



Plate 13 – WS05 cores



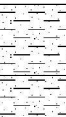
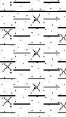
Plate 14 – WS06 cores



Plate 15 – WS07 cores

Appendix C – Exploratory Logs

 www.tandpregeneration.co.uk		Contract Name: Berewood - Town Park Phase B		Client: WYG			Borehole ID: BH01	
		Contract Number: CS-J-0161	Date Started: 06-08-2019	Logged By: CP	Checked By: JD	Status: FINAL		
Cable Percussion Borehole Log		Easting:	Northing:	Ground Level:	Plant Used: Dando 2000	Print Date: 25-09-2019	Sheet 1 of 2 Scale: 1:50	
		Weather: Sunny/Windy		Termination: Specified depth reached		SPT Hammer: N/R, Energy Ratio: N/R		

Samples & In Situ Testing				Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill / Installation	
0.50 - 1.00	B1	SPT(S) 1.20m, N=11 (1,2/2,3,3,3)		(0.50)		Firm orangish brown very sandy CLAY. (WEATHERED LONDON CLAY FORMATION)	1		
1.00	D2								Firm orange mottled grey sandy CLAY. (WEATHERED LONDON CLAY FORMATION)
1.20 - 1.65	D3								
				(2.30)			2		
2.50	D4	SPT(S) 3.00m, N=16 (2,3/3,3,5,5)		2.80		Firm to stiff grey slightly sandy silty CLAY. (WEATHERED LONDON CLAY FORMATION)	3		
3.00 - 3.45	D5								
3.00 - 3.50	B6								
				(1.20)					
4.00	D7	U8 = 100 Blows		4.00		Stiff grey CLAY. (LONDON CLAY FORMATION)	4		
4.00 - 4.45	U8								
4.50	D9								
5.00 - 5.45	D10	SPT(S) 5.00m, N=23 (2,3/5,6,6,6)					5		
5.00 - 5.50	B11								
5.50	D12								
6.00 - 6.45	U13	U13 = 100 Blows					6		
7.00	D14	SPT(S) 7.00m, N=24 (2,3/5,6,6,7)		(10.30)		At 7.00mbgl: 10-30mm calcareous mudstone band.	7		
7.00 - 7.45	D15								
7.00 - 7.50	B16								
8.00 - 8.45	U17	U17 = 100 Blows					8		
8.50	D18					Below 8.50mbgl: Becomes very stiff.			
9.00 - 9.45	D19	SPT(S) 9.00m, N=35 (3,4/6,7,10,12)					9		
9.00 - 9.50	B20								
10.00	D21						10		

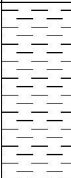
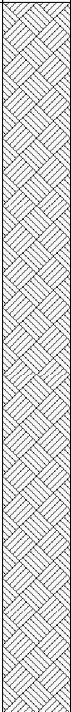
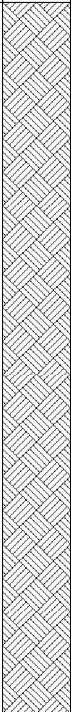
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	
06-08-2019	11:30	0.00	0.00		15.00	150	3.00	150	Groundwater seepage noted at 7.30mbgl.

Chiselling				Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

T&P Regeneration CP Template Issue Number: 1 Issue Date: June 2016

 www.tandpregeneration.co.uk		Contract Name: Berewood - Town Park Phase B		Client: WYG			Borehole ID: BH01	
		Contract Number: CS-J-0161	Date Started: 06-08-2019	Logged By: CP	Checked By: JD	Status: FINAL		
Cable Percussion Borehole Log		Easting:	Northing:	Ground Level:	Plant Used: Dando 2000	Print Date: 25-09-2019	Sheet 2 of 2 Scale: 1:50	
		Weather: Sunny/Windy		Termination: Specified depth reached		SPT Hammer: N/R, Energy Ratio: N/R		

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill / Installation
11.00 - 11.45 11.00 - 11.50	D22 B23	SPT(S) 11.00m, N=31 (3,5/6,7,9,9)				Stiff grey CLAY. (LONDON CLAY FORMATION)	11	
11.50	D24						12	
13.00 13.00 - 13.45	D25 D26	SPT(S) 13.00m, N=41 (3,5/7,9,10,15)				Stiff to very stiff grey very silty CLAY. (LONDON CLAY FORMATION)	13	
14.50 14.50 - 14.95	D27 U28	U28 = 100 Blows		14.30 (0.70)			14	
15.00	D29			15.00		End of Borehole at 15.00m	15	
							16	
							17	
							18	
							19	
							20	

Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth	Dia (mm)	
06-08-2019	16:00	15.00	3.00		15.00	150	3.00	150	Groundwater seepage noted at 7.30mbgl.

Chiselling				Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks	Top (m)	Base (m)	Type	Dia (mm)	Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks

T&P Regeneration CP Template Issue Number: 1 Issue Date: June 2016



www.tandpregeneration.co.uk

Contract Name:

Berewood - Town Park Phase B

Client:

WYG

Contract Number:

CS-J-0161

Date Started:

06-08-2019

Logged By:

CP

Checked By:

JD

Status:

FINAL

Trial Pit ID:

TP01

Sheet 1 of 1

Scale:

1:25

Trial Pit Log

Easting:

467364

Northing:

108934

Ground Level:

Plant Used:

Kubota 8 ton

Print Date:

25-09-2019

Weather: Sunny/Windy

Termination: Refusal

Stability: Stable

Samples & In Situ Testing			Strata Details					Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description			
0.00 - 0.20	ES1	HV 0.80m, 70 / 45kPa		0.20		Soft light brown slightly gravelly silty CLAY. Gravel is subangular to subrounded fine to coarse of flint and occasional chalk. (TOPSOIL)		1	
0.30 - 0.60	ES2					Stiff orangish brown mottled grey sandy CLAY (WEATHERED LONDON CLAY FORMATION)			
0.70 - 0.80	D3			(0.90)		Below 0.80mbgl: Becomes firm and very sandy.			
1.10 - 1.30	D4			1.10		Soft orange mottled grey very sandy CLAY. (WEATHERED LONDON CLAY FORMATION)			
2.90 - 3.00	D5			(1.70)		Below 1.70mbgl: Becomes sandy.			
		2.80				Soft bluish grey sandy silty CLAY. (LONDON CLAY FORMATION)			
						(0.40)		Below 3.00mbgl: Becomes thinly laminated.	
				3.20		End of Trial Pit at 3.20m		2	
								3	
								4	
								5	

Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

Remarks:

Groundwater not encountered.

Dimensions:

Length: 3.00m

Width: 0.60m

Orientation: °



Groundwater Details

Depth encountered (m)

Remarks



www.tandpregeneration.co.uk

Contract Name:

Berewood - Town Park Phase B

Client:

WYG

Contract Number:

CS-J-0161

Date Started:

06-08-2019

Logged By:

CP

Checked By:

JD

Status:

FINAL

Trial Pit ID:

TP02

Sheet 1 of 1

Scale:

1:25

Trial Pit Log

Easting:

467390

Northing:

108900

Ground Level:

Plant Used:

Kubota 8 ton

Print Date:

25-09-2019

Weather: Sunny/Windy

Termination: Specified depth reached

Stability: Stable

Samples & In Situ Testing				Strata Details					Water	Backfill		
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description						
0.00 - 0.30	ES1	HV 1.00m, 38 / 21kPa		(0.30)		REWORKED TOPSOIL: Soft light brown slightly gravelly silty CLAY with rare cobbles. Gravel is subangular to subrounded fine to coarse of flint and rare chalk. Cobbles are angular to subangular of chalk.				1		
0.30 - 0.60	ES2			0.30		Firm dark orangish brown slightly sandy CLAY. (WEATHERED LONDON CLAY FORMATION)						
				(0.30)								
				0.60		Soft orangish brown mottled grey sandy CLAY. (WEATHERED LONDON CLAY FORMATION)						
1.00 1.00	B4 D3			(1.50)						2		
		Below 1.60mbgl: Becomes very sandy clay.										
1.80	D5			2.10	End of Trial Pit at 2.10m						3	
											4	
											5	

Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

Remarks:

Groundwater not encountered. Infiltration test carried out in trial pit.

Dimensions:

Length: 2.00m

Width: 0.60m

Orientation: °



Groundwater Details

Depth encountered (m)

Remarks



www.tandpregeneration.co.uk

Contract Name:

Berewood - Town Park Phase B

Client:

WYG

Contract Number:

CS-J-0161

Date Started:

06-08-2019

Logged By:

CP

Checked By:

JD

Status:

FINAL

Trial Pit ID:

TP03

Sheet 1 of 1

Scale:

1:25

Trial Pit Log

Easting:

467416

Northing:

108826

Ground Level:

Plant Used:

Kubota 8 ton

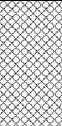
Print Date:

25-09-2019

Weather: Sunny/Windy

Termination: Specified depth reached

Stability: Stable

Samples & In Situ Testing			Strata Details					Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description			
0.00 - 0.45	ES1			(0.45)		MADE GROUND: Brown, black and grey sandy GRAVEL with medium cobble content. Gravel is angular to subangular fine to coarse of brick, bitumen, flint, glass and chalk. Cobbles are angular to subrounded of brick and flint.			
0.55 - 0.85	B2			0.45		Firm brown and white slightly sandy gravelly silty CLAY. Gravel is angular to subrounded fine to coarse of flint and chalk.			
0.55 - 0.85	D3			0.55		(REWORKED LONDON CLAY FORMATION)			
0.55 - 0.85	ES4			(0.30)		Soft to firm orangish brown slightly sandy CLAY. (WEATHERED LONDON CLAY FORMATION)			
				0.85		End of Trial Pit at 0.85m			
								1	
								2	
								3	
								4	
								5	

Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

Remarks:

Groundwater not encountered.

Dimensions:

Length: 1.40m

Width: 0.70m

Orientation: °



Groundwater Details

Depth encountered (m)

Remarks



www.tandpregeneration.co.uk

Contract Name:

Berewood - Town Park Phase B

Client:

WYG

Contract Number:

CS-J-0161

Date Started:

06-08-2019

Logged By:

CP

Checked By:

JD

Status:

FINAL

Trial Pit ID:

TP04

Sheet 1 of 1

Scale:

1:25

Trial Pit Log

Easting:

467416

Northing:

108893

Ground Level:

Plant Used:

Kubota 8 ton

Print Date:

25-09-2019

Weather: Sunny/Windy

Termination: Specified depth reached

Stability: Stable

Samples & In Situ Testing			Strata Details					Water	Backfill
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description			
0.20 - 0.40	ES1			(0.70)		MADE GROUND: Light brown, brown, black and grey silty sandy GRAVEL with medium to high cobble content. Gravel is angular to subrounded fine coarse of flint, brick, glass, bitumen and chalk. Cobbles are subrounded of flint.		1	
0.70 - 1.10	ES2			0.70 (0.40)		MADE GROUND: Soft brown with red and white patches sandy gravelly CLAY with low cobble content. Gravel is angular to subrounded fine to coarse of chalk, flint and brick. Cobbles are subangular to subrounded of flint.			
1.10 - 1.30 1.10 - 1.30 1.10 - 1.30	B4 D3 ES5			1.10 (0.50)		Soft brown becoming bluish grey mottled orange CLAY with frequent pockets of fibrous peat. (WEATHERED LONDON CLAY FORMATION)			
						End of Trial Pit at 1.60m		2	
								3	
								4	
								5	

Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

Remarks:

Groundwater not encountered.

Dimensions:

Length: 2.00m

Width: 0.70m

Orientation: °



Groundwater Details

Depth encountered (m)

Remarks

 www.tandpregeneration.co.uk		Contract Name: Berewood - Town Park Phase B			Client: WYG			Borehole ID: WS01	
		Contract Number: CS-J-0161	Date Started: 06-08-2019	Logged By: CP	Checked By: JD	Status: FINAL			
Windowless Sample Borehole Log		Easting: 467285	Northing: 108977	Ground Level:	Plant Used: Competitor Dart	Print Date: 25-09-2019	Sheet 1 of 1 Scale: 1:25		
		Weather: Sunny/Windy			Termination: Refusal		SPT Hammer: N/R, Energy Ratio: N/R		

Samples & In Situ Testing				Strata Details				Groundwater	
Depth	Sample ID	Windowless Sample Recovery	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill / Installation
0.00 - 0.20	ES1	0.00 - 1.00 = 100%			0.20		Firm light brown gravelly silty CLAY. Gravel is subangular to subrounded fine to coarse of flint. (TOPSOIL)		
0.20 - 0.60	ES2				(0.40)		Firm dark orangish brown slightly sandy CLAY with rare angular fine to medium coal gravel. (REWORKED LONDON CLAY FORMATION)		
					0.60		Firm orangish brown slightly sandy CLAY. (WEATHERED LONDON CLAY FORMATION)		
1.00 - 1.20	D3	1.00 - 2.00 = 90%	SPT() 1.00m, N=9 (2,2/2,3,2,2)					1	
1.80 - 2.00	D4	2.00 - 3.00 = 100%	SPT() 2.00m, N=13 (2,2/2,3,4,4)		(2.60)			2	
		3.00 - 4.00 = 100%	SPT() 3.00m, N=18 (3,4/4,5,4,5)					3	
		4.00 - 5.00 = 90%	SPT() 4.00m, N=19 (2,4/4,5,5,5)		3.20		Soft to firm bluish grey slightly sandy CLAY. (WEATHERED LONDON CLAY FORMATION)	4	
					(1.80)				
							Below 4.50mbgl. Becomes sandy.		
			SPT() 5.00m, N=35 (5,6/7,9,9,10)		5.00		End of Borehole at 5.00m	5	

Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

Start & End of Shift Observations						Borehole Diameter		Casing Diameter		Remarks:
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)		
									Borehole dipped prior to back filling. Groundwater water not detected.	

