

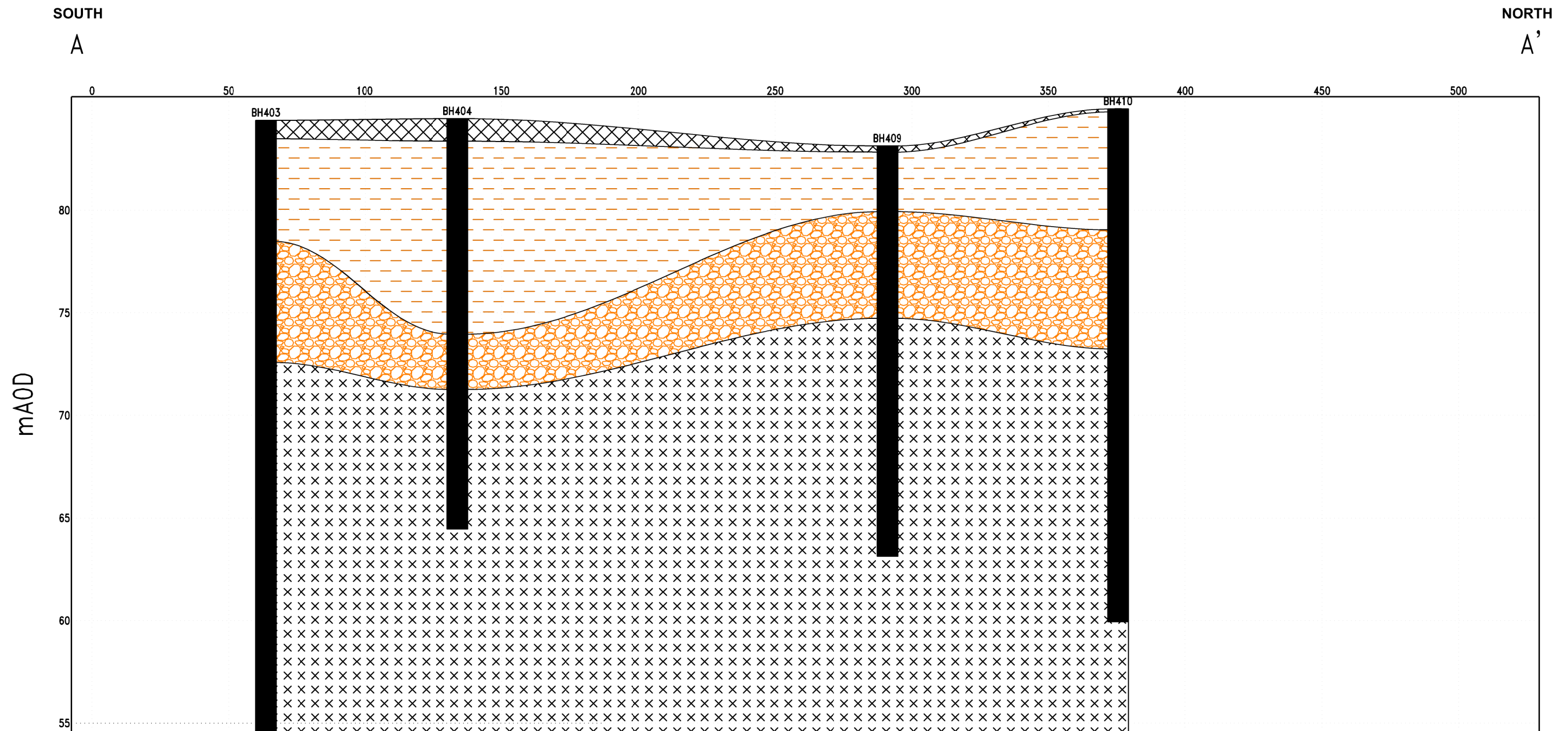
LEGEND

MADE GROUND

LOWESTOFT FORMATION

KESGRAVE CATCHMENT SUBGROUP

LEWES NODULAR / SEAFORD CHALK FORMATION



Horizontal Scale - 1:1,500

Vertical Scale - 1:200

TITLE:

Indicative Geological SectionA

Broadwater Road

Welwyn Garden City

DWN: DE

CHK: SS

DATE: 26 November 2014

SCALE: To Scale @ A3

REV: 1

PROJECT NO.: 2342.18

FIGURE NO.: 5a

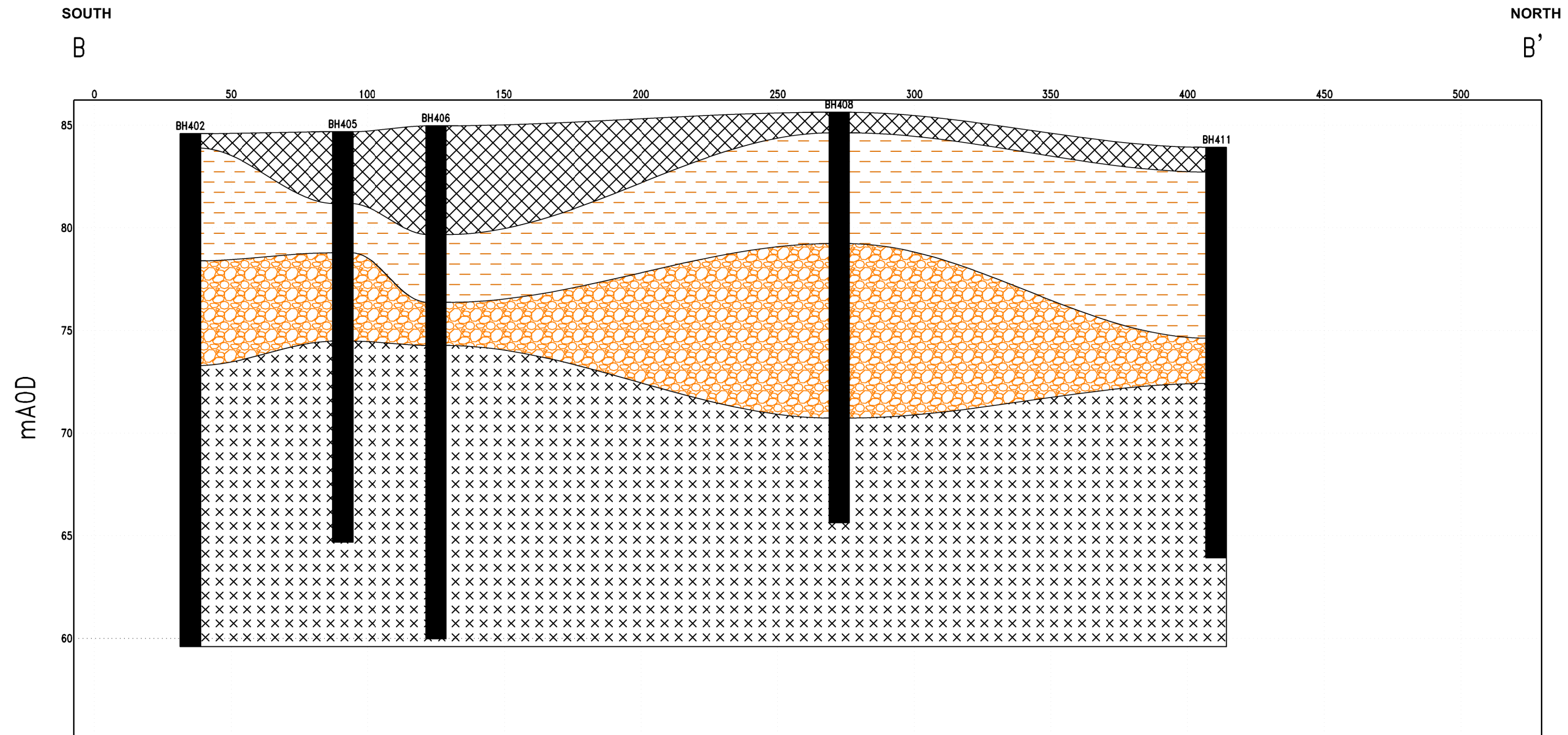
LEGEND

MADE GROUND

LOWESTOFT FORMATION

KESGRAVE CATCHMENT SUBGROUP

LEWES NODULAR / SEAFORD CHALK FORMATION



Horizontal Scale - 1:1,500
 Vertical Scale - 1:200

TITLE:

Indicative Geological Section B

Broadwater Road

Welwyn Garden City

DWN: DE

CHK: SS

DATE: 26 November 2014

SCA: To Scale @ A3

REV: 1

PROJECT NO.: 2342.18

FIGURE NO.: 5b

LEGEND

MADE GROUND

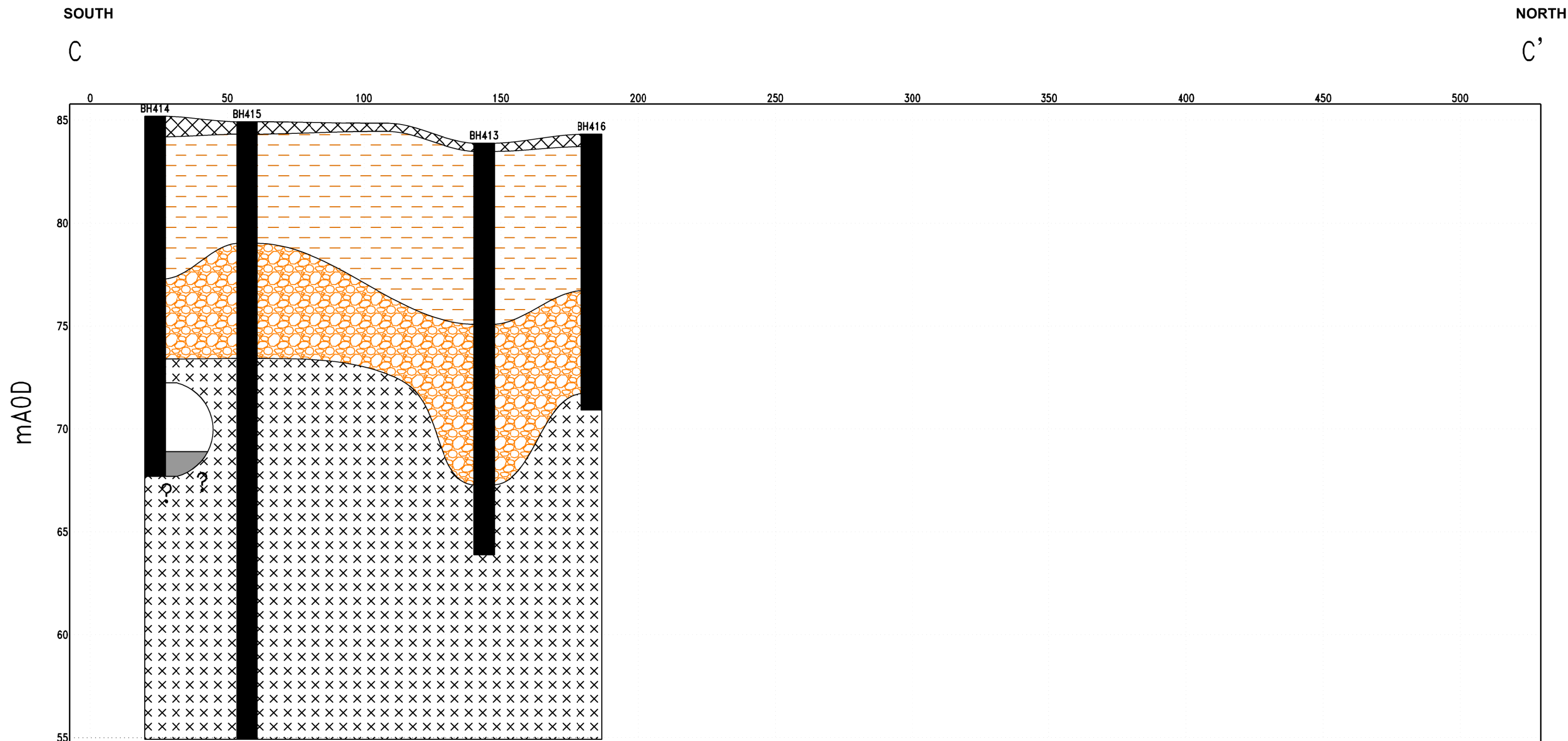
LOWESTOFT FORMATION

KESGRAVE CATCHMENT SUBGROUP

LEWES NODULAR / SEAFORD CHALK FORMATION

VOID

DISSOLUTION SOILS



LEGEND

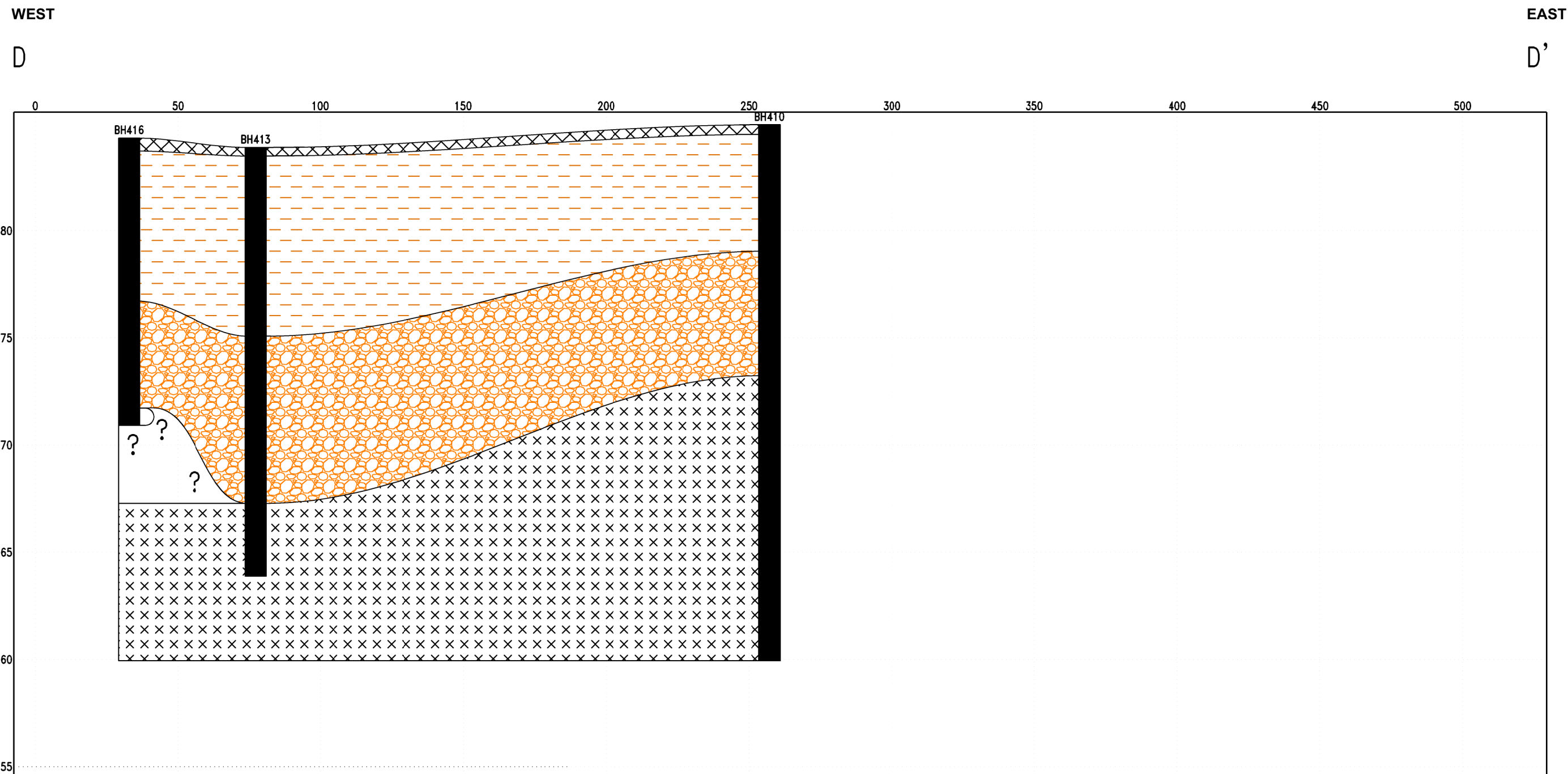
MADE GROUND

LOWESTOFT FORMATION

KESGRAVE CATCHMENT SUBGROUP

LEWES NODULAR / SEAFORD CHALK FORMATION

VOID



Horizontal Scale - 1:1,500
Vertical Scale - 1:200



TITLE:
Indicative Geological Section D
Broadwater Road
Welwyn Garden City

DWN: DE	SCA: To Scale @ A3	PROJECT NO.: 2342.18
CHK: SS	REV: 1	FIGURE NO.: 5d
DATE: 26 November 2014		

