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Site: BRILL PLACE, LONDON NW1

TRIAL PIT
DP105

Date: 08/04/19

Pit Size: 0.30m L x 0.30m W x 1.20m D.

529881 mE 183125 mN
Ground Level: 18.89m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.30	D1			MADE GROUND - Soft, brown and dark brown mottled, slightly sandy, slightly gravelly, silty CLAY. Gravel of angular to sub-rounded concrete, brick, flint and ash.			
0.70	D2						
1.10	D3						
						1.20	17.69
				Pit completed at 1.20m depth			

KEY
- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS
1. Live roots observed to 1.20m depth
2. Pit dry
3. Pit sides stable
4. Pit extended by dynamic probe to 5.00m depth

Project No 14727

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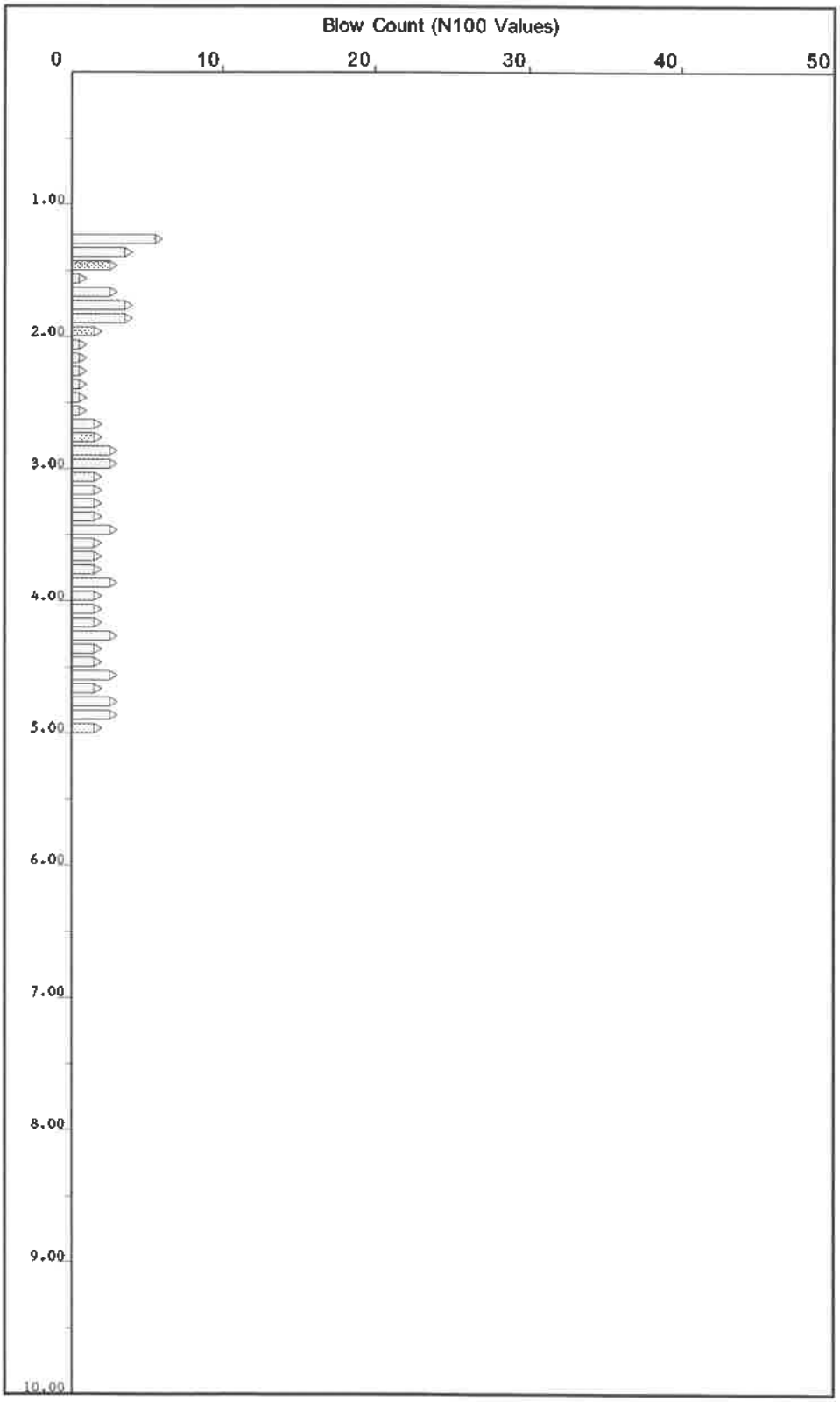
GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 08/04/19 Project Number 14727	PROBE No DP105 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

Depth (m)	Torque	Blows (100mm)
.1		-
.2		-
.3		-
.4		-
.5		-
.6		-
.7		-
.8		-
.9		-
1.0		-
.1		-
.2		-
.3		6
.4		4
.5		3
.6		1
.7		3
.8		4
.9		4
2.0		2
.1		1
.2		1
.3		1
.4		1
.5		1
.6		1
.7		2
.8		2
.9		3
3.0		3
.1		2
.2		2
.3		2
.4		2
.5		3
.6		2
.7		2
.8		2
.9		3
4.0		2
.1		2
.2		2
.3		3
.4		2
.5		2
.6		3
.7		2
.8		3
.9		3
5.0		2



Remarks :			
	Hammer	63.5 kg	14727
	Standard Drop	750 mm	
	Cone	50 mm dia	
	Rod	8kg / 35 mm	

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Site: **BRILL PLACE, LONDON NW1**

TRIAL PIT DP106

Date: 08/04/19

Pit Size: 0.30m L x 0.30m W x 1.20m D.

529879 mE 183124 mN
Ground Level: 18.82m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.50	D1			MADE GROUND - Soft, brown and dark brown mottled, slightly sandy, slightly gravelly, silty CLAY. Gravel of angular to sub-rounded concrete, brick, flint and ash.			
1.00	D2						
						1.20	17.62
				Pit completed at 1.20m depth			

KEY
- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS
1. Live roots observed to 1.10m depth
2. Pit dry
3. Pit sides stable
4. Pit extended by dynamic probe to 5.00m depth

Project No	
14727	
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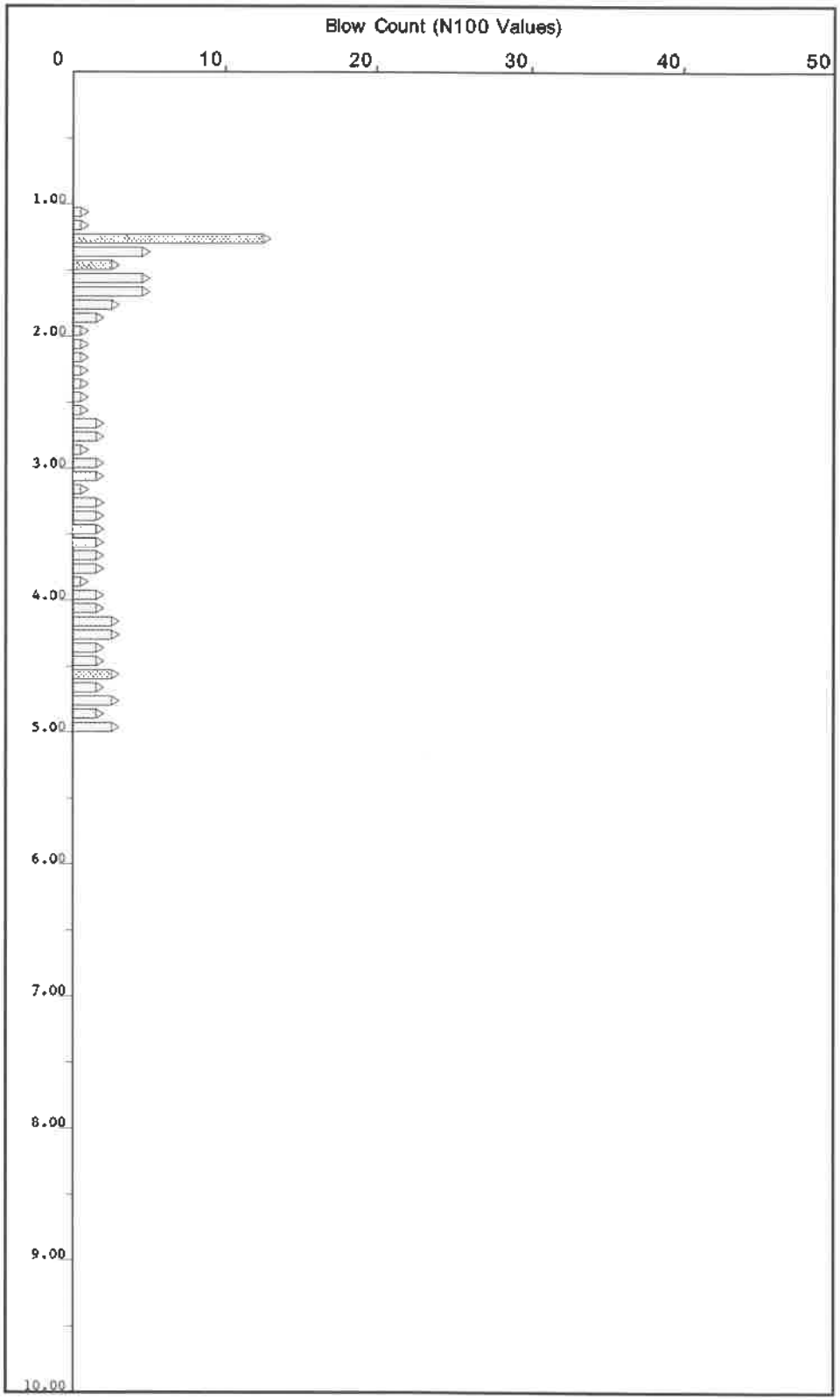
GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 08/04/19 Project Number 14727	PROBE No DP106 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

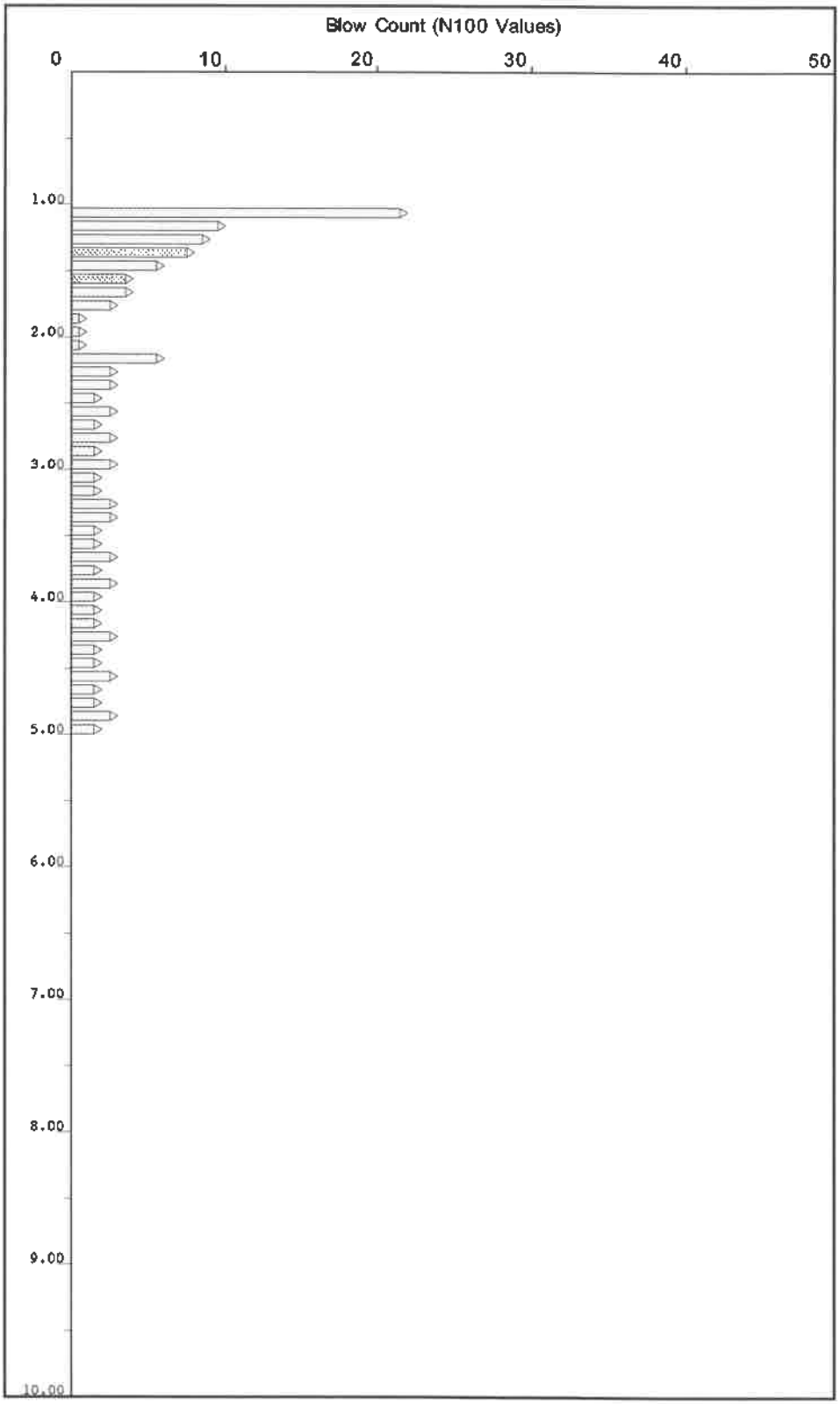
Depth (m)	Torque	Blows (100mm)
.1		-
.2		-
.3		-
.4		-
.5		-
.6		-
.7		-
.8		-
.9		-
1.0		-
.1		1
.2		1
.3		13
.4		5
.5		3
.6		5
.7		5
.8		3
.9		2
2.0		1
.1		1
.2		1
.3		1
.4		1
.5		1
.6		1
.7		2
.8		2
.9		1
3.0		2
.1		2
.2		1
.3		2
.4		2
.5		2
.6		2
.7		2
.8		2
.9		1
4.0		2
.1		2
.2		3
.3		3
.4		2
.5		2
.6		3
.7		2
.8		3
.9		2
5.0		3



