





- KEY
-  BH1 Sirius cable percussive boreholes
 -  WS1 Sirius window sample boreholes

REVISION	
0	>>
A	>>
B	>>
C	>>
D	>>

SIRIUS GEOTECHNICAL & ENVIRONMENTAL
4245 Park Approach,
Thorpe Park,
Leeds
LS15 8GB
www.thesiriusgroup.com
TEL: 0113 264 9960
FAX: 0113 264 9962



CLIENT

**WM MORRISON
SUPERMARKETS
PLC**

SITE

**CHALK FARM ROAD,
CAMDEN**

DRAWING TITLE

**EXPLORATORY
HOLE LOCATION
PLAN**

DRAWING NO. C3821/04		REVISION NO. 0	
DRAWN BY SA		APPROVED BY MB	
DATE June 2010	SCALE NTS		PAPER SIZE A3



BOREHOLE RECORD

BH No. **BH1**
Sheet 1 of 2

Site: Chalk Farm Road, Camden

Contract No: **C3821**

Client: Wm Morrison Supermarkets Plc

Dates:
07/04/2010-08/04/2010

Method: Cable percussive rig with 150mm diameter tools and casing.

Scale **1:100**

SAMPLE DETAILS

Type (Blows)	Depth From - To(m)	N (Cu)
D	0.30	
D (75)	1.20 1.20 - 1.65 1.45 - 1.70	(30)
D	2.00	
S	2.20 - 2.65	N=8 (1,1,1,2,2,3)
D	3.00	
U (35)	3.20 - 3.55	
D	3.55 - 3.60	(24)
D	4.00	
S	4.20 - 4.50	N=7 (1,0,1,1,2,3)
D	5.00	
U (38)	5.20 - 5.60	
D	5.60 - 5.65	(74)
D	6.00	
D	6.50	
S	6.70 - 7.15	N=15 (2,2,3,4,4,4)
D	7.50	
U (60)	8.20 - 8.65	
D	8.65 - 8.70	(82)
D	9.00	
S	9.70 - 10.15	N=21 (4,4,5,5,5,6)
D	10.20	
D (80)	11.20 11.20 - 11.65	
D	12.20	
S	12.70 - 13.15	N=33 (4,6,7,8,9,9)
D	13.20	
D (80)	14.20 14.20 - 14.55 14.55 - 14.70	(118)
D	15.20	
S	15.70 - 16.15	N=33 (6,6,6,8,9,10)
D	16.20	
D (100)	17.20 17.20 - 17.58 17.58 - 17.68	(112)
D	18.00	
S	18.70 - 18.95	N=36 (6,6,7,9,10,10)
D	19.00	

Groundwater
(Casing)

STRATA RECORD

Description

MADE GROUND: Tarmac.

MADE GROUND: Light grey sandy angular fine to coarse GRAVEL of limestone.

MADE GROUND: Firm brown slightly sandy gravelly CLAY. Low plasticity (field test). Gravel is subangular to subrounded fine to coarse of siltstone, clinker and brick.

Stiff, locally firm, low strength brown fissured slightly sandy slightly gravelly CLAY. Very high plasticity. Gravel is subangular fine to coarse gravel of flint.