Water Strikes						Installation			
Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Type	Dia (mm)

T&P Regeneration WS Template Issue Number: 1 Issue Date: June 2016

 www.tandpregeneration.co.uk		Contract Name: Berewood - Town Park Phase B		Client: WYG		Borehole ID: WS02	
		Contract Number: CS-J-0161	Date Started: 06-08-2019	Logged By: CP	Checked By: JD		
Windowless Sample Borehole Log		Easting: 467287	Northing: 108843	Ground Level:	Plant Used: Competitor Dart	Print Date: 25-09-2019	Sheet 1 of 1 Scale: 1:25
		Weather: Sunny/Windy		Termination: Refusal		SPT Hammer: N/R, Energy Ratio: N/R	

Samples & In Situ Testing				Strata Details				Groundwater	
Depth	Sample ID	Windowless Sample Recovery	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill / Installation
0.00 - 0.20	ES1	0.00 - 1.00 = 90%			0.20		Firm light brown slightly gravelly silty CLAY. Gravel is subangular to subrounded fine to coarse of flint, chalk and rare brick. (REWORKED TOPSOIL)		
0.30 - 0.60	ES2				(0.80)		Firm to stiff brown and dark brown slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse of flint, chalk, glass and brick. (REWORKED LONDON CLAY FORMATION)		
1.00 - 1.20	D3	1.00 - 2.00 = 900%	SPT() 1.00m, N=9 (2,2/2,2,3,2)		1.00		Firm orangish brown CLAY. (WEATHERED LONDON CLAY FORMATION)	1	
					(1.10)				
		2.00 - 3.00 = 100%	SPT() 2.00m, N=9 (1,2/2,2,3,2)		2.10		Soft to firm orangish brown mottled brown sandy CLAY. (WEATHERED LONDON CLAY FORMATION)	2	
		3.00 - 4.00 = 90%	SPT() 3.00m, N=10 (1,2/2,2,3,3)		(2.20)			3	
							Below 3.50mbgl: Becomes very sandy.		
		4.00 - 5.00 = 90%	SPT() 4.00m, N=16 (2,3/3,4,4,5)		4.30		Soft bluish grey very sandy CLAY. (LONDON CLAY FORMATION)	4	
					(0.70)		Below 4.60mbgl: Becomes thinly laminated.		
			SPT() 5.00m, N=15 (2,2/3,4,4,4)		5.00		End of Borehole at 5.00m	5	

Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

Start & End of Shift Observations						Borehole Diameter		Casing Diameter		Remarks:
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)		
									Borehole dipped prior to back filling. Groundwater water recorded at 3.30mbgl.	

Water Strikes						Installation			
Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Type	Dia (mm)

T&P Regeneration WS Template Issue Number: 1 Issue Date: June 2016

 www.tandpregeneration.co.uk		Contract Name: Berewood - Town Park Phase B			Client: WYG			Borehole ID: WS03	
		Contract Number: CS-J-0161	Date Started: 06-08-2019	Logged By: CP	Checked By: JD	Status: FINAL			
Windowless Sample Borehole Log		Easting: 467190	Northing: 109002	Ground Level:	Plant Used: Competitor Dart	Print Date: 25-09-2019	Sheet 1 of 1 Scale: 1:25		
		Weather: Sunny/Windy			Termination: Refusal		SPT Hammer: N/R, Energy Ratio: N/R		

Samples & In Situ Testing				Strata Details				Groundwater	
Depth	Sample ID	Windowless Sample Recovery	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill / Installation
0.00 - 0.20	ES1	0.00 - 1.00 = 100%			0.20		Soft light brown slightly sandy silty CLAY with rare medium subrounded to rounded gravel of chalk.		
0.30 - 0.60	ES2				(0.40)		Firm light orangish brown mottled light orangish grey slightly sandy CLAY. (WEATHERED LONDON CLAY FORMATION)		
					0.60		Soft to firm orange mottled grey CLAY with rare subrounded to rounded medium gravel of mudstone. (WEATHERED LONDON CLAY FORMATION)		
1.00 - 1.20	D3	1.00 - 2.00 = 100%	SPT() 1.00m, N=6 (1,1/1,1,2,2)					1	
1.80 - 2.00	D4		SPT() 2.00m, N=9 (2,1/2,2,3,2)		(2.80)			2	
		2.00 - 3.00 = 100%							
3.00 - 3.20	D5	3.00 - 4.00 = 100%	SPT() 3.00m, N=18 (3,4/4,5,4,5)					3	
			SPT() 4.00m, N=19 (3,4/4,4,5,6)		3.40		Firm bluish grey slightly sandy CLAY. (LONDON CLAY FORMATION)		
3.80 - 4.00	D6								
		4.00 - 5.00 = 100%			(1.60)			4	
			SPT() 5.00m, N=35 (5,7/7,9,9,10)		5.00		End of Borehole at 5.00m	5	

Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

Start & End of Shift Observations						Borehole Diameter		Casing Diameter		Remarks:
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)		
									Borehole dipped prior to back filling. Groundwater water not detected.	

Water Strikes						Installation			
Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Type	Dia (mm)

T&P Regeneration WS Template Issue Number: 1 Issue Date: June 2016

 www.tandpregeneration.co.uk		Contract Name: Berewood - Town Park Phase B		Client: WYG			Borehole ID: WS04	
		Contract Number: CS-J-0161	Date Started: 20-08-2019	Logged By: CP	Checked By: JD	Status: FINAL		
Windowless Sample Borehole Log		Easting:	Northing:	Ground Level:	Plant Used: Competitor Dart	Print Date: 25-09-2019	Sheet 1 of 1 Scale: 1:25	
		Weather: Sunny		Termination: Specified depth reached		SPT Hammer: N/R, Energy Ratio: N/R		

Samples & In Situ Testing				Strata Details				Groundwater	
Depth	Sample ID	Windowless Sample Recovery	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill / Installation
0.00 - 0.30	ES1	0.00 - 1.00 = 100%			(0.30)		Soft brown slightly gravelly CLAY with grass top. Gravel is subangular to subrounded fine to medium of chalk and flint. (TOPSOIL)		
0.30 - 0.60	ES2				0.30		Firm to stiff orangish brown slightly silty CLAY. (WEATHERED LONDON CLAY FORMATION)		
0.90 - 1.00	D3	1.00 - 2.00 = 100%	HV 0.80m, 110 / 22kPa SPT() 1.00m, N=12 (1,2/3,2,3,4)					1	
1.20 - 1.40	D4		HV 1.30m, 87 / 22kPa						
		2.00 - 3.00 = 100%	SPT() 2.00m, N=13 (2,3/2,3,4,4)					2	
		3.00 - 4.00 = 90%	SPT() 3.00m, N=15 (3,3/2,4,4,5)		(4.70)		Below 2.80mbgl: Becomes fissured.	3	
		4.00 - 5.00 = 80%	SPT() 4.00m, N=18 (4,4/3,4,5,6)					4	
			SPT() 5.00m, N=35 (7,6/8,8,9,10)		5.00		End of Borehole at 5.00m	5	

Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

Start & End of Shift Observations						Borehole Diameter		Casing Diameter		Remarks:
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)		
									Groundwater not encountered.	

Water Strikes						Installation			
Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Type	Dia (mm)

T&P Regeneration WS Template Issue Number: 1 Issue Date: June 2016

 www.tandpregeneration.co.uk		Contract Name: Berewood - Town Park Phase B		Client: WYG			Borehole ID: WS05	
		Contract Number: CS-J-0161	Date Started: 20-08-2019	Logged By: CP	Checked By: JD	Status: FINAL		
Windowless Sample Borehole Log		Easting:	Northing:	Ground Level:	Plant Used: Competitor Dart	Print Date: 25-09-2019	Sheet 1 of 1 Scale: 1:25	
		Weather: Sunny		Termination: Specified depth reached			SPT Hammer: N/R, Energy Ratio: N/R	

Samples & In Situ Testing				Strata Details				Groundwater	
Depth	Sample ID	Windowless Sample Recovery	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill / Installation
0.10 - 0.30	ES1	0.00 - 1.00 = 100%			(0.50)		Firm brown slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse of flint and chalk with rare fragments of glass, brick, bitumen and coal. (REWORKED TOPSOIL)		
0.50 - 0.70	ES2				0.50		Firm orangish brown slightly sandy silty CLAY. (WEATHERED LONDON CLAY FORMATION)		
0.90 - 1.00	D3	1.00 - 2.00 = 100%	SPT() 1.00m, N=9 (1,2/1,2,3,3) HV 1.10m, 25 / 5kPa				Below 0.90mbgl: Becomes soft.	1	
1.20 - 1.40	D4								
		2.00 - 3.00 = 100%	SPT() 2.00m, N=12 (3,3/2,3,3,4)		(2.90)		Below 2.10mbgl: Becomes silty.	2	
		3.00 - 4.00 = 90%	SPT() 3.00m, N=17 (5,5/5,4,4,4)				Below 3.30mbgl: Becomes very soft.	3	
3.70 - 3.90	D5	4.00 - 5.00 = 100%	SPT() 4.00m, N=18 (4,4/4,4,5,5)		3.40		Firm to stiff grey slightly sandy silty CLAY. (LONDON CLAY FORMATION)		
							Below 3.90mbgl: Becomes sandy.	4	
					(1.60)		Below 4.20mbgl: Becomes stiff.		
							Below 4.50mbgl: Becomes very silty.		
			SPT() 5.00m, N=38 (3,6/6,10,11,11)		5.00		End of Borehole at 5.00m	5	

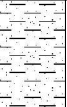
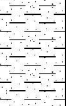
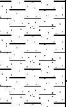
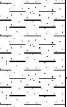
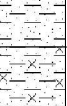
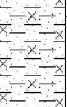
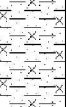
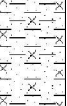
Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

Start & End of Shift Observations						Borehole Diameter		Casing Diameter		Remarks:
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)		
									Groundwater not encountered.	

Water Strikes						Installation			
Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Type	Dia (mm)

T&P Regeneration WS Template Issue Number: 1 Issue Date: June 2016

 www.tandpregeneration.co.uk		Contract Name: Berewood - Town Park Phase B		Client: WYG			Borehole ID: WS06	
		Contract Number: CS-J-0161	Date Started: 20-08-2019	Logged By: CP	Checked By: JD	Status: FINAL		
Windowless Sample Borehole Log		Easting:	Northing:	Ground Level:	Plant Used: Competitor Dart	Print Date: 25-09-2019	Sheet 1 of 1 Scale: 1:25	
		Weather: Sunny		Termination: Specified depth reached			SPT Hammer: N/R, Energy Ratio: N/R	

Samples & In Situ Testing				Strata Details				Groundwater	
Depth	Sample ID	Windowless Sample Recovery	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill / Installation
0.10 - 0.40	ES1	0.00 - 1.00 = 100%			(0.40)		Very soft dark brown slightly sandy CLAY with grass top. (TOPSOIL)		
0.40 - 0.60	ES2				0.40		Soft orangish brown mottled grey sandy CLAY with rare subrounded to rounded medium gravel of mudstone. (WEATHERED LONDON CLAY FORMATION)		
0.90 - 1.00	D3	1.00 - 2.00 = 100%	SPT() 1.00m, N=4 (0,1/1,1,1,1)		(1.80)		Below 0.80mbgl: Becomes soft.	1	
1.50 - 1.70	D4						Below 1.50mbgl: Becomes very sandy and grey.		
		2.00 - 3.00 = 100%	SPT() 2.00m, N=13 (2,3/3,3,3,4)		2.20		Below 1.90mbgl: Becomes extremely soft.	2	
2.50 - 2.70	D5						Soft to firm bluish grey sandy silty CLAY. (WEATHERED LONDON CLAY FORMATION)		
		3.00 - 4.00 = 100%	SPT() 3.00m, N=16 (3,4/4,4,4,5)		(2.80)		Below 2.50mbgl: Becomes stiff.	3	
		4.00 - 5.00 = 50%	SPT() 4.00m, N=18 (3,4/4,4,5,5)				Below 4.50mbgl: Becomes very stiff and slightly sandy.	4	
			SPT() 5.00m, N=20 (3,5/4,5,5,6)		5.00		End of Borehole at 5.00m	5	

Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

Start & End of Shift Observations						Borehole Diameter		Casing Diameter		Remarks:
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)		
									Groundwater encountered at approximately 3.50mbgl.	

Water Strikes						Installation			
Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Type	Dia (mm)

T&P Regeneration WS Template Issue Number: 1 Issue Date: June 2016

 www.tandpregeneration.co.uk		Contract Name: Berewood - Town Park Phase B			Client: WYG			Borehole ID: WS07	
		Contract Number: CS-J-0161	Date Started: 20-08-2019	Logged By: CP	Checked By: JD	Status: FINAL			
Windowless Sample Borehole Log		Easting:	Northing:	Ground Level:	Plant Used: Competitor Dart	Print Date: 25-09-2019	Sheet 1 of 1 Scale: 1:25		
		Weather: Sunny			Termination: Specified depth reached		SPT Hammer: N/R, Energy Ratio: N/R		

Samples & In Situ Testing				Strata Details				Groundwater		
Depth	Sample ID	Windowless Sample Recovery	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill / Installation	
0.00 - 0.20	ES1	0.00 - 1.00 = 90%	SPT() 1.00m, N=5 (1,1/1,2,1,1)		0.20		Soft brown CLAY with frequent fragments plant fragments.	1		
0.30 - 0.60	ES2						Soft to firm brown mottled orangish gravelly CLAY. Gravel is angular to subrounded fine to coarse of flint and chalk. (REWORKED LONDON CLAY FORMATION)			
							At 0.60mbgl: Black fibrous fabric (suspected asbestos).			
0.90 - 1.00	D3	1.00 - 2.00 = 80%			(1.70)		At 0.80mbgl: frequent plant fragments.			
1.50 - 1.70	D4		SPT() 2.00m, N=4 (0,1/0,1,1,2)		1.90		Soft bluish grey and orange slightly gravelly CLAY with frequent fibrous peat traces. Gravel is angular to subrounded fine to coarse of flint. (REWORKED LONDON CLAY FORMATION)	2		
2.30 - 2.50	D5	2.00 - 3.00 = 70%				(0.70)				
2.70 - 2.90	D6					2.60				Very soft yellowish grey CLAY with occasional fibrous peat traces. (REWORKED LONDON CLAY FORMATION)
		3.00 - 4.00 = 80%	SPT() 3.00m, N=7 (1,1/1,2,2,2)		(0.80)			3		
						3.40				Soft to firm orange mottled grey CLAY with root traces. (POSSIBLE RELICT TOPSOIL)
										Below 3.80mbgl: Becomes firm to stiff.
		4.00 - 5.00 = 80%	SPT() 4.00m, N=13 (2,2/2,3,3,5)		(1.20)			4		
						4.60				Stiff to very stiff bluish grey CLAY. (LONDON CLAY FORMATION)
						(0.40)				
			SPT() 5.00m, N=25 (5,5/5,6,6,8)		5.00		End of Borehole at 5.00m	5		

Sample Key: B = Bulk Disturbed D = Small Disturbed U = Undisturbed Open-Drive W = Water G = Gas ES = Environmental Soil EW = Environmental Water

Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	
									Groundwater not encountered.