Remarks :	Hammer	63.5 kg	14727
	Standard Drop	750 mm	
	Cone	50 mm dia	
	Rod	8kg / 35 mm	

GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 08/04/19 Project Number 14727	PROBE No DP107 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

Depth (m)	Torque	Blows (100mm)
.1		-
.2		-
.3		-
.4		-
.5		-
.6		-
.7		-
.8		-
.9		-
1.0		-
.1		22
.2		10
.3		9
.4		8
.5		6
.6		4
.7		4
.8		3
.9		1
2.0		1
.1		1
.2		6
.3		3
.4		3
.5		2
.6		3
.7		2
.8		3
.9		2
3.0		3
.1		2
.2		2
.3		3
.4		3
.5		2
.6		2
.7		3
.8		2
.9		3
4.0		2
.1		2
.2		2
.3		3
.4		2
.5		2
.6		3
.7		2
.8		2
.9		3
5.0		2



Remarks :		
	Hammer	63.5 kg
	Standard Drop	750 mm
	Cone	50 mm dia
	Rod	8kg / 35 mm

14727

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Site: **BRILL PLACE, LONDON NW1**

TRIAL PIT DP107

Date: 08/04/19

Pit Size: 0.30m L x 0.30m W x 0.40m D.

529877 mE 183123 mN

Ground Level: 18.86m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.20	D1			MADE GROUND - Soft, brown and dark brown mottled, slightly sandy, slightly gravelly, silty CLAY. Gravel of angular to sub-rounded flint, brick, concrete and ash.		0.40	18.46
				MADE GROUND - CONCRETE.			
				Pit abandoned at 0.40m depth			

KEY

- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▽c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS

1. Live roots observed to at least 0.40m depth
2. Pit dry
3. Pit sides stable
4. Hole abandoned at 0.40m depth on concrete obstruction and relocated to position DP107

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Site: BRILL PLACE, LONDON NW1

TRIAL PIT
DP107A

Date: 08/04/19

Pit Size: 0.30m L x 0.30m W x 1.20m D.

529876 mE 183124 mN
Ground Level: 18.86m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.20	D1			MADE GROUND - Soft, brown, slightly sandy, slightly gravelly, silty CLAY with some cobbles of brick and concrete. Gravel of angular to sub-rounded flint, brick and ash.			
0.80	D2						
1.10	D3						
						1.20	17.66
				Pit completed at 1.20m depth			

KEY
- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS
1. Live roots observed to 0.70m depth
2. Pit dry
3. Pit sides stable
4. Pit extended by dynamic probe to 5.00m depth

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14727	
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Site: **BRILL PLACE, LONDON NW1**

TRIAL PIT DP108

Date: 08/04/19

Pit Size: 0.30m L x 0.30m W x 0.90m D.

529875 mE 183122 mN
Ground Level: 18.86m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.40	D1			MADE GROUND - Orange brown and light brown, slightly clayey, sandy GRAVEL. Gravel of angular to sub-rounded flint, brick and concrete.		0.50	18.36
0.80	D2			MADE GROUND - Soft, brown, slightly sandy, slightly gravelly, silty CLAY. Gravel of angular to sub-rounded flint, brick, concrete and ash.		0.90	17.96
				MADE GROUND - OBSTRUCTION Pit abandoned at 0.90m depth			

KEY
- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS
1. No live roots observed
2. Pit dry
3. Pit sides stable
4. Hole abandoned at 0.90m depth on concrete obstruction

Project No	
14727	
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Site: BRILL PLACE, LONDON NW1

TRIAL PIT
DP108A

Date: 08/04/19

Pit Size: 0.30m L x 0.30m W x 0.90m D.

529875 mE 183123 mN
Ground Level: 18.86m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.20	D1			MADE GROUND - Soft, brown, slightly sandy, slightly gravelly, silty CLAY with some cobbles of brick and concrete. Gravel of angular to sub-rounded flint, brick, concrete and ash.			
0.50	D2						
0.80	D3					0.90	17.96
				MADE GROUND - CONCRETE.			
				Pit abandoned at 0.90m depth			

KEY
- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS
1. Live roots observed to 0.50m depth
2. Pit dry
3. Pit sides stable
4. Hole abandoned at 0.90m depth on concrete obstruction

Project No	
14727	
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Site: **BRILL PLACE, LONDON NW1**

TRIAL PIT
DP109

Date: 08/04/19

Pit Size: 0.30m L x 0.30m W x 1.00m D.

529874 mE 183120 mN
Ground Level: 18.88m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.20	D1			MADE GROUND - Soft, dark brown, slightly sandy, slightly gravelly, silty CLAY. Gravel of angular to sub-rounded flint, brick and concrete.		0.30	18.58
0.70	D2			MADE GROUND - Soft, brown, slightly sandy, slightly gravelly, silty CLAY. Gravel of angular to sub-rounded brick, concrete, flint and ash.		1.00	17.88
				Pit completed at 1.00m depth			

KEY
- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS
1. No live roots observed
2. Pit dry
3. Pit sides stable
4. Hole extended by dynamic probe to 5.00m depth

Project No	
14727	
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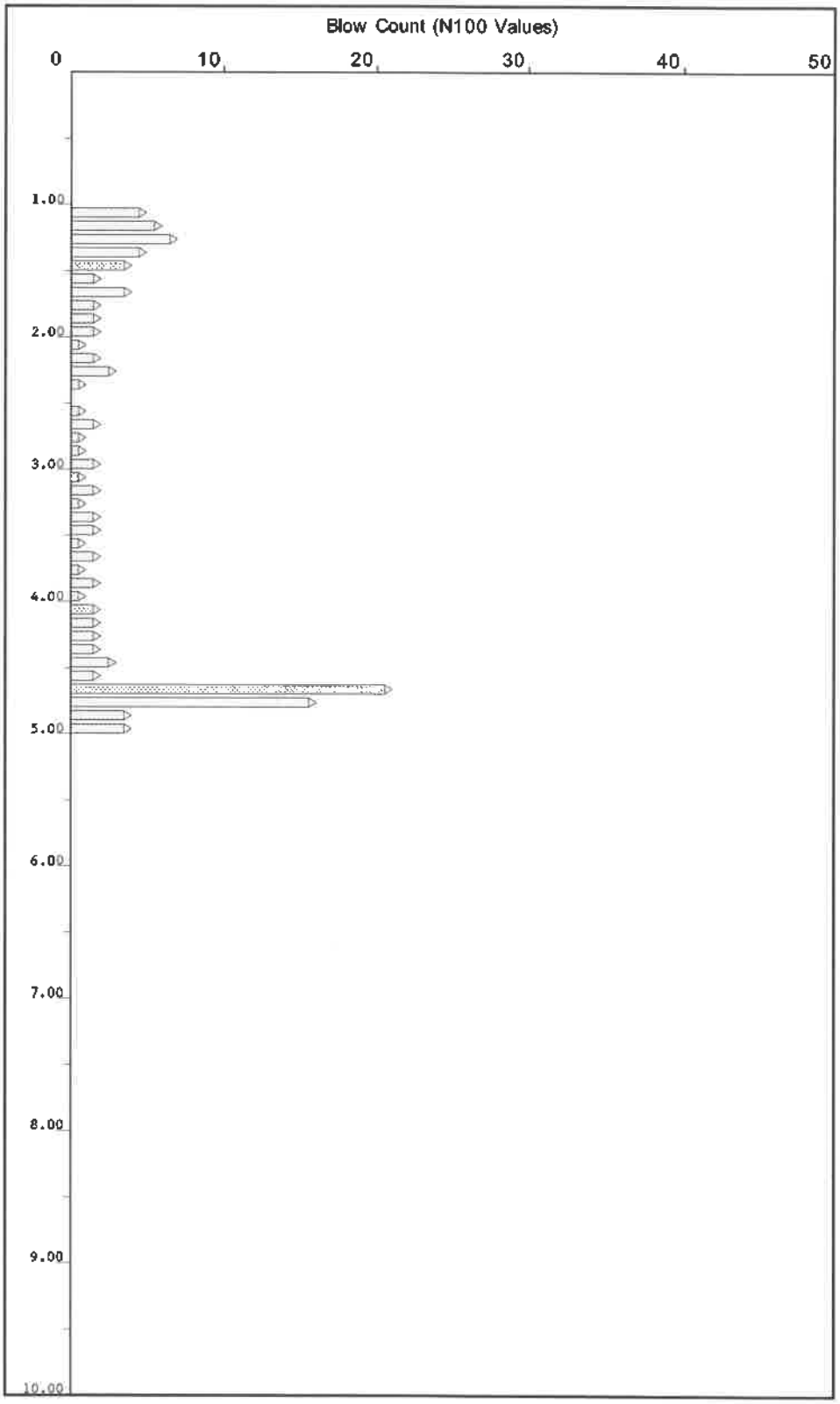
GROUND ENGINEERING LIMITED Tel: 01733-666566 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 08/04/19 Project Number 14727	PROBE No DP109 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

Depth (m)	Torque	Blows (100mm)
0.1		-
0.2		-
0.3		-
0.4		-
0.5		-
0.6		-
0.7		-
0.8		-
0.9		-
1.0		-
1.1		5
1.2		6
1.3		7
1.4		5
1.5		4
1.6		2
1.7		4
1.8		2
1.9		2
2.0		2
2.1		1
2.2		2
2.3		3
2.4		1
2.5		0
2.6		1
2.7		2
2.8		1
2.9		1
3.0		2
3.1		1
3.2		2
3.3		1
3.4		2
3.5		2
3.6		1
3.7		2
3.8		1
3.9		2
4.0		1
4.1		2
4.2		2
4.3		2
4.4		2
4.5		3
4.6		2
4.7		21
4.8		16
4.9		4
5.0		4



Remarks :		
	Hammer	63.5 kg
	Standard Drop	750 mm
	Cone	50 mm dia
	Rod	8kg / 35 mm

14727

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Site: **BRILL PLACE, LONDON NW1**

TRIAL PIT DP110

Date: 09/04/19

Pit Size: 0.30m L x 0.30m W x 1.20m D.

529871 mE 183119 mN

Ground Level: 18.98m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.10	D1			MADE GROUND - Dark grey and black ASPHALT.		0.08	18.90
				MADE GROUND - Brown, clayey SAND AND GRAVEL. Gravel of angular to sub-rounded brick, concrete and flint.		0.20	18.78
0.30	D2			MADE GROUND - Soft, dark brown, slightly sandy, slightly gravelly, silty CLAY. Gravel of angular to sub-rounded brick, flint and concrete.		0.40	18.58
0.50	D3			MADE GROUND - Soft, brown, slightly sandy, gravelly, silty CLAY with occasional concrete cobbles. Gravel of angular to sub-rounded concrete, brick, flint and ash.			
1.00	D4						
						1.20	17.78
				Pit completed at 1.20m depth			