--- From 5.20m to 8.20m medium strength

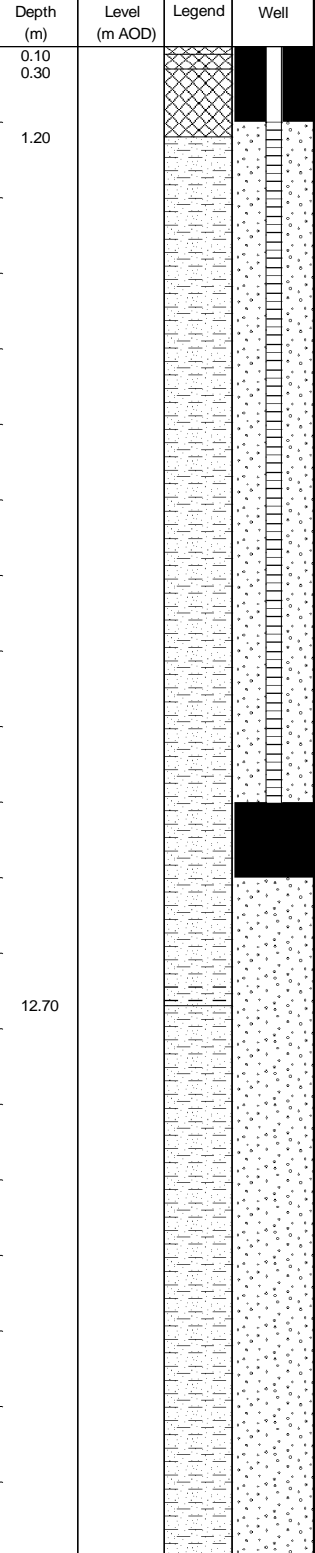
--- From 8.20m to 12.70m high strength

Stiff high and very high strength grey brown slightly sandy slightly gravelly CLAY. Very high, locally high, plasticity. Gravel is fine to coarse subrounded of flint.

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Logged By: JCC Checked By: MB

Driller: SDS





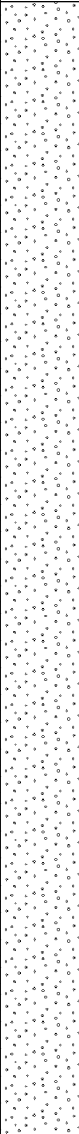
Remarks and Water Observations

- 1) Service inspection pit hand excavated to 1.20m.
- 2) Groundwater seepage at 23.60m bgl. No rise in the groundwater level recorded after 20 minutes.
- 3) Cable percussive boring complete at 35.00m.
- 4) Standpipe installed as detailed above.
- 5) Shear strengths given in () show results of hand vane tests undertaken in U100's.

GL (m AOD)
-
Easting:
-
Northing:
-

Fig. No.

BH1

				BOREHOLE RECORD		BH No. BH1 Sheet 2 of 2							
				Site: Chalk Farm Road, Camden		Contract No: C3821							
				Client: Wm Morrison Supermarkets Plc		Dates: 07/04/2010-08/04/2010							
				Method: Cable percussive rig with 150mm diameter tools and casing.		Scale 1:100							
SAMPLE DETAILS			Groundwater (Casing)	STRATA RECORD Description		Logged By: JCC		Checked By: MB					
						Driller: SDS							
Type (Blows)	Depth From - To(m)	N (Cu)				Depth (m)	Level (m AOD)	Legend	Well				
D U (100) D D D	20.00 20.20 - 20.60 20.60 - 20.65 21.00	(70)	21	Stiff high and very high strength grey brown slightly sandy slightly gravelly CLAY. Very high, locally high, plasticity. Gravel is fine to coarse subrounded of flint.									
S D	21.70 - 22.15 22.00	N=35 (5,5,7,9,9,10)	22										
D U (100) D D	23.00 23.20 - 23.60 23.60 - 23.65 24.00	(92)	23 24										
S D	24.75 - 25.15 25.20	N=38 (6,8,8,9,10,11)	25										
D U (100) D D	26.20 26.20 - 26.50 26.50 - 26.55 27.20		26 27										
S D	27.70 - 28.15 28.20	N=46 (7,8,10,10,12,14)	28										
D U B	29.20		29										
D	30.20		30										
U (110) D	30.70 - 30.95 30.95 - 31.00	(>150)	31										
D S	32.20 32.20 - 32.65	50/195mm (8,11,14,19,17)	32										
D	33.20		33										
U (120) D	33.70 - 33.95 33.95 - 34.00		34										
D	35.00		35										
End of Borehole at 35.00 m									35.00				
									36				
									37				
				38									
				39									
Remarks and Water Observations						GL (m AOD) - Easting: - Northing: -		Fig. No. BH1					
1) Service inspection pit hand excavated to 1.20m. 2) Groundwater seepage at 23.60m bgl. No rise in the groundwater level recorded after 20 minutes. 3) Cable percussive boring complete at 35.00m. 4) Standpipe installed as detailed above. 5) Shear strengths given in () show results of hand vane tests undertaken in U100's.													



