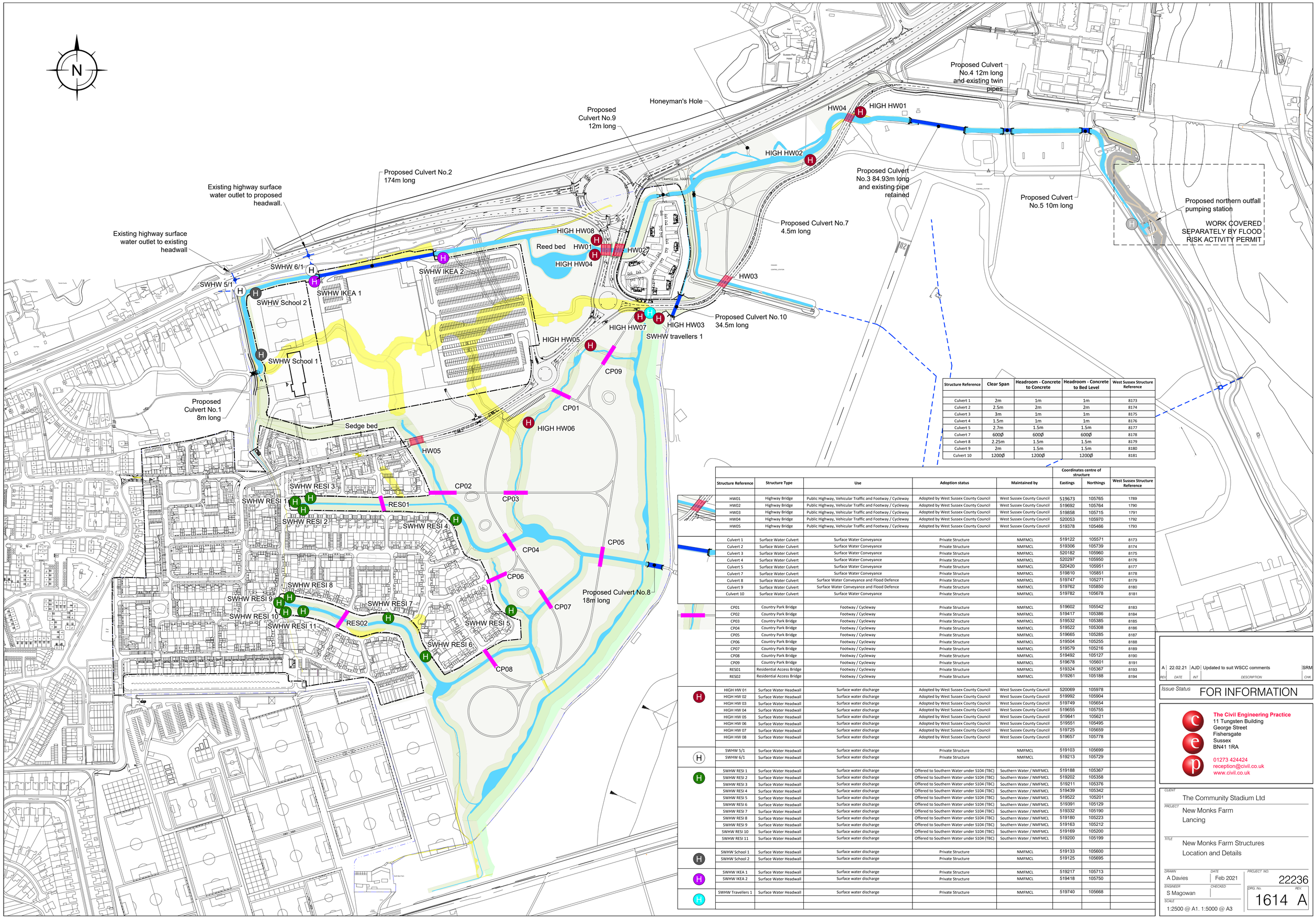
Extract from Table 5.2 - Site Risk Categories