KEY

- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS

1. No live roots observed
2. Pit dry
3. Pit sides stable
4. Hole extended by dynamic probe to 5.00m depth

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14727	
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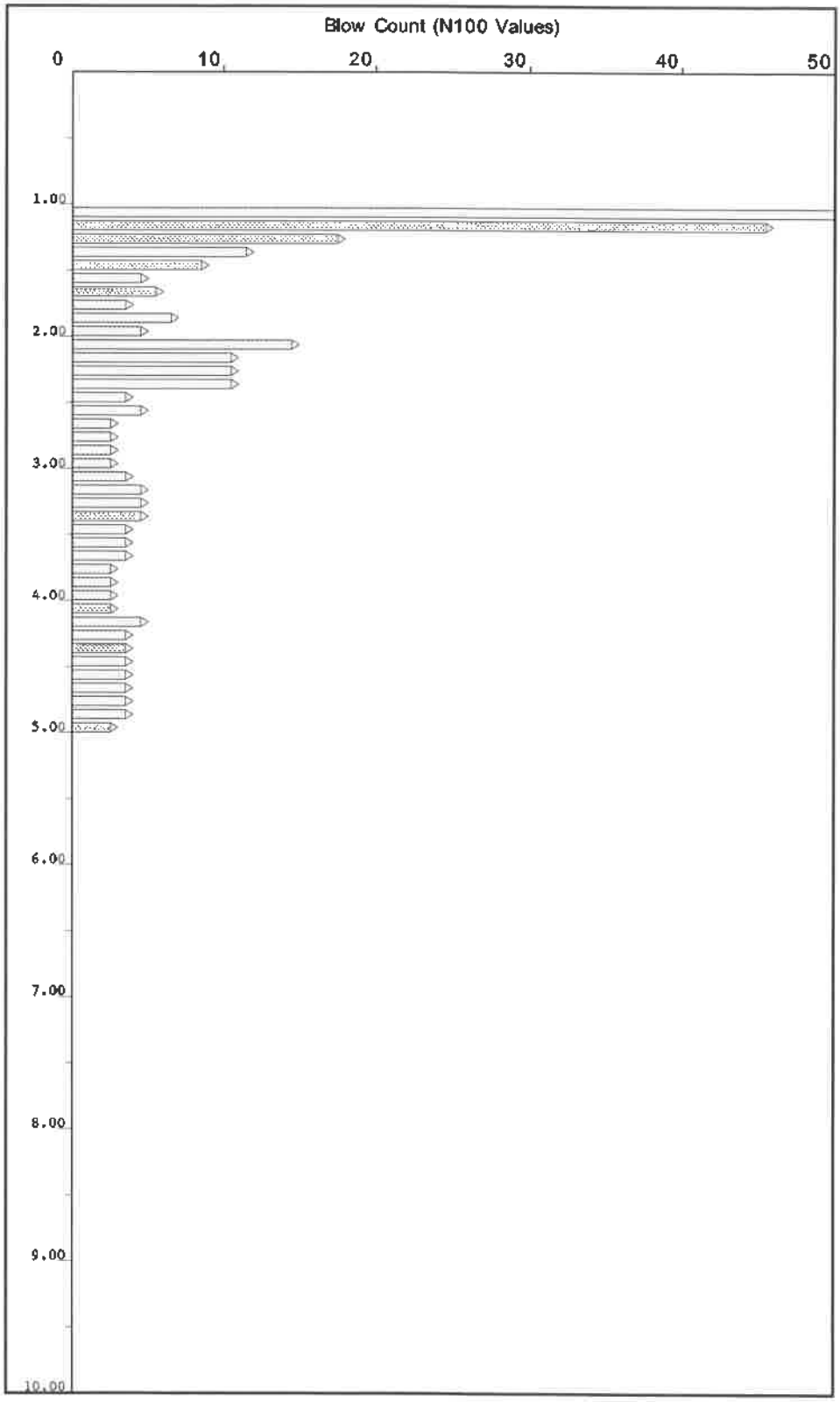
GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 09/04/19 Project Number 14727	PROBE No DP110 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

Depth (m)	Torque	Blows (100mm)
.1		-
.2		-
.3		-
.4		-
.5		-
.6		-
.7		-
.8		-
.9		-
1.0		-
.1		70
.2		46
.3		18
.4		12
.5		9
.6		5
.7		6
.8		4
.9		7
2.0		5
.1		15
.2		11
.3		11
.4		11
.5		4
.6		5
.7		3
.8		3
.9		3
3.0		3
.1		4
.2		5
.3		5
.4		5
.5		4
.6		4
.7		4
.8		3
.9		3
4.0		3
.1		3
.2		5
.3		4
.4		4
.5		4
.6		4
.7		4
.8		4
.9		4
5.0		3



Remarks :			
	Hammer	63.5 kg	14727
	Standard Drop	750 mm	
	Cone	50 mm dia	
	Rod	8kg / 35 mm	

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Site: **BRILL PLACE, LONDON NW1**

TRIAL PIT DP111

Date: 09/04/19

Pit Size: 0.30m L x 0.30m W x 1.20m D.

529869 mE 183118 mN
Ground Level: 19.04m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.10	D1			MADE GROUND - Dark grey and black ASPHALT.		0.08	18.96
				MADE GROUND - Brown, clayey SAND AND GRAVEL. Gravel of angular to sub-rounded flint.		0.20	18.84
0.35	D2			MADE GROUND - Soft, dark brown, slightly sandy, slightly gravelly, silty CLAY. Gravel of angular to sub-rounded flint, brick and concrete.		0.50	18.54
0.60	D3			MADE GROUND - Soft, brown, slightly sandy, gravelly, silty CLAY and occasional concrete cobbles. Gravel of angular to sub-rounded brick, concrete, flint and ash.			
1.10	D4					1.20	17.84
				Pit completed at 1.20m depth			

KEY
- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS
1. Live roots observed to 0.50m depth
2. Pit dry
3. Pit sides stable
4. Hole extended by dynamic probe to 5.00m depth

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14727	
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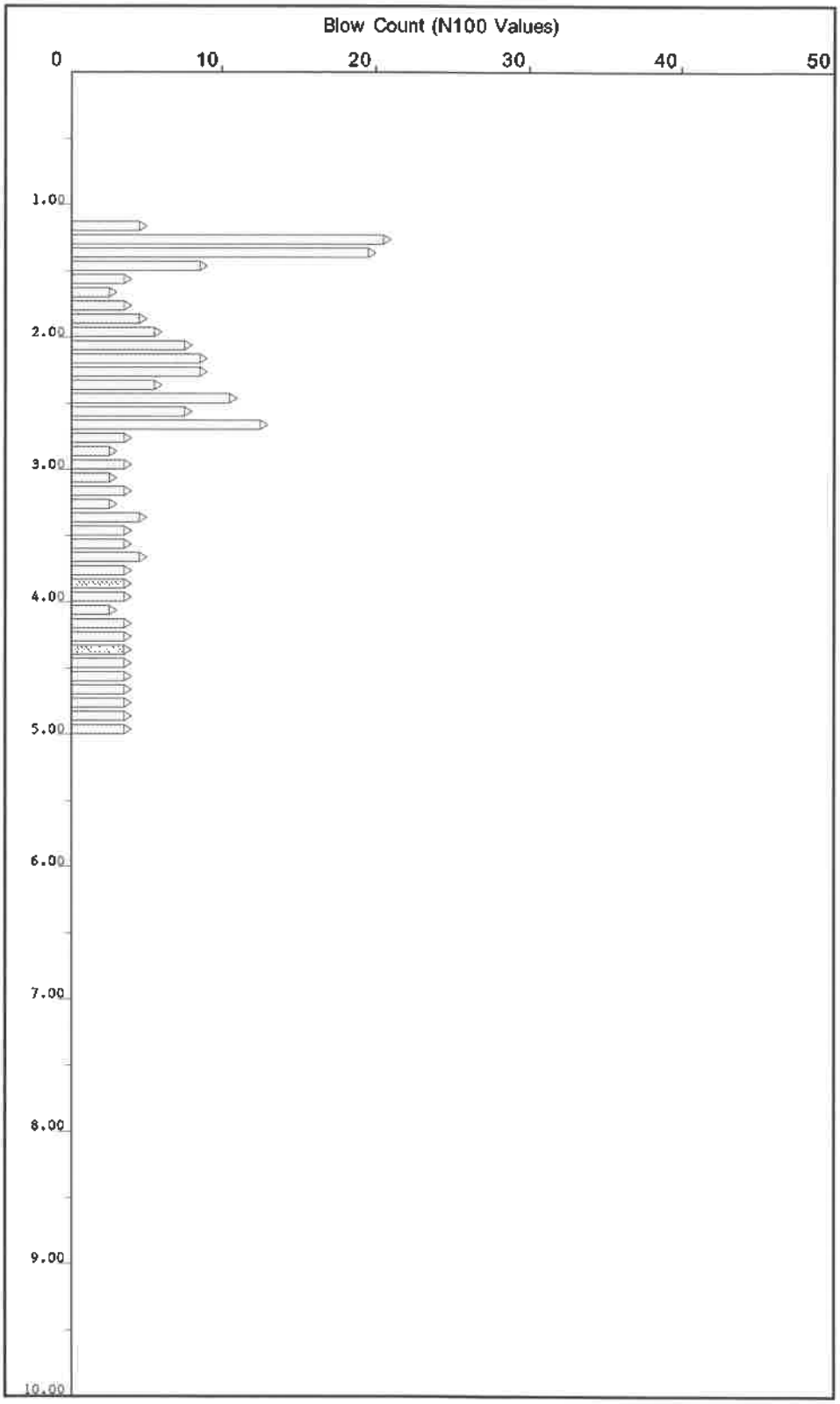
GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 09/04/19 Project Number 14727	PROBE No DP111 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

Depth (m)	Torque	Blows (100mm)
.1		-
.2		-
.3		-
.4		-
.5		-
.6		-
.7		-
.8		-
.9		-
1.0		-
.1		-
.2		5
.3		21
.4		20
.5		9
.6		4
.7		3
.8		4
.9		5
2.0		6
.1		8
.2		9
.3		9
.4		6
.5		11
.6		8
.7		13
.8		4
.9		3
3.0		4
.1		3
.2		4
.3		3
.4		5
.5		4
.6		4
.7		5
.8		4
.9		4
4.0		4
.1		3
.2		4
.3		4
.4		4
.5		4
.6		4
.7		4
.8		4
.9		4
5.0		4



Remarks :			
	Hammer	63.5 kg	14727
	Standard Drop	750 mm	
	Cone	50 mm dia	
	Rod	8kg / 35 mm	

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Site: BRILL PLACE, LONDON NW1

TRIAL PIT
DP112

Date: 09/04/19

Pit Size: 0.35m L x 0.35m W x 1.20m D.

529867 mE 183117 mN
Ground Level: 19.09m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
				MADE GROUND - Dark grey ASPHALT.		0.08	19.01
0.15	D1			MADE GROUND - Brown, slightly clayey SAND AND GRAVEL. Gravel of angular to rounded flint.		0.20	18.89
				MADE GROUND - CONCRETE slab.		0.24	18.85
0.40	D2			MADE GROUND - Brown and light brown, slightly clayey SAND AND GRAVEL. Gravel of angular to sub-rounded flint and brick.		0.50	18.59
0.70	D3			MADE GROUND - Soft, brown, slightly sandy, slightly gravelly, silty CLAY with occasional brick cobbles. Gravel of angular to sub-rounded brick, concrete, flint and ash.			
1.10	D4					1.20	17.89
				Pit completed at 1.20m depth			

KEY
- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS
1. No live roots observed
2. Pit dry
3. Pit sides stable
4. Hole extended by dynamic probe to 5.00m depth

Project No 14727	
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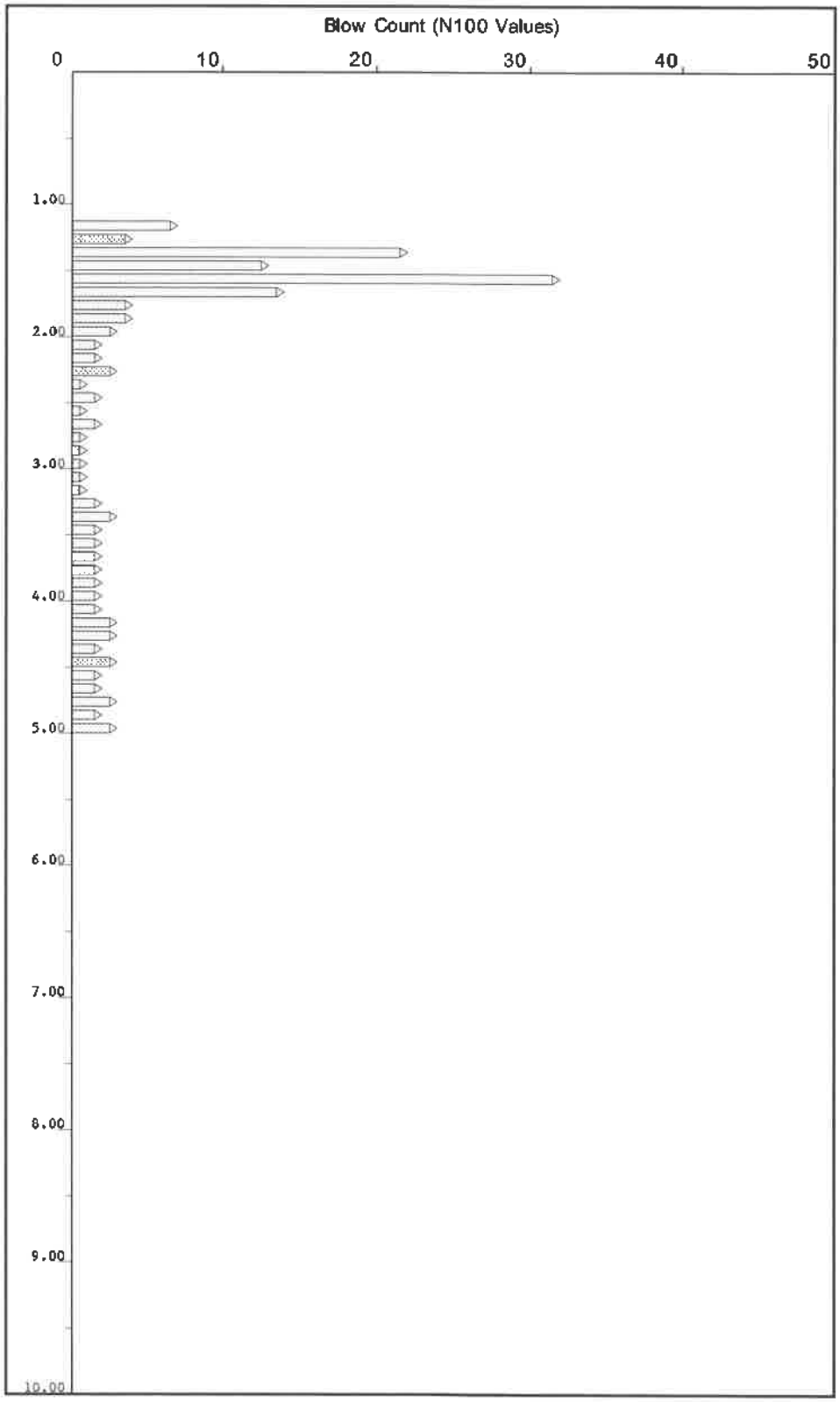
GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 09/04/19 Project Number 14727	PROBE No DP112 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

Depth (m)	Torque	Blows (100mm)
.1		-
.2		-
.3		-
.4		-
.5		-
.6		-
.7		-
.8		-
.9		-
1.0		-
.1		-
.2		7
.3		4
.4		22
.5		13
.6		32
.7		14
.8		4
.9		4
2.0		3
.1		2
.2		2
.3		3
.4		1
.5		2
.6		1
.7		2
.8		1
.9		1
3.0		1
.1		1
.2		2
.3		3
.4		2
.5		2
.6		2
.7		2
.8		2
.9		2
4.0		2
.1		3
.2		3
.3		2
.4		3
.5		2
.6		2
.7		3
.8		2
.9		3
5.0		



Remarks :			
	Hammer	63.5 kg	14727
	Standard Drop	750 mm	
	Cone	50 mm dia	
	Rod	8kg / 35 mm	

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Site: BRILL PLACE, LONDON NW1

TRIAL PIT DP113

Date: 09/04/19

Pit Size: 0.40m L x 0.30m W x 1.20m D.