LEGEND

MADE GROUND

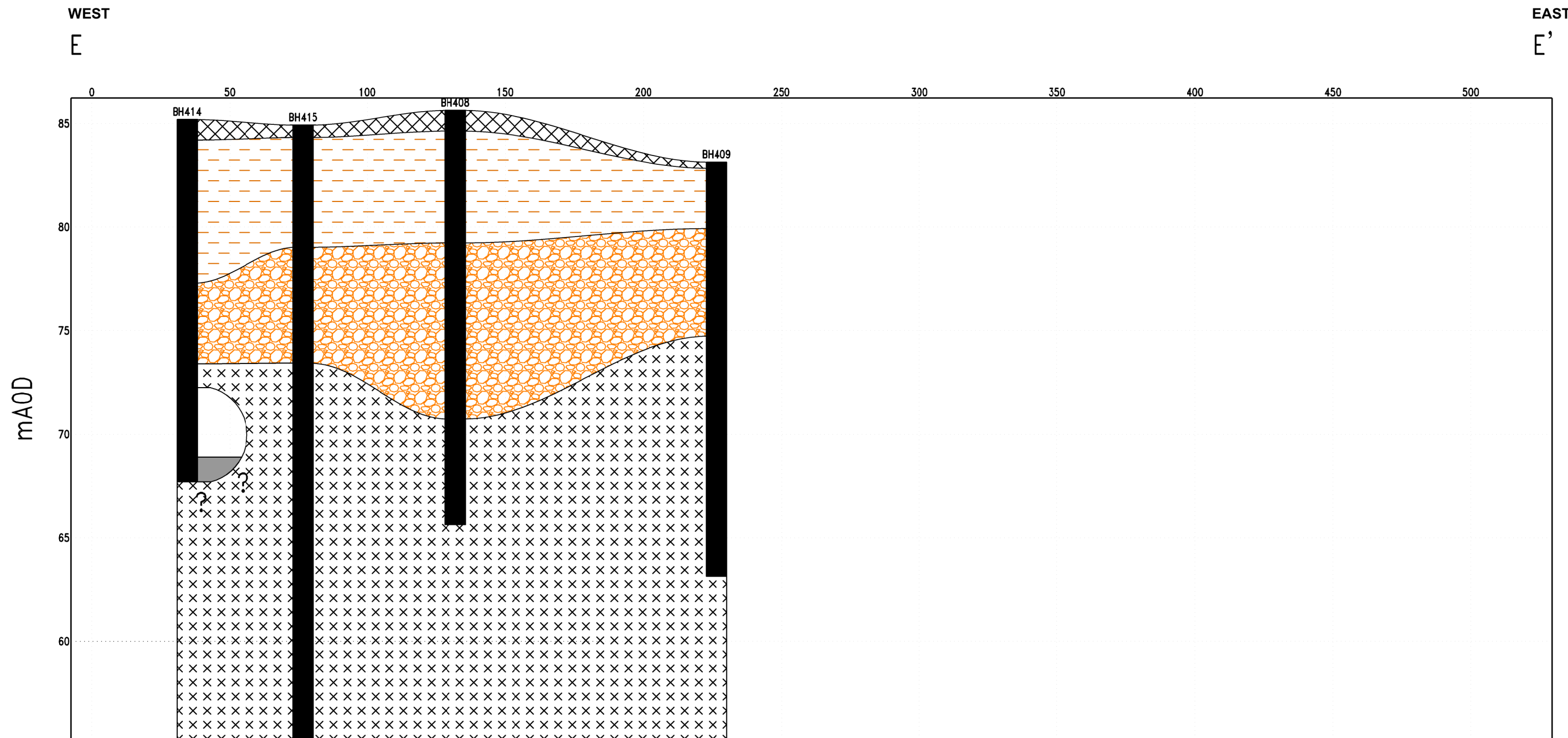
LOWESTOFT FORMATION

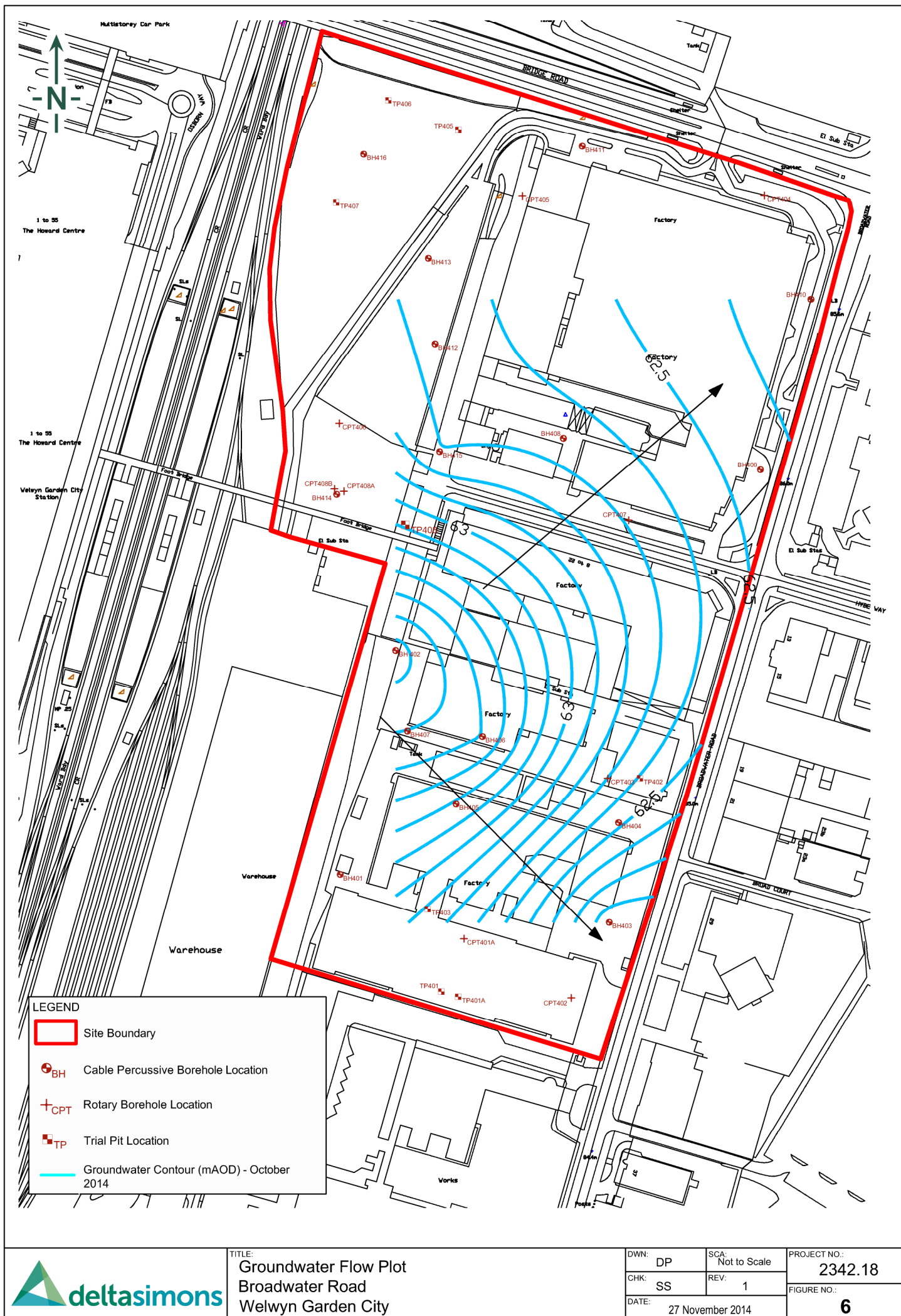
KESGRAVE CATCHMENT SUBGROUP

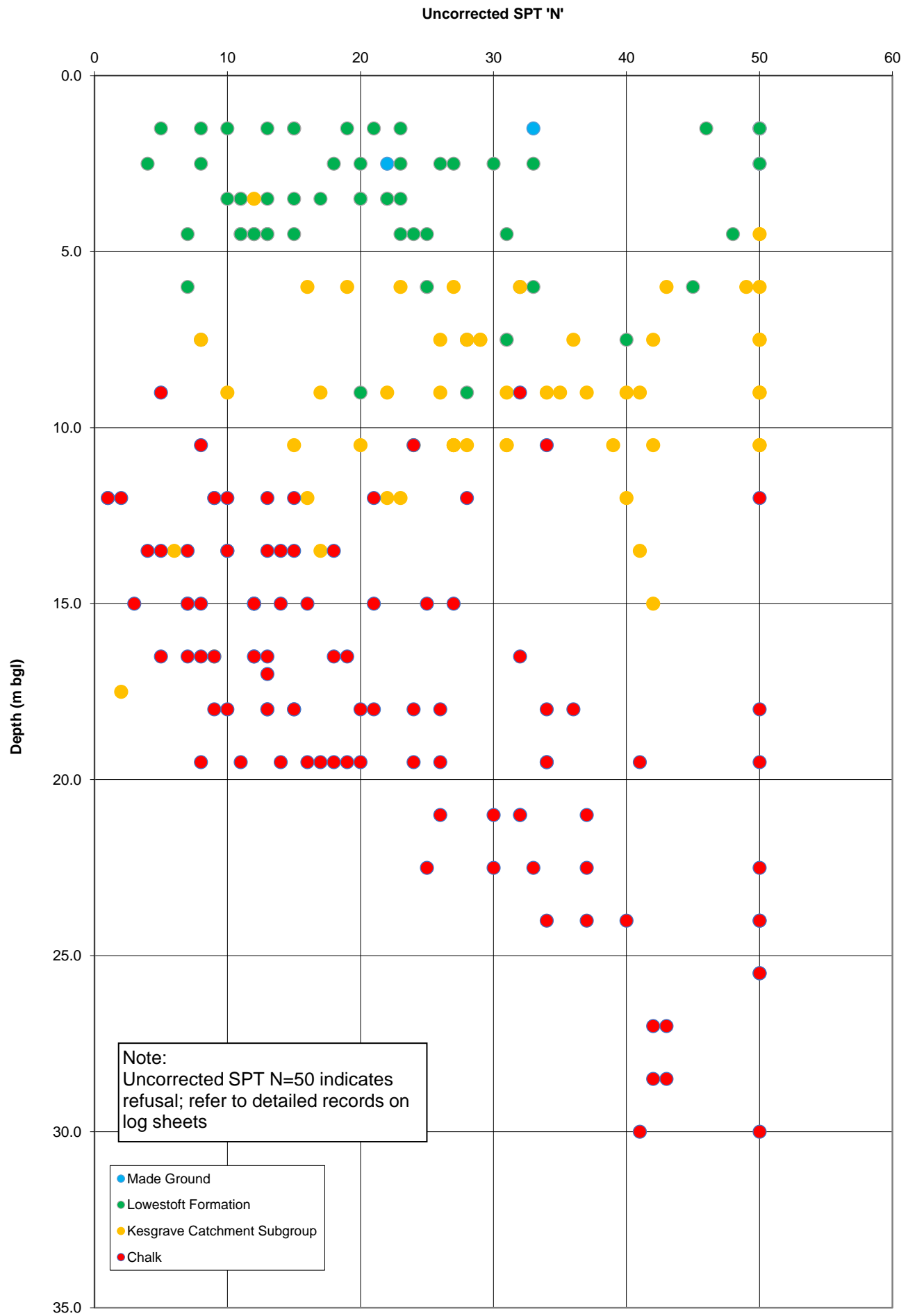
LEWES NODULAR / SEAFORD CHALK FORMATION

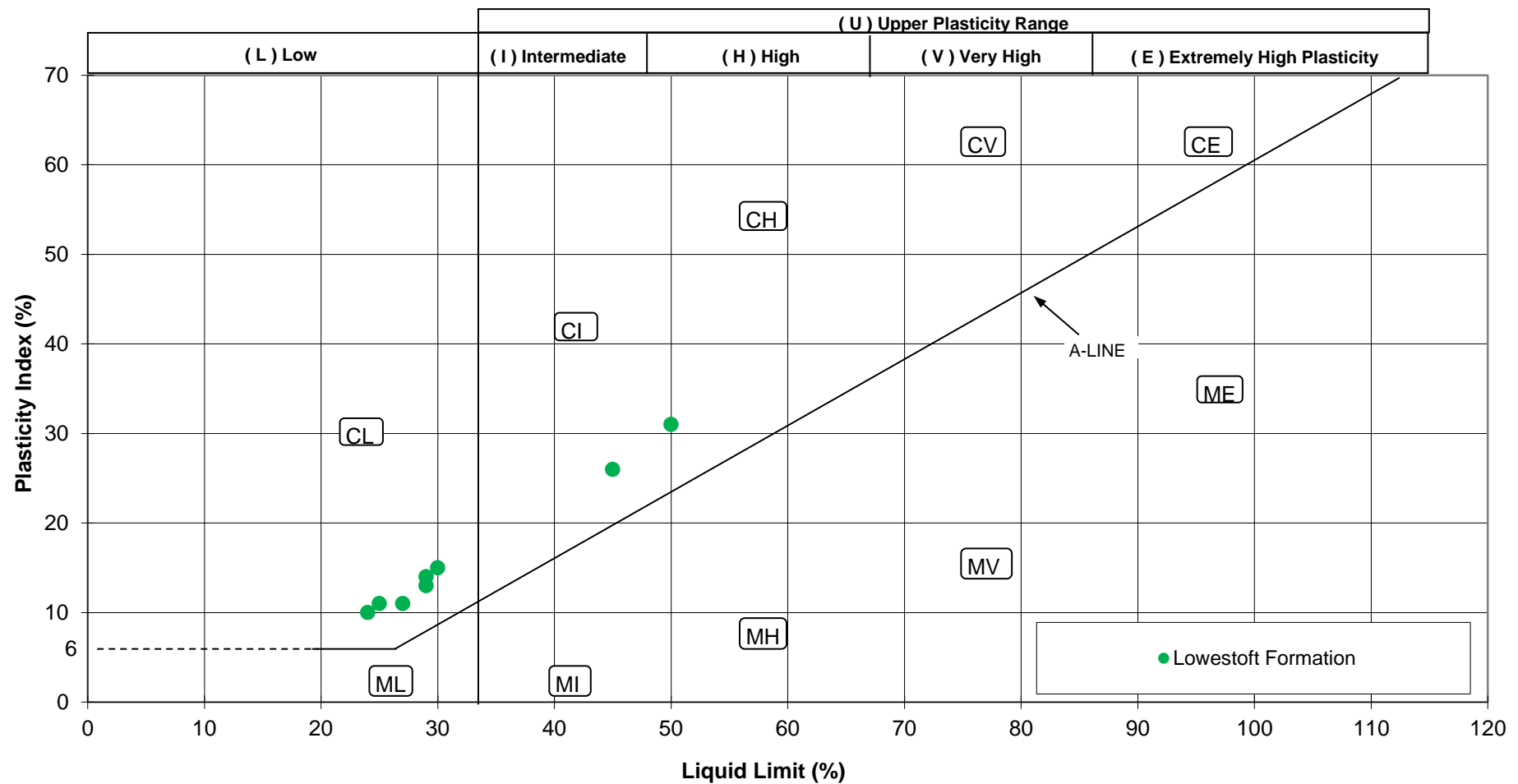
VOID

DISSOLUTION SOILS









TITLE:

Plasticity Chart - All Soils
Broadwater Rd, Welwyn Garden City

DWN:

WC

DATE:

Nov-14

PROJECT NO.:

2342-18

FIGURE NO.:

8



Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com									
Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH401			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 06/10/2014 - 07/10/2014		Client: Spen Hill Developments Ltd			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details				
					TYPE	REF	Depth	SPT N Value/Drive mm					
MADE GROUND: Asphalt.				84.52 0.15 84.37 0.30	D	1	0.50						
MADE GROUND: Concrete													
MADE GROUND: Dark brown sandy gravelly clay. Gravel is angular to rounded fine to coarse and of mixed lithologies including concrete, brick and flint. Sand is fine to coarse. Frequent ash and tarmac.				(1.10)	D	2	1.00						
Stiff orange brown slightly gravelly sandy CLAY. Gravel is angular to subrounded fine to coarse flint. Sand is medium to coarse. (LOWESTOFT FORMATION)				83.27 1.40						B	1	1.50 - 2.00 1.50 - 1.95	
					D	3	2.50 - 3.00 2.50 - 2.95	CPT N=21 4,5/5,6,5,5					
					D	4	3.50 - 4.00 3.50 - 3.95	SPT N=22 3,4/4,6,6,6					
					D	5	4.50 - 5.00 4.50 - 4.95	CPT N=23 4,5/5,6,6,6					
				(150mm)	B	2	6.00 - 6.50 6.00 - 6.45	CPT N=27 5,6/6,6,7,8					
Medium to very dense orange brown very sandy angular to rounded fine to coarse flint GRAVEL. Sand is fine to coarse. Occasional flint cobbles. (KESGRAVE CATCHMENT SUBGROUP)													
					D	6	7.50 - 8.00 7.50 - 7.95	CPT N=50/240mm (7,12/12,16,18,4/15mm)					
					D	7	9.00 - 9.50 9.00 - 9.45	CPT N=34 6,7/8,8,9,9					
					D	7	9.00 - 9.50 9.00 - 9.45	CPT N=34 6,7/8,8,9,9					

REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 20.00m bgl.				CHISELLING			WATER LEVEL OBSERVATIONS				
				Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
				NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
				BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
				150mm to 20.00m			150mm to 11.90m				

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum	Page 1 of 3
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524054.54 N: 212697.97 Level: 84.67	Logged By: WC	Checked By: WC Approved By: SS

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com										
Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH401				
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 06/10/2014 - 07/10/2014		Client: Spen Hill Developments Ltd				
DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details	
					TYPE	REF	Depth	SPT N Value/Drive mm		
Medium to very dense orange brown very sandy angular to rounded fine to coarse flint GRAVEL. Sand is fine to coarse. Occasional flint cobbles. (KESGRAVE CATCHMENT SUBGROUP)(BH Continued)					D	8	10.50 - 11.00 10.50 - 10.95	CPT N=31 5,6/7,7,8,9		
Recovered as structureless CHALK composed of cream with rare orange veins slightly gravelly silt. Gravel is subangular fine to medium extremely weak low density cream. Grade Dm. (LEWES NODULAR/ SEAFORD CHALK FORMATION)			11.90	72.77 11.90	B	3	11.90 12.00 - 12.50 12.00 - 12.45	SPT N=9 1,0/2,2,2,3		
					D	10	13.50 - 14.00 13.50 - 13.95	SPT N=18 2,3/4,4,5,5		
					D	11	15.00 - 15.50 15.00 - 15.45	SPT N=25 2,4/6,6,6,7		
					D	12	17.00			
					D	13	18.00 - 18.50 18.00 - 18.45	SPT N=15 2,3/4,3,4,4		
				(8.10)						
					D	14	19.50 - 20.00 19.50 - 19.95	SPT N=17 3,3/4,5,4,4		
			64.67	20.00						
REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 20.00m bgl.			CHISELLING			WATER LEVEL OBSERVATIONS				
			Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
			NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
			BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
			150mm to 20.00m			150mm to 11.90m				
All measurements in metres unless otherwise stated		10m/page	Scale: 1:62.50		Coordinates to National Grid Ground Level to Ordnance Datum				Page 2 of 3	
Plant Used: Dando 2000		Coordinates / Level (mAOD): E: 524054.54 N: 212697.97 Level: 84.67		Logged By: WC		Checked By: WC		Approved By: SS		

Delta-Simons
3 Henley Office Park, Doddington Road,
Lincoln, LN6 3QR
Tel: +44 (0) 870 0400 012
Fax: +44 (0) 1522 698393
Email: info@deltasimons.com



Project: **Broadwater Road, Welwyn Garden City** Project No: **2342.18** Hole ID: **BH401**

CABLE PERCUSSION BOREHOLE LOG

Date From / To:
 06/10/2014 - 07/10/2014

Client:
Spen Hill Developments Ltd

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results		Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm		
Borehole complete at 20.00m bgl.										

REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Borehole remained dry on completion.
4. Installed with HDPE standpipe to 20.00m bgl.