3.2.7 Worst case site score = 7 Lower Priority Site.

4 Conclusion

4.1 The assessment indicates the site is in the Lower Priority range with an acceptable level of risk.

4.2 The level of risk does not support the installation of a road restraint system for the approaches to the bridges.



Structure Reference	Clear Span	Headroom - Concrete to Concrete	Headroom - Concrete to Bed Level	West Sussex Structure Reference
Culvert 1	2m	1m	1m	8173
Culvert 2	2.5m	2m	2m	8174
Culvert 3	3m	1m	1m	8175
Culvert 4	1.5m	1m	1m	8176
Culvert 5	2.7m	1.5m	1.5m	8177
Culvert 7	600Ø	600Ø	600Ø	8178
Culvert 8	2.25m	1.5m	1.5m	8179
Culvert 9	2m	1.5m	1.5m	8180
Culvert 10	1200Ø	1200Ø	1200Ø	8181

	Structure Reference	Structure Type	Use	Adoption status	Maintained by	Coordinates centre of structure		West Sussex Structure Reference
						Eastings	Northings	
	HW01	Highway Bridge	Public Highway, Vehicular Traffic and Footway / Cycleway	Adopted by West Sussex County Council	West Sussex County Council	519673	105765	1789
	HW02	Highway Bridge	Public Highway, Vehicular Traffic and Footway / Cycleway	Adopted by West Sussex County Council	West Sussex County Council	519692	105764	1790
	HW03	Highway Bridge	Public Highway, Vehicular Traffic and Footway / Cycleway	Adopted by West Sussex County Council	West Sussex County Council	519858	105715	1791
	HW04	Highway Bridge	Public Highway, Vehicular Traffic and Footway / Cycleway	Adopted by West Sussex County Council	West Sussex County Council	520053	105970	1792
	HW05	Highway Bridge	Public Highway, Vehicular Traffic and Footway / Cycleway	Adopted by West Sussex County Council	West Sussex County Council	519378	105466	1793
	Culvert 1	Surface Water Culvert	Surface Water Conveyance	Private Structure	NMFMCL	519122	105571	8173
	Culvert 2	Surface Water Culvert	Surface Water Conveyance	Private Structure	NMFMCL	519306	105739	8174
	Culvert 3	Surface Water Culvert	Surface Water Conveyance	Private Structure	NMFMCL	520182	105960	8175
	Culvert 4	Surface Water Culvert	Surface Water Conveyance	Private Structure	NMFMCL	520297	105950	8176
	Culvert 5	Surface Water Culvert	Surface Water Conveyance	Private Structure	NMFMCL	520420	105951	8177
	Culvert 7	Surface Water Culvert	Surface Water Conveyance	Private Structure	NMFMCL	519810	105851	8178
	Culvert 8	Surface Water Culvert	Surface Water Conveyance and Flood Defence	Private Structure	NMFMCL	519747	105271	8179
	Culvert 9	Surface Water Culvert	Surface Water Conveyance and Flood Defence	Private Structure	NMFMCL	519762	105850	8180
	Culvert 10	Surface Water Culvert	Surface Water Conveyance	Private Structure	NMFMCL	519782	105678	8181
	CP01	Country Park Bridge	Footway / Cycleway	Private Structure	NMFMCL	519602	105542	8183
	CP02	Country Park Bridge	Footway / Cycleway	Private Structure	NMFMCL	519417	105386	8184
	CP03	Country Park Bridge	Footway / Cycleway	Private Structure	NMFMCL	519532	105385	8185
	CP04	Country Park Bridge	Footway / Cycleway	Private Structure	NMFMCL	519522	105308	8186
	CP05	Country Park Bridge	Footway / Cycleway	Private Structure	NMFMCL	519665	105285	8187
	CP06	Country Park Bridge	Footway / Cycleway	Private Structure	NMFMCL	519504	105255	8188
	CP07	Country Park Bridge	Footway / Cycleway	Private Structure	NMFMCL	519579	105216	8189
	CP08	Country Park Bridge	Footway / Cycleway	Private Structure	NMFMCL	519492	105127	8190