529865 mE 183115 mN

Ground Level: 19.14m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.10	D1			MADE GROUND - Dark grey and black ASPHALT.		0.08	19.06
0.25	D2			MADE GROUND - Brown SAND AND GRAVEL. Gravel of angular to rounded flint and brick.		0.15	18.99
				MADE GROUND - CONCRETE paving slab.		0.22	18.92
				MADE GROUND - Light brown SAND AND GRAVEL. Gravel of angular to sub-rounded flint.		0.30	18.84
0.50	D3			MADE GROUND - Soft, brown, slightly sandy, slightly gravelly, silty CLAY with many concrete cobbles. Gravel of angular to sub-rounded concrete, brick, ash and flint.			
1.00	D4						
						1.20	17.94
				Pit completed at 1.20m depth			

KEY
- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS
1. No live roots observed
2. Pit dry
3. Pit sides stable
4. Hole extended by dynamic probe to refusal at 1.60m depth

Project No 14727

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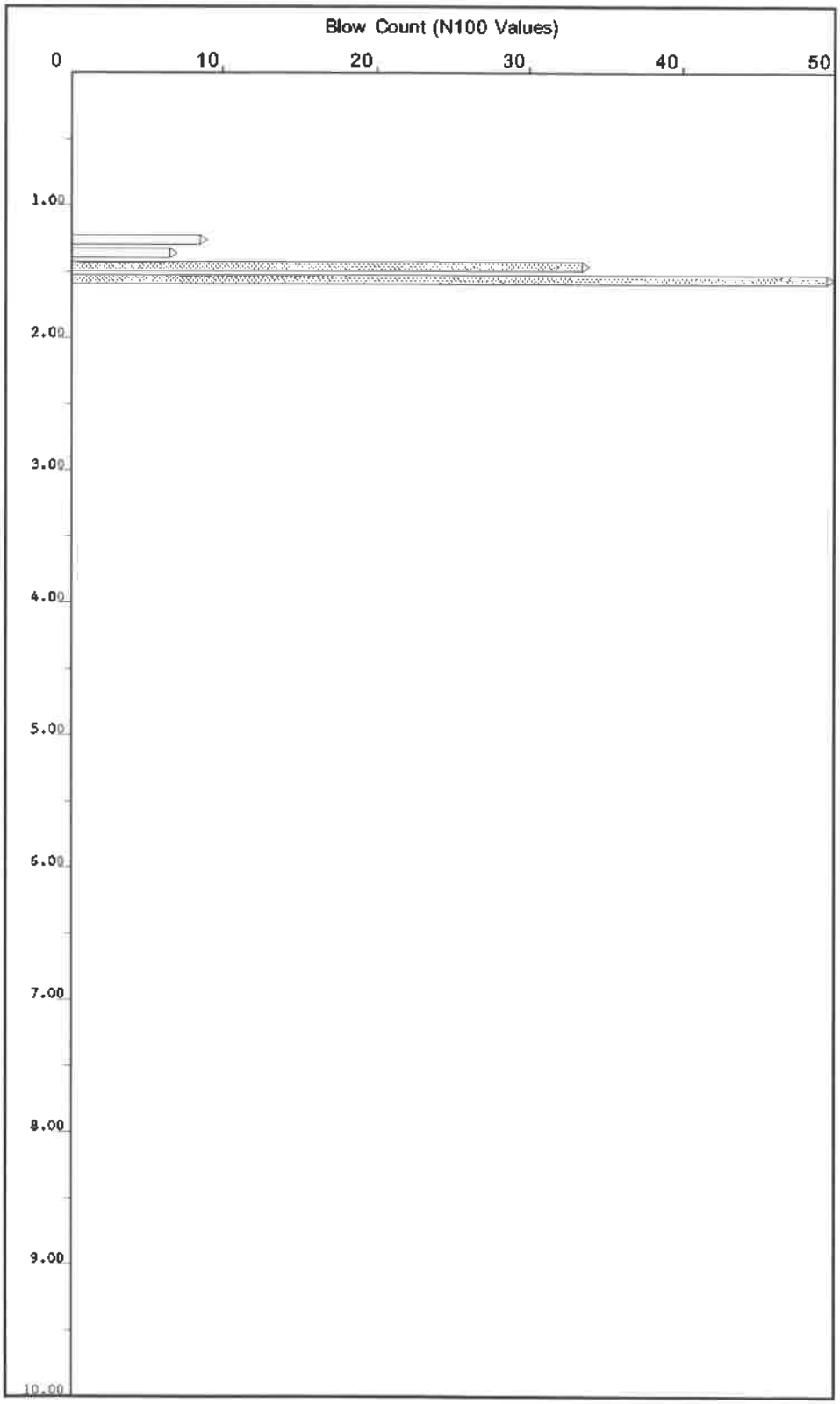
GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 09/04/19 Project Number 14727	PROBE No DP113 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

Depth (m)	Torque	Blows (100mm)
.1		-
.2		-
.3		-
.4		-
.5		-
.6		-
.7		-
.8		-
.9		-
1.0		-
.1		-
.2		-
.3		9
.4		7
.5		34
.6		50



Remarks :			
	Hammer	63.5 kg	14727
	Standard Drop	750 mm	
	Cone	50 mm dia	
	Rod	8kg / 35 mm	

GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	Site: BRILL PLACE, LONDON NW1	TRIAL PIT DP114
	Date: 09/04/19 — Pit Size: 0.35m L x 0.35m W x 1.00m D.	529863 mE 183114 mN Ground Level: 19.17m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
				MADE GROUND - Dark grey and black ASPHALT.		0.08	19.09
0.30	D1			MADE GROUND - Brown SAND AND GRAVEL with many concrete cobbles. Gravel of angular to sub-rounded flint and concrete.		0.50	18.67
0.60	D2			MADE GROUND - Soft, brown, slightly sandy, slightly gravelly, silty CLAY. Gravel of angular to sub-rounded concrete, flint and concrete. Many concrete cobbles below 0.60m depth.		1.00	18.17
				Pit completed at 1.00m depth			

KEY
- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS
1. No live roots observed
2. Pit dry
3. Pit sides stable
4. Hole extended by dynamic probe to 5.00m depth

Project No	
14727	
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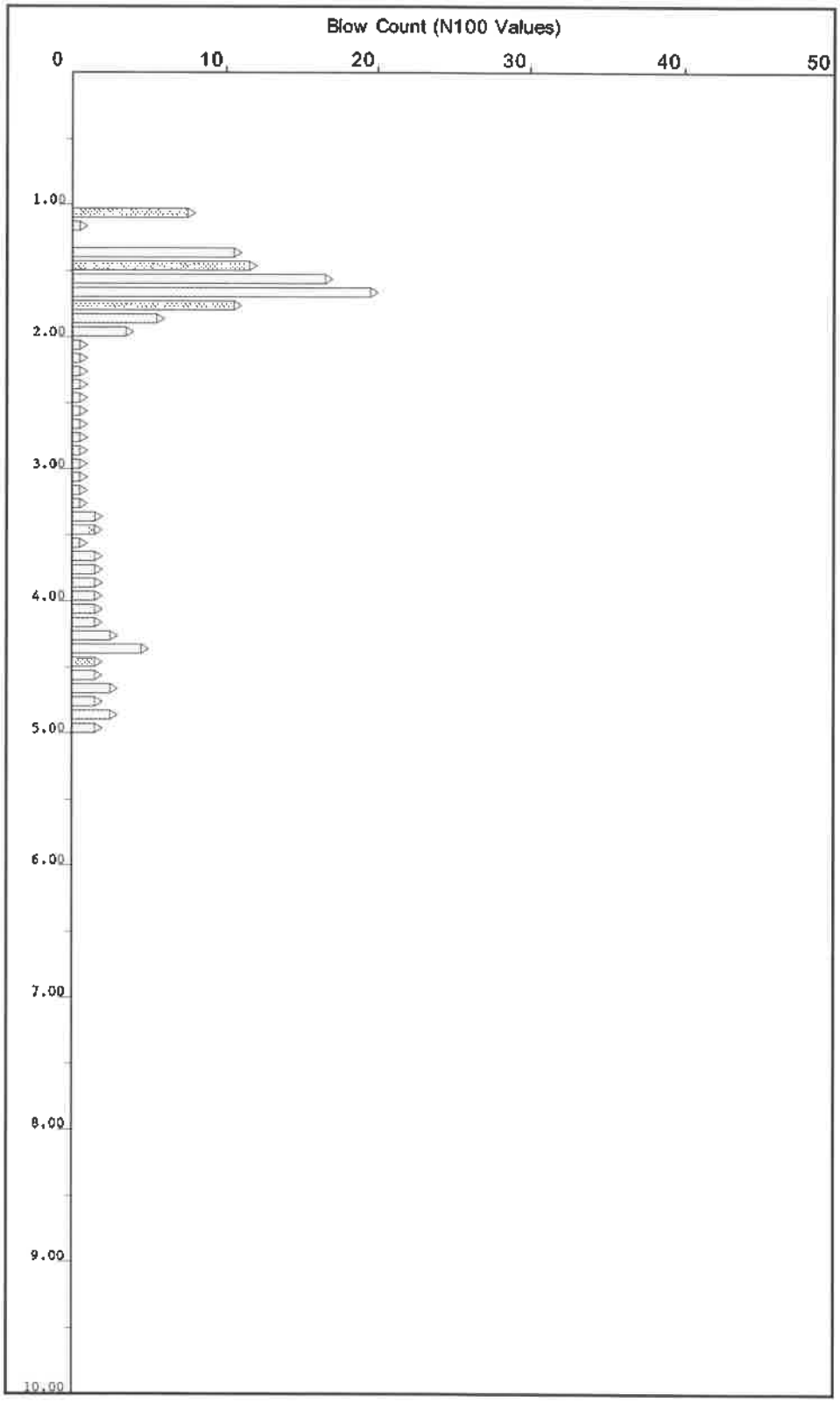
GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 09/04/19 Project Number 14727	PROBE No DP114 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

Depth (m)	Torque	Blows (100mm)
.1		-
.2		-
.3		-
.4		-
.5		-
.6		-
.7		-
.8		-
.9		-
1.0		-
.1		8
.2		1
.3		0
.4		11
.5		12
.6		17
.7		20
.8		11
.9		6
2.0		4
.1		1
.2		1
.3		1
.4		1
.5		1
.6		1
.7		1
.8		1
.9		1
3.0		1
.1		1
.2		1
.3		1
.4		2
.5		2
.6		1
.7		2
.8		2
.9		2
4.0		2
.1		2
.2		2
.3		3
.4		5
.5		2
.6		2
.7		3
.8		2
.9		3
5.0		2



Remarks :		
	Hammer	63.5 kg
	Standard Drop	750 mm
	Cone	50 mm dia
	Rod	8kg / 35 mm

14727

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Site: **BRILL PLACE, LONDON NW1**

TRIAL PIT
DP115

Date: 09/04/19

Pit Size: 0.30m L x 0.30m W x 1.10m D.