Water Strikes					Installation				
Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks	Top (m)	Base (m)	Type	Dia (mm)

T&P Regeneration WS Template Issue Number: 1 Issue Date: June 2016

Appendix D – Geotechnical Results

T & P Regeneration

Unit 4
Brunel Lock Development
Smeaton Road
Bristol
BS1 6SE
For the attention of Craig Pennell

Report No: B23229
Issue No 01

LABORATORY TEST REPORT

Project Name		BEREWOOD	
Project Number		B23229	Date samples received 15/08/2019
Your Ref		CS-J-0161	Date written instructions received 16/09/2019
Purchase Order			Date testing commenced 16/09/2019
Please find enclosed the results as summarised below			
Figure / Table	Test Quantity	Description	ISO 17025 Accredited
1	5	BRE Suite - Soil	Yes
App S1	~	Sample Descriptions - Soil	N/A
App S2	~	Deviating Samples - Soil	N/A
App S3	~	Summary of In-House Analytical Test Methods - Soil	N/A
Remarks :			
Issued by : Stephen Langman		Date of Issue : 10/10/2019	Key to symbols used in this report S/C : Testing was sub-contracted
Approved Signatories :  10/10/2019 G Wilson (JMD/Laboratories Director), S Langman (Laboratory Coordinator)			
Unless we are notified to the contrary, samples will be disposed after a period of one month from this date. The results reported relate to samples received in the laboratory only. All results contained in this report are provisional unless signed by an approved signatory This report should not be reproduced except in full without the written approval of the laboratory. Under multisite accreditation the testing contained in this report may have been performed at another Terra Tek laboratory. The enclosed results remain the property of Terra Tek Limited and we reserve the right to withdraw our report if we have not received cleared funds in accordance with our standard terms and conditions Only those results indicated in this report are UKAS accredited and any opinions or interpretations expressed are outside the scope of UKAS accreditation. Feedback on the this report may be left via our website www.terratek.co.uk/contact-us			



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Offices in Airdrie, Birmingham, Belfast and Chesham

Head Office : 62 Rochsolloch Road, Airdrie, ML6 9BG

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES				Site BEREWOOD																Contract No CS-J-0161			
				Client																			
				Engineer																			
Sample Identification				Lab Sample ID																			
Hole	Depth m	Sample Ref	Sample Type																				
				Sulphate (acid soluble as SO4) %	Sulphate (water soluble in 2:1 extract) as SO4 g/l	pH	Total Sulphur %																
BH01	1.00		D	400155	<0.01	0.03	7.6	<0.01															
TP03	0.55-0.85		B	400167	0.02	0.04	7.9	<0.01															
WS01	1.00-1.20		T	400137	0.05	0.03	7.2	0.02															
WS02	1.00-1.20		T	400139	0.02	0.03	7.8	<0.01															
TP01	1.10-1.30		B	400173	0.01	0.01	7.4	<0.01															
Limits of Detection					0.01	0.01	~	0.01															
Terra Tek Analysis Method:					TP171	TP169	TP019	TP129															
Accreditation M=Mcerts U=UKAS N=No accreditation					M	M	M	M															
Originator		Checked & Approved		BRE SD1 SUITE - SOIL																Tk Figure 1 Sheet 1 of 1			
TH		S. Langren 1U/1U/ZU19																					

 TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES				Site BEREWOOD				Contract No E13009/1			
				Client							
				Engineer							
Sample Identification				Lab Sample ID	Date Sampled	Temperature on receipt °C	PRIMARY MATRIX	Secondary Matrix	Additional matrix	% Loss at 30C	% Retained 2mm
Exploratory Hole	Depth m	Sample Ref	Sample Type								
WS01	1.00-1.20		T	400137	19/08/19	14.0	Clayey SAND	Fine gravel		91.7	~
WS02	1.00-1.20		T	400139	19/08/19	14.0	Sandy CLAY			12.7	~
BH01	1.00		D	400155	08/08/19	14.0	Sandy CLAY	Fine gravel		14.3	~
TP03	0.55-0.85		B	400167	15/08/19	14.0	CLAY	Fine gravel		17.3	~
TP01	1.10-1.30		B	400173	15/08/19	14.0	Clayey SAND			17.2	~
Notes Terra Tek are accredited for clay, sand and loam matrix types only, where they constitute the major component of the sample. Other coarse granular materials such as gravel, are not accredited where they comprise the major component of the sample. Results are expressed on a dry-weight basis (samples dried at 30°C ± 5°C) except where stated. The laboratory removes any material > 2mm prior to analysis. The quantity and nature of the material is shown as the secondary and additional matrix types in the above table. Where a parameter cannot be determined in house it is our policy to use a UKAS/MCERTS accredited laboratory wherever possible. Terra Tek will assume responsibility for the quality of subcontracted tests and the performance of the subcontractor chosen. Where there is no known UKAS/MCERTS laboratory for a particular parameter, a laboratory listed within the Terra Tek Approved Subcontractors List, which is subject to performance assessment, will be selected.											
Originator		Checked & Approved		SAMPLE DESCRIPTIONS				Appendix S1			
TGH		 10/10/2019									
								Sheet 1 of 1			

 TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES				Site BEREWOOD				Contract No CS-J-0161				
				Client								
				Engineer								
Sample Identification				Lab Sample ID	Date Sampled	Deviating conditions					Preservatives used	
Exploratory Hole	Depth m	Sample Ref	Sample Type			Sampling date has not been provided	Exceeded maximum holding time for selected test(s)	Presence of headspace in sample vial	Poorly fitting cap or lid	Damaged container		
WS01	1.00-1.20		T	400137	19/08/19							
WS02	1.00-1.20		T	400139	19/08/19							
BH01	1.00		D	400155	08/08/19							
TP03	0.55-0.85		B	400167	15/08/19							
TP01	1.10-1.30		B	400173	15/08/19							
NOTES - Results reported for samples classified as deviating may be compromised. Deviation types are shown as "X" or "Yes" in the table above. - The absence of "X" or "Yes" in the table above indicates no reported deviations. - Deviations due to use of incorrect sample container are shown on result tables. - Deviating results are indicated within result tables.												
Originator		Checked & Approved		DEVIATING SAMPLES - SOIL					 Appendix S2 Sheet 1 of 1			
TGH		<i>S. Langren</i> 10/10/2019										

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		SiteBEREWOOD		Contract NoCS-J-0161		
		Client				
		Engineer				
Method Code	Reference	Description of Method	ISO17025 Accredited	MCERTS Accredited	Wet/Dry Sample Tested	
GP001	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Preparation of soil samples for chemical analysis	Yes	Yes	N/A	
GP012	BS EN 12457-3: Characterisation of Waste - Compliance test for leaching of granular waste materials and sludges (two-stage batch test)	Preparation of soil samples for two-stage leachate test			Dry	
TP019	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of pH in 2.5:1 water/soil extract using pH meter.	Yes	Yes	Dry	
TP032	MAFF Book 427: The Analysis of Agricultural Materials: Method 8	Determination of water soluble boron by colorimetry	Yes		Dry	
TP040	APHA/AWWA, 19th edition: Method 3500Cr-D	Determination of hexavalent chromium by colorimetry.	Yes		Dry	
TP041	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of organic matter by titrimetry.	Yes		Dry	
TP042	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of loss on ignition at 50-440°C by gravimetry	Yes	Yes	Dry	
TP045	GACHAMJA A.M. Chromatography and Analysis: 1992 9-11 (modified)	Determination of polyaromatic hydrocarbons extractable in dichloromethane, by GC/MS	Yes	Yes	Dry	
TP046	MEWAM method: Phenols in water and Effluents: 4-aminoantipyrine method	Determination of monohydric phenols by steam distillation/colorimetry	Yes	Yes	Dry	
TP047	MEWAM method: Cyanide in Waters etc	Determination of free cyanide by steam distillation/colorimetry	Yes		Dry	
TP048	MEWAM method: Cyanide in Waters etc	Determination of total cyanide by steam distillation/colorimetry.	Yes	Yes	Dry	
TP049	MEWAM method: Cyanide in Waters etc	Determination of complex cyanide by calculation	Yes		Dry	
TP050	MEWAM method: Determination of Thiocyanate ,1985	Determination of thiocyanate by colorimetry	Yes	Yes	Dry	
TP051	USEPA Method 9030B	Determination of acid soluble sulphides by steam distillation/colorimetry.	Yes	Yes	Wet	
TP067	TNRCC Method 1005: 2001 (modified)	Determination of pentane/acetone extractable petroleum hydrocarbons (C8 - C40) by GC/FID	Yes	Yes	Wet	
TP072	In-house documented method	Determination of ammoniacal nitrogen by colorimetry			Dry	
TP073	In-house documented method	Determination of anionic detergent (MBAS) by colorimetry			Dry	
TP074	In-house documented method	Determination of water soluble fluoride by ion selective electrode			Dry	
TP098	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of acid soluble chloride by titrimetry			Dry	
TP099	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of water soluble chloride by titrimetry	Yes	Yes	Dry	
Notes 1. Terra Tek (Birmingham) are MCERTS accredited for clay, sand & loam matrix types only, where they constitute the major component of the sample. Other coarse granular materials, ie gravel, are not accredited where they comprise the major component of the sample. 2. Results are expressed on a dry-weight basis (samples dried at 30°C ± 5°C) except where stated. 3. The laboratory removes any material >2mm prior to analysis. The quantity and nature of any material removed from samples is recorded and the information is available on request. 4. The laboratory records the date of analysis of each parameter. This information is available on request. 5. Where a parameter cannot be determined in house it is our policy to use a UKAS/MCERTS accredited laboratory wherever possible. Terra Tek will assume responsibility for the quality of subcontracted tests and the performance of the subcontractor chosen. Where there is no known UKAS/MCERTS laboratory for a particular parameter, a laboratory listed within the Terra Tek Approved Subcontractors list, which is subject to performance assessment, will be selected.						
Originator	Checked & Approved	SUMMARY OF IN-HOUSE ANALYTICAL TEST METHODS (SOIL)			Tk Appendix S3 Sheet 1 of 2	
N/A	N/A					

TK

T & P Regeneration

Unit 4
Brunel Lock Development
Smeaton Road
Bristol
BS1 6SE
For the attention of Craig Pennell

Report No: B23318
Issue No 02

LABORATORY TEST REPORT

Project Name		BEREWOOD	
Project Number		B23318	Date samples received 27/08/2019
Your Ref		CS-J-0161	Date written instructions received 16/09/2019
Purchase Order			Date testing commenced 16/09/2019
Please find enclosed the results as summarised below			
Figure / Table	Test Quantity	Description	ISO 17025 Accredited
1	1	BRE Suite - Soil	Yes
App S1	~	Sample Descriptions - Soil	N/A
App S2	~	Deviating Samples - Soil	N/A
App S3	~	Summary of In-House Analytical Test Methods - Soil	N/A
Remarks :			
Issued by : Stephen Langman		Date of Issue : 11/10/2019	Key to symbols used in this report S/C : Testing was sub-contracted
Approved Signatories : <i>S. Langman</i> 11/10/2019 G Wilson (JMD/Laboratories Director), S Langman (Laboratory Coordinator)			
Unless we are notified to the contrary, samples will be disposed after a period of one month from this date. The results reported relate to samples received in the laboratory only. All results contained in this report are provisional unless signed by an approved signatory This report should not be reproduced except in full without the written approval of the laboratory. Under multisite accreditation the testing contained in this report may have been performed at another Terra Tek laboratory. The enclosed results remain the property of Terra Tek Limited and we reserve the right to withdraw our report if we have not received cleared funds in accordance with our standard terms and conditions Only those results indicated in this report are UKAS accredited and any opinions or interpretations expressed are outside the scope of UKAS accreditation. Feedback on the this report may be left via our website www.terratek.co.uk/contact-us			



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TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES				Site BEREWOOD																Contract No CS-J-0161			
				Client																			
				Engineer																			
Sample Identification				Lab Sample ID	Sulphate (acid soluble as SO ₄)	Sulphate (water soluble in 2:1 extract) as SO ₄	pH	Total Sulphur															
Hole	Depth m	Sample Ref	Sample Type		%	g/l		%															
WS05	1.20-1.40		T	701277	<0.01	0.03	7.5	<0.01															
					Limits of Detection	0.01	~	0.01															
					Terra Tek Analysis Method	TP171	TP169	TP019	TP129														
					Accreditation M=Mcerts U=UKAS N=No accreditation	M	M	M	M														

Originator	Checked & Approved	BRE SD1 SUITE - SOIL	Figure 1 Sheet 1 of 1
TH	S. Langren 11/10/2019		

 TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES				Site BEREWOOD				Contract No E13009/1			
				Client							
				Engineer							
Sample Identification				Lab Sample ID	Date Sampled	Temperature on receipt °C	PRIMARY MATRIX	Secondary Matrix	Additional matrix	% Loss at 30C	% Retained 2mm
Exploratory Hole	Depth m	Sample Ref	Sample Type								
WS05	1.20-1.40		T	701277	15/08/19	10.4	CLAY	Fine gravel		20.8	~
Notes Terra Tek are accredited for clay, sand and loam matrix types only, where they constitute the major component of the sample. Other coarse granular materials such as gravel, are not accredited where they comprise the major component of the sample. Results are expressed on a dry-weight basis (samples dried at 30°C ± 5°C) except where stated. The laboratory removes any material > 2mm prior to analysis. The quantity and nature of the material is shown as the secondary and additional matrix types in the above table. Where a parameter cannot be determined in house it is our policy to use a UKAS/MCERTS accredited laboratory wherever possible. Terra Tek will assume responsibility for the quality of subcontracted tests and the performance of the subcontractor chosen. Where there is no known UKAS/MCERTS laboratory for a particular parameter, a laboratory listed within the Terra Tek Approved Subcontractors List, which is subject to performance assessment, will be selected.											
Originator		Checked & Approved		SAMPLE DESCRIPTIONS				Appendix S1 Sheet 1 of 1			
TH		 11/10/2019									

 TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES				Site BEREWOOD				Contract No CS-J-0161					
				Client									
				Engineer									
Sample Identification				Lab Sample ID	Date Sampled	Deviating conditions						Preservatives used	
Exploratory Hole	Depth m	Sample Ref	Sample Type			Sampling date has not been provided	Exceeded maximum holding time for selected test(s)	Presence of headspace in sample vial	Poorly fitting cap or lid	Damaged container			
WS05	1.20-1.40		T	701277	15/08/19								
NOTES 1 Results reported for samples classified as deviating may be compromised. Deviation types are shown as "X" or "Yes" in the table above. 2 The absence of "X" or "Yes" in the table above indicates no reported deviations. 3 Deviations due to use of incorrect sample container are shown on result tables. 4 Deviating results are indicated within result tables.													
Originator		Checked & Approved		DEVIATING SAMPLES - SOIL						 Appendix S2 Sheet 1 of 1			
TGH		<i>S. Langren</i> 11/10/2019											