	CP09	Country Park Bridge	Footway / Cycleway	Private Structure	NMFMCL	519678	105601	8191
	RES01	Residential Access Bridge	Footway / Cycleway	Private Structure	NMFMCL	519324	105367	8193
	RES02	Residential Access Bridge	Footway / Cycleway	Private Structure	NMFMCL	519261	105188	8194
H	HIGH HW 01	Surface Water Headwall	Surface water discharge	Adopted by West Sussex County Council	West Sussex County Council	520069	105978	
	HIGH HW 02	Surface Water Headwall	Surface water discharge	Adopted by West Sussex County Council	West Sussex County Council	519992	105904	
	HIGH HW 03	Surface Water Headwall	Surface water discharge	Adopted by West Sussex County Council	West Sussex County Council	519749	105654	
	HIGH HW 04	Surface Water Headwall	Surface water discharge	Adopted by West Sussex County Council	West Sussex County Council	519655	105755	
	HIGH HW 05	Surface Water Headwall	Surface water discharge	Adopted by West Sussex County Council	West Sussex County Council	519641	105821	
	HIGH HW 06	Surface Water Headwall	Surface water discharge	Adopted by West Sussex County Council	West Sussex County Council	519551	105495	
	HIGH HW 07	Surface Water Headwall	Surface water discharge	Adopted by West Sussex County Council	West Sussex County Council	519725	105659	
	HIGH HW 08	Surface Water Headwall	Surface water discharge	Adopted by West Sussex County Council	West Sussex County Council	519657	105778	
H	SWHW 5/1	Surface Water Headwall	Surface water discharge	Private Structure	NMFMCL	519103	105699	
	SWHW 6/1	Surface Water Headwall	Surface water discharge	Private Structure	NMFMCL	519213	105729	
H	SWHW RESI 1	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519188	105367	
	SWHW RESI 2	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519202	105358	
	SWHW RESI 3	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519211	105376	
	SWHW RESI 4	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519439	105342	
	SWHW RESI 5	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519522	105201	
	SWHW RESI 6	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519391	105129	
	SWHW RESI 7	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519332	105190	
	SWHW RESI 8	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519180	105223	
	SWHW RESI 9	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519163	105212	
	SWHW RESI 10	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519169	105200	
	SWHW RESI 11	Surface Water Headwall	Surface water discharge	Offered to Southern Water under S104 (TBC)	Southern Water / NMFMCL	519200	105199	
H	SWHW School 1	Surface Water Headwall	Surface water discharge	Private Structure	NMFMCL	519133	105600	
	SWHW School 2	Surface Water Headwall	Surface water discharge	Private Structure	NMFMCL	519125	105695	
H	SWHW IKEA 1	Surface Water Headwall	Surface water discharge	Private Structure	NMFMCL	519217	105713	
	SWHW IKEA 2	Surface Water Headwall	Surface water discharge	Private Structure	NMFMCL	519418	105750	
H	SWHW Travellers 1	Surface Water Headwall	Surface water discharge	Private Structure	NMFMCL	519740	105668	

REV	DATE	INT	DESCRIPTION	CHK
A	22.02.21	AJD	Updated to suit WSCC comments	SRM

Issue Status: FOR INFORMATION

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CLIENT: The Community Stadium Ltd

PROJECT: New Monks Farm
Lancing

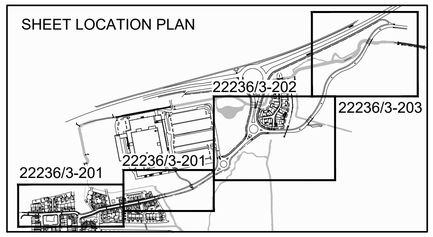
TITLE: New Monks Farm Structures
Location and Details