BOREHOLE RECORD

BH No. **BH2**
Sheet 1 of 2

Site: Chalk Farm Road, Camden

Contract No: **C3821**

Client: Wm Morrison Supermarkets Plc

Dates:
09/04/2010-13/04/2010

Method: Cable percussive boring rig with 200mm and 150mm diameter casing and tools.

Scale **1:100**

SAMPLE DETAILS

Groundwater
(Casing)

STRATA RECORD

Logged By: JCC Checked By: MB

Driller: SDS

Type
(Blows)

Depth
From - To(m)

N
(Cu)

Description

Depth
(m)

Level
(m AOD)

Legend

Well

D 0.40

D B 1.00
1.20 - 1.65

N=35
(2,5,8,10,
10,7)

1

D B 2.00
2.20 - 2.65

N=27
(3,3,4,8,9
,6)

2

D B 3.00
3.20 - 3.65

N=16
(2,2,5,4,4
,3)

3

D B 4.00
4.20 - 4.65

62/225mm
(10,12,30,
22,10)

4

D B 5.00
5.20 - 5.65

60/150mm
(25,20,50,
10)

5

D U (45) 6.75
7.00 - 7.45

(98)

7

D 7.45 - 7.50

8

D 8.00

9

S 8.50 - 8.95

N=23
(4,4,5,5,6
,7)

D 9.00

10

D (75) 10.00
10.00 - 10.45

(88)

11

D 10.45 - 10.50

12

D 11.00

13

S 11.50 - 11.95

N=29
(4,5,5,7,8
,9)

D 12.00

14

D (80) 13.00
13.00 - 13.45

(44)

15

D 13.45 - 13.50

16

D 14.00

17

S 14.50 - 14.95

N=35
(4,6,7,8,1
0,10)

D 15.00

18

D (100) 16.00
16.00 - 16.40

(98)

19

D 16.40 - 16.45

20

D 17.00

21

S 17.50 - 17.95

N=37
(6,7,8,8,1
0,11)

D 18.00

22

D (100) 19.00
19.00 - 19.30

(98)

23

D 19.30 - 19.35

24

MADE GROUND: Tarmac.

MADE GROUND: Light grey sandy angular to subangular fine to coarse GRAVEL of limestone.

MADE GROUND: Medium dense and dense brown clayey fine to coarse SAND and subangular to subrounded fine to coarse GRAVEL of sandstone, brick, flint, limestone, concrete and clinker.

From 4.20m: Low cobble and boulder content of concrete.

From 5.50 to 5.75m: Obstruction encountered.

Stiff high strength brown fissured locally thinly laminated slightly sandy slightly gravelly CLAY. Very high plasticity. Gravel is subangular to subrounded fine to coarse gravel of flint.

--- At 13.45m hand vane failed on fissures

Stiff high strength and very high strength grey brown fissured slightly sandy slightly gravelly CLAY. Very high plasticity. Gravel is subangular to subrounded fine to medium of flint.

--- At 16.40m hand vane sheared on fissures.

Continued next sheet

Remarks and Water Observations

- 1) Service inspection pit hand excavated to 1.20m.
- 2) Groundwater encountered at 4.40m bgl, rising to 4.35m bgl after 15 minutes.
- 3) Chiselling hard strata from 5.50m to 5.75m bgl, 1 hour.
- 4) Casing reduced from 200m to 150mm at 6.75m.
- 5) Cable percussive boring complete at 35.00m.
- 6) Standpipe installed, as detailed above.
- 7) Shear strengths given in () show results of hand vane tests undertaken in U100's.