529861 mE 183115 mN
Ground Level: 19.18m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
				MADE GROUND - Dark grey and black ASPHALT.		0.08	19.10
0.30	D1			MADE GROUND - Light brown slightly clayey SAND AND GRAVEL. Gravel of angular to sub-rounded concrete, brick, flint and ash.		0.40	18.78
0.80	D2			MADE GROUND - Brown, clayey sandy GRAVEL. Gravel of angular to sub-rounded concrete, brick, flint and ash.		1.10	18.08
				Pit completed at 1.10m depth			

KEY
- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS
1. No live roots observed
2. Pit dry
3. Pit sides stable
4. Hole extended by dynamic probe to 5.00m depth

Project No	
14727	
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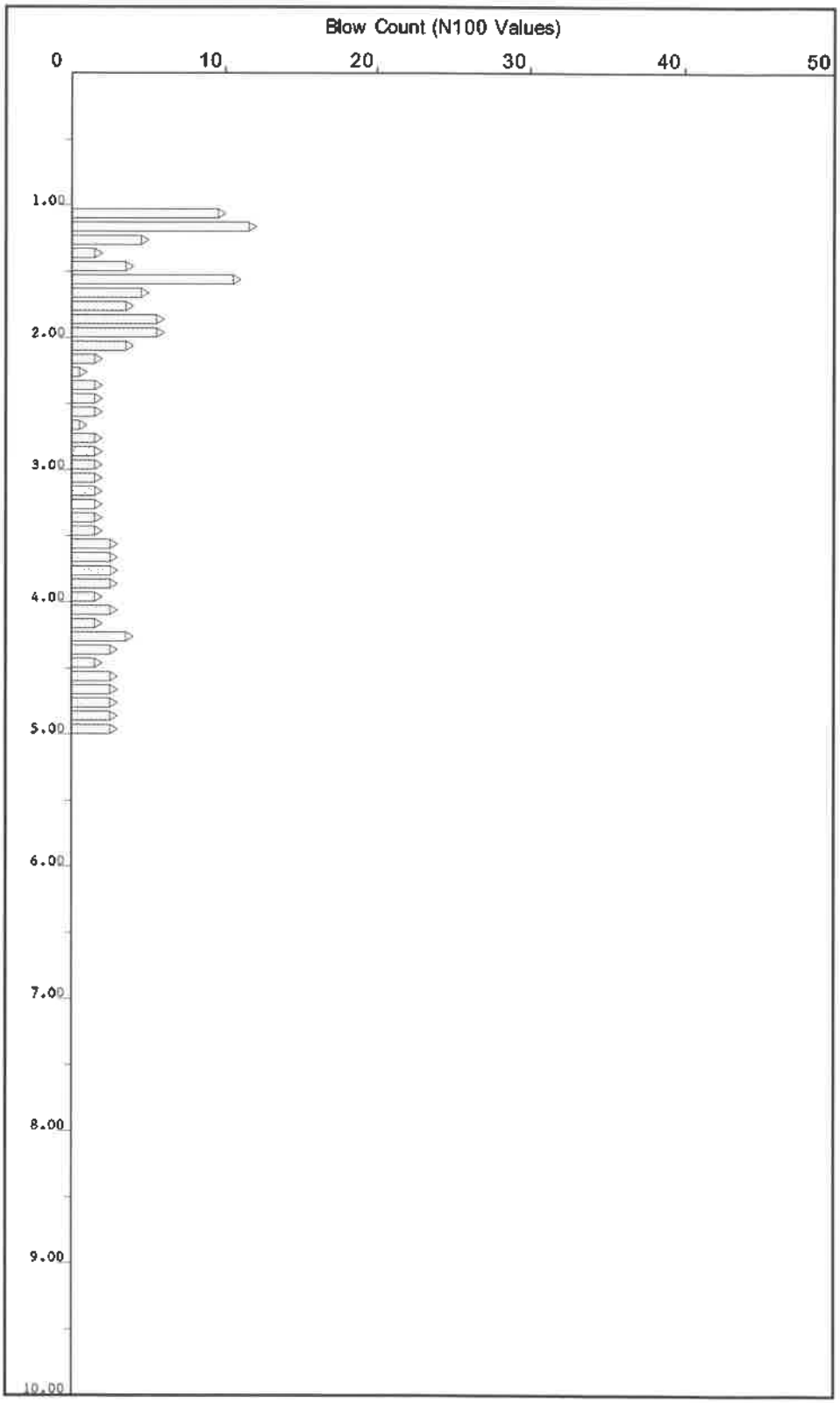
GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 09/04/19 Project Number 14727	PROBE No DP115 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

Depth (m)	Torque	Blows (100mm)
.1		-
.2		-
.3		-
.4		-
.5		-
.6		-
.7		-
.8		-
.9		-
1.0		-
.1		10
.2		12
.3		5
.4		2
.5		4
.6		11
.7		5
.8		4
.9		6
2.0		6
.1		4
.2		2
.3		1
.4		2
.5		2
.6		2
.7		1
.8		2
.9		2
3.0		2
.1		2
.2		2
.3		2
.4		2
.5		2
.6		3
.7		3
.8		3
.9		3
4.0		2
.1		3
.2		2
.3		4
.4		3
.5		2
.6		3
.7		3
.8		3
.9		3
5.0		3



Remarks :	Hammer	63.5 kg	14727
	Standard Drop	750 mm	
	Cone	50 mm dia	
	Rod	8kg / 35 mm	

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Site: **BRILL PLACE, LONDON NW1**

TRIAL PIT DP116

Date: 09/04/19

Pit Size: 0.30m L x 0.30m W x 0.75m D.

529859 mE 183116 mN
Ground Level: 19.16m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
				MADE GROUND - Dark grey and black ASPHALT.		0.08	19.08
0.30	D1			MADE GROUND - Brown, slightly clayey SAND AND GRAVEL with some concrete cobbles. Gravel of angular to sub-rounded concrete, brick, flint and ash.			
0.50	D2					0.60	18.56
				MADE GROUND - CONCRETE.		0.75	18.41
				Pit abandoned at 0.75m depth			

KEY
- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS
1. No live roots observed
2. Pit dry
3. Pit sides stable
4. Pit abandoned at 0.75m depth due to concrete obstruction met at 0.60m depth

Project No 14727

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Site: **BRILL PLACE, LONDON NW1**

TRIAL PIT DP117

Date: 09/04/19

Pit Size: 0.35m L x 0.35m W x 1.20m D.

529856 mE 183123 mN

Ground Level: 19.24m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.30	D1			MADE GROUND - Soft, dark brown, slightly gravelly, silty CLAY. Gravel of angular to sub-rounded flint, brick and concrete.		0.30	18.94
0.70	D2			MADE GROUND - Soft, brown, slightly sandy, slightly gravelly, silty CLAY with some concrete cobbles. Gravel of angular to rounded brick, concrete, flint and ash.			
1.10	D3					1.20	18.04
				Pit completed at 1.20m depth			

KEY

- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS

1. No live roots observed
2. Pit dry
3. Pit sides stable
4. Hole extended by dynamic probe to refusal at 1.80m depth

Project No	
14727	
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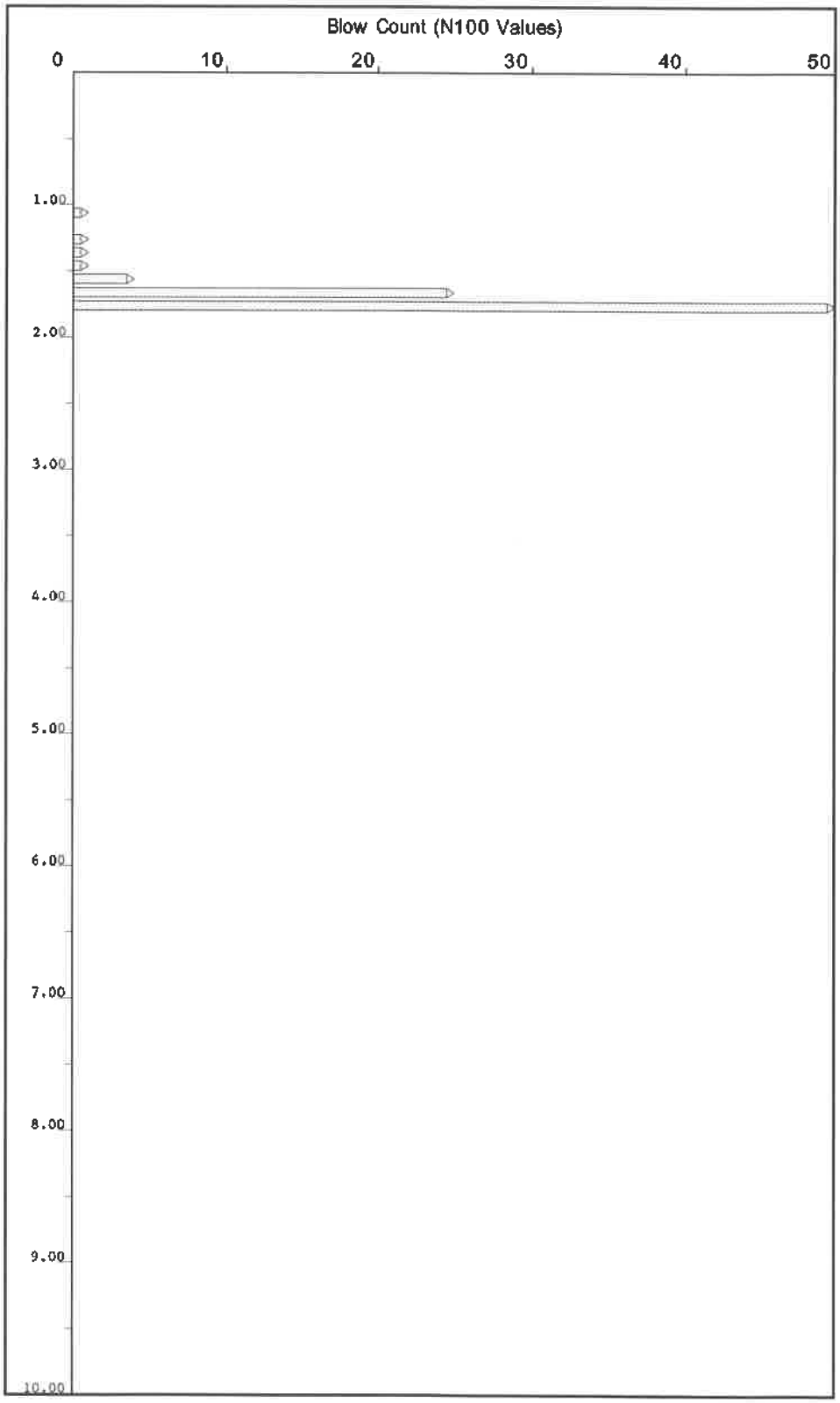
GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 09/04/19 Project Number 14727	PROBE No DP117 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

Depth (m)	Torque	Blows (100mm)
.1		-
.2		-
.3		-
.4		-
.5		-
.6		-
.7		-
.8		-
.9		-
1.0		-
.1		1
.2		0
.3		1
.4		1
.5		1
.6		4
.7		25
.8		50



Remarks :			
	Hammer	63.5 kg	14727
	Standard Drop	750 mm	
	Cone	50 mm dia	
	Rod	8kg / 35 mm	

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Site: BRILL PLACE, LONDON NW1

TRIAL PIT
DP118

Date: 09/04/19

Pit Size: 0.30m L x 0.30m W x 1.10m D.

529853 mE 183127 mN
Ground Level: 19.78m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.20	D1			MADE GROUND - Soft, dark brown, slightly gravelly, silty CLAY. Gravel of angular to sub-rounded flint and brick.		0.30	19.48
0.60	D2			MADE GROUND - Soft, brown, slightly sandy, slightly gravelly, silty CLAY with some concrete cobbles. Gravel of angular to sub-rounded brick, concrete and ash.		1.20	18.58
1.00	D3			Pit completed at 1.20m depth			

KEY
- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS
1. Live roots observed to 1.10m depth
2. Pit dry
3. Pit sides stable
4. Hole extended by dynamic probe to refusal at 1.80m depth

Project No	
14727	
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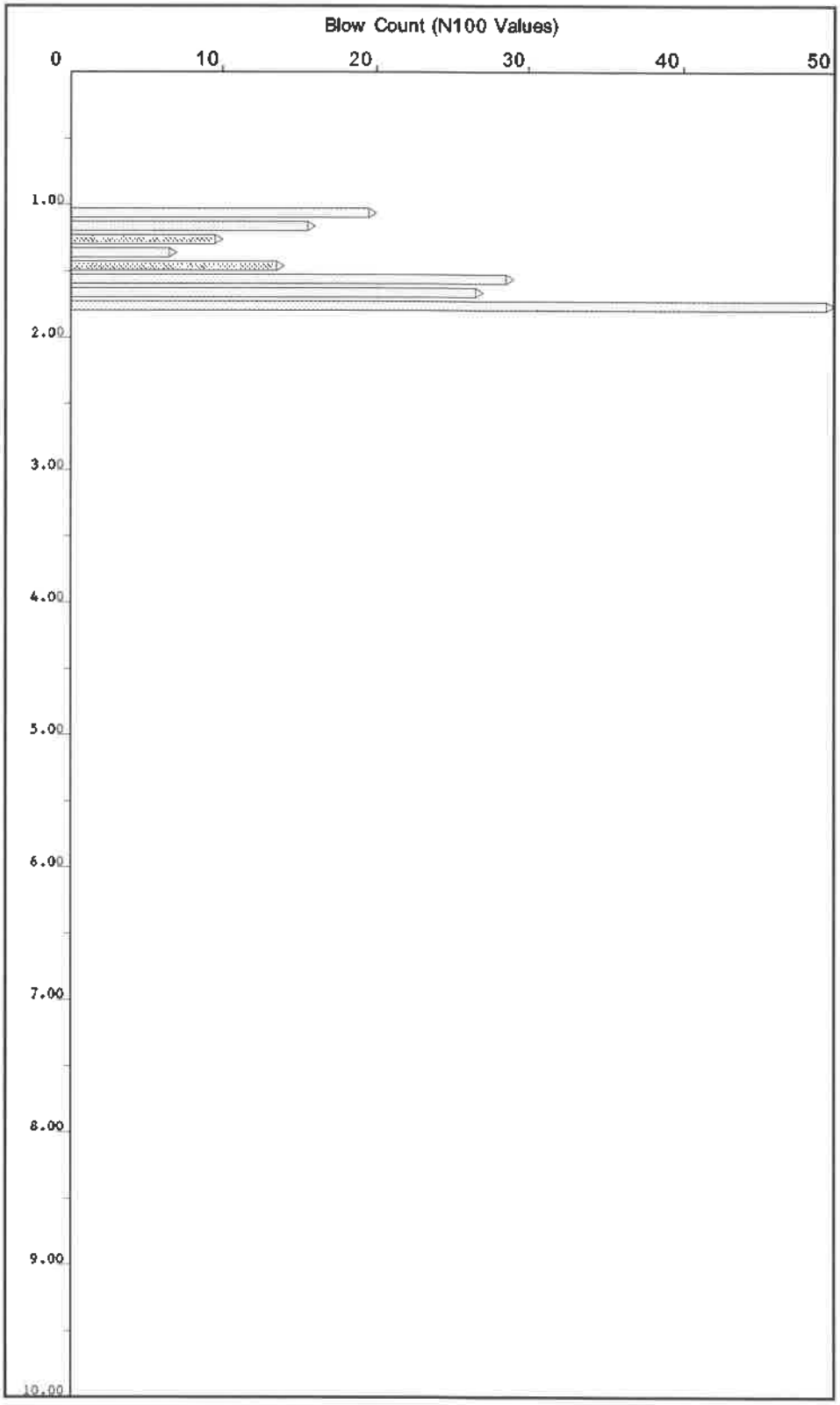
GROUND ENGINEERING LIMITED Tel: 01733-566666 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 09/04/19 Project Number 14727	PROBE No DP118 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