DRAWN	DATE	PROJECT NO.
A Davies	Feb 2021	22236
ENGINEER: S Magowan	CHECKED	
SCALE: 1:2500 @ A1. 1:5000 @ A3	DRG. No. 1614	REV. A

CEP DRAWING LIST	
No.	Sheet Title
NMF-CEP-03-DR-C-003	Site Layout - Current Survey - Sheet 1 of 2
NMF-CEP-03-DR-C-004	Site Layout - Current Survey - Sheet 2 of 2
NMF-CEP-03-DR-C-005	Site Layout - Highway Phasing Plan
NMF-CEP-03-DR-C-006	Old Shoreham Road Tie In Staging
NMF-CEP-03-DR-C-103	Site Layout - General Arrangement - Sh3
NMF-CEP-03-DR-C-104	Site Layout - General Arrangement - Sh4
NMF-CEP-03-DR-C-105	Site Layout - General Arrangement - Sh5
NMF-CEP-03-DR-C-106	Site Layout - General Arrangement - Sh6
NMF-CEP-03-DR-C-107	Site Layout - Old Shoreham Road Overlay
NMF-CEP-03-DR-C-200	Site Location Plan - Section 38 Agreement
NMF-CEP-03-DR-C-201	Site Layout - Section 38 Agreement Plan Sh 1
NMF-CEP-03-DR-C-202	Site Layout - Section 38 Agreement Plan Sh 2
NMF-CEP-03-DR-C-203	Site Layout - Section 38 Agreement Plan Sh 3
NMF-CEP-03-DR-C-211	Site Layout - Section 278 Agreement Plan
NMF-CEP-03-DR-C-221	Site Layout - Highway Maintenance Plan
NMF-CEP-03-DR-C-300	Site Layout - Existing Services
NMF-CEP-03-DR-C-302	Site Layout - Existing Services - Sheet 1
NMF-CEP-03-DR-C-303	Site Layout - Existing Services - Sheet 2
NMF-CEP-03-DR-C-323	Site Layout - Proposed Services
NMF-CEP-03-DR-C-324	Site Layout - Proposed Services
NMF-CEP-03-DR-C-325	Site Layout - Proposed Services
NMF-CEP-03-DR-C-403	Site Layout - Proposed Levels
NMF-CEP-03-DR-C-404	Site Layout - Proposed Levels
NMF-CEP-03-DR-C-405	Site Layout - Proposed Levels
NMF-CEP-03-DR-C-406	Proposed Vertical Alignment - Sheet 1
NMF-CEP-03-DR-C-407	Proposed Vertical Alignment - Sheet 2
NMF-CEP-03-DR-C-408	Proposed Vertical Alignment - Sheet 3
NMF-CEP-03-DR-C-415	Roundabout 1 - Proposed Vertical Alignment
NMF-CEP-03-DR-C-418	Roundabout 2 - Proposed Vertical Alignment
NMF-CEP-03-DR-C-431	Site Layout - Road Dimensions - Sh 1 of 3
NMF-CEP-03-DR-C-432	Site Layout - Road Dimensions - Sh 2 of 3
NMF-CEP-03-DR-C-433	Site Layout - Road Dimensions - Sh 3 of 3
NMF-CEP-03-DR-C-450	Bridge Site Location Plan
NMF-CEP-03-DR-C-471	Traveller Site Bund Works - Sections
NMF-CEP-03-DR-C-503	Site Layout - Proposed Drainage
NMF-CEP-03-DR-C-504	Site Layout - Proposed Drainage
NMF-CEP-03-DR-C-505	Site Layout - Proposed Drainage
NMF-CEP-03-DR-C-506	Site Layout - Proposed Drainage - Culvert 10
NMF-CEP-03-DR-C-511	Manhole Schedules
NMF-CEP-03-DR-C-521	Site Layout - Gully Catchment
NMF-CEP-03-DR-C-522	Site Layout - Gully Catchment
NMF-CEP-03-DR-C-523	Site Layout - Gully Catchment
NMF-CEP-03-DR-C-551	Plan and Section - Traveller Site Rising
NMF-CEP-03-DR-C-561	Construction Details - Drainage
NMF-CEP-03-DR-C-562	Construction Details - Drainage
NMF-CEP-03-DR-C-563	Construction Details - Surface Finishes