CHISELLING			WATER LEVEL OBSERVATIONS						
Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth		
NO CHISELLING UNDERTAKEN:					NO WATER ENCOUNTERED:				
BOREHOLE DIAMETER			CASING DIAMETER			DEPTH SEALED			
150mm to 20.00m			150mm to 11.90m						

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum			Page 3 of 3	
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524054.54 N: 212697.97 Level: 84.67	Logged By: WC		Checked By: WC		Approved By: SS

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com									
Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH402			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 09/10/2014 - 10/10/2014		Client: Spen Hill Developments Ltd			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
MADE GROUND: Brown sandy clayey gravel. Gravel is angular fine to coarse concrete and brick. Sand is fine to coarse.				(0.70) 83.89 0.70	D	1	0.50		
Stiff orangey brown slightly sandy gravelly CLAY. Gravel is angular to subrounded fine to coarse flint. Sand is fine to coarse.(LOWESTOFT FORMATION)				(4.30)	D	2	1.00		
					D	3	1.50 - 1.95 1.50 - 1.95	CPT N=46 4,6/9,11,12,14	
					D	4	2.50 - 2.95 2.50 - 2.95	CPT N=50/275mm (2,7/8,12,16,14/50mm)	
					B	1	3.50 - 3.95 3.50 - 3.95	CPT N=20 2,3/3,4,6,7	
Very stiff orangey brown slightly sandy slightly gravelly CLAY. Gravel is angular to rounded fine to coarse flint. Sand is fine to coarse. Fine to medium gravel and medium to coarse sand sized organic particles throughout.(LOWESTOFT FORMATION)				(1.20)	D	5	4.50 - 4.95 4.50 - 4.95	CPT N=25 2,3/5,6,7,7	
					B	2	5.00 - 5.50		
Medium to very dense orange brown sandy subangular to rounded fine to coarse flint GRAVEL. Sand is fine to coarse.(KESGRAVE CATCHMENT SUBGROUP)				(5.10)	D	6	6.00 - 6.45 6.00 - 6.45	SPT N=50/200mm (6,8/14,18,18/50mm)	
					B	3	7.50 - 7.95 7.50 - 7.95	CPT N=28 3,4/5,6,8,9	
					D	7	9.00 - 9.45 9.00 - 9.45	CPT N=35 4,6/7,8,9,11	

REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 25.00m bgl.	CHISELLING			WATER LEVEL OBSERVATIONS					
	Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth	
				1	10-10-14		24.00		11.30
	NO CHISELLING UNDERTAKEN:								
	BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED			
150mm to 25.00m			150mm to 11.30m						

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum	Page 1 of 3
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524103.37 N: 212675.76 Level: 84.59	Logged By: WC	Checked By: WC Approved By: SS

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com									
Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH402			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 09/10/2014 - 10/10/2014		Client: Spen Hill Developments Ltd			
DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
Medium to very dense orange brown sandy subangular to rounded fine to coarse flint GRAVEL. Sand is fine to coarse.(KESGRAVE CATCHMENT SUBGROUP)(BH Continued)			11.30	73.29 11.30	D	8	10.50 - 10.95 10.50 - 10.95	CPT N=39 4,6/7,8,11,13	
Recovered as structureless CHALK composed of cream with rare orange veins slightly gravelly silt. Gravel is angular to subangular fine to medium extremely weak low density chalk. Rare subrounded coarse rinded flint gravel.Grade Dm.(LEWES NODULAR/ SEAFORD CHALK FORMATION)					D	9	12.00 - 12.45 12.00 - 12.45	SPT N=9 2,2/2,2,2,3	
					D	10	13.45 - 13.95 13.50 - 13.95	SPT N=13 2,2/3,3,4,3	
					D	11	15.00 - 15.45 15.00 - 15.45	SPT N=12 2,3/2,3,4,3	
					D	12	16.50 - 16.95 16.50 - 16.95	SPT N=9 3,3/2,2,3,2	
					D	13	18.00 - 18.45 18.00 - 18.45	SPT N=21 2,3/5,6,6,4	
				(13.70)					
					D	14	19.50 - 19.95 19.50 - 19.95	SPT N=34 3,4/6,8,10,10	

REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 25.00m bgl.	CHISELLING			WATER LEVEL OBSERVATIONS					
	Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth	
				1	10-10-14		24.00		11.30
	NO CHISELLING UNDERTAKEN:								
	BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED			
150mm to 25.00m			150mm to 11.30m						

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum	Page 2 of 3
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524103.37 N: 212675.76 Level: 84.59	Logged By: WC	Checked By: WC Approved By: SS

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com													
Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH402							
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 09/10/2014 - 10/10/2014		Client: Spen Hill Developments Ltd							
DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details				
					TYPE	REF	Depth	SPT N Value/Drive mm					
Recovered as structureless CHALK composed of cream with rare orange veins slightly gravelly silt. Gravel is angular to subangular fine to medium extremely weak low density chalk. Rare subrounded coarse rinded flint gravel. Grade Dm. (LEWES NODULAR/ SEAFORD CHALK FORMATION)(BH Continued)					D	15	21.00 - 21.45 21.00 - 21.45	SPT N=32 4,3/6,7,9,10					
					D	16	22.50 - 22.95 22.50 - 22.95	SPT N=33 4,5/6,6,10,11					
					D	17	24.00 - 24.45 24.00 - 24.45	SPT N=37 3,5/7,9,9,12					
Borehole complete at 25.00m bgl.			59.59 25.00										
REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 25.00m bgl.					CHISELLING			WATER LEVEL OBSERVATIONS					
					Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth	
					NO CHISELLING UNDERTAKEN:			1	10-10-14		24.00		11.30
					BOREHOLE DIAMETER			CASING DIAMETER			DEPTH SEALED		
					150mm to 25.00m			150mm to 11.30m					
All measurements in metres unless otherwise stated		10m/page Scale: 1:62.50		Coordinates to National Grid Ground Level to Ordnance Datum				Page 3 of 3					
Plant Used: Dando 2000		Coordinates / Level (mAOD): E: 524103.37 N: 212675.76 Level: 84.59		Logged By: WC		Checked By: WC		Approved By: SS					

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com									
Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH403			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 07/10/2014 - 08/10/2014		Client: Spen Hill Developments Ltd			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
MADE GROUND: Concrete				84.18 0.20					
MADE GROUND: Grey sandy gravel. Gravel is coarse angular to subrounded fine to coarse of mixed lithologies including brick, flint and concrete. Sand is medium to coarse.				(0.70) 83.48 0.90	D	1	0.50		
Stiff orange brown slightly gravelly sandy CLAY . Gravel is angular to rounded fine to coarse flint. Sand is fine to coarse. (LOWESTOFF FORMATION).				(0.90) 82.58 1.80	B	1	1.50 - 1.95 1.50 - 1.95	CPT N=23 3,4/4,5,6,8	
MADE GROUND: Orange brown slightly gravelly sandy clay. Gravel is angular to rounded fine to coarse flint and rare concrete.				(4.50)	D	3	2.50 - 2.95 2.50 - 2.95	CPT N=18 2,2/3,4,5,6	
			D		4	3.50 - 3.95 3.50 - 3.95	CPT N=17 2,3/3,4,4,6		
			D		5	4.50 - 4.95 4.50 - 4.95	CPT N=11 2,3/3,4,2,2		
			B		2	5.40 - 5.80			
Stiff brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to medium flint. Sand is fine to coarse. Rare medium gravel sized organic patches.(LOWESTOFT FORMATION)			(150mm)	(0.50) 78.98 5.40 78.48 5.90	D	6	6.00 - 6.45 6.00 - 6.45	CPT N=16 2,2/3,4,4,5	
Medium dense to dense brown orange sandy subangular to rounded fine to coarse flint GRAVEL. Sand is fine to coarse. (KESGRAVE CATCHMENT SUBGROUP)				(5.90)	D	7	7.50 - 7.95 7.50 - 7.95	CPT N=26 3,4/5,5,7,9	
			B		3	9.00 - 9.45 9.00 - 9.45	CPT N=40 2,5/8,9,11,12		

REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Groundwater encountered at 23.46m bgl. 4. Installed with HDPE standpipe to 30.00m bgl.				CHISELLING			WATER LEVEL OBSERVATIONS					
				Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth	
				NO CHISELLING UNDERTAKEN:			1	08-10-14		23.46		
				BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED			
150mm to 30.00m			150mm to 11.80m									

All measurements in metres unless otherwise stated		10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum		Page 1 of 4
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524182.88 N: 212675.1 Level: 84.38		Logged By: WC	Checked By: WC	Approved By: SS

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com												
Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH403						
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 07/10/2014 - 08/10/2014		Client: Spen Hill Developments Ltd						
DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details			
					TYPE	REF	Depth	SPT N Value/Drive mm				
Medium dense to dense brownly orange sandy subangular to rounded fine to coarse flint GRAVEL. Sand is fine to coarse. (KESGRAVE CATCHMENT SUBGROUP)(BH Continued)			11.80	72.58 11.80	D	8	10.50 - 10.95 10.50 - 10.95	CPT N=27 2,3/4,7,8,8				
Recovered as structureless CHALK composed of cream occasional orange veins slightly gravelly silt. Gravel is angular fine to medium extremely weak low density chalk. Abundant angular to subangular flint gravel. Grade Dm.(LEWES NODULAR/ SEAFORD CHALK FORMATION).				72.18 12.20	D	9	12.00 - 12.45 12.00 - 12.45	CPT N=50/200mm (4,10/13,19,18/50mm)				
Recovered as structureless CHALK composed of cream occasional orange veins slightly sandy slightly gravelly silt. Gravel is angular to subangular fine to medium extremely weak low density cream. Occasional subrounded fine to coarse flint gravel. Grade Dm.(LEWES NODULAR/ SEAFORD CHALK FORMATION).					D	10	13.50 - 13.95 13.50 - 13.95	SPT N=10 1,2/3,2,2,3				
					D	11	15.00 - 15.45 15.00 - 15.45	SPT N=12 2,3/2,3,4,3				
					B	4	16.50 - 16.95 16.50 - 16.95	SPT N=18 8,6/5,5,4,4				
					D	12	18.00 - 18.45 18.00 - 18.45	SPT N=24 4,5/5,6,6,7				
					D	13	19.50 - 19.95 19.50 - 19.95	SPT N=24 4,5/5,6,6,7				
REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Groundwater encountered at 23.46m bgl. 4. Installed with HDPE standpipe to 30.00m bgl.			CHISELLING			WATER LEVEL OBSERVATIONS						
			Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth		
			NO CHISELLING UNDERTAKEN:			1	08-10-14		23.46			
						BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED	
						150mm to 30.00m			150mm to 11.80m			
All measurements in metres unless otherwise stated		10m/page	Scale: 1:62.50		Coordinates to National Grid Ground Level to Ordnance Datum			Page 2 of 4				
Plant Used: Dando 2000		Coordinates / Level (mAOD): E: 524182.88 N: 212675.1 Level: 84.38		Logged By: WC		Checked By: WC		Approved By: SS				

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Project: **Broadwater Road, Welwyn Garden City** Project No: **2342.18** Hole ID: **BH403**

CABLE PERCUSSION BOREHOLE LOG

Date From / To: **07/10/2014 - 08/10/2014**

Client: **Spen Hill Developments Ltd**

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
Recovered as structureless CHALK composed of cream occasional orange veins slightly sandy slightly gravelly silt. Gravel is angular to subangular fine to medium extremely weak low density cream. Occasional subrounded fine to coarse flint gravel. Grade Dm. (LEWES NODULAR/ SEAFORD CHALK FORMATION). (BH Continued)				(17.80)	D	14	21.00 - 21.45 21.00 - 21.45	SPT N=30 5,7/5,7,9,9	
					D	15	22.50 - 22.95 22.50 - 22.95	SPT N=50/220mm (7,8/19,15,16/70mm)	
					D	16	24.00 - 24.45 24.00 - 24.45	SPT N=50/255mm (7,8/8,13,17,12/30mm)	
					D	17	25.50 - 25.95 25.50 - 25.95	SPT N=35/255mm (5,5/6,7,10,12/30mm)	
					D	18	27.00 - 27.45 27.00 - 27.45	SPT N=42 4,7/7,9,12,14	
					D	19	27.50		
					D	20	28.50 - 28.95 28.50 - 28.95	SPT N=43 8,9/10,10,11,12	
				54.38 30.00	D	21	30.00 - 30.45		

REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Groundwater encountered at 23.46m bgl.
4. Installed with HDPE standpipe to 30.00m bgl.

CHISELLING			WATER LEVEL OBSERVATIONS						
Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth		
			1	08-10-14		23.46			

BOREHOLE DIAMETER		CASING DIAMETER		DEPTH SEALED	
150mm to 30.00m		150mm to 11.80m			

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum			Page 3 of 4
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524182.88 N: 212675.1 Level: 84.38	Logged By: WC		Checked By: WC	Approved By: SS

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Project: **Broadwater Road, Welwyn Garden City** Project No: **2342.18** Hole ID: **BH403**

CABLE PERCUSSION BOREHOLE LOG

Date From / To:
 07/10/2014 - 08/10/2014

Client:
Spen Hill Developments Ltd

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
Borehole complete at 30.00m bgl.							30.00 - 30.45	SPT N=50/95mm (9,14/29,21/20mm)	

REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Groundwater encountered at 23.46m bgl.
4. Installed with HDPE standpipe to 30.00m bgl.