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		SiteBEREWOOD		Contract NoCS-J-0161	
		Client			
		Engineer			
Method Code	Reference	Description of Method	ISO17025 Accredited	MCERTS Accredited	Wet/Dry Sample Tested
GP001	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Preparation of soil samples for chemical analysis	Yes	Yes	N/A
GP012	BS EN 12457-3: Characterisation of Waste - Compliance test for leaching of granular waste materials and sludges (two-stage batch test)	Preparation of soil samples for two-stage leachate test			Dry
TP019	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of pH in 2.5:1 water/soil extract using pH meter.	Yes	Yes	Dry
TP032	MAFF Book 427: The Analysis of Agricultural Materials: Method 8	Determination of water soluble boron by colorimetry	Yes		Dry
TP040	APHA/AWWA, 19th edition: Method 3500Cr-D	Determination of hexavalent chromium by colorimetry.	Yes		Dry
TP041	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of organic matter by titrimetry.	Yes		Dry
TP042	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of loss on ignition at 50-440°C by gravimetry	Yes	Yes	Dry
TP045	GACHAMJA A.M. Chromatography and Analysis: 1992 9-11 (modified)	Determination of polyaromatic hydrocarbons extractable in dichloromethane, by GC/MS	Yes	Yes	Dry
TP046	MEWAM method: Phenols in water and Effluents: 4-aminoantipyrine method	Determination of monohydric phenols by steam distillation/colorimetry	Yes	Yes	Dry
TP047	MEWAM method: Cyanide in Waters etc	Determination of free cyanide by steam distillation/colorimetry	Yes		Dry
TP048	MEWAM method: Cyanide in Waters etc	Determination of total cyanide by steam distillation/colorimetry.	Yes	Yes	Dry
TP049	MEWAM method: Cyanide in Waters etc	Determination of complex cyanide by calculation	Yes		Dry
TP050	MEWAM method: Determination of Thiocyanate ,1985	Determination of thiocyanate by colorimetry	Yes	Yes	Dry
TP051	USEPA Method 9030B	Determination of acid soluble sulphides by steam distillation/colorimetry.	Yes	Yes	Wet
TP067	TNRCC Method 1005: 2001 (modified)	Determination of pentane/acetone extractable petroleum hydrocarbons (C8 - C40) by GC/FID	Yes	Yes	Wet
TP072	In-house documented method	Determination of ammoniacal nitrogen by colorimetry			Dry
TP073	In-house documented method	Determination of anionic detergent (MBAS) by colorimetry			Dry
TP074	In-house documented method	Determination of water soluble fluoride by ion selective electrode			Dry
TP098	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of acid soluble chloride by titrimetry			Dry
TP099	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of water soluble chloride by titrimetry	Yes	Yes	Dry
Notes 1. Terra Tek (Birmingham) are MCERTS accredited for clay, sand & loam matrix types only, where they constitute the major component of the sample. Other coarse granular materials, ie gravel, are not accredited where they comprise the major component of the sample. 2. Results are expressed on a dry-weight basis (samples dried at 30°C ± 5°C) except where stated. 3. The laboratory removes any material >2mm prior to analysis. The quantity and nature of any material removed from samples is recorded and the information is available on request. 4. The laboratory records the date of analysis of each parameter. This information is available on request. 5. Where a parameter cannot be determined in house it is our policy to use a UKAS/MCERTS accredited laboratory wherever possible. Terra Tek will assume responsibility for the quality of subcontracted tests and the performance of the subcontractor chosen. Where there is no known UKAS/MCERTS laboratory for a particular parameter, a laboratory listed within the Terra Tek Approved Subcontractors list, which is subject to performance assessment, will be selected.					
Originator	Checked & Approved	SUMMARY OF IN-HOUSE ANALYTICAL TEST METHODS (SOIL)		Tk Appendix S3 Sheet 1 of 2	
N/A	N/A				

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES		SiteBEREWOOD		Contract NoCS-J-0161	
		Client			
		Engineer			
Method Code	Reference	Description of Method	ISO17025 Accredited	MCERTS Accredited	Wet/Dry Sample Tested
TP100	Wisconsin DNR Modified GRO method, Method for Determining Gasoline Range Organics	Determination of Volatile Petroleum Hydrocarbons/GRO.	Yes	Yes	Wet
TP110	USEPA Methods 8082A & 3665A	Determination of Total & Speciated 7 PCB Congeners by GC/MS SIM	Yes	Yes	Wet
TP114	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of carbonate in soil (rapid titration method)			Dry
TP126	TNRCC Method 1006 (modified)	Extracted petroleum hydrocarbons from TP067 split into aromatic and aliphatic fractions. Analysed by GC/FID.	Yes		Wet
TP129	In-house documented method	Determination of total sulphur by ICP-OES spectroscopy	Yes	Yes	Dry
TP134	In-house documented method	Determination of water soluble chloride by titrimetry	Yes	Yes	Dry
TP135	USEPA Methods 8100 & 8270D. In-house method TP045	Determination of polyaromatic hydrocarbons extractable in dichloromethane, by GC/MS (with concentration stage)			Dry
TP137	BS7755: Section 3.9: 1995/ISO 11466:1995	Determination of acid extractable metals in soil by ICP-OES	Selected	Selected	Dry
TP145	USEPA Methods 3550C & 8270D	Determination of Semi-Volatile Organic Compounds by GC/MS	Yes	Yes	Wet
TP147	USEPA Methods 8082A & 3665A	Determination of total & speciated WHO 12 PCB Congeners by GC/MS SIM.			Wet
TP150	USEPA Methods 8081B & 8141B	Determination of pesticides and herbicides in soil by GC/MS SIM			Dry
TP152	USEPA Method 556	Determination of carbonyls by GC/MS.			Wet
TP154	USEPA Method 5021. Wisconsin DNR modified GRO method	Determination of volatiles in by GC/MS headspace	Yes	Selected	Wet
TP158	USEPA Method 1671	Determination of glycols by GC/FID DI			Wet
TP169	In-house documented method	Determination of water soluble sulphate in 2:1 water/soil extract by ICP-OES spectroscopy	Yes	Yes	Dry
TP171	In-house documented method	Determination of acid soluble sulphate by ICP-OES spectroscopy	Yes	Yes	Dry
TP178	In-house documented method	Determination of water soluble nitrate by ion selective electrode			Dry
Notes					
1. Terra Tek (Birmingham) are MCERTS accredited for clay, sand & loam matrix types only, where they constitute the major component of the sample. Other coarse granular materials, ie gravel, are not accredited where they comprise the major component of the sample. 2. Results are expressed on a dry-weight basis (samples dried at 30°C ± 5°C) except where stated. 3. The laboratory removes any material >2mm prior to analysis. The quantity and nature of any material removed from samples is recorded and the information is available on request. 4. The laboratory records the date of analysis of each parameter. This information is available on request. 5. Where a parameter cannot be determined in house it is our policy to use a UKAS/MCERTS accredited laboratory wherever possible. Terra Tek will assume responsibility for the quality of subcontracted tests and the performance of the subcontractor chosen. Where there is no known UKAS/MCERTS laboratory for a particular parameter, a laboratory listed within the Terra Tek Approved Subcontractors list, which is subject to performance assessment, will be selected.					
Originator	Checked & Approved	SUMMARY OF IN-HOUSE ANALYTICAL TEST METHODS (SOIL)		Tk Appendix S3	
N/A	N/A				
Sheet 2 of 2					

T & P Regeneration

Unit 4
Brunel Lock Development
Smeaton Road
Bristol
BS1 6SE
For the attention of Craig Pennell

Report No: **B23318**
Issue No **01**

LABORATORY TEST REPORT

Project Name		BEREWOOD	
Project Number		B23318	Date samples received
Your Ref		CS-J-0161	Date written instructions received
Purchase Order			Date testing commenced
			27/08/2019
			16/09/2019
			16/09/2019
Please find enclosed the results as summarised below			
Figure / Table	Test Quantity	Description	ISO 17025 Accredited
1	1	Summary of Geotechnical Tests	Yes
2	1	Atterberg Limit	Yes
Remarks :			
Issued by : Stephen Langman		Date of Issue : 03/10/2019	
Approved Signatories :  03/10/2019		Key to symbols used in this report S/C : Testing was sub-contracted	
G Wilson (JMD/Laboratories Director), S Langman (Laboratory Coordinator)			
Unless we are notified to the contrary, samples will be disposed after a period of one month from this date. The results reported relate to samples received in the laboratory only. All results contained in this report are provisional unless signed by an approved signatory This report should not be reproduced except in full without the written approval of the laboratory. Under multisite accreditation the testing contained in this report may have been performed at another Terra Tek laboratory. The enclosed results remain the property of Terra Tek Limited and we reserve the right to withdraw our report if we have not received cleared funds in accordance with our standard terms and conditions Only those results indicated in this report are UKAS accredited and any opinions or interpretations expressed are outside the scope of UKAS accreditation. Feedback on the this report may be left via our website www.terratek.co.uk/contact-us			



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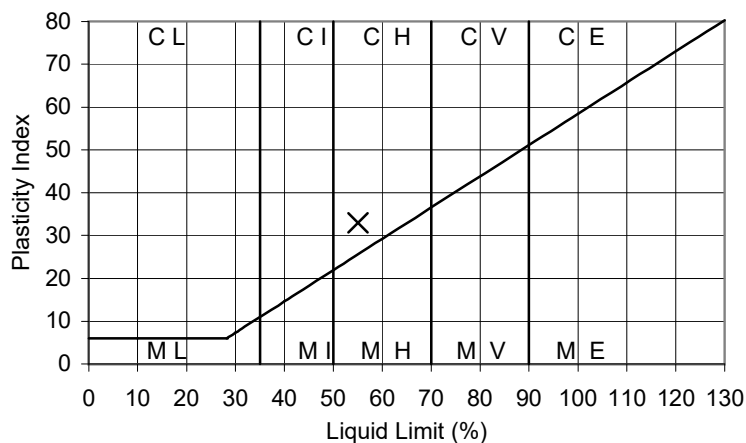
Head Office : 62 Rochsolloch Road, Airdrie, ML6 9BG

 TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES				Site BEREWOOD												Contract No CS-J-0161			
				Client															
				Engineer															
Sample Identification				Lab Sample ID	Non Engineering Sample Description	Moisture Content	Atterberg limits					Particle Density	Density		Total Stress			Other Tests	
Exploratory Hole	Depth m	Sample Ref	Sample Type				Liquid Limit	Plastic Limit	Plasticity Index	Percentage retained 425µm	Atterberg Classification		Bulk	Dry	Shear Strength	Apparent Cohesion C	Angle of Shearing Resistance Phi		
WS05	1.20-1.40		T	701277	Brown slightly sandy CLAY.	29	55	22	33	0	CH	Mg/m³	Mg/m³	Mg/m³	kPa	kPa		BRE SD1 Suite	
Notes Opinions and interpretations are outside the scope of UKAS accreditation				UKAS Accredited Test Y/N						Test details are given on the 'Notes on Laboratory Procedures' sheet								See individual report sheets	
Originator		Approved		SUMMARY OF GEOTECHNICAL TESTS														 Figure 1 Sheet 1 of 1	
PM		<i>S. Langman</i> 03/10/2019																	

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES	Site	BEREWOOD	Contract No.	CS-J-0161
	Client		Hole ID	WS05
	Engineer		Sample Ref	
			Depth (m)	1.20-1.40
			Sample Type	T

Non Engineering Description : Brown slightly sandy CLAY.

Preparation : Sample as received



Results :

As Received Moisture Content : (BS1377:Part 2:Clause 3:1990)	29 %
Percentage retained on 425µm sieve :	0 %
Liquid Limit :	55 %
Plastic Limit :	22 %
Plasticity Index :	33
Equivalent moisture content of material passing 425µm sieve :	29 %
Liquidity Index :	0.21

Originator	Checked & Approved	Liquid Limit (One Point Cone Penetrometer Method) Plastic Limit, Plasticity Index & Liquidity Index BS 1377:Part 2:Clause 4.4:1990 BS 1377:Part 2:Clause 5:1990	 Figure 2 Sheet 1 of 1
IG	S. Langren 03/10/2019		

T & P Regeneration

Unit 4
Brunel Lock Development
Smeaton Road
Bristol
BS1 6SE
For the attention of Craig Pennell

Report No: B23229
Issue No 02

LABORATORY TEST REPORT

Project Name	BEREWOOD		
Project Number	B23229	Date samples received	15/08/2019
Your Ref	CS-J-0161	Date written instructions received	16/09/2019
Purchase Order		Date testing commenced	16/09/2019
Please find enclosed the results as summarised below			
Figure / Table	Test Quantity	Description	ISO 17025 Accredited
1	~	Summary of Geotechnical Tests	See Report
2 - 6	5	Atterberg Limit	Yes
7 - 8	2	California Bearing Ratio	Yes
Remarks :			
Issued by : Stephen Langman		Date of Issue : 14/10/2019	Key to symbols used in this report S/C : Testing was sub-contracted
Approved Signatories :  14/10/2019 G Wilson (JMD/Laboratories Director), S Langman (Laboratory Coordinator)			
Unless we are notified to the contrary, samples will be disposed after a period of one month from this date. The results reported relate to samples received in the laboratory only. All results contained in this report are provisional unless signed by an approved signatory This report should not be reproduced except in full without the written approval of the laboratory. Under multisite accreditation the testing contained in this report may have been performed at another Terra Tek laboratory. The enclosed results remain the property of Terra Tek Limited and we reserve the right to withdraw our report if we have not received cleared funds in accordance with our standard terms and conditions Only those results indicated in this report are UKAS accredited and any opinions or interpretations expressed are outside the scope of UKAS accreditation. Feedback on the this report may be left via our website www.terratek.co.uk/contact-us			



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Head Office : 62 Rochsolloch Road, Airdrie, ML6 9BG

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES				Site BEREWOOD											Contract No CS-J-0161								
				Client																			
				Engineer																			
Sample Identification				Lab Sample ID	Non Engineering Sample Description	Moisture Content	Atterberg limits					Particle Density	Density		Total Stress		Other Tests						
Exploratory Hole	Depth m	Sample Ref	Sample Type				Liquid Limit	Plastic Limit	Plasticity Index	Percentage retained 425µm	Atterberg Classification		Bulk	Dry	Shear Strength	Apparent Cohesion C		Angle of Shearing Resistance Phi					
BH01	1.00		D	400155	Brown weathered MUDSTONE.	15	41	21	20	0	CI						BRE SD1 Suite						
TP01	1.10-1.30		B	400173	Brown weathered MUDSTONE.	28		non plastic		2							BRE SD1 Suite						
TP03	0.55-0.85		B	400167	Brown weathered MUDSTONE.	19	35	17	18	0	CL						CBR,BRE SD1 Suite						
TP04	1.10-1.30		B	400169	Brown weathered MUDSTONE.	11											CBR						
WS01	1.00-1.20		T	400137	Brown weathered MUDSTONE.	20	55	25	30	0	CH						BRE SD1 Suite						
Notes				Opinions and interpretations are outside the scope of UKAS accreditation				UKAS Accredited Test Y/N										Test details are given on the 'Notes on Laboratory Procedures' sheet				See individual report sheets	
Originator		Approved		SUMMARY OF GEOTECHNICAL TESTS														Tk Figure 1 Sheet 1 of 2					
PM		S. Langman 14/10/2019																					

 TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES				Site BEREWOOD												Contract No CS-J-0161							
				Client																			
				Engineer																			
Sample Identification				Lab Sample ID	Non Engineering Sample Description	Moisture Content	Atterberg limits					Particle Density	Density		Total Stress			Other Tests					
Exploratory Hole	Depth m	Sample Ref	Sample Type				Liquid Limit	Plastic Limit	Plasticity Index	Percentage retained 425µm	Atterberg Classification		Bulk	Dry	Shear Strength	Apparent Cohesion C	Angle of Shearing Resistance Phi						
WS02	1.00-1.20		T	400139	Brown weathered MUDSTONE	17	48	18	30	0	CI	Mg/m³	Mg/m³	Mg/m³	kPa	kPa		BRE SD1 Suite					
Notes: Opinions and interpretations are outside the scope of UKAS accreditation				UKAS Accredited Test Y/N												Test details are given on the 'Notes on Laboratory Procedures' sheet				See individual report sheets			
Originator		Approved		SUMMARY OF GEOTECHNICAL TESTS														 Figure 1 Sheet 2 of 2					
PM		<i>S. Langman</i> 14/10/2019																					



Site BEREWOOD

Client

Engineer

Contract No. CS-J-0161

Hole ID BH01

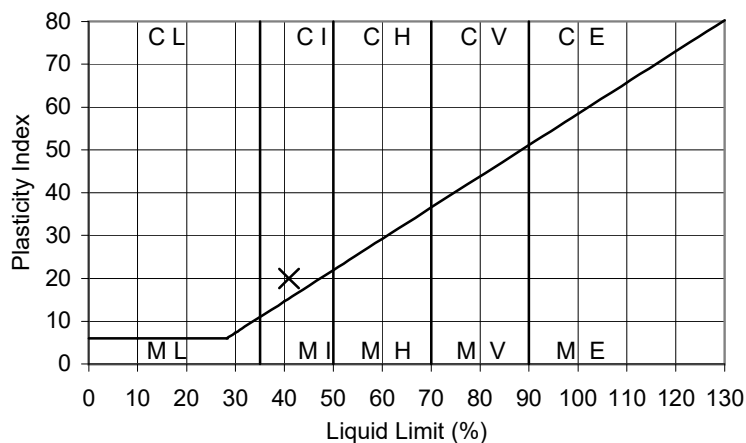
Sample Ref

Depth (m) 1.00

Sample Type D

Non Engineering Description : Brown weathered MUDSTONE.

Preparation : Sample as received



Results :

As Received Moisture Content : (BS1377:Part 2:Clause 3:1990)	15 %
Percentage retained on 425µm sieve :	0 %
Liquid Limit :	41 %
Plastic Limit :	21 %
Plasticity Index :	20
Equivalent moisture content of material passing 425µm sieve :	15 %
Liquidity Index :	-0.30

Originator

Checked & Approved

IG

S. Langren
14/10/2019

**Liquid Limit (One Point Cone Penetrometer Method)
Plastic Limit, Plasticity Index & Liquidity Index**

BS 1377:Part 2:Clause 4.4:1990

BS 1377:Part 2:Clause 5:1990



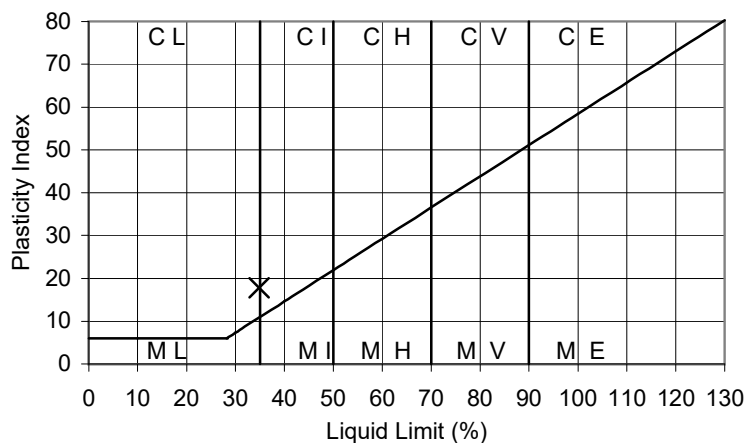
Figure 2

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES	Site	BEREWOOD	Contract No. CS-J-0161 Hole ID TP01 Sample Ref Depth (m) 1.10-1.30 Sample Type B						
	Client								
	Engineer								
Non Engineering Description : Brown weathered MUDSTONE. Preparation : Sample as received Sample was determined to be Non-Plastic after preparation Results : <table><tr><td>As Received Moisture Content : (BS1377:Part 2:Clause 3:1990)</td><td>28 %</td></tr><tr><td>Percentage retained on 425µm sieve :</td><td>2 %</td></tr><tr><td>Equivalent moisture content of material passing 425µm sieve :</td><td>29 %</td></tr></table>				As Received Moisture Content : (BS1377:Part 2:Clause 3:1990)	28 %	Percentage retained on 425µm sieve :	2 %	Equivalent moisture content of material passing 425µm sieve :	29 %
As Received Moisture Content : (BS1377:Part 2:Clause 3:1990)	28 %								
Percentage retained on 425µm sieve :	2 %								
Equivalent moisture content of material passing 425µm sieve :	29 %								
Originator	Checked & Approved	Plastic Limit BS 1377:Part 2:Clause 5:1990  Figure 3							
IG	<i>S. Langan</i> 14/10/2019								

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES	Site	BEREWOOD	Contract No.	CS-J-0161
	Client		Hole ID	TP03
	Engineer		Sample Ref	
			Depth (m)	0.55-0.85
			Sample Type	B

Non Engineering Description : Brown weathered MUDSTONE.

Preparation : Sample as received



Results :

As Received Moisture Content : (BS1377:Part 2:Clause 3:1990)	19 %
Percentage retained on 425µm sieve :	0 %
Liquid Limit :	35 %
Plastic Limit :	17 %
Plasticity Index :	18
Equivalent moisture content of material passing 425µm sieve :	19 %
Liquidity Index :	0.11

Originator	Checked & Approved	Liquid Limit (One Point Cone Penetrometer Method) Plastic Limit, Plasticity Index & Liquidity Index BS 1377:Part 2:Clause 4.4:1990 BS 1377:Part 2:Clause 5:1990	 Figure 4 Sheet 1 of 1
SB	<i>S. Langren</i> 14/10/2019		



Site BEREWOOD

Client

Engineer

Contract No. CS-J-0161

Hole ID WS01

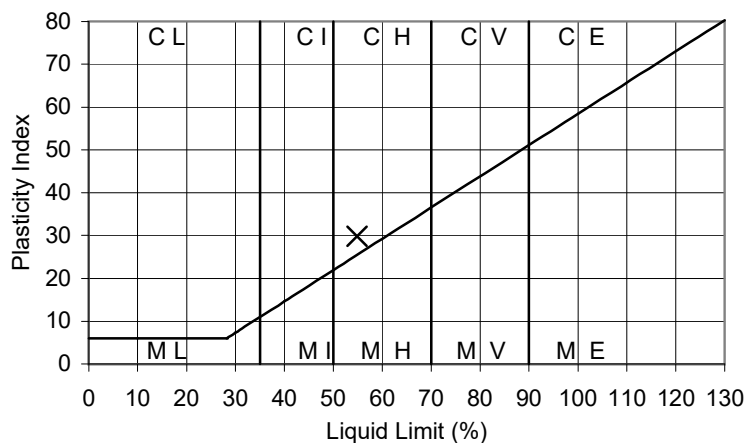
Sample Ref

Depth (m) 1.00-1.20

Sample Type T

Non Engineering Description : Brown weathered MUDSTONE.

Preparation : Sample as received



Results :

As Received Moisture Content : (BS1377:Part 2:Clause 3:1990)	20 %
Percentage retained on 425µm sieve :	0 %
Liquid Limit :	55 %
Plastic Limit :	25 %
Plasticity Index :	30
Equivalent moisture content of material passing 425µm sieve :	20 %
Liquidity Index :	-0.17

Originator

Checked & Approved

IG

S. Langren
14/10/2019

**Liquid Limit (One Point Cone Penetrometer Method)
Plastic Limit, Plasticity Index & Liquidity Index**

BS 1377:Part 2:Clause 4.4:1990

BS 1377:Part 2:Clause 5:1990



Figure 5



Site BEREWOOD

Client

Engineer

Contract No. CS-J-0161

Hole ID WS02

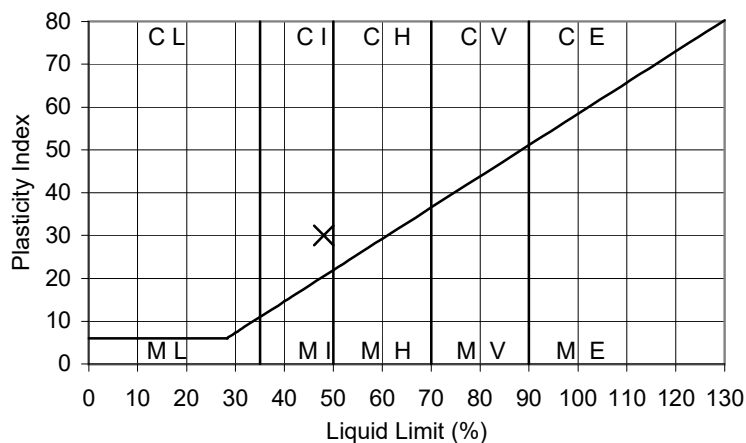
Sample Ref

Depth (m) 1.00-1.20

Sample Type T

Non Engineering Description : Brown weathered MUDSTONE

Preparation : Sample as received



Results :

As Received Moisture Content : (BS1377:Part 2:Clause 3:1990)	17 %
Percentage retained on 425µm sieve :	0 %
Liquid Limit :	48 %
Plastic Limit :	18 %
Plasticity Index :	30
Equivalent moisture content of material passing 425µm sieve :	17 %
Liquidity Index :	-0.03

Originator

Checked & Approved

JH

S. Langren
14/10/2019

**Liquid Limit (One Point Cone Penetrometer Method)
Plastic Limit, Plasticity Index & Liquidity Index**

BS 1377:Part 2:Clause 4.4:1990

BS 1377:Part 2:Clause 5:1990



Figure 6

Non Engineering Description: Brown weathered MUDSTONE.

Preparation Details:

Specimen was prepared at natural moisture content

Compaction using 2.5kg compactive effort

Specimen Bulk Density 2.09 Mg/m³

Specimen Dry Density 1.78 Mg/m³

Mass of sample > 20 mm 1.3 %

Specimen Soaked

Test Details:

Surcharge: 4.5 kg

Seating Load: 10 N

Moisture Content: 17 %

Base

4.5 kg

10 N

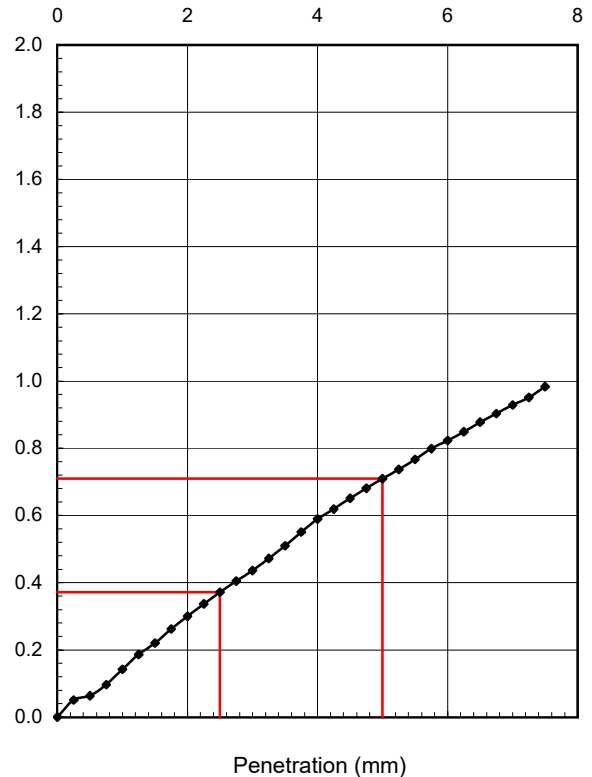
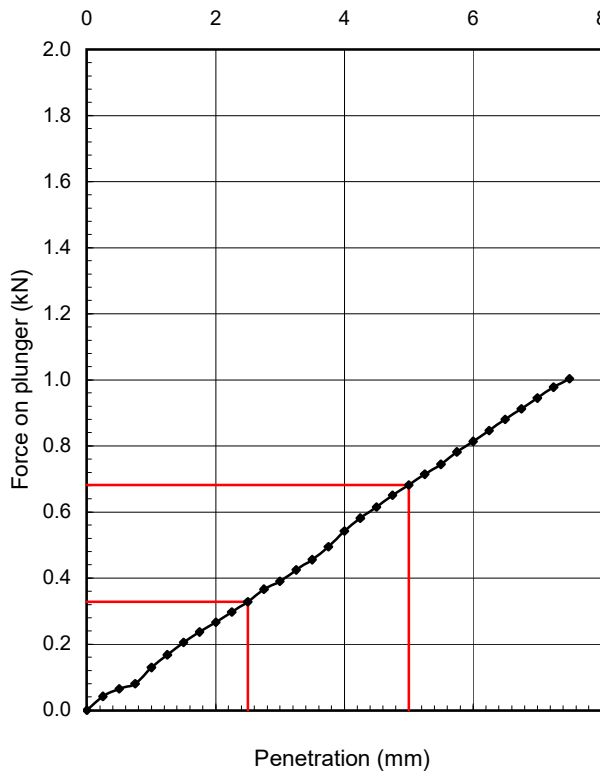
17 %

CBR Value: 3.4 %

3.5 %

Top of Specimen
Penetration (mm)

Base of Specimen
Penetration (mm)



Originator

Checked &
Approved

ME

S. Langren
14/10/2019

CALIFORNIA BEARING RATIO

BS1377 : Part 4 : Clause 7 : 1990

Tk

Figure 7

Sheet 1 of 1

Non Engineering Description: Brown weathered MUDSTONE.