WSCC DRAWING LIST	
No.	Sheet Title
S278/38/01	Alternative Methods of Laying Kerbs
S278/38/02	Approved Kerb Type Selection Sheet 1
S278/38/03	Approved Kerb Type Selection Sheet 2
S278/38/04	Footway/Cycleway Type 1 & 2
S278/38/07	Footway Crossover Type 1 - Residential
S278/38/09	Service Margins
S278/38/11	Drainage - Gully A Pre-cast Concrete
S278/38/13	Drainage - Type B Catchpit
S278/38/16	Street Furniture - Ramp Feature
S278/38/18	Street Furniture - Tactile Crossings
S278/38/21	Carriageway - Flexible Specification
S278/38/33	Pipe Bedding
S278/38/36	Pipe Junctions - Lateral Connections

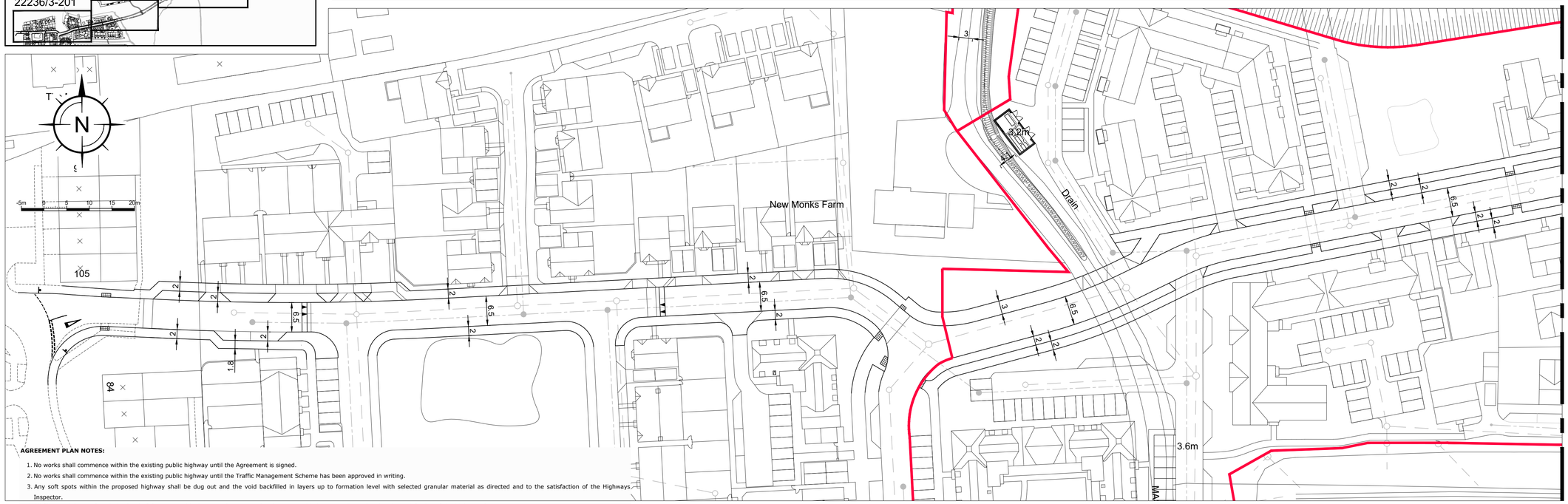
SHEET LOCATION PLAN



STREET LIGHTING KEY

Unit Type ID	Count	Status	Mounting Height	Column Type	Column Material	Column Colour	Installation Type	Root Length	Mounting	Luminaire Tilt	Luminaire	Optic Setting	Output (klm)	Colour Temperature	Wattage	Luminaire Weight	Windage	Control Unit	Switching Unit	Isolator	Luminaire Elexon Code	Control Gear Elexon Code
A	16	Proposed column	8 metres	Stepped tubular	Galvanised steel	BS12C39 (Sherwood Green)	Planted	Factory standard	Post top	5 degrees	Philips BGP703 Mini Luma	DM33 BL1	10.0	Neutral white	56W (40 no. LEDs)	9.5kg	0.021m²	Electronic DALI enabled ballast	Mayflower External node	Tofco DPI range	42 0056 0000 100	98 0001 0010 100