CHISELLING			WATER LEVEL OBSERVATIONS						
Depth From	Depth To	Time Taken		Date	Time	Water Strike	Standing Level	Casing Depth	
			1	08-10-14		23.46			
NO CHISELLING UNDERTAKEN:									
BOREHOLE DIAMETER			CASING DIAMETER			DEPTH SEALED			
150mm to 30.00m			150mm to 11.80m						


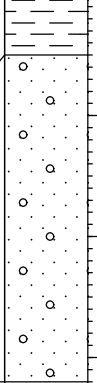
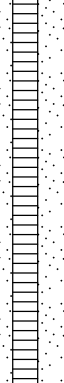
All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum				Page 4 of 4
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524182.88 N: 212675.1 Level: 84.38	Logged By: WC		Checked By: WC		Approved By: SS

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com									
Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH404			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 08/10/2014 - 09/10/2014		Client: Spen Hill Developments Ltd			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
MADE GROUND: Asphalt.				84.31 0.15 84.16 0.30	D	1	0.50		
MADE GROUND: Concrete.				B	1	1.00			
MADE GROUND: Brown slightly sandy gravelly clay. Gravel is angular to rounded fine to coarse of mixed lithologies predominantly flint with brick and concrete.									
Stiff orangey brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse flint. Sand is fine to coarse.(LOWESTOFT FORMATION)				83.36 1.10	D	2	1.50 - 2.00 1.50 - 1.95	SPT N=10 1,1/2,2,3,3	
				U	1	2.50 - 2.95	U=20/383mm		
				D	3	3.00			
				D	4	3.50 - 4.00 3.50 - 3.95	SPT N=11 1,1/2,2,3,4		
				U	2	4.50 - 4.95	U=35/383mm		
				D	5	5.00			
Dense orangey brown slightly gravelly clayey fine to coarse SAND. Gravel is angular to rounded fine to coarse flint. Clay occurs in irregularly spaced irregularly sized pockets. Fine gravel sized organic speckling throughout.(POSSIBLE LOWESTOFT FORMATION)			(150mm)	78.56 5.90	B	2	6.00	SPT N=32 5,6/8,8,8,8	
				D	6	6.00 - 6.50 6.00 - 6.45			
Medium dense orange brown slightly sandy angular to subangular fine to coarse flint GRAVEL. Sand is fine to coarse.(LOWESTOFT FORMATION)				76.06 8.40	B	3	8.40		
				D	8	9.00 - 9.50 9.00 - 9.45	CPT N=28 5,6/6,7,7,8		
				74.76 9.70	B	4	9.70		

REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 40.00m bgl.	CHISELLING			WATER LEVEL OBSERVATIONS				
	Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
	NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
	BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
	150mm to 20.00m			150mm to 13.40m				

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum	Page 1 of 3
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524197.53 N: 212743.84 Level: 84.46	Logged By: WC	Checked By: WC Approved By: SS

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Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH404						
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 08/10/2014 - 09/10/2014		Client: Spen Hill Developments Ltd						
DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details			
					TYPE	REF	Depth	SPT N Value/Drive mm				
Stiff brown slightly sandy slightly gravelly CLAY. Gravel is subrounded coarse flint. Sand is fine to coarse. Occasional flint cobble.(LOWESTOFT FORMATION)(BH Continued)				(0.80)	B D	5 9	10.50	SPT N=24 3,4/5,6,6,7				
73.96 10.50				10.50 - 11.00 10.50 - 10.95								
Medium dense to dense orangey brown gravelly fine to coarse SAND. Gravel is angular to subrounded fine to coarse flint.(KESGRAVE CATCHMENT SUBGROUP)				(2.70)			12.00 - 12.45	CPT N=33 5,6/7,8,9,9				
Stiff brown slightly sandy slightly gravelly CLAY. Gravel is subrounded coarse flint. Sand is fine to coarse. Occasional flint cobble.(KESGRAVE CATCHMENT SUBGROUP)			13.40	71.26 13.20 71.06 13.40	B B D	6 7 10	13.20 13.40 13.50 - 14.00 13.50 - 13.95	SPT N=7 1,2/2,1,2,2				
Recovered as structureless CHALK composed of cream with rare orange veins slightly gravelly CHALK silt. Gravel is angular to subangular fine to medium extremely weak low density cream. Rare subrounded coarse gravels and cobbles of rinded flint throughout.Grade Dm.(LEWES NODULAR/ SEAFORD CHALK FORMATION)				(6.60)	D	11	15.00 - 15.50 15.00 - 15.45	SPT N=8 2,1/2,2,2,2				
					D	12	16.50 - 17.00 16.50 - 16.95	SPT N=32 6,6/7,7,8,10				
					D	13	18.00 - 18.50 18.00 - 18.45	SPT N=36 5,6/7,7,10,12				
					D	14	19.50 - 20.00 19.50 - 19.95	SPT N=50 15,10/15,15,20				
				64.46 20.00								
REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 40.00m bgl.				CHISELLING			WATER LEVEL OBSERVATIONS					
				Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth	
				NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:					
				BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED			
				150mm to 20.00m			150mm to 13.40m					
All measurements in metres unless otherwise stated		10m/page	Scale: 1:62.50		Coordinates to National Grid Ground Level to Ordnance Datum				Page 2 of 3			
Plant Used: Dando 2000		Coordinates / Level (mAOD): E: 524197.53 N: 212743.84 Level: 84.46		Logged By: WC		Checked By: WC		Approved By: SS				

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Project: **Broadwater Road, Welwyn Garden City** Project No: **2342.18** Hole ID: **BH404**

CABLE PERCUSSION BOREHOLE LOG

Date From / To:
08/10/2014 - 09/10/2014

Client:
Spen Hill Developments Ltd

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results		Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm		
Borehole complete at 20.00m bgl.										

REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Borehole remained dry on completion.
4. Installed with HDPE standpipe to 40.00m bgl.

CHISELLING			WATER LEVEL OBSERVATIONS						
Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth		
NO CHISELLING UNDERTAKEN:					NO WATER ENCOUNTERED:				
BOREHOLE DIAMETER			CASING DIAMETER			DEPTH SEALED			
150mm to 20.00m			150mm to 13.40m						

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum			Page 3 of 3	
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524197.53 N: 212743.84 Level: 84.46	Logged By: WC		Checked By: WC		Approved By: SS

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com									
Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH405			
CABLE PERCUSSION BOREHOLE LOG				Date: 02/10/2014		Client: Spen Hill Developments Ltd			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
MADE GROUND: Concrete.			(150mm)	84.48 0.20					
MADE GROUND: Orangey brown sandy gravelly clay. Gravel is angular to rounded fine to coarse of flint and rare brick. Sand is fine to coarse.				D	1	0.50	CPT N=50/265mm (4,6/10,13,15,12/40mm)		
				D	2	1.00			
				B	1	1.50 - 1.95 1.50 - 1.95			
Firm orangey brown slightly gravelly sandy CLAY. Gravel is subangular to rounded fine to coarse flint. Sand is fine to coarse. Rare flint cobbles. (LOWESTOFT FORMATION)	D	3	2.50 - 2.95 2.50 - 2.95	CPT N=22 3,3/4,4,6,8					
	D	4	3.50 - 3.95 3.50 - 3.95		CPT N=11 5,4/3,3,2,3				
Stiff brown slightly sandy slightly gravelly CLAY. Gravel is subangular to rounded fine to medium flint and rare sandstone. Rare fine gravel sized organic patches.(LOWESTOFT FORMATION)	D	5	4.50 - 4.95 4.50 - 4.95	CPT N=11 1,1/2,3,3,3					
	B	2	5.10 - 5.50						
Medium dense orange sandy angular to rounded fine to coarse flint GRAVEL. Sand is fine to coarse. (KESGRAVE CATCHMENT SUBGROUP)			(4.30)	79.58 5.10	D	6	6.00 - 6.45 6.00 - 6.45	CPT N=23 3,3/4,5,6,8	
				(0.80)					
				78.78 5.90	D	7	7.50 - 7.95 7.50 - 7.95		CPT N=29 2,3/5,7,7,10
B	3	9.00 - 9.45 9.00 - 9.45	CPT N=22 2,3/3,5,6,8						

REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 20.00m bgl.	CHISELLING			WATER LEVEL OBSERVATIONS				
	Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
	NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
	BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
	150mm to 20.00m			150mm to 10.20m				

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum	Page 1 of 3
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524109.81 N: 212731.43 Level: 84.68	Logged By: WC	Checked By: WC Approved By: SS

Approved By: SS

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Project: **Broadwater Road, Welwyn Garden City** Project No: **2342.18** Hole ID: **BH405**

CABLE PERCUSSION BOREHOLE LOG

Date: **02/10/2014**

Client: **Spen Hill Developments Ltd**

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results		Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm		
Borehole complete at 20.00m bgl.										

REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Borehole remained dry on completion.
4. Installed with HDPE standpipe to 20.00m bgl.

CHISELLING			WATER LEVEL OBSERVATIONS						
Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth		
NO CHISELLING UNDERTAKEN:					NO WATER ENCOUNTERED:				
BOREHOLE DIAMETER			CASING DIAMETER			DEPTH SEALED			
150mm to 20.00m			150mm to 10.20m						

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum			Page 3 of 3	
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524109.81 N: 212731.43 Level: 84.68	Logged By: WC		Checked By: WC		Approved By: SS

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com									
Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH406			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 03/10/2014 - 06/10/2014		Client: Spen Hill Developments Ltd			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
MADE GROUND: Concrete.				84.77 0.20					
MADE GROUND: Stiff orangey brown sandy gravelly clay. Gravel is angular to rounded fine to coarse of flint and rare brick (no evidence of brick from 1.90 m bgl) Sand is fine to coarse. Assumed to be reworked to 1.90 m bgl. (LOWESTOFT FORMATION)				D	1	0.50			
				D	2	1.00			
				D	3	1.50 - 1.95 1.50 - 1.95			CPT N=33 5,6/7,7,9,10
				B	1	2.50 - 2.95 2.50 - 2.95			CPT N=26 2,3/5,6,7,8
				D	4	3.50 - 3.95 3.50 - 3.95			CPT N=20 3,4/4,5,5,6
Stiff orangey brown slightly sandy slightly gravelly CLAY. Gravel is subangular to rounded fine to coarse flint. Sand is fine to coarse.(LOWESTOFT FORMATION)					(5.10)				
				D	5	4.50 - 4.95 4.50 - 4.95			CPT N=13 1,2/2,3,4,4
				D	6	5.30			
				D	7	6.00 - 6.45 6.00 - 6.45			SPT N=33 2,4/5,6,10,12
	U	1	7.50 - 7.95			U=100/405mm			
Very dense to medium orangey brown sandy angular to rounded fine to coarse flint GRAVEL. Sand is fine to coarse. Rare flint cobbles.(KESGRAVE CATCHMENT SUBGROUP)		(150mm)							
	D	8	7.95 - 8.05						
	B	2	9.00 - 9.45 9.00 - 9.45			CPT N=50/265mm (3,5/6,14,17,13/40mm)			
				76.37 8.60					
				(2.10)					

REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 25.00m bgl.				CHISELLING			WATER LEVEL OBSERVATIONS				
				Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
				NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
				BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
				150mm to 25.00m			150mm to 10.70m				


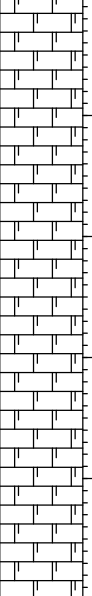
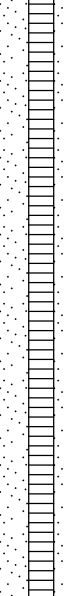
All measurements in metres unless otherwise stated		10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum		Page 1 of 3
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524122.39 N: 212763.62 Level: 84.97		Logged By: WC	Checked By: WC	Approved By: SS