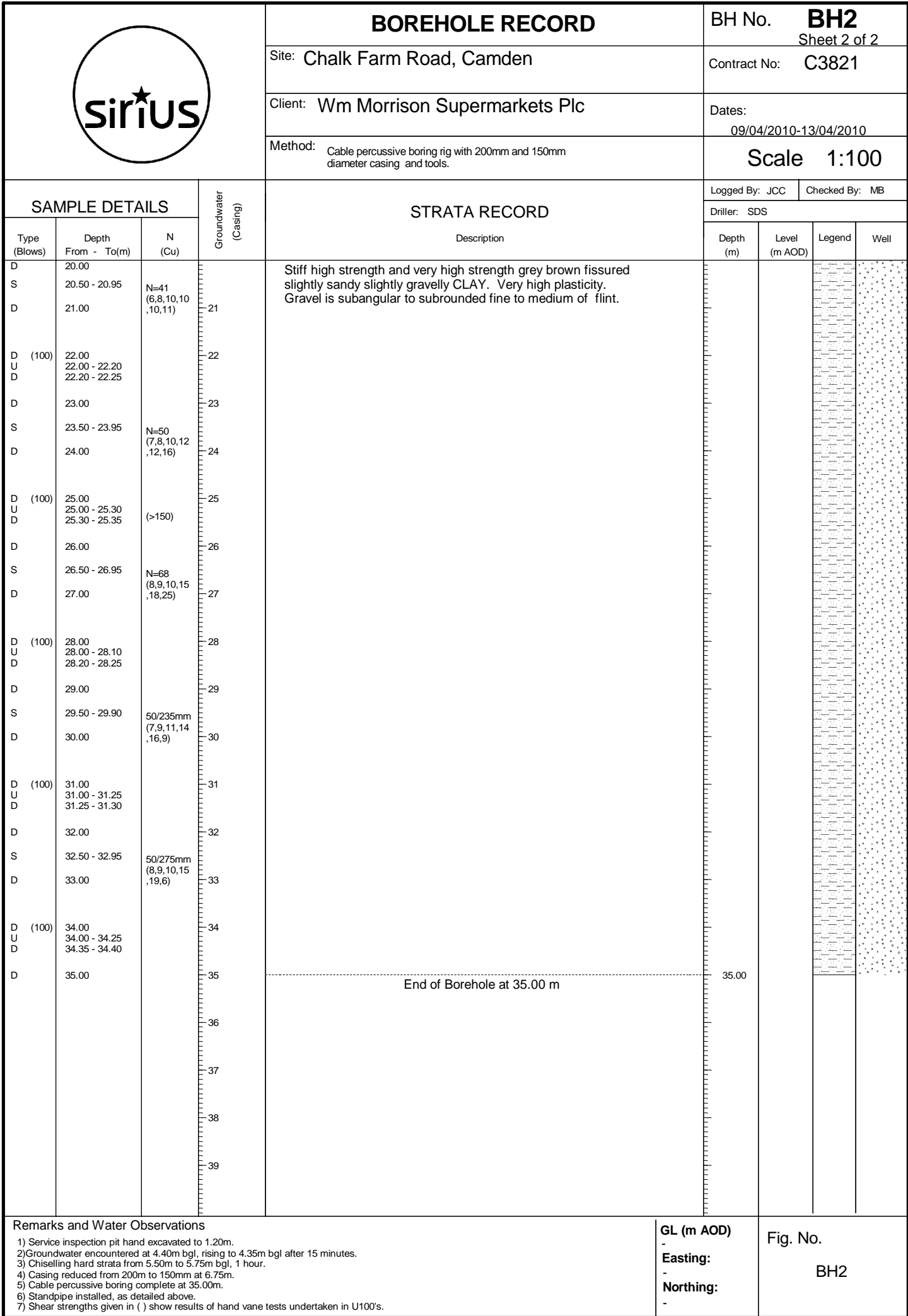
GL (m AOD)

Easting:

Northing:

Fig. No.