B	4	Proposed column	8 metres	Stepped tubular	Galvanised steel	BS12C39 (Sherwood Green)	Planted	Factory standard	Post top	5 degrees	Philips BGP703 Mini Luma	DM10 BL1	10.0	Neutral white	56W (40 no. LEDs)	9.5kg	0.021m²	Electronic DALI enabled ballast	Mayflower External node	Tofco DPI range	42 0056 0000 100	98 0001 0010 100
C	4	Proposed column	6 metres	Stepped tubular	Galvanised steel	BS12C39 (Sherwood Green)	Planted	Factory standard	Post top	5 degrees	Philips BGP702 Micro Luma	DM10 BL1	3.0	Neutral white	17W (20 no. LEDs)	8.0kg	0.021m²	Electronic DALI enabled ballast	Mayflower External node	Tofco DPI range	42 0017 0000 100	98 0001 0010 100
D	7	Proposed column	8 metres	Stepped tubular	Galvanised steel	BS12C39 (Sherwood Green)	Planted	Factory standard	Post top	5 degrees	Philips BGP702 Micro Luma	DM10 BL1	5.0	Neutral white	29W (20 no. LEDs)	8.0kg	0.021m²	Electronic DALI enabled ballast	Mayflower External node	Tofco DPI range	42 0029 0000 100	98 0001 0010 100

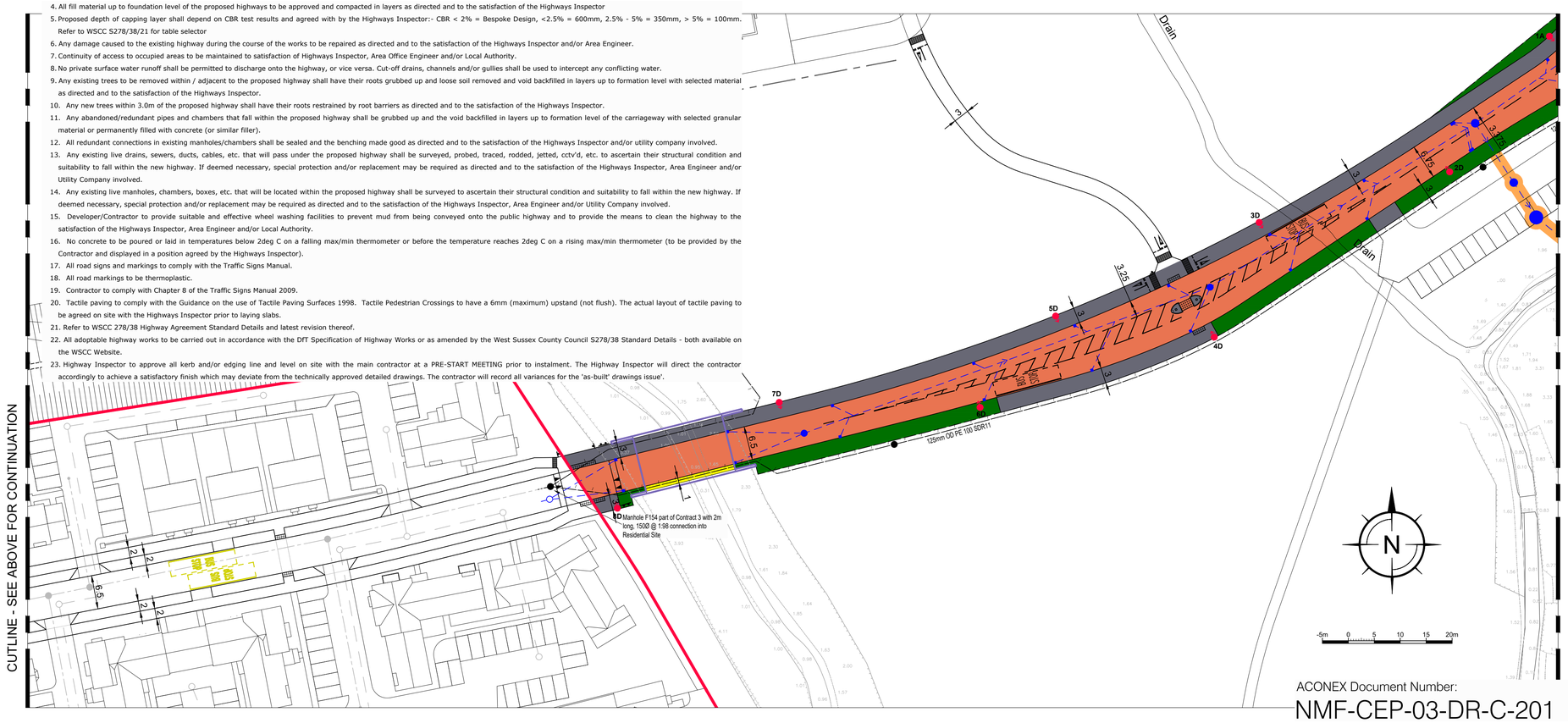
For full details of street lighting see SSE drawings SSE-QL725-LD-001 to 003