Depth (m)	Torque	Blows (100mm)
.1		-
.2		-
.3		-
.4		-
.5		-
.6		-
.7		-
.8		-
.9		-
1.0		-
.1		20
.2		16
.3		10
.4		7
.5		14
.6		29
.7		27
.8		50



Remarks :			
	Hammer	63.5 kg	14727
	Standard Drop	750 mm	
	Cone	50 mm dia	
	Rod	8kg / 35 mm	

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Site: **BRILL PLACE, LONDON NW1**

TRIAL PIT DP119

Date: 10/04/19

Pit Size: 0.30m L x 0.30m W x 1.10m D.

529857 mE 183129 mN

Ground Level: 20.05m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.30	D1			MADE GROUND - Soft, dark brown, slightly sandy, slightly gravelly, silty CLAY. Gravel of angular to sub-rounded flint, brick and concrete.		0.40	19.65
0.70	D2			MADE GROUND - Firm, brown, slightly sandy, slightly gravelly, silty CLAY with some cobbles of concrete and brick. Gravel of angular to sub-rounded brick and concrete.			
1.10	D3					1.20	18.85
				Pit completed at 1.20m depth			

KEY

- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS

1. Live roots observed to 1.10m depth
2. Pit dry
3. Pit sides stable
4. Hole extended by dynamic probe to refusal at 2.10m depth

Project No	
14727	
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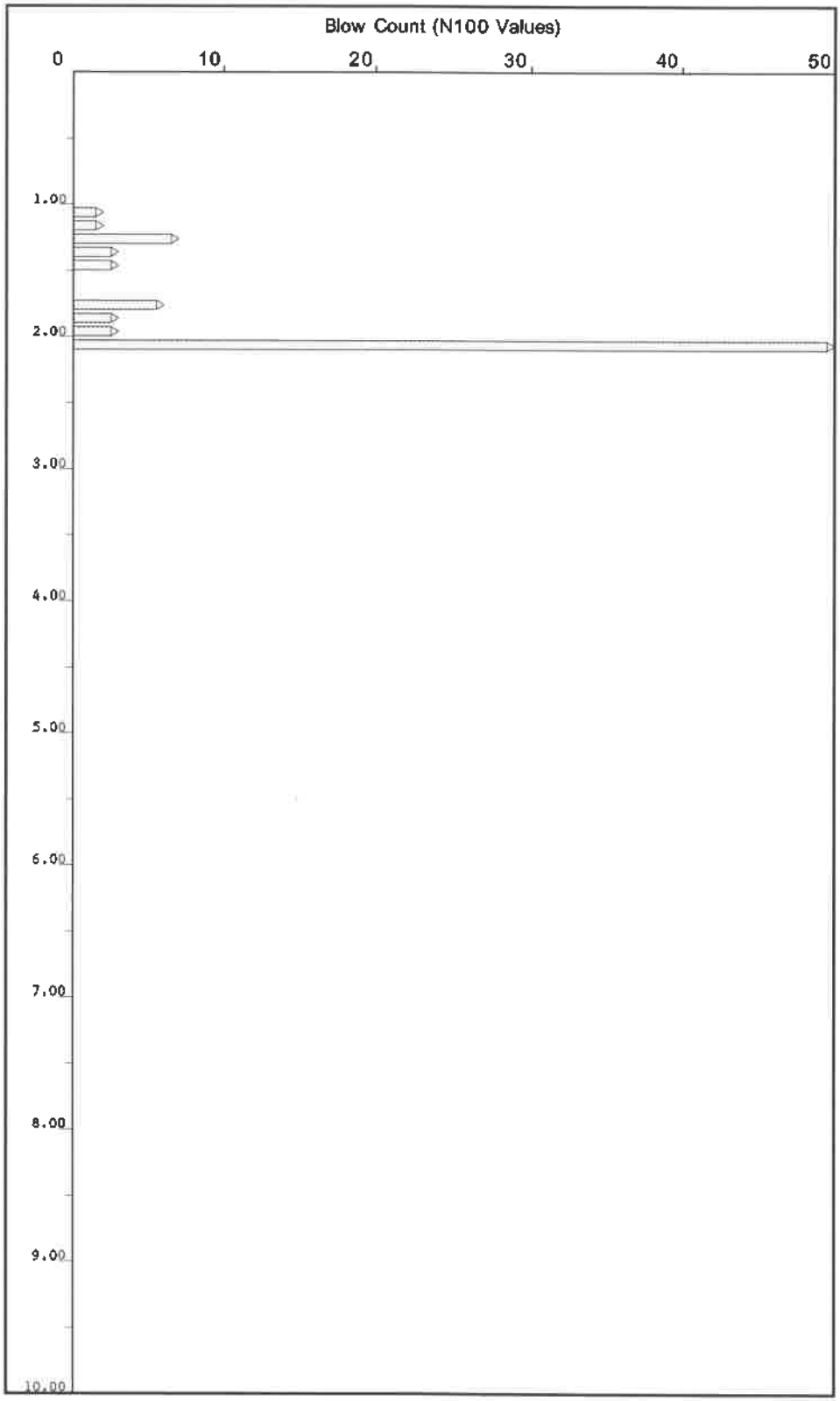
GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 10/04/19 Project Number 14727	PROBE No DP119 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

Depth (m)	Torque	Blows (100mm)
.1		-
.2		-
.3		-
.4		-
.5		-
.6		-
.7		-
.8		-
.9		-
1.0		-
.1		2
.2		2
.3		7
.4		3
.5		3
.6		0
.7		0
.8		6
.9		3
2.0		3
.1		50



Remarks :			
	Hammer	63.5 kg	14727
	Standard Drop	750 mm	
	Cone	50 mm dia	
	Rod	8kg / 35 mm	

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Site: **BRILL PLACE, LONDON NW1**

TRIAL PIT DP120

Date: 10/04/19

Pit Size: 0.35m L x 0.35m W x 1.10m D.

529861 mE 183132 mN

Ground Level: 20.13m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.20	D1			MADE GROUND - Soft, dark brown, slightly sandy, slightly gravelly, silty CLAY. Gravel of angular to sub-rounded flint, brick, concrete and ash.		0.30	19.83
0.50	D2			MADE GROUND - Soft, brown, slightly gravelly, sandy, silty CLAY with some cobbles of concrete and brick. Gravel of angular to sub-rounded flint, brick and concrete.			
1.00	D3					1.20	18.93
				Pit completed at 1.20m depth			

KEY

- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS

1. Live roots observed to at least 1.10m depth
2. Pit dry
3. Pit sides stable
4. Hole extended by dynamic probe to refusal at 4.10m depth

Project No	
14727	
Scale	Page
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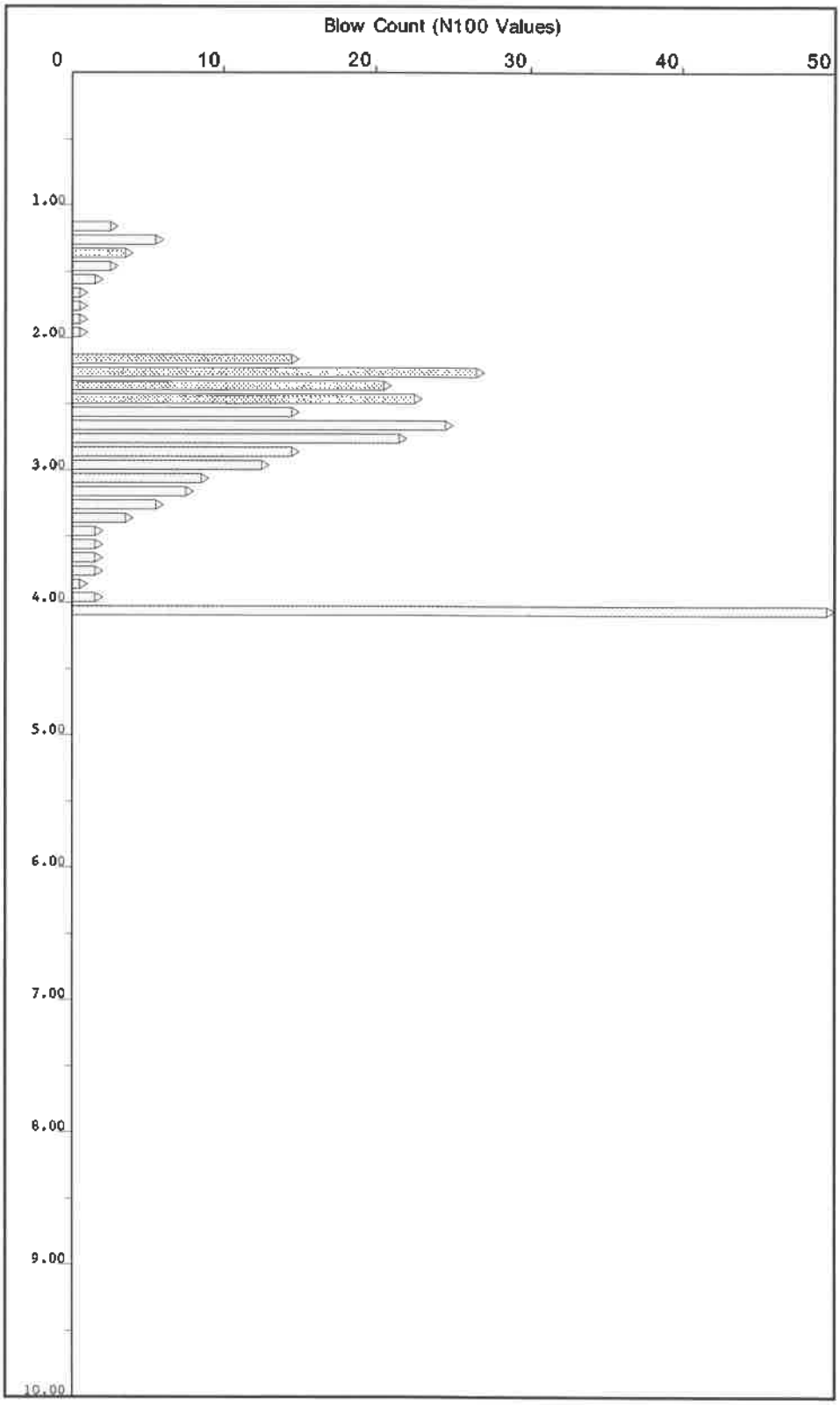
GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 10/04/19 Project Number 14727	PROBE No DP120 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

Depth (m)	Torque	Blows (100mm)
.1		-
.2		-
.3		-
.4		-
.5		-
.6		-
.7		-
.8		-
.9		-
1.0		-
.1		-
.2		3
.3		6
.4		4
.5		3
.6		2
.7		1
.8		1
.9		1
2.0		1
.1		0
.2		15
.3		27
.4		21
.5		23
.6		15
.7		25
.8		22
.9		15
3.0		13
.1		9
.2		8
.3		6
.4		4
.5		2
.6		2
.7		2
.8		2
.9		1
4.0		2
.1		50



Remarks :		
	Hammer	63.5 kg
	Standard Drop	750 mm
	Cone	50 mm dia
	Rod	8kg / 35 mm

14727

GROUND ENGINEERING LIMITED

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Site: **BRILL PLACE, LONDON NW1**

TRIAL PIT DP121

Date: 10/04/19

Pit Size: 0.30m L x 0.30m W x 1.00m D.