Preparation Details:

Specimen was prepared at natural moisture content

Compaction using 2.5kg compactive effort

Specimen Bulk Density 1.88 Mg/m³

Specimen Dry Density 1.46 Mg/m³

Mass of sample > 20 mm 0.0 %

Specimen Soaked

Test Details:

Top
Surcharge: 4.5 kg
Seating Load: 10 N
Moisture Content: 28 %

Base

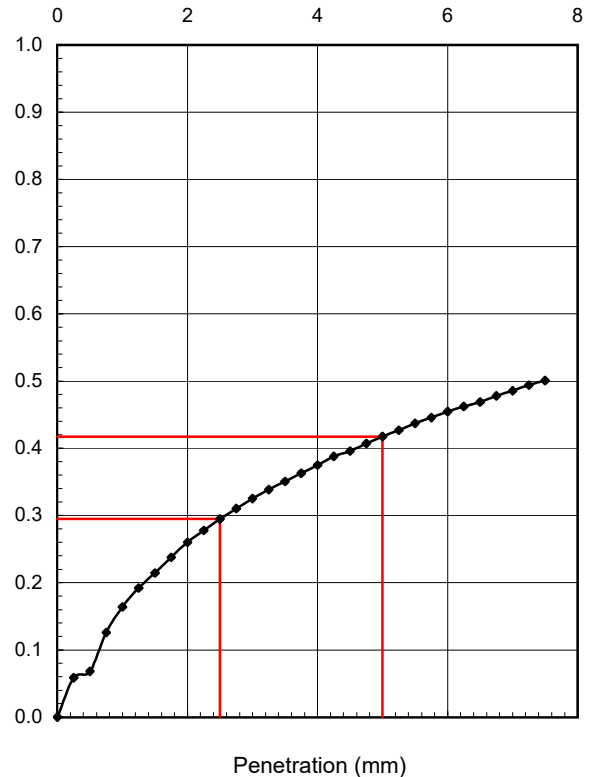
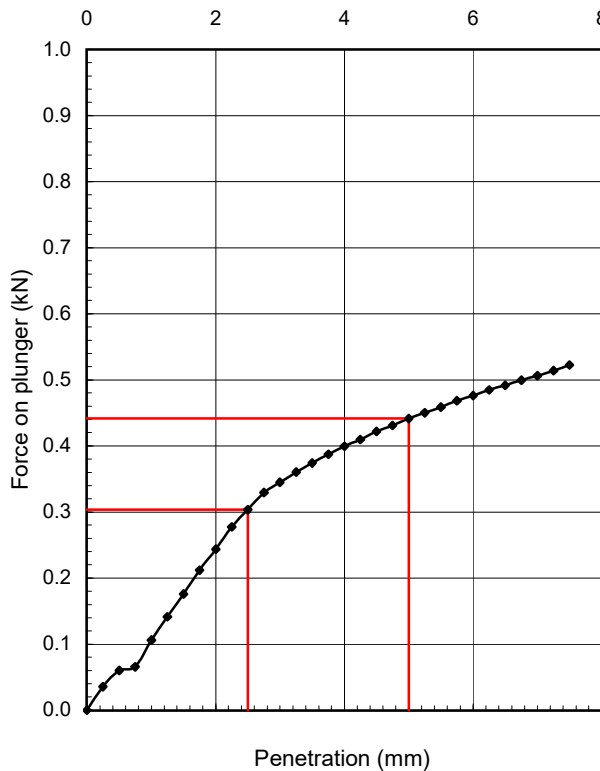
4.5 kg
10 N
30 %

CBR Value: 2.3 %

2.2 %

Top of Specimen
Penetration (mm)

Base of Specimen
Penetration (mm)

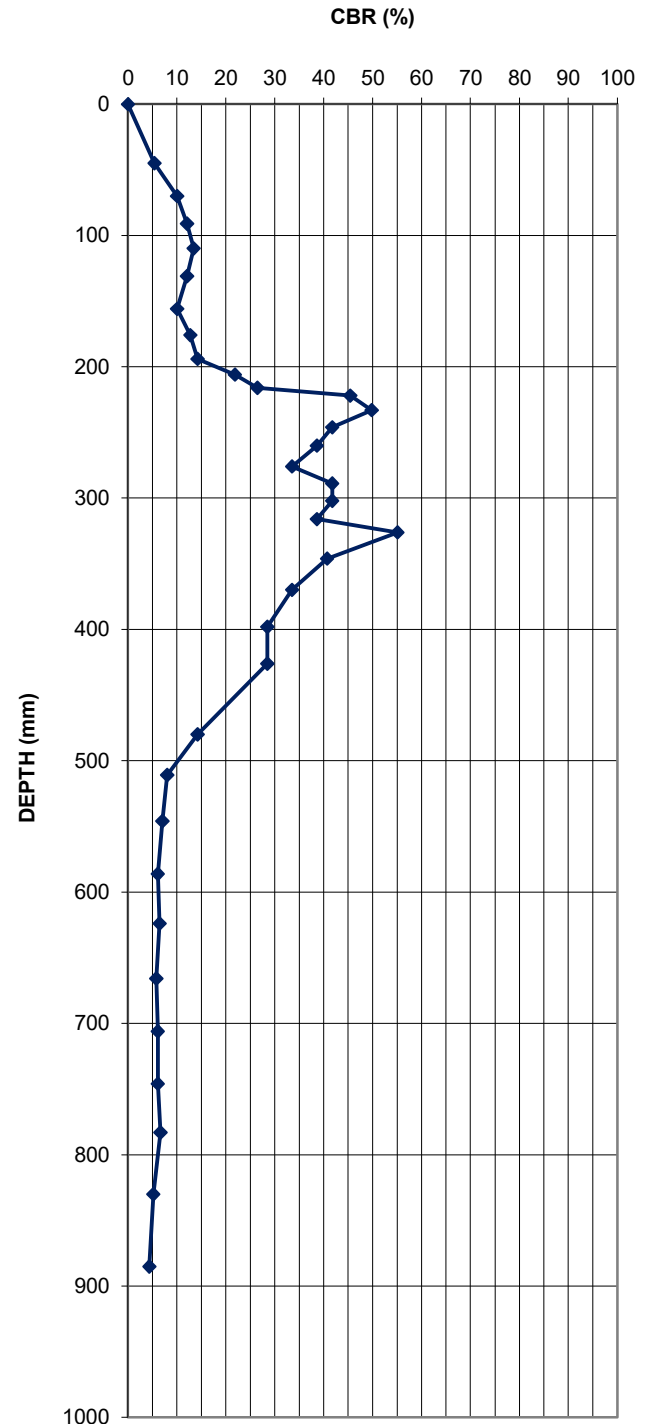


Dynamic Cone Penetrometer & CBR Relationship from IAN 73/06 (2009)

Project Name:	Berewood - Town Park Phase 2					Project ID:	CS-J-0161
Client:	WYG						
Hole ID:	TRL02	Date:	20-08-2019	Logged:	CP	Checked:	JD

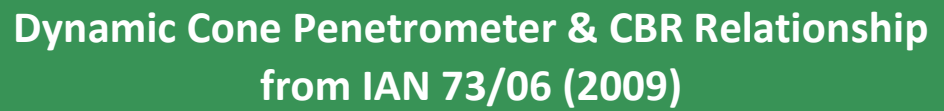
Initial scale reading (mm):	64	Datum - below ground level (bgl) (mm):	
-----------------------------	----	--	--

no. of Blows	scale reading (mm)	penet. - bgl (mm)	DCP (mm/blow)	CBR (%)
1	64	0	0	0.0
1	109	45	45	5.4
1	134	70	25	10.1
1	155	91	21	12.1
1	174	110	19	13.4
1	195	131	21	12.1
1	220	156	25	10.1
1	240	176	20	12.7
1	258	194	18	14.2
1	270	206	12	21.8
1	280	216	10	26.5
1	286	222	6	45.4
2	297	233	6	49.8
2	310	246	7	41.8
2	324	260	7	38.6
2	340	276	8	33.5
2	353	289	7	41.8
2	366	302	7	41.8
2	380	316	7	38.6
2	390	326	5	55.1
3	410	346	7	40.7
3	434	370	8	33.5
3	462	398	9	28.5
3	490	426	9	28.5
3	544	480	18	14.2
1	575	511	31	8.0
1	610	546	35	7.0
1	650	586	40	6.1
1	688	624	38	6.5
1	730	666	42	5.8
1	770	706	40	6.1
1	810	746	40	6.1
1	847	783	37	6.6
1	894	830	47	5.2
1	949	885	55	4.4



Remarks:

CBR correlation based on IAN 73/06: $\text{Log}_{10}(\text{CBR}) = 2.48 - 1.057 \times \text{Log}_{10}(\text{mm/blow})$



Initial scale reading (mm):	131	Datum - below ground level (bgl) (mm):	
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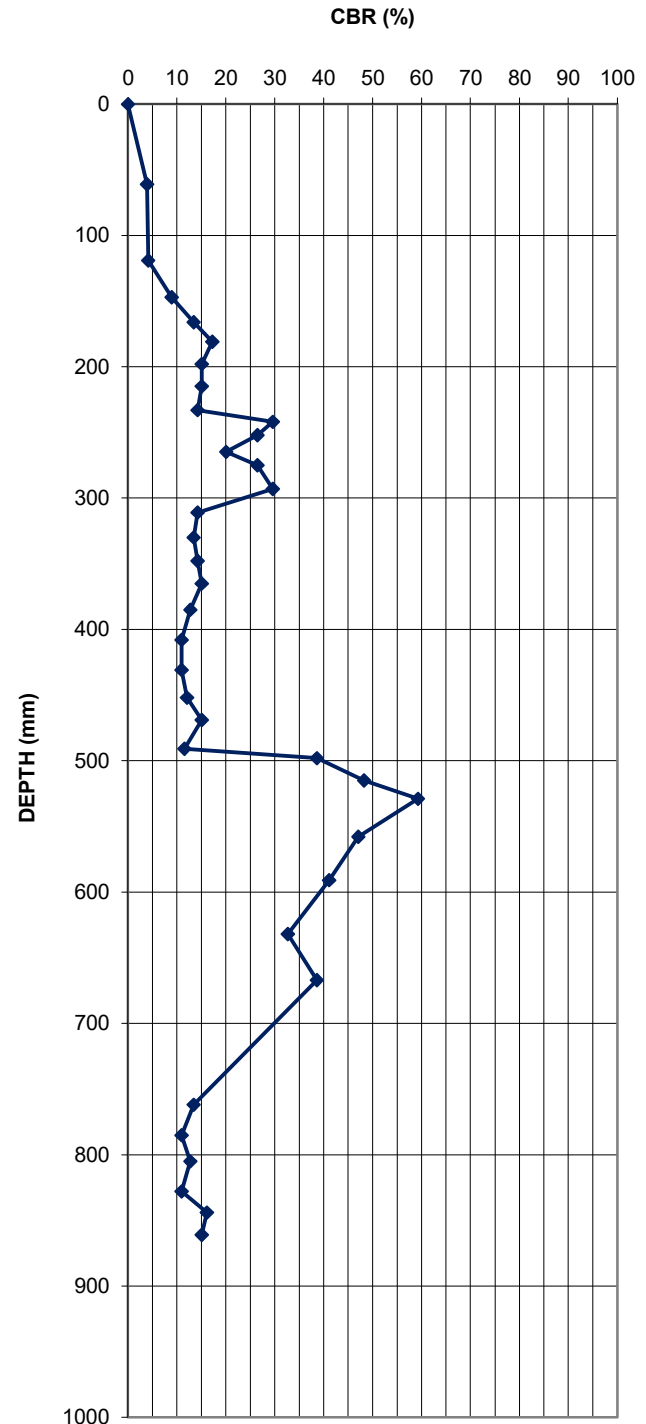
CBR correlation based on IAN 73/06: $\text{Log}_{10}(\text{CBR}) = 2.48 - 1.057 \times \text{Log}_{10}(\text{mm/blow})$

Dynamic Cone Penetrometer & CBR Relationship from IAN 73/06 (2009)

Project Name:	Berewood - Town Park Phase 2					Project ID:	CS-J-0161
Client:	WYG						
Hole ID:	TRL05	Date:	20-08-2019	Logged:	CP	Checked:	JD

Initial scale reading (mm):	75	Datum - below ground level (bgl) (mm):	
-----------------------------	----	--	--

no. of Blows	scale reading (mm)	penet. - bgl (mm)	DCP (mm/blow)	CBR (%)
1	75	0	0	0.0
1	136	61	61	3.9
1	194	119	58	4.1
1	222	147	28	8.9
1	241	166	19	13.4
1	256	181	15	17.3
1	273	198	17	15.1
1	290	215	17	15.1
1	308	233	18	14.2
1	317	242	9	29.6
1	327	252	10	26.5
1	340	265	13	20.1
1	350	275	10	26.5
2	368	293	9	29.6
1	386	311	18	14.2
1	405	330	19	13.4
1	423	348	18	14.2
1	440	365	17	15.1
1	460	385	20	12.7
1	483	408	23	11.0
1	506	431	23	11.0
1	527	452	21	12.1
1	544	469	17	15.1
1	566	491	22	11.5
1	573	498	7	38.6
3	590	515	6	48.3
3	604	529	5	59.3
5	633	558	6	47.1
5	666	591	7	41.1
5	707	632	8	32.7
5	742	667	7	38.6
5	837	762	19	13.4
1	860	785	23	11.0
1	880	805	20	12.7
1	903	828	23	11.0
1	919	844	16	16.1
1	936	861	17	15.1



Remarks:

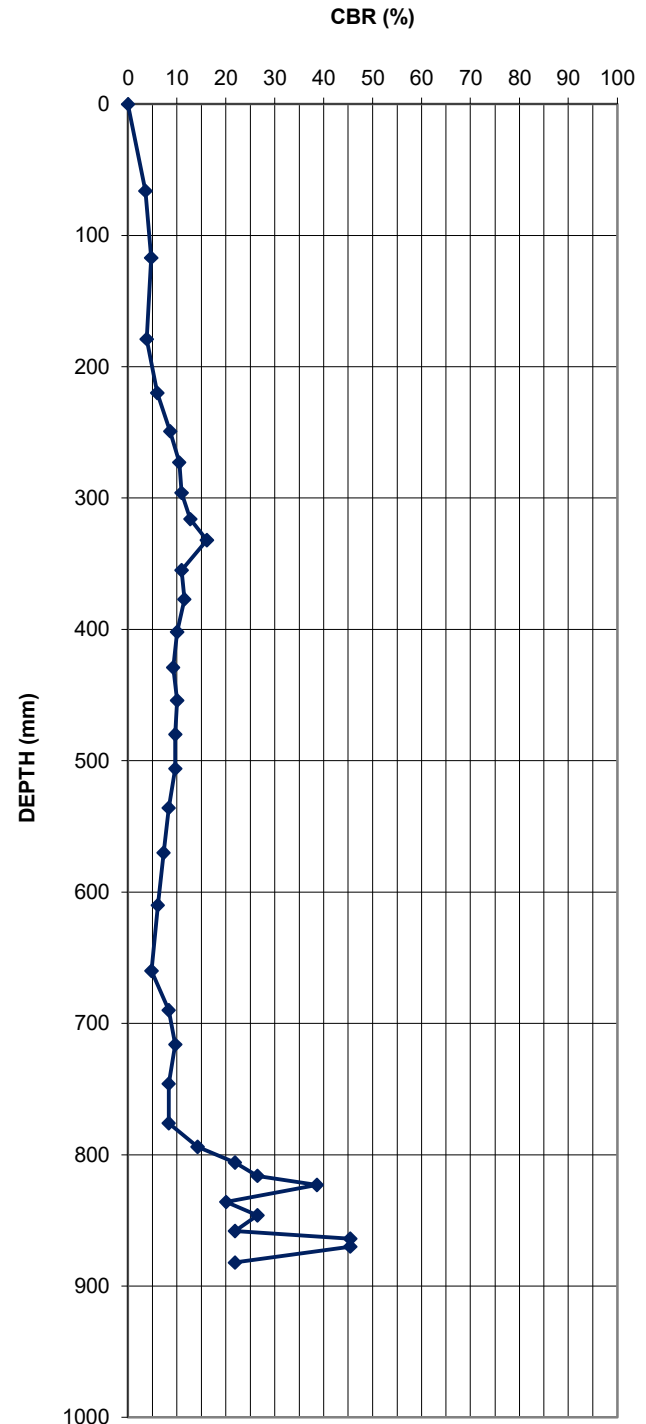
CBR correlation based on IAN 73/06: $\text{Log}_{10}(\text{CBR}) = 2.48 - 1.057 \times \text{Log}_{10}(\text{mm/blow})$