CUTLINE - SEE BELOW FOR CONTINUATION

AGREEMENT PLAN NOTES:

1. No works shall commence within the existing public highway until the Agreement is signed.
2. No works shall commence within the existing public highway until the Traffic Management Scheme has been approved in writing.
3. Any soft spots within the proposed highway shall be dug out and the void backfilled in layers up to formation level with selected granular material as directed and to the satisfaction of the Highways Inspector.
4. All fill material up to foundation level of the proposed highways to be approved and compacted in layers as directed and to the satisfaction of the Highways Inspector
5. Proposed depth of capping layer shall depend on CBR test results and agreed with by the Highways Inspector:- CBR < 2% = Bespoke Design, <2.5% = 600mm, 2.5% - 5% = 350mm, > 5% = 100mm. Refer to WSCC S278/38/21 for table selector
6. Any damage caused to the existing highway during the course of the works to be repaired as directed and to the satisfaction of the Highways Inspector and/or Area Engineer.
7. Continuity of access to occupied areas to be maintained to satisfaction of Highways Inspector, Area Office Engineer and/or Local Authority.
8. No private surface water runoff shall be permitted to discharge onto the highway, or vice versa. Cut-off drains, channels and/or gullies shall be used to intercept any conflicting water.
9. Any existing trees to be removed within / adjacent to the proposed highway shall have their roots grubbed up and loose soil removed and void backfilled in layers up to formation level with selected material as directed and to the satisfaction of the Highways Inspector.
10. Any new trees within 3.0m of the proposed highway shall have their roots restrained by root barriers as directed and to the satisfaction of the Highways Inspector.
11. Any abandoned/redundant pipes and chambers that fall within the proposed highway shall be grubbed up and the void backfilled in layers up to formation level of the carriageway with selected granular material or permanently filled with concrete (or similar filler).
12. All redundant connections in existing manholes/chambers shall be sealed and the benching made good as directed and to the satisfaction of the Highways Inspector and/or utility company involved.
13. Any existing live drains, sewers, ducts, cables, etc. that will pass under the proposed highway shall be surveyed, probed, traced, rodded, jetted, cctv'd, etc. to ascertain their structural condition and suitability to fall within the new highway. If deemed necessary, special protection and/or replacement may be required as directed and to the satisfaction of the Highways Inspector, Area Engineer and/or Utility Company involved.
14. Any existing live manholes, chambers, boxes, etc. that will be located within the proposed highway shall be surveyed to ascertain their structural condition and suitability to fall within the new highway. If deemed necessary, special protection and/or replacement may be required as directed and to the satisfaction of the Highways Inspector, Area Engineer and/or Utility Company involved.
15. Developer/Contractor to provide suitable and effective wheel washing facilities to prevent mud from being conveyed onto the public highway and to provide the means to clean the highway to the satisfaction of the Highways Inspector, Area Engineer and/or Local Authority.
16. No concrete to be poured or laid in temperatures below 2deg C on a falling max/min thermometer or before the temperature reaches 2deg C on a rising max/min thermometer (to be provided by the Contractor and displayed in a position agreed by the Highways Inspector).
17. All road signs and markings to comply with the Traffic Signs Manual.
18. All road markings to be thermoplastic.
19. Contractor to comply with Chapter 8 of the Traffic Signs Manual 2009.
20. Tactile paving to comply with the Guidance on the use of Tactile Paving Surfaces 1998. Tactile Pedestrian Crossings to have a 6mm (maximum) upstand (not flush). The actual layout of tactile paving to be agreed on site with the Highways Inspector prior to laying slabs.
21. Refer to WSCC 278/38 Highway Agreement Standard Details and latest revision thereof.
22. All adoptable highway works to be carried out in accordance with the DfT Specification of Highway Works or as amended by the West Sussex County Council S278/38 Standard Details - both available on the WSCC Website.
23. Highway Inspector to approve all kerb and/or edging line and level on site with the main contractor at a PRE-START MEETING prior to instalment. The Highway Inspector will direct the contractor accordingly to achieve a satisfactory finish which may deviate from the technically approved detailed drawings. The contractor will record all variances for the 'as-built' drawings issue'.