529866 mE 183134 mN

Ground Level: 20.09m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.30	D1			MADE GROUND - Soft, brown, slightly sandy, slightly gravelly, silty CLAY. Gravel of angular to sub-rounded concrete, brick and flint.		0.40	19.69
0.70	D2			MADE GROUND - Soft, light brown, slightly sandy, gravelly, sandy CLAY. Gravel of angular to sub-rounded concrete.		1.00	19.09
				Pit completed at 1.00m depth			

KEY

- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS

1. Live roots observed to at least 1.00m depth
2. Pit dry
3. Pit sides stable
4. Hole extended by dynamic probe to refusal at 2.40m depth

Project No	
14727	
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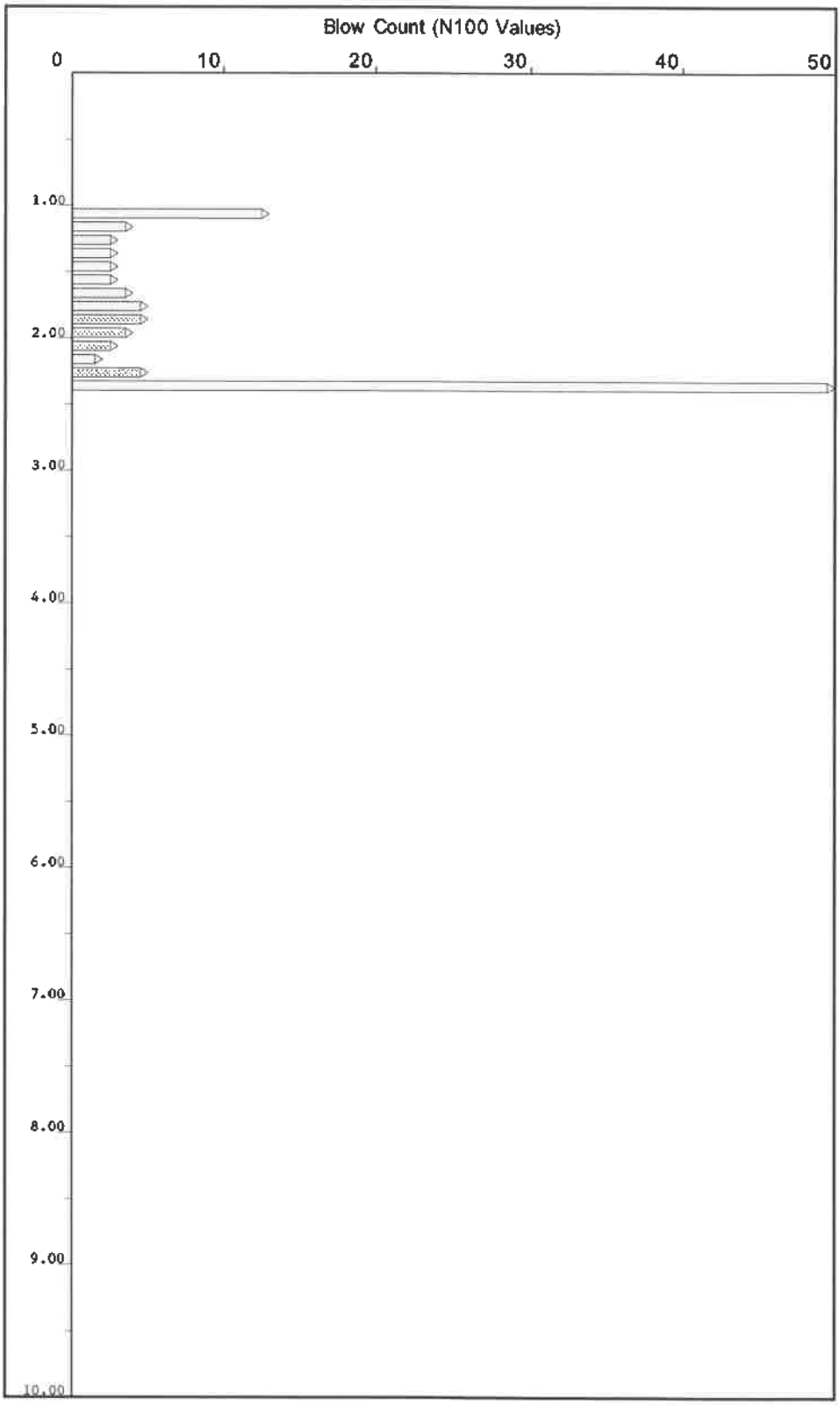
GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 10/04/19 Project Number 14727	PROBE No DP121 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

Depth (m)	Torque	Blows (100mm)
.1		-
.2		-
.3		-
.4		-
.5		-
.6		-
.7		-
.8		-
.9		-
1.0		-
.1		13
.2		4
.3		3
.4		3
.5		3
.6		3
.7		4
.8		5
.9		5
2.0		4
.1		3
.2		2
.3		5
.4		50



Remarks :			
	Hammer	63.5 kg	14727
	Standard Drop	750 mm	
	Cone	50 mm dia	
	Rod	8kg / 35 mm	

GROUND ENGINEERING LIMITED

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Site: **BRILL PLACE, LONDON NW1**

TRIAL PIT DP122

Date: 10/04/19

Pit Size: 0.35m L x 0.35m W x 0.90m D.

529870 mE 183137 mN

Ground Level: 19.66m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.20	D1			MADE GROUND - Soft, brown, slightly sandy, slightly gravelly, silty CLAY. Gravel of angular to sub-rounded concrete and flint.			
0.50	D2						
0.80	D3					0.90	18.76
				MADE GROUND - CONCRETE Pit abandoned at 0.90m depth			

KEY

- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS

1. Live roots observed to at least 0.90m depth
2. Pit dry
3. Pit sides stable
4. Pit abandoned at 0.90m depth due to concrete slab
5. Slab penetrated and hole extended by dynamic probe to refusal at 2.00m depth

Project No	
14727	
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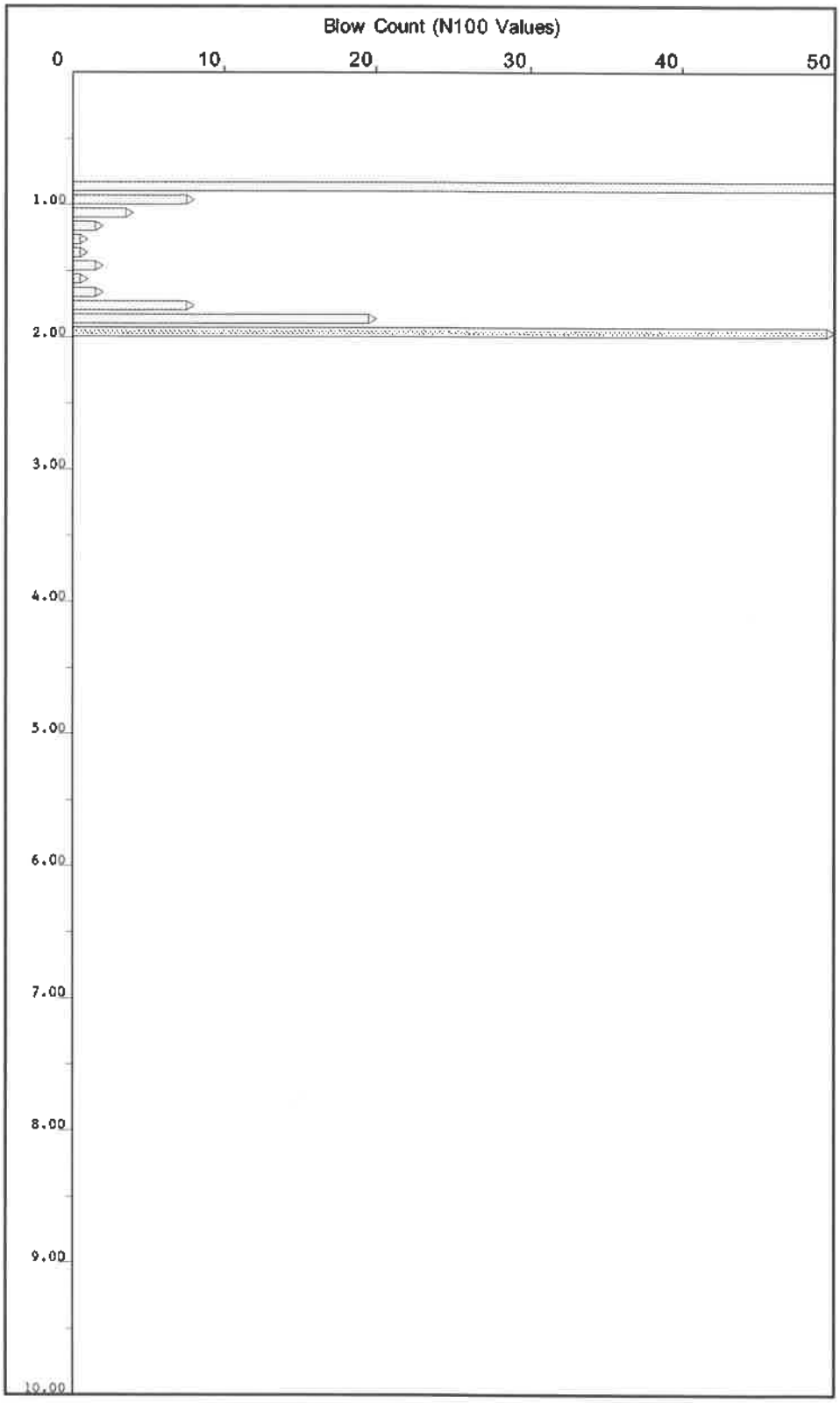
GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 10/04/19 Project Number 14727	PROBE No DP122 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

Depth (m)	Torque	Blows (100mm)
.1		-
.2		-
.3		-
.4		-
.5		-
.6		-
.7		-
.8		-
.9		66
1.0		8
.1		4
.2		2
.3		1
.4		1
.5		2
.6		1
.7		2
.8		8
.9		20
2.0		50



Remarks :			
	Hammer	63.5 kg	14727
	Standard Drop	750 mm	
	Cone	50 mm dia	
	Rod	8kg / 35 mm	

GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	Site: BRILL PLACE, LONDON NW1	TRIAL PIT DP123
	Date: 10/04/19 — Pit Size: 0.35m L x 0.35m W x 1.20m D.	529874 mE 183139 mN Ground Level: 19.10m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.30	D1			MADE GROUND - Soft, brown and dark brown mottled, slightly sandy, slightly gravelly, silty CLAY with some concrete cobbles. Gravel of angular to sub-rounded flint, brick, concrete and ash.			
0.70	D2					1.20	17.90
				Pit completed at 1.20m depth			

KEY
- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS
1. No live roots observed
2. Pit dry
3. Pit sides stable
4. Hole extended by dynamic probe to refusal at 1.70m depth

Project No 14727	
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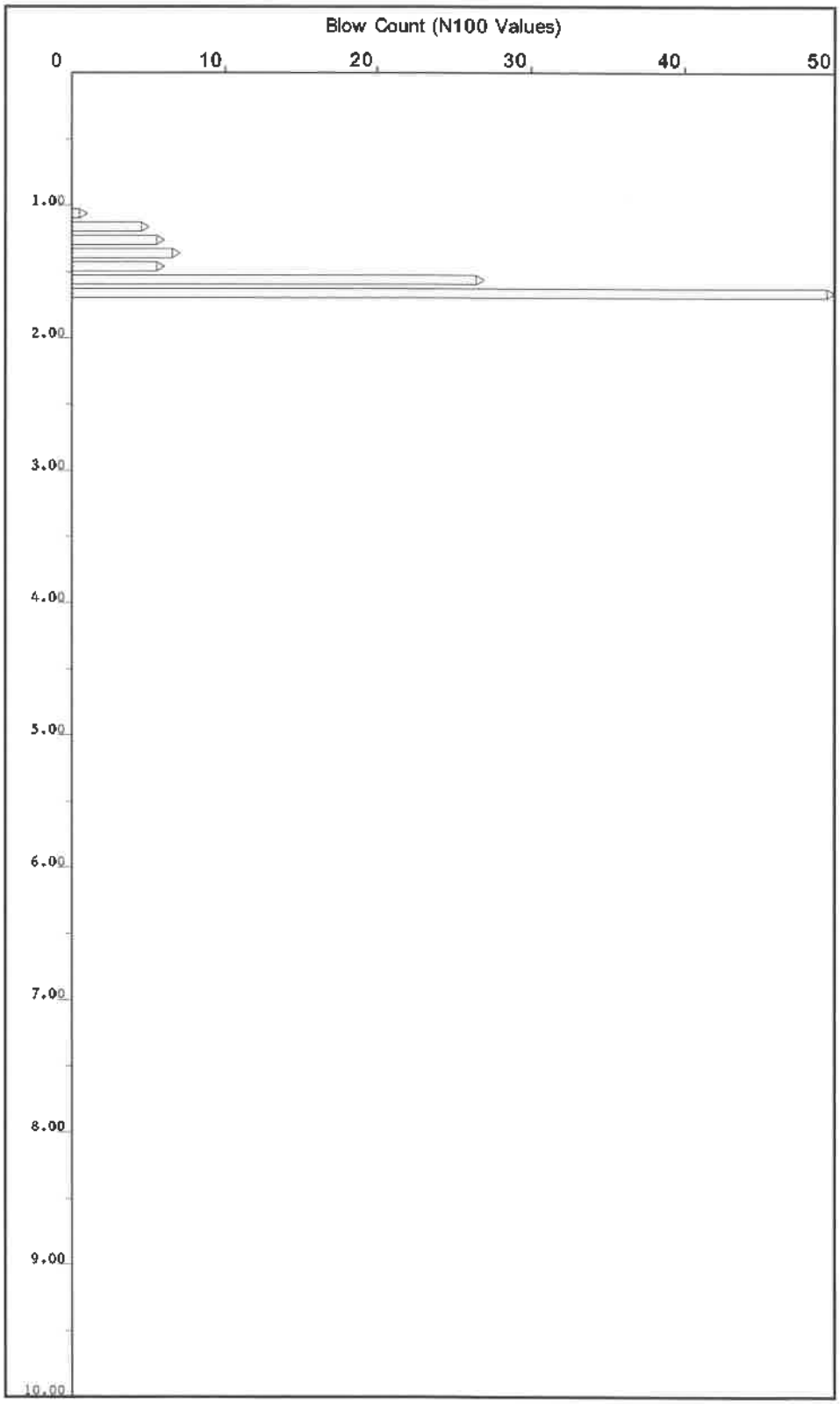
GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 10/04/19 Project Number 14727	PROBE No DP123 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

Depth (m)	Torque	Blows (100mm)
.1		-
.2		-
.3		-
.4		-
.5		-
.6		-
.7		-
.8		-
.9		-
1.0		-
.1		1
.2		5
.3		6
.4		7
.5		6
.6		27
.7		50



Remarks :			
	Hammer	63.5 kg	14727
	Standard Drop	750 mm	
	Cone	50 mm dia	
	Rod	8kg / 35 mm	

GROUND ENGINEERING LIMITED
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Site: BRILL PLACE, LONDON NW1

TRIAL PIT
DP124

Date: 10/04/19

Pit Size: 0.30m L x 0.30m W x 1.20m D.