Dynamic Cone Penetrometer & CBR Relationship from IAN 73/06 (2009)

Project Name:	Berewood - Town Park Phase 2					Project ID:	CS-J-0161
Client:	WYG						
Hole ID:	TRL06	Date:	20-08-2019	Logged:	CP	Checked:	JD

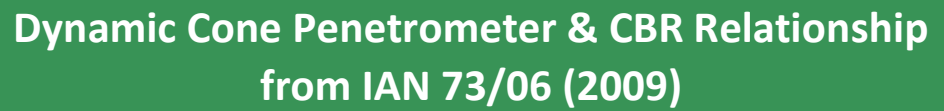
Initial scale reading (mm):	54	Datum - below ground level (bgl) (mm):	
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no. of Blows	scale reading (mm)	penet. - bgl (mm)	DCP (mm/blow)	CBR (%)
1	54	0	0	0.0
1	120	66	66	3.6
1	171	117	51	4.7
1	233	179	62	3.8
1	274	220	41	6.0
1	303	249	29	8.6
1	327	273	24	10.5
1	350	296	23	11.0
1	370	316	20	12.7
1	386	332	16	16.1
1	409	355	23	11.0
1	431	377	22	11.5
1	456	402	25	10.1
1	483	429	27	9.3
1	508	454	25	10.1
1	534	480	26	9.6
1	560	506	26	9.6
1	590	536	30	8.3
1	624	570	34	7.3
1	664	610	40	6.1
1	714	660	50	4.8
1	744	690	30	8.3
1	770	716	26	9.6
1	800	746	30	8.3
1	830	776	30	8.3
1	848	794	18	14.2
1	860	806	12	21.8
1	870	816	10	26.5
1	877	823	7	38.6
1	890	836	13	20.1
1	900	846	10	26.5
1	912	858	12	21.8
1	918	864	6	45.4
1	924	870	6	45.4
1	936	882	12	21.8



Remarks:

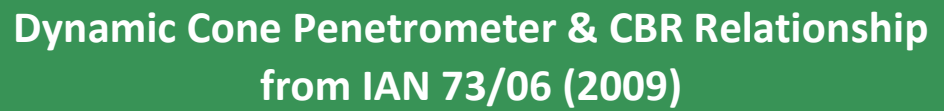
CBR correlation based on IAN 73/06: $\text{Log}_{10}(\text{CBR}) = 2.48 - 1.057 \times \text{Log}_{10}(\text{mm/blow})$



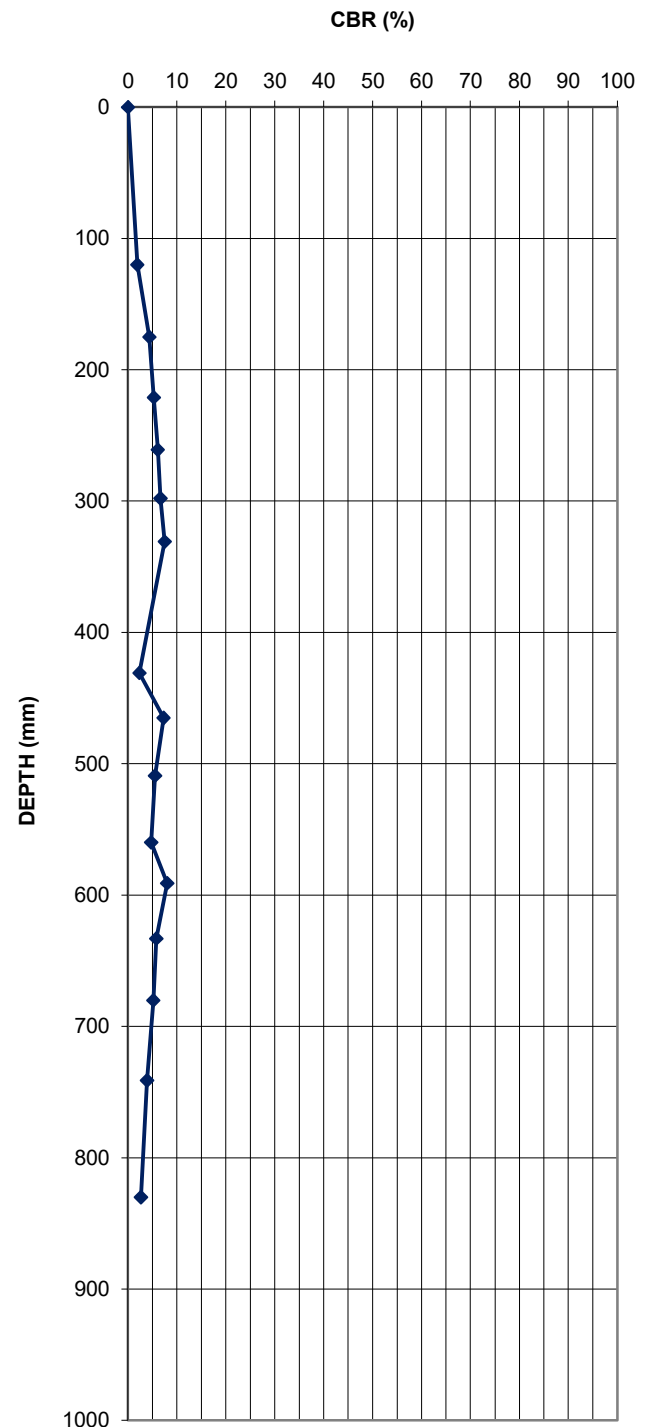
Initial scale reading (mm):	107	Datum - below ground level (bgl) (mm):	
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Depth (mm)	CBR (%)
0	0
10	1
20	2
30	3
40	4
50	5
60	6
70	7
80	8
90	9
100	10
110	11
120	12
130	13
140	14
150	15
160	16
170	17
180	18
190	19
200	20
210	21
220	22
230	23
240	24
250	25
260	26
270	27
280	28
290	29
300	30
310	31
320	32
330	33
340	34
350	35
360	36
370	37
380	38
390	39
400	40
410	41
420	42
430	45
440	44
450	43
460	42
470	41
480	40
490	39
500	38
510	37
520	36
530	35
540	34
550	33
560	32
570	31
580	30
590	29
600	28
610	27
620	26
630	25
640	24
650	23
660	22
670	21
680	20
690	19
700	18
710	17
720	16
730	15
740	14
750	13
760	12
770	11
780	10
790	9
800	8
810	7
820	6
830	5
840	4
850	3
860	2
870	1
880	0
890	0
900	0
910	0
920	0
930	0
940	0
950	0
960	0
970	0
980	0
990	0
1000	0

CBR correlation based on IAN 73/06: $\text{Log}_{10}(\text{CBR}) = 2.48 - 1.057 \times \text{Log}_{10}(\text{mm/blow})$



Initial scale reading (mm):	111	Datum - below ground level (bgl) (mm):	
-----------------------------	-----	--	--



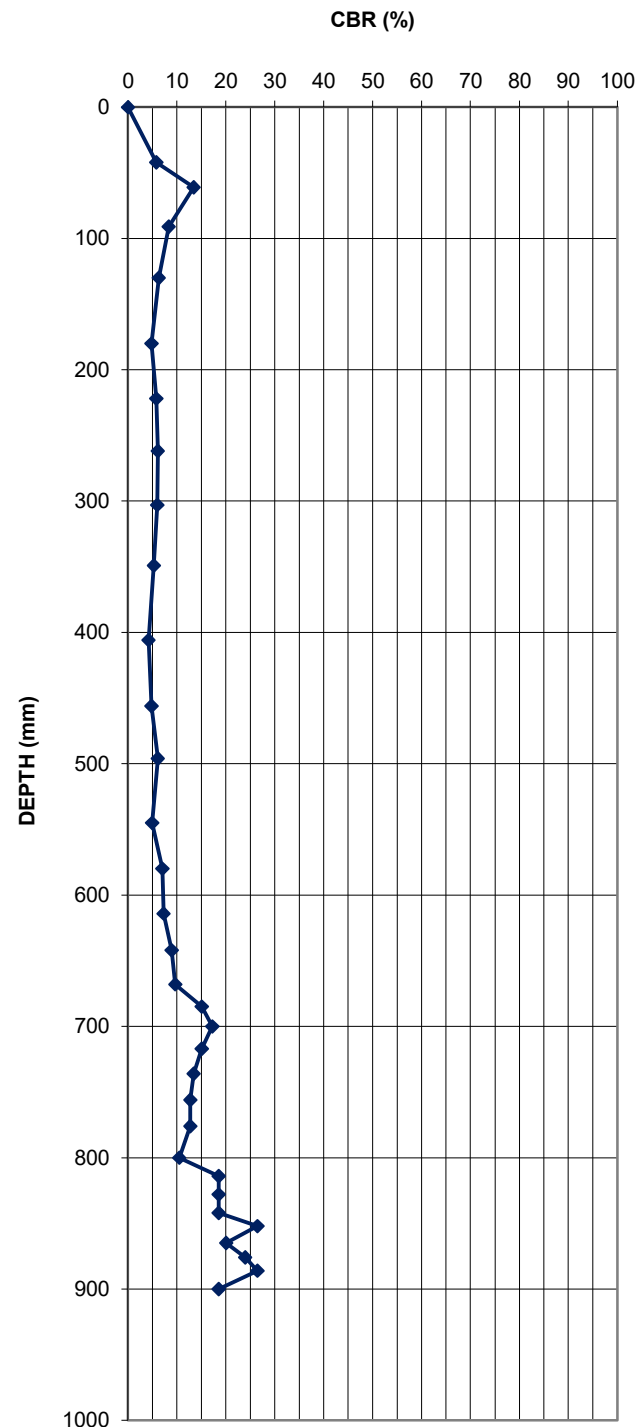
CBR correlation based on IAN 73/06: $\text{Log}_{10}(\text{CBR}) = 2.48 - 1.057 \times \text{Log}_{10}(\text{mm/blow})$

Dynamic Cone Penetrometer & CBR Relationship from IAN 73/06 (2009)

Project Name:	Berewood - Town Park Phase 2					Project ID:	CS-J-0161
Client:	WYG						
Hole ID:	TRL09	Date:	20-08-2019	Logged:	CP	Checked:	JD

Initial scale reading (mm):	44	Datum - below ground level (bgl) (mm):	
-----------------------------	----	--	--

no. of Blows	scale reading (mm)	penet. - bgl (mm)	DCP (mm/blow)	CBR (%)
1	44	0	0	0.0
1	86	42	42	5.8
1	105	61	19	13.4
1	135	91	30	8.3
1	174	130	39	6.3
1	224	180	50	4.8
1	266	222	42	5.8
1	306	262	40	6.1
1	347	303	41	6.0
1	393	349	46	5.3
1	450	406	57	4.2
1	500	456	50	4.8
1	540	496	40	6.1
1	589	545	49	4.9
1	624	580	35	7.0
1	658	614	34	7.3
1	686	642	28	8.9
1	712	668	26	9.6
1	729	685	17	15.1
1	744	700	15	17.3
1	761	717	17	15.1
1	780	736	19	13.4
1	800	756	20	12.7
1	820	776	20	12.7
1	844	800	24	10.5
1	858	814	14	18.6
1	872	828	14	18.6
1	886	842	14	18.6
1	896	852	10	26.5
1	909	865	13	20.1
1	920	876	11	23.9
1	930	886	10	26.5
1	944	900	14	18.6



Remarks:

CBR correlation based on IAN 73/06: $\text{Log}_{10}(\text{CBR}) = 2.48 - 1.057 \times \text{Log}_{10}(\text{mm/blow})$

Appendix E – Chemical Results



2683



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THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 19-24380

Issue: 1

Date of Issue: 16/08/2019

Contact: Craig Pennell

Customer Details: T & P Regeneration Ltd (Smeaton Road)
Unit 4
Brunel Lock Development
Bristol
BS1 6SE

Quotation No: Q15-00390

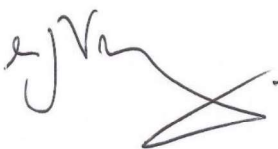
Order No: 5934

Customer Reference: CS-J-0161

Date Received: 09/08/2019

Date Approved: 16/08/2019

Details: Berewood - Town Park Phase B

Approved by: 

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)

This report may only be reproduced in full

Sample Summary

Report No.: 19-24380, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
181278	TP01 1 0.00 - 0.20	06/08/2019	13/08/2019		
181279	TP01 2 0.30 - 0.60	06/08/2019	13/08/2019		
181280	TP02 1 0.00 - 0.30	06/08/2019	13/08/2019		
181281	TP02 2 0.30 - 0.60	06/08/2019	13/08/2019		
181282	TP03 1 0.00 - 0.45	06/08/2019	13/08/2019	Silty loam	
181283	TP03 4 0.55 - 0.85	06/08/2019	13/08/2019		
181284	TP04 1 0.20 - 0.40	06/08/2019	13/08/2019		
181285	TP04 2 0.70 - 1.10	06/08/2019	13/08/2019	Silty loam	
181286	TP04 5 1.10 - 1.30	06/08/2019	13/08/2019		
181287	WS01 1 0.00 - 0.20	06/08/2019	13/08/2019		
181288	WS01 2 0.20 - 0.60	06/08/2019	13/08/2019		
181289	WS02 1 0.00 - 0.20	06/08/2019	13/08/2019		
181290	WS02 2 0.30 - 0.60	06/08/2019	13/08/2019		
181291	WS03 1 0.00 - 0.20	06/08/2019	13/08/2019	Silty loam	
181292	WS03 2 0.30 - 0.60	06/08/2019	13/08/2019	Silty clayey loam	
181293	BH01 0.00 - 0.30	06/08/2019	13/08/2019		
181294	BH01 0.30 - 0.60	06/08/2019	13/08/2019		