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Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH406			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 03/10/2014 - 06/10/2014		Client: Spen Hill Developments Ltd			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
			10.70	74.27 10.70	D	9	10.50 - 10.95 10.50 - 10.95	CPT N=27 4,6/8,6,6,7	
Recovered as structureless CHALK composed of cream with rare orange veins slightly gravelly silt. Gravel is angular fine to medium extremely weak low density cream. Bands of very thinly to thinly bedded fine to coarse sand. Grade Dm.(LEWES NODULAR/ SEAFORD CHALK FORMATION)				(1.20)					
				73.07 11.90	D	10	12.00 - 12.45 12.00 - 12.45	SPT N=10 8,6/4,2,2,2	
Recovered as structureless CHALK composed of cream with rare orange veins slightly gravelly silt. Gravel is subangular fine to medium extremely weak low density cream. Rare subangular to subrounded coarse rinded flint gravel and rinded flint cobbles. Slightly grey from 21.0 m bgl. Grade Dm.(LEWES NODULAR/ SEAFORD CHALK FORMATION)					D	11	13.50 - 13.95 13.50 - 13.95	SPT N=10 3,3/2,2,3,3	
					D	12	15.00 - 15.45 15.00 - 15.45	SPT N=14 2,3/4,5,3,2	
					D	13	16.50 - 16.95 16.50 - 16.95	SPT N=12 2,5/2,3,3,4	
					D	14	18.00 - 18.45 18.00 - 18.45	SPT N=26 3,4/7,7,6,6	
				(13.10)	D	15	19.50 - 19.95 19.50 - 19.95	SPT N=26 2,3/5,6,7,8	
					B	3	20.00 - 20.50		

REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 25.00m bgl.	CHISELLING			WATER LEVEL OBSERVATIONS				
	Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
	NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED			
150mm to 25.00m			150mm to 10.70m					

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum	Page 2 of 3
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524122.39 N: 212763.62 Level: 84.97	Logged By: WC	Checked By: WC Approved By: SS

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com												
Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH406						
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 03/10/2014 - 06/10/2014		Client: Spen Hill Developments Ltd						
DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details			
					TYPE	REF	Depth	SPT N Value/Drive mm				
Recovered as structureless CHALK composed of cream with rare orange veins slightly gravelly silt. Gravel is subangular fine to medium extremely weak low density cream. Rare subangular to subrounded coarse rinded flint gravel and rinded flint cobbles. Slightly grey from 21.0 m bgl. Grade Dm. (LEWES NODULAR/ SEAFORD CHALK FORMATION)(BH Continued)					D	16	21.00 - 21.45 21.00 - 21.45	SPT N=32 6,8/7,8,7,10				
							D	17		22.50 - 22.95 22.50 - 22.95	SPT N=50/235mm (6,7/8,12,20,10/10mm)	
										D	18	24.00 - 24.45 24.00 - 24.45
			59.97	25.00								
Borehole complete at 25.00m bgl.												
REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 25.00m bgl.					CHISELLING			WATER LEVEL OBSERVATIONS				
					Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
					NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
					BOREHOLE DIAMETER			CASING DIAMETER			DEPTH SEALED	
					150mm to 25.00m			150mm to 10.70m				
All measurements in metres unless otherwise stated		10m/page Scale: 1:62.50		Coordinates to National Grid Ground Level to Ordnance Datum				Page 3 of 3				
Plant Used: Dando 2000		Coordinates / Level (mAOD): E: 524122.39 N: 212763.62 Level: 84.97		Logged By: WC		Checked By: WC		Approved By: SS				

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com									
Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH407			
CABLE PERCUSSION BOREHOLE LOG				Date: 01/10/2014		Client: Spen Hill Developments Ltd			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
MADE GROUND: Brown sandy gravelly clay. Gravel is angular to subrounded fine to coarse flint. Sand is fine to coarse.			82.23 2.10	(2.10)	D	1	0.50	CPT N=50/255mm (2,7/9,14,18,9/30mm)	
D					2	1.00			
D					3	1.50 - 1.95 1.50 - 1.95			
MADE GROUND: Brown sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of mixed lithologies including flint brick and concrete. Sand is fine to coarse. Occasional anthropogenic material including metal and glass.			81.33 3.00	(0.90)	D	4	2.50 - 2.95 2.50 - 2.95	CPT N=50/265mm (7,9/10,13,14,13/40mm)	
D					5	3.50 - 3.95 3.50 - 3.95			
MADE GROUND: Firm sandy gravelly clay. Gravel is subangular to subrounded fine to coarse flint. Sand is fine to coarse.(POSSIBLY REWORKED LOWESTOFT FORMATION)			80.13 4.20	(1.20)	D	6	4.20	CPT N=15 3,5/6,4,3,2	
D					7	4.50 - 4.95 4.50 - 4.95			
Firm brown sandy gravelly CLAY. Gravel is subangular to rounded fine to coarse flint. Sand is fine to coarse. Sand and gravel become slight at 6.45 m bgl.(LOWESTOFT FORMATION)			76.93 7.40	(3.20)	U	1	6.00 - 6.45	U=32/405mm	
D					8	6.45 - 6.55			
D					9	7.50 - 7.95 7.50 - 7.95			
Soft orange brown sandy gravelly CLAY. Gravel is subangular to subrounded fine to coarse flint. Sand is fine to coarse.(LOWESTOFT FORMATION)			75.93 8.40	(1.00)	D	10	9.00 - 9.45 9.00 - 9.45	CPT N=31 3,4/6,7,9,9	
D					10	9.00 - 9.45 9.00 - 9.45			
Loose to medium dense orange brown gravelly SAND. Gravel is subrounded to rounded fine to coarse flint. Sand is fine to coarse. (KESGRAVE CATCHMENT SUBGROUP)			75.93 8.40	(1.00)	D	10	9.00 - 9.45 9.00 - 9.45	CPT N=10 1,1/2,2,3,3	
D					10	9.00 - 9.45 9.00 - 9.45			

REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 20.00m bgl.				CHISELLING			WATER LEVEL OBSERVATIONS				
				Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
				NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
				BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
				150mm to 20.00m			150mm to 13.80m				

All measurements in metres unless otherwise stated		10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum		Page 1 of 3
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524086.6 N: 212766.25 Level: 84.33		Logged By: WC	Checked By: WC	Approved By: SS

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Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH407						
CABLE PERCUSSION BOREHOLE LOG				Date: 01/10/2014		Client: Spen Hill Developments Ltd						
DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details			
					TYPE	REF	Depth	SPT N Value/Drive mm				
Loose to medium dense orange brown gravelly SAND. Gravel is subrounded to rounded fine to coarse flint. Sand is fine to coarse. (KESGRAVE CATCHMENT SUBGROUP)(BH Continued)			13.80	(5.40)	D	11	10.50 - 10.95 10.50 - 10.95	CPT N=15 1,2/2,4,4,5				
					D	12	12.00 - 12.45 12.00 - 12.45	CPT N=16 3,4/6,4,3,3				
					D	13	13.50 - 13.95 13.50 - 13.95	CPT N=6 3,2/1,3,0,2				
Recovered as structureless CHALK composed of cream with rare orange veins slightly gravelly silt. Gravel is subangular fine to medium extremely weak low density cream. Grade Dm. with approximately 50% loose fine to coarse SAND and angular to rounded fine to coarse flint GRAVEL occurring in irregularly sized and spaced pockets. (POSSIBLE DISSOLUTION FEATURE)				(3.30)	D	14	16.00	U=100/0mm				
B U					1 2	16.50 - 16.95						
D					15	17.00 - 17.45 17.00 - 17.45	CPT N=13 2,2/4,3,3,3					
Recovered as structureless CHALK of cream with rare orange veins composed of slightly sandy gravelly silt. Gravel is angular fine to coarse extremely weak low density cream. Sand is fine to coarse cream. Rare rinded flint cobble. Grade Dc.(LEWES NODULAR/ SEAFORD CHALK FORMATION)				(2.90)	U	3	18.00 - 18.45	U=51/405mm				
					D	16	18.45 - 18.55					
					D	17	19.50 - 19.95 19.50 - 19.95	SPT N=20 3,4/4,5,5,6				
			64.33	20.00								
REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 20.00m bgl.					CHISELLING			WATER LEVEL OBSERVATIONS				
					Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
					NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
					BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
					150mm to 20.00m			150mm to 13.80m				
All measurements in metres unless otherwise stated		10m/page Scale: 1:62.50		Coordinates to National Grid Ground Level to Ordnance Datum				Page 2 of 3				
Plant Used: Dando 2000		Coordinates / Level (mAOD): E: 524086.6 N: 212766.25 Level: 84.33		Logged By: WC		Checked By: WC		Approved By: SS				

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Project: **Broadwater Road, Welwyn Garden City** Project No: **2342.18** Hole ID: **BH407**

CABLE PERCUSSION BOREHOLE LOG

Date: **01/10/2014**

Client: **Spen Hill Developments Ltd**

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results		Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm		
Borehole complete at 20.00m bgl.										

REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Borehole remained dry on completion.
4. Installed with HDPE standpipe to 20.00m bgl.

CHISELLING			WATER LEVEL OBSERVATIONS						
Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth		
NO CHISELLING UNDERTAKEN:									
BOREHOLE DIAMETER			CASING DIAMETER			DEPTH SEALED			
150mm to 20.00m			150mm to 13.80m						



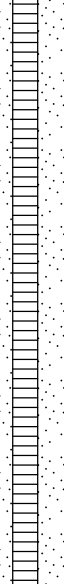
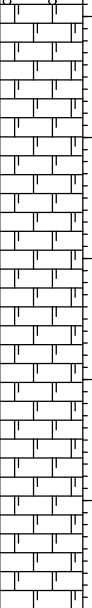
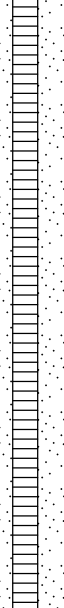
All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum			Page 3 of 3	
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524086.6 N: 212766.25 Level: 84.33	Logged By: WC		Checked By: WC		Approved By: SS

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com									
Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH408			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 15/10/2014 - 16/10/2014		Client: Spen Hill Developments Ltd			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
MADE GROUND: Concrete.				85.23 0.40	D	1	0.50		
(0.60)				D	2	1.00			
84.63 1.00				D	3	1.50 - 2.00 1.50 - 1.95	CPT N=15 2,3/4,4,3,4		
Stiff orange brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse flint. Sand is fine to coarse.(LOWESTOFT FORMATION)				(5.40)	B U	1	2.50 - 3.00 2.50 - 2.95	U=50/0mm	
D					4	3.50 - 4.00 3.50 - 3.95	CPT N=13 2,3/2,3,4,4		
U					2	4.50 - 4.95	U=40/383mm		
D					5	5.00			
D					6	6.00 - 6.50 6.00 - 6.45	SPT N=25 2,3/4,6,6,9		
B					2	6.40			
Loose to medium dense orange brown sandy angular to subrounded fine to coarse flint GRAVEL. Sand is medium to coarse. Occasional flint cobbles.(KESGRAVE CATCHMENT SUBGROUP)			(150mm)	D	7	7.50 - 8.00 7.50 - 7.95	CPT N=8 2,2/2,2,2,2		
D				8	9.00 - 9.50 9.00 - 9.45	CPT N=17 2,3/4,4,4,5			

REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 20.00m bgl. 5. Coordinates estimated due to no GPS signal.				CHISELLING			WATER LEVEL OBSERVATIONS				
				Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
				NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
				BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
				150mm to 20.00m			150mm to 14.90m				

All measurements in metres unless otherwise stated		10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum		Page 1 of 3
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524161 N: 212906 Level: 85.63		Logged By: WC	Checked By: WC	Approved By: SS

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Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH408				
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 15/10/2014 - 16/10/2014		Client: Spen Hill Developments Ltd				
DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details	
					TYPE	REF	Depth	SPT N Value/Drive mm		
Loose to medium dense orange brown sandy angular to subrounded fine to coarse flint GRAVEL. Sand is medium to coarse. Occasional flint cobbles.(KESGRAVE CATCHMENT SUBGROUP)(BH Continued)				(8.50)	D	9	10.50 - 11.00 10.50 - 10.95	CPT N=20 3,4/4,5,5,6		
Recovered as structureless CHALK composed of cream with rare orange veins sandy gravelly silt. Gravel is angular to subangular fine to medium extremely weak low density cream. Sand is fine to coarse. Rare subrounded coarse gravels and cobbles of rinded flint throughout.Grade Dm. (LEWES NODULAR/SEAFORD CHALK FORMATION)			14.90	70.73 14.90	B	3	14.90	CPT N=3 1,0/1,0,2,0		
					D	12	15.00 - 15.45 15.00 - 15.45			
					D	13	16.50 - 17.00 16.50 - 16.95			SPT N=7 1,1/1,2,2,2
					D	14	18.00 - 18.50 18.00 - 18.45			SPT N=10 1,1/2,2,3,3
					D	15	19.50 - 20.00 19.50 - 19.95	SPT N=8 2,3/2,2,2,2		
			65.63	20.00						
REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 20.00m bgl. 5. Coordinates estimated due to no GPS signal.			CHISELLING			WATER LEVEL OBSERVATIONS				
			Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
			NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
			BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
			150mm to 20.00m			150mm to 14.90m				
All measurements in metres unless otherwise stated		10m/page	Scale: 1:62.50		Coordinates to National Grid Ground Level to Ordnance Datum				Page 2 of 3	
Plant Used: Dando 2000		Coordinates / Level (mAOD): E: 524161 N: 212906 Level: 85.63		Logged By: WC		Checked By: WC		Approved By: SS		

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Project: **Broadwater Road, Welwyn Garden City** Project No: **2342.18** Hole ID: **BH408**

CABLE PERCUSSION BOREHOLE LOG

Date From / To:
 15/10/2014 - 16/10/2014

Client:
Spen Hill Developments Ltd



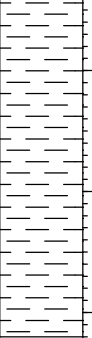
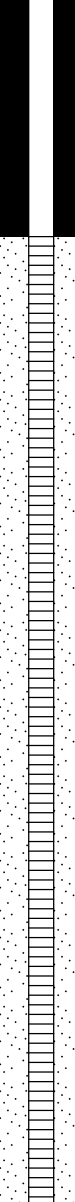
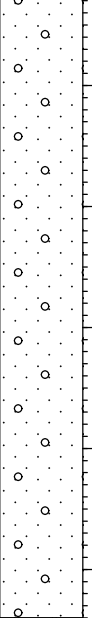
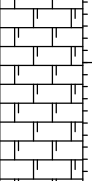
DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results		Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm		
Borehole complete at 20.00m bgl.										

REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Borehole remained dry on completion.
4. Installed with HDPE standpipe to 20.00m bgl.
5. Coordinates estimated due to no GPS signal.

CHISELLING			WATER LEVEL OBSERVATIONS					
Depth From	Depth To	Time Taken		Date	Time	Water Strike	Standing Level	Casing Depth
NO CHISELLING UNDERTAKEN:				NO WATER ENCOUNTERED:				
BOREHOLE DIAMETER			CASING DIAMETER			DEPTH SEALED		
150mm to 20.00m			150mm to 14.90m					

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum			Page 3 of 3	
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524161 N: 212906 Level: 85.63	Logged By: WC		Checked By: WC		Approved By: SS

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com									
Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH409			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 10/10/2014 - 13/10/2014		Client: Spen Hill Developments Ltd			
DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
MADE GROUND: Concrete.				82.83 0.30					
Stiff orangey brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse flint. Sand is fine to coarse. Possibly reworked to 1.5 m bgl. (LOWESTOFT FORMATION)				(2.90)	D	1	0.50	SPT N=5 1,0/1,0,2,2	
					D	2	1.00		
					D	3	1.50 - 1.95 1.50 - 1.95		
					Vey to medium dense orange brown gravelly fine to coarse SAND. Gravel is subangular to rounded fine to coarse flint. (KESGRAVE CATCHMENT SUBGROUP)			(150mm)	
D	4	3.00	CPT N=12 1,2/2,3,3,4						
B	1	3.20							
D	5	3.50 - 4.00 3.50 - 3.95							
D	6	4.50 - 5.00 4.50 - 4.95	CPT N=50/155mm (7,13/17,23,10/5mm)						
D	7	6.00 - 6.50 6.00 - 6.45	CPT N=32 4,6/7,7,9,9						
Recovered as structureless CHALK composed of cream with rare orange veins slightly gravelly silt. Gravel is angular to subangular fine to medium extremely to very weak low to medium density cream. Rare subrounded coarse rinded flint gravel throughout grade Dm. (LEWES NODULAR/SEAFORD CHALK FORMATION)			(5.20)	D	8	7.50 - 8.00 7.50 - 7.95	CPT N=36 5,7/8,8,10,10		
				B	2	8.40	SPT N=5 2,3/2,1,1,1		
				D	9	9.00 - 9.50 9.00 - 9.45			
REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 20.00m bgl. 5. Coordinates estimated due to no GPS signal.				CHISELLING Depth From Depth To Time Taken NO CHISELLING UNDERTAKEN:			WATER LEVEL OBSERVATIONS Date Time Water Strike Standing Level Casing Depth NO WATER ENCOUNTERED:		
				BOREHOLE DIAMETER 150mm to 20.00m			CASING DIAMETER 150mm to 8.40m		
				DEPTH SEALED					
All measurements in metres unless otherwise stated		10m/page Scale: 1:62.50		Coordinates to National Grid Ground Level to Ordnance Datum				Page 1 of 3	
Plant Used: Dando 2000		Coordinates / Level (mAOD): E: 524255 N: 212891 Level: 83.13		Logged By: WC			Checked By: WC		Approved By: SS

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Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH409						
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 10/10/2014 - 13/10/2014		Client: Spen Hill Developments Ltd						
DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details			
					TYPE	REF	Depth	SPT N Value/Drive mm				
Recovered as structureless CHALK composed of cream with rare orange veins slightly gravelly silt. Gravel is angular to subangular fine to medium extremely to very weak low to medium density cream. Rare subrounded coarse rinded flint gravel throughout grade Dm. (LEWES NODULAR/SEAFORD CHALK FORMATION)(BH Continued)				(11.60)	D	10	10.50 - 11.00 10.50 - 10.95	SPT N=8 2,2/3,3,1,1				
					D	11	12.00 - 12.50 12.00 - 12.45	SPT N=13 2,3/4,3,3,3				
					D	12	13.50 - 14.00 13.50 - 13.95	SPT N=15 2,3/4,4,4,3				
					D	13	15.00 - 15.50 15.00 - 15.45	SPT N=16 3,3/4,4,4,4				
					D	14	16.50 - 17.00 16.50 - 16.95	SPT N=19 3,4/4,5,5,5				
					D	15	18.00 - 18.50 18.00 - 18.45	SPT N=15 3,4/4,3,4,4				
				63.13 20.00	D	16	19.50 - 20.00 19.50 - 19.95	SPT N=19 3,4/5,5,5,4				
REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 20.00m bgl. 5. Coordinates estimated due to no GPS signal.					CHISELLING			WATER LEVEL OBSERVATIONS				
					Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
					NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
					BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
					150mm to 20.00m			150mm to 8.40m				
All measurements in metres unless otherwise stated		10m/page Scale: 1:62.50		Coordinates to National Grid Ground Level to Ordnance Datum				Page 2 of 3				
Plant Used: Dando 2000		Coordinates / Level (mAOD): E: 524255 N: 212891 Level: 83.13		Logged By: WC		Checked By: WC		Approved By: SS				

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Project: **Broadwater Road, Welwyn Garden City** Project No: **2342.18** Hole ID: **BH409**

CABLE PERCUSSION BOREHOLE LOG

Date From / To:
 10/10/2014 - 13/10/2014

Client:
Spen Hill Developments Ltd

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results		Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm		
Borehole complete at 20.00m bgl.										

REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Borehole remained dry on completion.
4. Installed with HDPE standpipe to 20.00m bgl.
5. Coordinates estimated due to no GPS signal.

CHISELLING			WATER LEVEL OBSERVATIONS				
Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
BOREHOLE DIAMETER			CASING DIAMETER			DEPTH SEALED	
150mm to 20.00m			150mm to 8.40m				
Coordinates to National Grid Ground Level to Ordnance Datum						Page 3 of 3	
Logged By:			Checked By:			Approved By:	
WC			WC			SS	

All measurements in metres
 unless otherwise stated

10m/page Scale: 1:62.50

Coordinates to National Grid
 Ground Level to Ordnance Datum

Page 3 of 3

Plant Used:
 Dando 2000

Coordinates / Level (mAOD):
 E: 524255 N: 212891
 Level: 83.13

Logged By:
 WC

Checked By:
 WC

Approved By:
 SS

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com									
Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH410			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 16/10/2014 - 20/10/2014		Client: Spen Hill Developments Ltd			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details			
					TYPE	REF	Depth	SPT N Value/Drive mm				
MADE GROUND: Asphalt.				84.79 0.15								
MADE GROUND: Brown sandy clayey gravel. Gravel is angular to rounded fine to coarse of mixed lithologies including brick, concrete and flint. Sand is fine to coarse. Frequent brick cobbles.				84.49 0.45	D	1	0.50					
Stiff orangey brown sandy gravelly CLAY. Gravel is angular to subrounded fine to coarse flint. Sand is fine to coarse. Rare flint cobbles. (LOWESTOFT FORMATION)				(4.65)	D	2	1.00					
					D	3	1.50 - 2.00 1.50 - 1.95	CPT N=15 2,2/3,3,4,5				
					D	4	2.50 - 3.00 2.50 - 2.95	CPT N=20 2,3/4,5,5,6				
					D	5	3.50 - 4.00 3.50 - 3.95	CPT N=22 3,3/4,4,7,7				
Stiff orangey brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse flint. Sand is fine to coarse. (LOWESTOFT FORMATION)				79.84 5.10	B	1	5.10					
Medium dense to dense orangey brown slightly sandy angular to subrounded fine to coarse flint GRAVEL. Sand is fine to coarse. Occasional flint cobbles. (KESGRAVE CATCHMENT SUBGROUP)				(150mm)								
				79.04 5.90	B	2	6.00 - 6.50 6.00 - 6.45	CPT N=19 3,4/4,4,5,6				
					D	7	7.50 - 8.00 7.50 - 7.95	CPT N=29 4,5/6,6,7,10				
				(5.80)	D	8	9.00 - 9.50 9.00 - 9.45	CPT N=31 4,6/7,7,8,9				

REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Groundwater encountered at 22.35m bgl. 4. Installed with HDPE standpipe to 25.00m bgl.				CHISELLING			WATER LEVEL OBSERVATIONS					
				Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth	
				NO CHISELLING UNDERTAKEN:			1	20-10-14		22.35		
				BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED			
				150mm to 25.00m			150mm to 11.70m					

All measurements in metres unless otherwise stated		10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum		Page 1 of 3
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524279.09 N: 212972.11 Level: 84.94		Logged By: WC	Checked By: WC	Approved By: SS

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com												
Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH410						
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 16/10/2014 - 20/10/2014		Client: Spen Hill Developments Ltd						
DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details			
					TYPE	REF	Depth	SPT N Value/Drive mm				
Medium dense to dense orangey brown slightly sandy angular to subrounded fine to coarse flint GRAVEL. Sand is fine to coarse. Occasional flint cobbles. (KESGRAVE CATCHMENT SUBGROUP) (BH Continued)			11.70	73.24 11.70	D	9	10.50 - 11.00 10.50 - 10.95	CPT N=31 4,6/7,7,8,9				
Recovered as structureless CHALK composed of cream with rare orange veins slightly gravelly silt. Gravel is angular to subangular fine to medium extremely weak low density cream. Rare subrounded coarse gravels and cobbles of rinded flint throughout grade Dm. (LEWES NODULAR/SEAFORD CHALK FORMATION)					B	3	11.70					
					D	10	12.00 - 12.50 12.00 - 12.45	SPT N=2 1,1/0,1,1,0				
					D	11	13.50 - 14.00 13.50 - 13.95	SPT N=5 1,1/2,1,1,1				
					D	12	15.00 - 15.50 15.00 - 15.45	SPT N=7 1,2/2,1,2,2				
					D	13	16.50 - 17.00 16.50 - 16.95	SPT N=8 2,2/2,2,2,2				
				D	14	18.00 - 18.50 18.00 - 18.45	SPT N=13 2,2/3,3,3,4					
				D	15	19.50 - 20.00 19.50 - 19.95	SPT N=16 3,4/3,3,4,6					
REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Groundwater encountered at 22.35m bgl. 4. Installed with HDPE standpipe to 25.00m bgl.				CHISELLING			WATER LEVEL OBSERVATIONS					
				Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth	
				NO CHISELLING UNDERTAKEN:			1	20-10-14		22.35		
				BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED			
				150mm to 25.00m			150mm to 11.70m					
All measurements in metres unless otherwise stated		10m/page	Scale: 1:62.50		Coordinates to National Grid Ground Level to Ordnance Datum			Page 2 of 3				
Plant Used: Dando 2000		Coordinates / Level (mAOD): E: 524279.09 N: 212972.11 Level: 84.94		Logged By: WC		Checked By: WC		Approved By: SS				