BH2





BOREHOLE RECORD

BH No. **BH3**
Sheet 1 of 2

Site: Chalk Farm Road, Camden

Contract No: C3821

Client: Wm Morrison Supermarkets Plc

Dates:
14/04/2010-15/04/2010

Method: Cable percussive boring rig with 150mm diameter casing and tools.

Scale 1:100

SAMPLE DETAILS

Type (Blows)	Depth From - To(m)	N (Cu)
D	0.30	
D B D	1.00 1.20 - 1.65 1.40	N=18 (1,2,4,5,5,4)
D S	2.00 2.20 - 2.65	N=8 (1,2,2,2,2,2)
D U (20)	3.00 3.20 - 3.65	
D S	4.00 4.20 - 4.65	N=8 (1,1,2,2,2,2)
D B UF	5.00 5.20 - 5.65	
D B D S D	6.00 6.20 - 6.65 6.20 6.20 - 6.65 7.00	N=50 (5,8,10,10,20,10)
B D U (50)	7.70 - 8.15 8.00 8.20 - 8.45	N=28 (10,10,8,7,7,6)
D D	8.65 - 8.70 9.00	(88)
S D	9.70 - 10.15 10.20	N=33 (4,6,8,8,8,9)
D U D D	11.20 11.20 - 11.65 11.65 - 11.70 12.00	(86)
S D	12.70 - 13.15 13.20	N=37 (4,5,9,9,9,10)
D U U D (88)	14.20 14.20 - 14.65 14.65 - 14.70 15.20	(88)
D S D	15.70 - 16.15 16.20	N=45 (6,7,9,10,12,14)
D U D (100)	17.20 17.20 - 17.60 17.60 - 17.65 18.20	
D S D	18.70 - 19.15 19.20	N=49 (5,8,12,10,12,15)

Groundwater
(Casing)



STRATA RECORD

Description
MADE GROUND: Tarmac.
MADE GROUND: Light grey sandy angular to subangular fine to coarse GRAVEL of limestone.
MADE GROUND: Medium dense brown clayey sandy GRAVEL. Medium cobble content. Gravel is subangular to subrounded fine to coarse of brick, clinker, sandstone and flint. Cobbles are angular to subrounded of brick, sandstone and concrete.
MADE GROUND: Soft low and medium strength brown slightly sandy slightly gravelly CLAY. High Plasticity (field test). Medium subangular brick and concrete cobble content. Gravel is subangular to subrounded fine to coarse of brick, clinker, sandstone and flint. --- from 3.00m very wet with strong sewage odour.
At 6.50m: Chiseling at 6.50m concrete/obstruction. From 6.50m: Obstruction. Assumed former concrete basement floor.
Stiff high and very high strength soft brown fissured slightly sandy slightly gravelly CLAY. Very high plasticity. Gravel is subangular to subrounded fine to coarse of flint.
--- At 12.00m orange brown and rare angular fine to coarse gravel of quartz.
Stiff very high strength orange brown fissured slightly sandy slightly gravelly CLAY. Very high, locally high, plasticity. Gravel is subangular to subrounded fine to coarse flint.