Results Summary

2683

Report No.: 19-24380, issue number 1

ELAB Reference	181282	181285	181291	181292
Customer Reference	1	2	1	2
Sample ID				
Sample Type	SOIL	SOIL	SOIL	SOIL
Sample Location	TP03	TP04	WS03	WS03
Sample Depth (m)	0.00 - 0.45	0.70 - 1.10	0.00 - 0.20	0.30 - 0.60
Sampling Date	06/08/2019	06/08/2019	06/08/2019	06/08/2019

Determinand	Codes	Units	LOD				
Soil sample preparation parameters							
Material removed	N	%	0.1	n/t	9.2	< 0.1	< 0.1
Description of Inert material removed	N		0	n/t	Stones	None	None
Metals							
Arsenic	M	mg/kg	1	n/t	12.3	5.9	12.3
Cadmium	M	mg/kg	0.5	n/t	< 0.5	< 0.5	< 0.5
Chromium	M	mg/kg	5	n/t	39.5	27.2	49.9
Copper	M	mg/kg	5	n/t	9.9	8.6	8.5
Lead	M	mg/kg	5	n/t	24.6	28.1	13.8
Mercury	M	mg/kg	0.5	n/t	< 0.5	< 0.5	< 0.5
Nickel	M	mg/kg	5	n/t	11.3	9.6	17.9
Selenium	M	mg/kg	1	n/t	< 1.0	< 1.0	< 1.0
Zinc	M	mg/kg	5	n/t	64.7	59.5	52.7
Anions							
Water Soluble Sulphate	M	g/l	0.02	n/t	0.04	0.03	0.04
Inorganics							
Hexavalent Chromium	N	mg/kg	0.8	n/t	< 0.8	< 0.8	< 0.8
Water Soluble Boron	N	mg/kg	0.5	n/t	0.7	0.6	< 0.5
Miscellaneous							
pH	M	pH units	0.1	n/t	7.5	6.7	7.8
Total Organic Carbon	N	%	0.01	n/t	0.20	1.8	< 0.01
Phenols							
Phenol	M	mg/kg	1	n/t	< 1	< 1	< 1
M,P-Cresol	N	mg/kg	1	n/t	< 1	< 1	< 1
O-Cresol	N	mg/kg	1	n/t	< 1	< 1	< 1
3,4-Dimethylphenol	N	mg/kg	1	n/t	< 1	< 1	< 1
2,3-Dimethylphenol	M	mg/kg	1	n/t	< 1	< 1	< 1
2,3,5-trimethylphenol	M	mg/kg	1	n/t	< 1	< 1	< 1
Total Monohydric Phenols	N	mg/kg	5	n/t	< 5	< 5	< 5

Results Summary

Report No.: 19-24380, issue number 1

ELAB Reference				181282	181285	181291	181292
Customer Reference				1	2	1	2
Sample ID							
Sample Type				SOIL	SOIL	SOIL	SOIL
Sample Location				TP03	TP04	WS03	WS03
Sample Depth (m)				0.00 - 0.45	0.70 - 1.10	0.00 - 0.20	0.30 - 0.60
Sampling Date				06/08/2019	06/08/2019	06/08/2019	06/08/2019
Determinand	Codes	Units	LOD				
Polyaromatic hydrocarbons							
Naphthalene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1
Anthracene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1
Pyrene	M	mg/kg	0.1	n/t	< 0.1	0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1
Chrysene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	n/t	< 0.1	0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	n/t	< 0.1	0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	n/t	< 0.1	< 0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	n/t	0.4	0.8	< 0.4
TPH CWG							
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01	n/t	n/t
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01	n/t	n/t
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	n/t	n/t
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	n/t	n/t
>C12-C16 Aliphatic	N	mg/kg	1	1.3	< 1.0	n/t	n/t
>C16-C21 Aliphatic	N	mg/kg	1	9.4	< 1.0	n/t	n/t
>C21-C35 Aliphatic	N	mg/kg	1	133	< 1.0	n/t	n/t
>C35-C40 Aliphatic	N	mg/kg	1	42.6	< 1.0	n/t	n/t
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01	n/t	n/t
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01	n/t	n/t
>C8-C10 Aromatic	N	mg/kg	1	< 1.0	< 1.0	n/t	n/t
>C10-C12 Aromatic	N	mg/kg	1	< 1.0	< 1.0	n/t	n/t
>C12-C16 Aromatic	N	mg/kg	1	< 1.0	< 1.0	n/t	n/t
>C16-C21 Aromatic	N	mg/kg	1	10.3	< 1.0	n/t	n/t
>C21-C35 Aromatic	N	mg/kg	1	229	< 1.0	n/t	n/t
>C35-C40 Aromatic	N	mg/kg	1	66.6	< 1.0	n/t	n/t
Total (>C5-C40) Ali/Aro	N	mg/kg	1	492	< 1.0	n/t	n/t



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Results Summary

Report No.: 19-24380, issue number 1

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #)
in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric Analysis Total (%)	Gravimetric Analysis by ACM Type (%)	Free Fibre Analysis (%)	Total Asbestos (%)
181282	0.00 - 0.45	TP03 1	Brown sandy soil, stones, concrete, brick,	Amosite (fibre bundles)	n/t	n/t	n/t	n/t
181285	0.70 - 1.10	TP04 2	Brown sandy soil, stones, brick	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 19-24380, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Hexavalent chromium	N	As submitted sample	14/08/2019	110	Colorimetry
pH	M	Air dried sample	16/08/2019	113	Electromeric
Aqua regia extractable metals	M	Air dried sample	14/08/2019	118	ICPMS
Phenols in solids	M	As submitted sample	14/08/2019	121	HPLC
PAH (GC-FID)	M	As submitted sample	14/08/2019	133	GC-FID
Water soluble anions	M	Air dried sample	14/08/2019	172	Ion Chromatography
Low range Aliphatic hydrocarbons soil	N	As submitted sample	15/08/2019	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	15/08/2019	181	GC-MS
Water soluble boron	N	Air dried sample	14/08/2019	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	16/08/2019	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	14/08/2019	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	16/08/2019	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	14/08/2019	214	GC-FID
Asbestos identification	U	Air dried sample	14/08/2019	PMAN	Microscopy

Tests marked N are not UKAS accredited

Report Information

Report No.: 19-24380, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"

Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.

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The results relate only to the sample received.

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Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage



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THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 19-24597

Issue: 1

Date of Issue: 04/09/2019

Contact: Craig Pennell

Customer Details: T & P Regeneration Ltd (Smeaton Road)
Unit 4
Brunel Lock Development
Bristol
BS1 6SE

Quotation No: Q15-00390

Order No: 5934-CS-J-0161

Customer Reference: CS-J-0161

Date Received: 22/08/2019

Date Approved: 04/09/2019

Details: Berewood - Town Park Phase B

Approved by: 

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)

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Sample Summary

Report No.: 19-24597, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
182402	WS04 1 0.00 - 0.30	20/08/2019	28/08/2019	Silty loam	
182403	WS04 2 0.30 - 0.60	20/08/2019	28/08/2019		
182404	WS05 1 0.10 - 0.30	20/08/2019	28/08/2019		
182405	WS05 2 0.50 - 0.70	20/08/2019	28/08/2019		
182406	WS06 1 0.10 - 0.40	20/08/2019	28/08/2019		
182407	WS06 2 0.40 - 0.60	20/08/2019	28/08/2019		
182408	WS07 1 0.00 - 0.20	20/08/2019	28/08/2019	Silty clayey loam	
182409	WS07 2 0.30 - 0.60	20/08/2019	28/08/2019		

Results Summary

Report No.: 19-24597, issue number 1

ELAB Reference	182402	182408
Customer Reference	1	1
Sample ID		
Sample Type	SOIL	SOIL
Sample Location	WS04	WS07
Sample Depth (m)	0.00 - 0.30	0.00 - 0.20
Sampling Date	20/08/2019	20/08/2019

Determinand	Codes	Units	LOD		
Soil sample preparation parameters					
Material removed	N	%	0.1	< 0.1	11.7
Description of Inert material removed	N		0	None	Stones
Metals					
Arsenic	M	mg/kg	1	11.2	15.2
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5
Chromium	M	mg/kg	5	40.5	45.4
Copper	M	mg/kg	5	14.9	27.9
Lead	M	mg/kg	5	26.9	35.8
Mercury	M	mg/kg	0.5	< 0.5	< 0.5
Nickel	M	mg/kg	5	13.5	35.7
Selenium	M	mg/kg	1	< 1.0	< 1.0
Zinc	M	mg/kg	5	51.5	127
Anions					
Water Soluble Sulphate	M	g/l	0.02	0.04	0.04
Inorganics					
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8
Water Soluble Boron	N	mg/kg	0.5	< 0.5	1.2
Miscellaneous					
pH	M	pH units	0.1	8.1	7.6
Total Organic Carbon	N	%	0.01	1.4	2.5
Phenols					
Phenol	M	mg/kg	1	< 1	< 1
M,P-Cresol	N	mg/kg	1	< 1	< 1
O-Cresol	N	mg/kg	1	< 1	< 1
3,4-Dimethylphenol	N	mg/kg	1	< 1	< 1
2,3-Dimethylphenol	M	mg/kg	1	< 1	< 1
2,3,5-trimethylphenol	M	mg/kg	1	< 1	< 1
Total Monohydric Phenols	N	mg/kg	5	< 5	< 5
Polyaromatic hydrocarbons					
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	M	mg/kg	0.1	< 0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4	< 0.4

Method Summary

Report No.: 19-24597, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Hexavalent chromium	N	As submitted sample	29/08/2019	110	Colorimetry
pH	M	Air dried sample	04/09/2019	113	Electromeric
Aqua regia extractable metals	M	Air dried sample	29/08/2019	118	ICPMS
Phenols in solids	M	As submitted sample	29/08/2019	121	HPLC
PAH (GC-FID)	M	As submitted sample	29/08/2019	133	GC-FID
Water soluble anions	M	Air dried sample	29/08/2019	172	Ion Chromatography
Water soluble boron	N	Air dried sample	29/08/2019	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	30/08/2019	210	IR

Tests marked N are not UKAS accredited

Report Information

Report No.: 19-24597, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"

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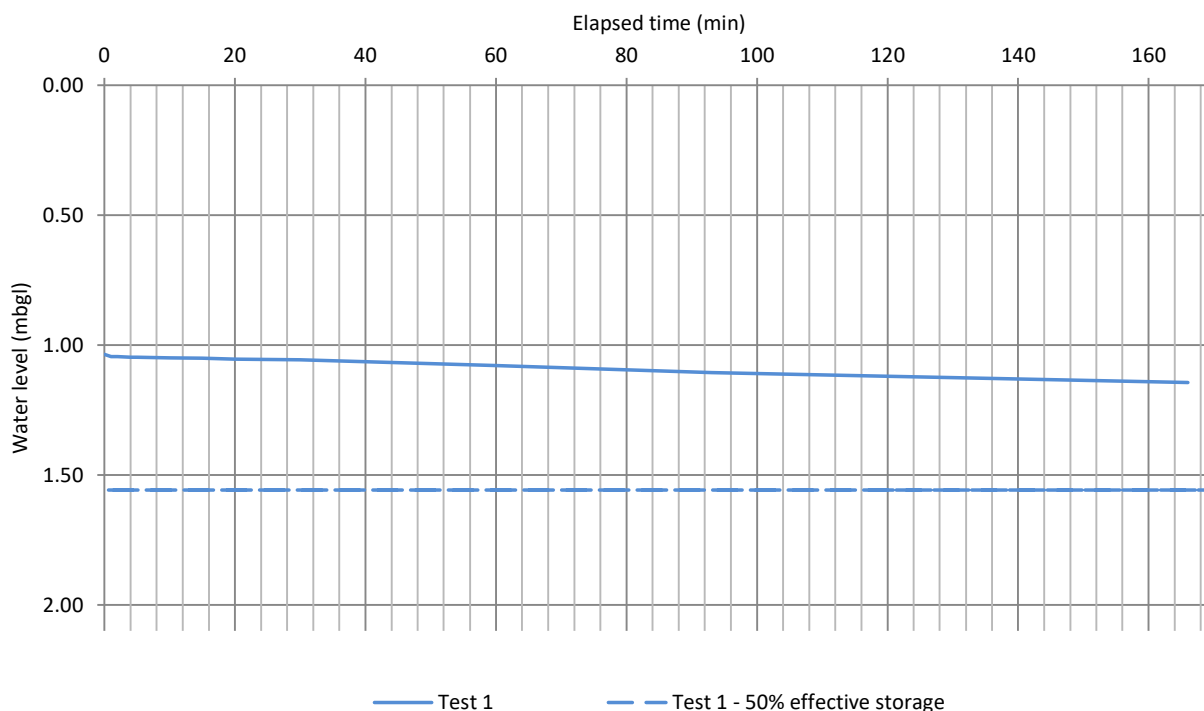
Charges may apply to extended sample storage

Appendix F – Infiltration Results



Infiltration Test Results in Accordance with BRE Digest 365:2016

Project Name:		Berewood - Town Park Phase 2					Project ID:		CS-J-0161					
Client:		WYG												
Hole ID:		TP02				Test Date:	02-07-2019		Logged:	CP		Checked:	JA	
Test 1		Test 2		Test 3		Soakaway Dimensions: Length (m) 2.00 Width (m) 0.60 Test 1 - Depth (m) 2.08 Test 2 - Depth (m) Test 3 - Depth (m)								
Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)									
0	1.04													
1	1.04													
2	1.05													
3	1.05							Test 1	Test 2	Test 3				
4	1.05					Depth to water at start of test (m)		1.04						
5	1.05					Depth to water at end of test (m)		1.14						
10	1.05					Total head drop (m)		0.11						
15	1.05					Depth to water at 75% level (m)		1.30						
20	1.05					Depth to water at 50% level (m)		1.56						
30	1.06					Depth to water at 25% level (m)		1.82						
45	1.07													
60	1.08					Base area of pit (m ²)		1.20						
93	1.11					Computed Internal Surface Area A _{p50} (m ²)		3.91						
166	1.14					Effective Storage Volume V _{p75-25} (m ³)		0.63						
						Elapsed time at 75% level (mins)		401						
						Elapsed time at 25% level (mins)		1287						
						50% discharge in 24 Hours		Yes						
						Soil infiltration rate <i>f</i> (m/s)		3.01E-06						
						Design soil infiltration rate <i>f</i> (m/s)		n/a (not BRE365 compliant)						



Remarks:

Where highlighted in red, results have been inferred from the graph.