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com													
Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH410							
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 16/10/2014 - 20/10/2014		Client: Spen Hill Developments Ltd							
DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details				
					TYPE	REF	Depth	SPT N Value/Drive mm					
Recovered as structureless CHALK composed of cream with rare orange veins slightly gravelly silt. Gravel is angular to subangular fine to medium extremely weak low density cream. Rare subrounded coarse gravels and cobbles of rinded flint throughout grade Dm. (LEWES NODULAR/SEAFORD CHALK FORMATION)(BH Continued)					D	16	21.00 - 21.50 21.00 - 21.45	SPT N=26 4,4/6,6,6,8					
					D	17	22.50 - 23.00 22.50 - 22.95	SPT N=25 3,4/5,6,7,7					
					D	18	24.00 - 24.50 24.00 - 24.45	SPT N=34 1,0/6,7,14,7					
Borehole complete at 25.00m bgl.			59.94 25.00										
REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Groundwater encountered at 22.35m bgl. 4. Installed with HDPE standpipe to 25.00m bgl.					CHISELLING			WATER LEVEL OBSERVATIONS					
					Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth	
					NO CHISELLING UNDERTAKEN:			1	20-10-14		22.35		
					BOREHOLE DIAMETER			CASING DIAMETER			DEPTH SEALED		
					150mm to 25.00m			150mm to 11.70m					
All measurements in metres unless otherwise stated		10m/page Scale: 1:62.50		Coordinates to National Grid Ground Level to Ordnance Datum				Page 3 of 3					
Plant Used: Dando 2000		Coordinates / Level (mAOD): E: 524279.09 N: 212972.11 Level: 84.94		Logged By: WC		Checked By: WC		Approved By: SS					

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com									
Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH411			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 21/10/2014 - 22/10/2014		Client: Spen Hill Developments Ltd			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
MADE GROUND: Asphalt.				83.77 0.15					
MADE GROUND: Brown slightly sandy gravelly clay. Gravel is angular to subrounded fine to coarse brick and flint. Sand is fine to coarse. Rare brick cobbles.				(1.05)	D	1	0.50		
Stiff brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse flint. Sand is fine to coarse. (LOWESTOFT FORMATION)				82.72 1.20	D	2	1.00		
					D	3	1.50 - 2.00 1.50 - 1.95	CPT N=8 2,1/2,2,2,2	
					D	4	2.50 - 3.00 2.50 - 2.95	CPT N=8 2,2/2,2,2,2	
					B U	1	3.50 - 4.00 3.50 - 3.95	U=35/0mm	
					D	5	4.50 - 5.00 4.50 - 4.95	SPT N=7 1,1/2,1,2,2	
					D	6	6.00 - 6.50 6.00 - 6.45	SPT N=7 1,0/1,2,2,2	
				(8.10)	D	7	7.50 - 8.00 7.50 - 7.95	SPT N=8 2,2/2,2,2,2	
					D	8	9.00 - 9.50 9.00 - 9.45	SPT N=20 1,2/2,4,7,7	
Very dense brown slightly clayey sandy angular to subrounded fine to coarse flint GRAVEL. Sand is fine to coarse. (KESGRAVE CATCHMENT SUBGROUP)				74.62 9.30	B	2	9.30		

REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 20.00m bgl.	CHISELLING			WATER LEVEL OBSERVATIONS				
	Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
	NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
	BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
	150mm to 20.00m			150mm to 11.50m				

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum	Page 1 of 3
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524170.02 N: 213045.29 Level: 83.92	Logged By: WC	Checked By: WC Approved By: SS

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Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH411					
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 21/10/2014 - 22/10/2014		Client: Spen Hill Developments Ltd					
DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details		
					TYPE	REF	Depth	SPT N Value/Drive mm			
Very demse brown slightly clayey sandy angular to subrounded fine to coarse flint GRAVEL. Sand is fine to coarse. (KESGRAVE CATCHMENT SUBGROUP)(BH Continued)				(2.20)	D	9	10.50 - 11.00 10.50 - 10.95	CPT N=54/165mm (7,12/14,18,22/15mm)			
Recovered as structureless CHALK composed of cream with rare orange veins sandy very gravelly silt. Gravel is angular to subangular fine to medium extremely to very weak low to medium density cream. Sand is fine to coarse. Rare subrounded coarse gravels and cobbles of rinded flint throughout. Grade Dm. (LEWES NODULAR/ SEAFORD CHALK FORMATION)			11.50	72.42 11.50	B	3	11.50				
					D	10	12.00 - 12.50 12.00 - 12.45	SPT N=1 1,0/0,1,0,0			
					D	11	13.50 - 14.00 13.50 - 13.95	SPT N=4 1,0/1,1,1,1			
					D	12	15.00 - 15.50 15.00 - 15.45	SPT N=7 1,1/1,2,2,2			
					D	13	16.50 - 17.00 16.50 - 16.95	SPT N=5 2,1/2,2,1,0			
				(8.50)	D	14	18.00 - 18.50 18.00 - 18.45	SPT N=9 2,2/2,2,3			
					D	15	19.50 - 20.00 19.50 - 19.95	SPT N=11 2,2/2,3,3,3			
			63.92	20.00							
REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 20.00m bgl.				CHISELLING			WATER LEVEL OBSERVATIONS				
				Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
				NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
				BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
				150mm to 20.00m			150mm to 11.50m				
All measurements in metres unless otherwise stated		10m/page	Scale: 1:62.50		Coordinates to National Grid Ground Level to Ordnance Datum				Page 2 of 3		
Plant Used: Dando 2000		Coordinates / Level (mAOD): E: 524170.02 N: 213045.29 Level: 83.92		Logged By: WC		Checked By: WC		Approved By: SS			

Delta-Simons
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Project: **Broadwater Road, Welwyn Garden City** Project No: **2342.18** Hole ID: **BH411**

CABLE PERCUSSION BOREHOLE LOG

Date From / To:
 21/10/2014 - 22/10/2014

Client:
Spen Hill Developments Ltd

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results		Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm		
Borehole complete at 20.00m bgl.										

REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Borehole remained dry on completion.
4. Installed with HDPE standpipe to 20.00m bgl.

CHISELLING			WATER LEVEL OBSERVATIONS					
Depth From	Depth To	Time Taken		Date	Time	Water Strike	Standing Level	Casing Depth
NO CHISELLING UNDERTAKEN:				NO WATER ENCOUNTERED:				
BOREHOLE DIAMETER			CASING DIAMETER			DEPTH SEALED		
150mm to 20.00m			150mm to 11.50m					

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum			Page 3 of 3	
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524170.02 N: 213045.29 Level: 83.92	Logged By: WC		Checked By: WC		Approved By: SS

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com									
Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH412			
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 17/10/2014 - 20/10/2014		Client: Spen Hill Developments Ltd			

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
MADE GROUND: Asphalt.				84.75 0.10/ 84.45 0.40					
MADE GROUND: Reddy brown clayey sandy gravel. Gravel is angular to subangular fine to coarse brick. Sand is fine to coarse. Frequent brick cobbles.					D	1	0.50		
Stiff orangey brown slightly gravelly sandy CLAY. Gravel is angular to subrounded fine to coarse flint. Sand is fine to coarse. (LOWESTOFT FORMATION)				(1.90)	D	2	1.00		
					D	3	1.50 - 1.95 1.50 - 1.95	SPT N=13 1,1/2,3,4,4	
Dense brown clayey gravelly fine to coarse SAND. Gravel is angular to subrounded fine to coarse flint. (LOWESTOFT FORMATION)				82.55 2.30 (1.10)	B	1	2.50 - 2.95 2.50 - 2.95	CPT N=33 3,5/7,8,9,9	
Stiff orangey brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse flint. Sand is fine to coarse. (LOWESTOFT FORMATION)				81.45 3.40 (1.30)	U	1	3.50 - 3.95	U=41/338mm	
					D	4	3.95 - 4.05		
					D	5	4.50 - 4.95 4.50 - 4.95	SPT N=48 4,5/8,10,14,16	
Very dense to dense orange brown gravelly fine to medium SAND. Gravel is angular to subrounded fine to coarse flint. (KESGRAVE CATCHMENT SUBGROUP)			(150mm)	80.15 4.70 (3.90)	B	2	6.00 - 6.45 6.00 - 6.45	CPT N=49 7,8/11,12,12,14	
					D	6	7.50 - 7.95 7.50 - 7.95	CPT N=50/85mm (11,14/30mm/41,9/10mm)	
				8.60 76.25 8.60					
Recovered as structureless CHALK composed of cream with rare orange veins slightly gravelly silt. Gravel is angular to subangular fine to medium extremely weak low density cream. Rare subrounded coarse gravels and cobbles of rinded flint throughout. Grade Dm. (LEWES NODULAR/ SEAFORD CHALK FORMATION)					D	7	9.00 - 9.45 9.00 - 9.45	SPT N=32 4,5/6,7,9,10	

REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 20.00m bgl.	CHISELLING			WATER LEVEL OBSERVATIONS				
	Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
	NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
	BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
150mm to 20.00m			150mm to 8.60m					

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum	Page 1 of 3
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524118.88 N: 212945.31 Level: 84.85	Logged By: WC	Checked By: WC Approved By: SS

Delta-Simons 3 Henley Office Park, Doddington Road, Lincoln, LN6 3QR Tel: +44 (0) 870 0400 012 Fax: +44 (0) 1522 698393 Email: info@deltasimons.com											
Project: Broadwater Road, Welwyn Garden City				Project No: 2342.18		Hole ID: BH412					
CABLE PERCUSSION BOREHOLE LOG				Date From / To: 17/10/2014 - 20/10/2014		Client: Spen Hill Developments Ltd					
DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details		
					TYPE	REF	Depth	SPT N Value/Drive mm			
Recovered as structureless CHALK composed of cream with rare orange veins slightly gravelly silt. Gravel is angular to subangular fine to medium extremely weak low density cream. Rare subrounded coarse gravels and cobbles of rinded flint throughout. Grade Dm. (LEWES NODULAR/ SEAFORD CHALK FORMATION)(BH Continued)				(11.40)	D	8	10.50 - 10.95 10.50 - 10.95	SPT N=34 4,5/7,7,9,11			
					D	9	12.00 - 12.45 12.00 - 12.45	SPT N=21 2,3/5,6,4,6			
					D	10	14.00				
					D	11	15.00 - 15.45 15.00 - 15.45	SPT N=27 3,2/3,6,10,8			
					D	12	16.50 - 16.95 16.50 - 16.95	SPT N=13 3,3/2,3,4,4			
					D	13	18.00 - 18.45 18.00 - 18.45	SPT N=50/235mm (4,7/13,15,17,5/10mm)			
					D	14	19.50 - 19.95 19.50 - 19.95	SPT N=41 3,6/9,10,10,12			
				64.85 20.00							
REMARKS : 1. Engineer verified logged in general accordance to BS 5930:2010. 2. Area CAT scanned prior to excavation. 3. Borehole remained dry on completion. 4. Installed with HDPE standpipe to 20.00m bgl.				CHISELLING			WATER LEVEL OBSERVATIONS				
				Depth From	Depth To	Time Taken	Date	Time	Water Strike	Standing Level	Casing Depth
				NO CHISELLING UNDERTAKEN:			NO WATER ENCOUNTERED:				
				BOREHOLE DIAMETER			CASING DIAMETER		DEPTH SEALED		
				150mm to 20.00m			150mm to 8.60m				
All measurements in metres unless otherwise stated		10m/page Scale: 1:62.50		Coordinates to National Grid Ground Level to Ordnance Datum				Page 2 of 3			
Plant Used: Dando 2000		Coordinates / Level (mAOD): E: 524118.88 N: 212945.31 Level: 84.85		Logged By: WC		Checked By: WC		Approved By: SS			

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Project: **Broadwater Road, Welwyn Garden City** Project No: **2342.18** Hole ID: **BH412**

CABLE PERCUSSION BOREHOLE LOG

Date From / To:
 17/10/2014 - 20/10/2014

Client:
Spen Hill Developments Ltd

DESCRIPTION OF STRATA	LEGEND	WATER	CASING DEPTH / (Diam. mm)	REDUCED LEVEL/ DEPTH (Thickness)	Sample Details			Test Results	Backfill Details
					TYPE	REF	Depth	SPT N Value/Drive mm	
Borehole complete at 20.00m bgl.									

REMARKS :

1. Engineer verified logged in general accordance to BS 5930:2010.
2. Area CAT scanned prior to excavation.
3. Borehole remained dry on completion.
4. Installed with HDPE standpipe to 20.00m bgl.

CHISELLING			WATER LEVEL OBSERVATIONS					
Depth From	Depth To	Time Taken		Date	Time	Water Strike	Standing Level	Casing Depth
NO CHISELLING UNDERTAKEN:						NO WATER ENCOUNTERED:		
BOREHOLE DIAMETER			CASING DIAMETER			DEPTH SEALED		
150mm to 20.00m			150mm to 8.60m					

All measurements in metres unless otherwise stated	10m/page Scale: 1:62.50	Coordinates to National Grid Ground Level to Ordnance Datum			Page 3 of 3	
Plant Used: Dando 2000	Coordinates / Level (mAOD): E: 524118.88 N: 212945.31 Level: 84.85	Logged By: WC		Checked By: WC		Approved By: SS