Depth (m)	Level (m AOD)	Legend	Well
0.30 0.40			
2.10			
8.10			
13.60			

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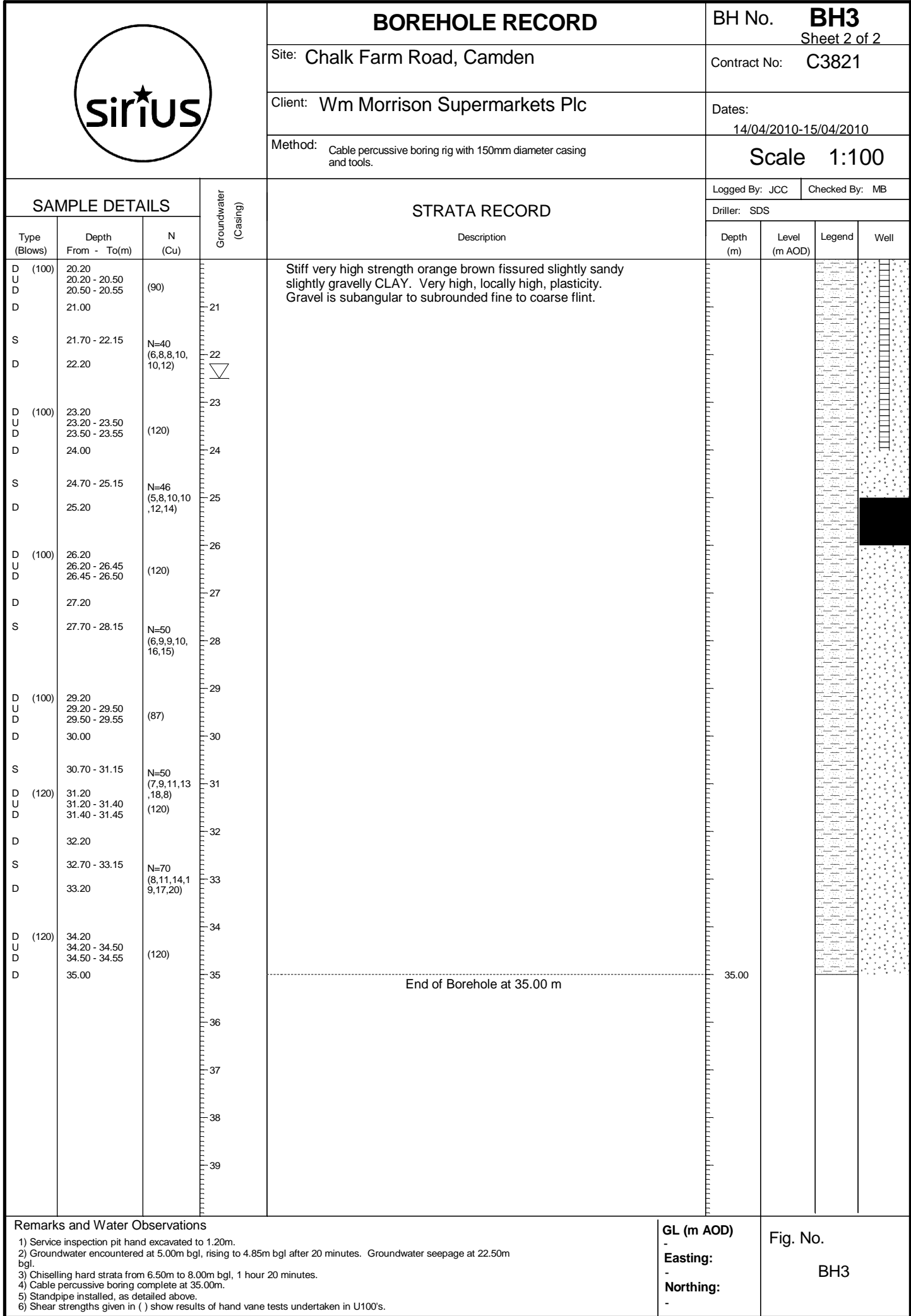
Remarks and Water Observations

- Service inspection pit hand excavated to 1.20m.
- Groundwater encountered at 5.00m bgl, rising to 4.85m bgl after 20 minutes. Groundwater seepage at 22.50m bgl.
- Chiselling hard strata from 6.50m to 8.00m bgl, 1 hour 20 minutes.
- Cable percussive boring complete at 35.00m.
- Standpipe installed, as detailed above.
- Shear strengths given in () show results of hand vane tests undertaken in U100's.

GL (m AOD)
-
Easting:
-
Northing:
-

Fig. No.

BH3



Appendix C CDA and LFRZ Map