CUTLINE - SEE ABOVE FOR CONTINUATION

CUTLINE - SEE DRAWING 22236/3-202 FOR CONTINUATION

WEST SUSSEX COUNTY COUNCIL SECTION 38 KEY

- Carriageway
- Footpath
- Verge
- Hard Landscaping
- Highway drainage easement
- Proposed bridge supporting carriageway
- Proposed highway surface water drainage
- Proposed foul water sewer
- Proposed tactile paving
- Existing highway boundary
- Application site boundary

GENERAL NOTES:

1. All dimensions to be checked on site. All details and dimensions relating to sub-Contractors work must be checked and agreed between the sub-Contractor or supplier and the general Contractor.

2. This drawing is to be read in conjunction with all relevant Architect's and Engineer's drawings and specification.

3. The main Contractor is responsible for ensuring the stability of the structure whilst the works are in progress.

4. Any information given regarding existing underground services is given in good faith after consultation with the relevant authority. No liability is accepted by the Consultant and the main Contractor is responsible for obtaining and checking all information and taking due care and attention whilst undertaking the works.

REV	DATE	INT	DESCRIPTION	CHK
P2	26.11.20	AJD	Updated to suit WSCC comments	SRM
P1	25.09.20	AJD	ISSUED FOR TENDER	SRM
B	24.07.20	AJD	Hatching removed from residential site	SRM
A	15.01.20	AJD	Hatching removed from Mash Barn Lane cycleway	SRM

Issue Status: FOR TENDER

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CLIENT: The Community Stadium Ltd

PROJECT: New Monks Farm
Lancing
Contract 3 - Adoptable Highways

TITLE: Site Layout
Section 38 Agreement Plan
Sheet 1 of 3

DRAWN	DATE	PROJECT NO.
A Davies	Mar 2018	22236
ENGINEER	CHECKED	ORG. No. / REV.
S Magowan		3-201 P2

SCALE: 1:500 @ A1, 1:1000 @ A3

ACONEX Document Number:
NMF-CEP-03-DR-C-201