529878 mE 183142 mN
Ground Level: 18.66m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.50	D1			MADE GROUND - Soft, brown, slightly sandy, slightly gravelly, silty CLAY with some concrete cobbles. Gravel of angular to sub-rounded flint, concrete, brick and ash.			
1.00	D2						
						1.20	17.46
				Pit completed at 1.20m depth			

KEY
- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS
1. Live roots observed to 1.00m depth
2. Pit dry
3. Pit sides stable
4. Hole extended by dynamic probe to 5.00m depth

Project No	
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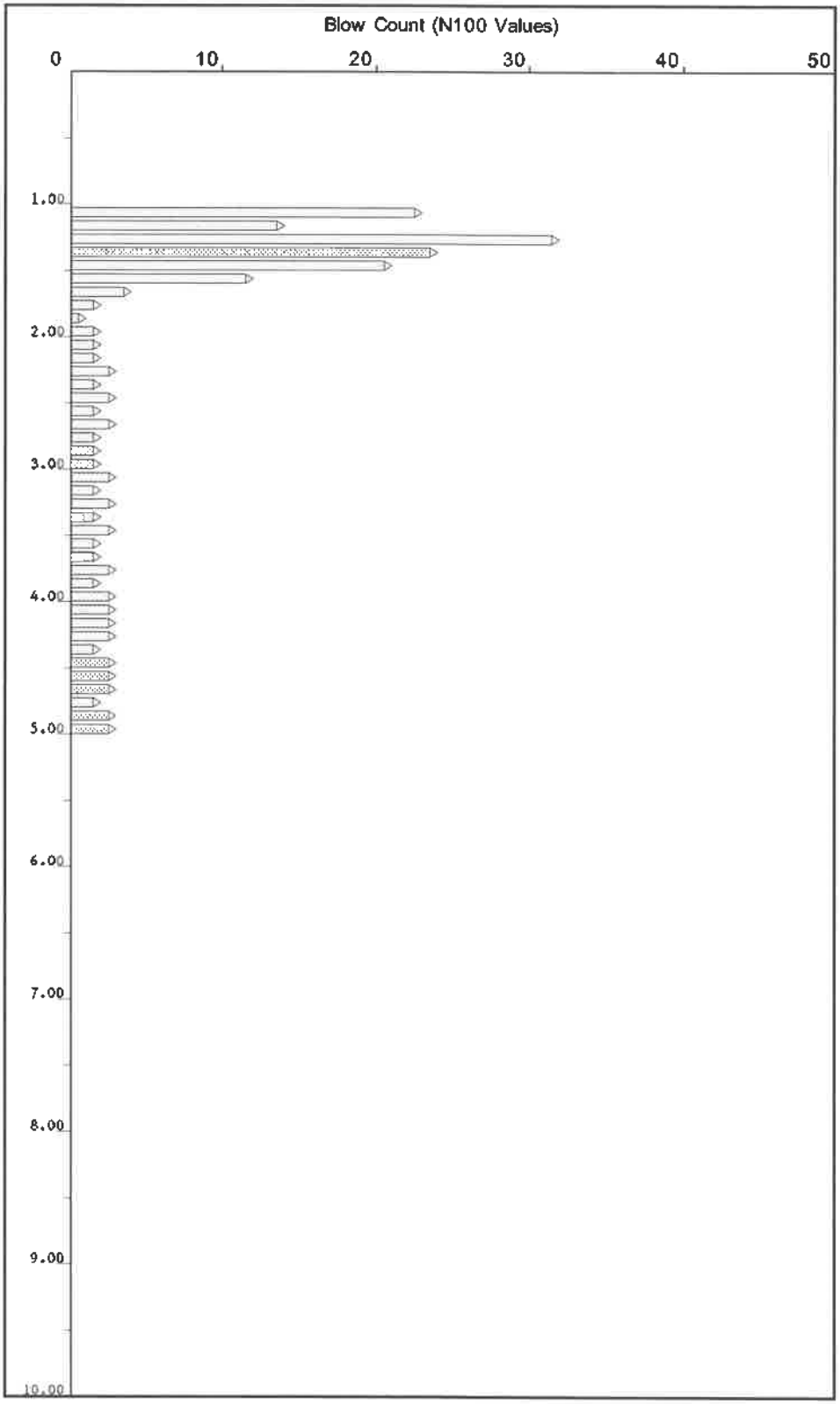
GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 10/04/19 Project Number 14727	PROBE No DP124 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

Depth (m)	Torque	Blows (100mm)
.1		-
.2		-
.3		-
.4		-
.5		-
.6		-
.7		-
.8		-
.9		-
1.0		-
.1		23
.2		14
.3		32
.4		24
.5		21
.6		12
.7		4
.8		2
.9		1
2.0		2
.1		2
.2		2
.3		3
.4		2
.5		3
.6		2
.7		3
.8		2
.9		2
3.0		2
.1		3
.2		2
.3		3
.4		2
.5		3
.6		2
.7		2
.8		3
.9		2
4.0		3
.1		3
.2		3
.3		3
.4		2
.5		3
.6		3
.7		3
.8		2
.9		3
5.0		3



Remarks :		
	Hammer	63.5 kg
	Standard Drop	750 mm
	Cone	50 mm dia
	Rod	8kg / 35 mm

14727

GROUND ENGINEERING LIMITED

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Site: **BRILL PLACE, LONDON NW1**

TRIAL PIT
DP125

Date: 10/04/19

Pit Size: 0.40m L x 0.35m W x 1.00m D.

529884 mE 183138 mN
Ground Level: 18.66m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.30	D1			MADE GROUND - Soft, brown, slightly sandy, slightly gravelly, silty CLAY with some concrete cobbles. Gravel of angular to sub-rounded flint, concrete, brick and ash.			
0.60	D2						
0.90	D3					1.20	17.46
				Pit completed at 1.20m depth			

KEY
- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS
1. Live roots observed to 0.70m depth
2. Pit dry
3. Pit sides stable
4. Hole extended by dynamic probe to 5.00m depth

Project No	
14727	
Scale	Page
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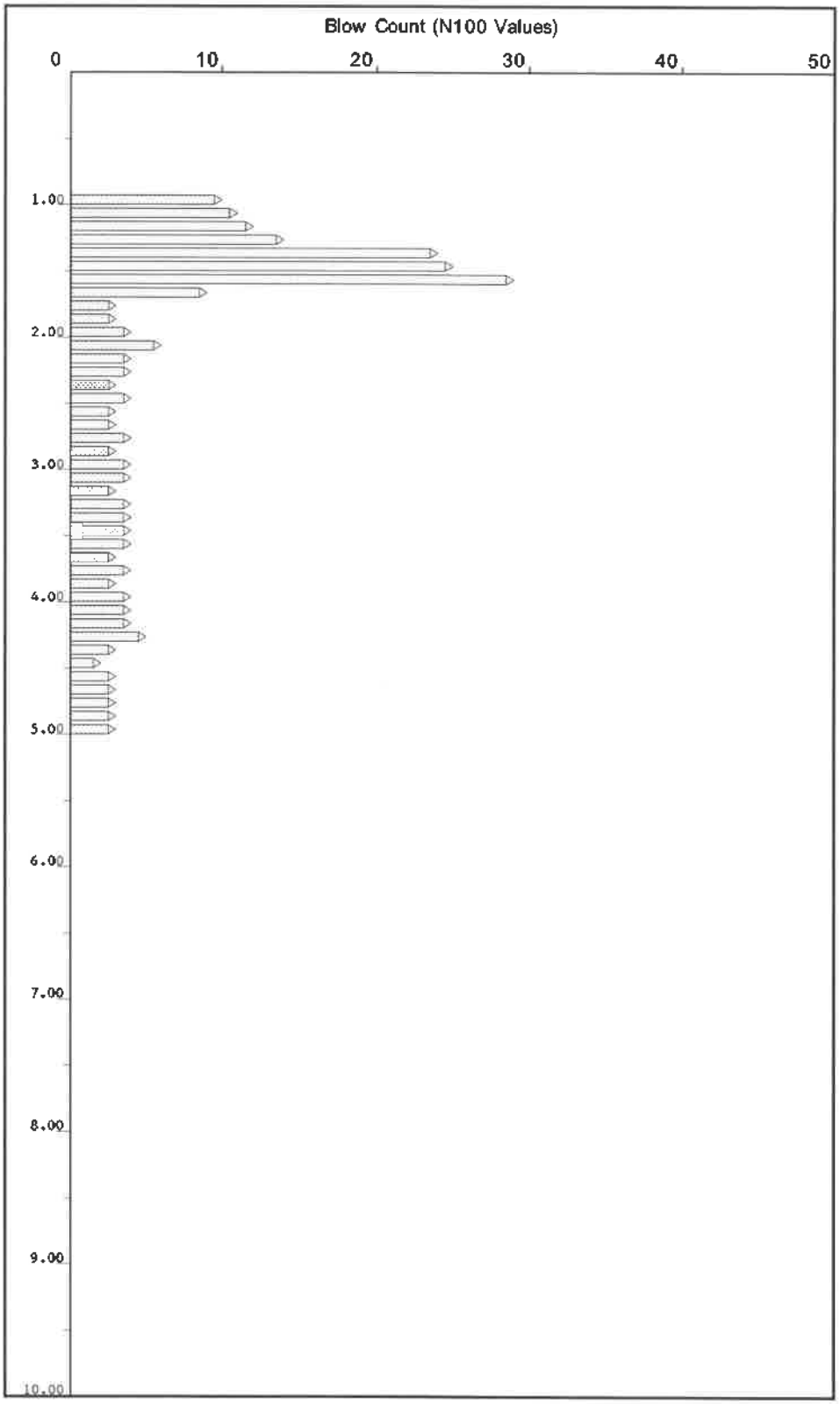
GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 10/04/19 Project Number 14727	PROBE No DP125 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

Depth (m)	Torque	Blows (100mm)
.1		-
.2		-
.3		-
.4		-
.5		-
.6		-
.7		-
.8		-
.9		-
1.0		10
.1		11
.2		12
.3		14
.4		24
.5		25
.6		29
.7		9
.8		3
.9		3
2.0		4
.1		6
.2		4
.3		4
.4		3
.5		4
.6		3
.7		3
.8		4
.9		3
3.0		4
.1		4
.2		3
.3		4
.4		4
.5		4
.6		4
.7		3
.8		4
.9		3
4.0		4
.1		4
.2		4
.3		5
.4		3
.5		2
.6		3
.7		3
.8		3
.9		3
5.0		3



Remarks :			
	Hammer	63.5 kg	14727
	Standard Drop	750 mm	
	Cone	50 mm dia	
	Rod	8kg / 35 mm	

GROUND ENGINEERING LIMITED

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Site: **BRILL PLACE, LONDON NW1**

TRIAL PIT DP126

Date: 10/04/19

Pit Size: 0.35m L x 0.30m W x 1.20m D.

529887 mE 183133 mN
Ground Level: 18.98m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.30	D1			MADE GROUND - Soft, brown and dark brown mottled, slightly sandy, slightly gravelly, silty CLAY with some concrete cobbles. Gravel of angular to sub-rounded flint, brick, concrete and ash.		0.40	18.58
0.70	D2			MADE GROUND - Soft, brown, slightly sandy, slightly gravelly, silty CLAY. Gravel of angular to sub-rounded concrete, brick, flint, ash and plastic pipe fragments.		1.20	17.78
1.10	D3			Pit completed at 1.20m depth			

KEY
- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS
1. Live roots observed to at least 1.20m depth
2. Pit dry
3. Pit sides stable
4. Hole extended by dynamic probe to 5.00m depth

Project No 14727

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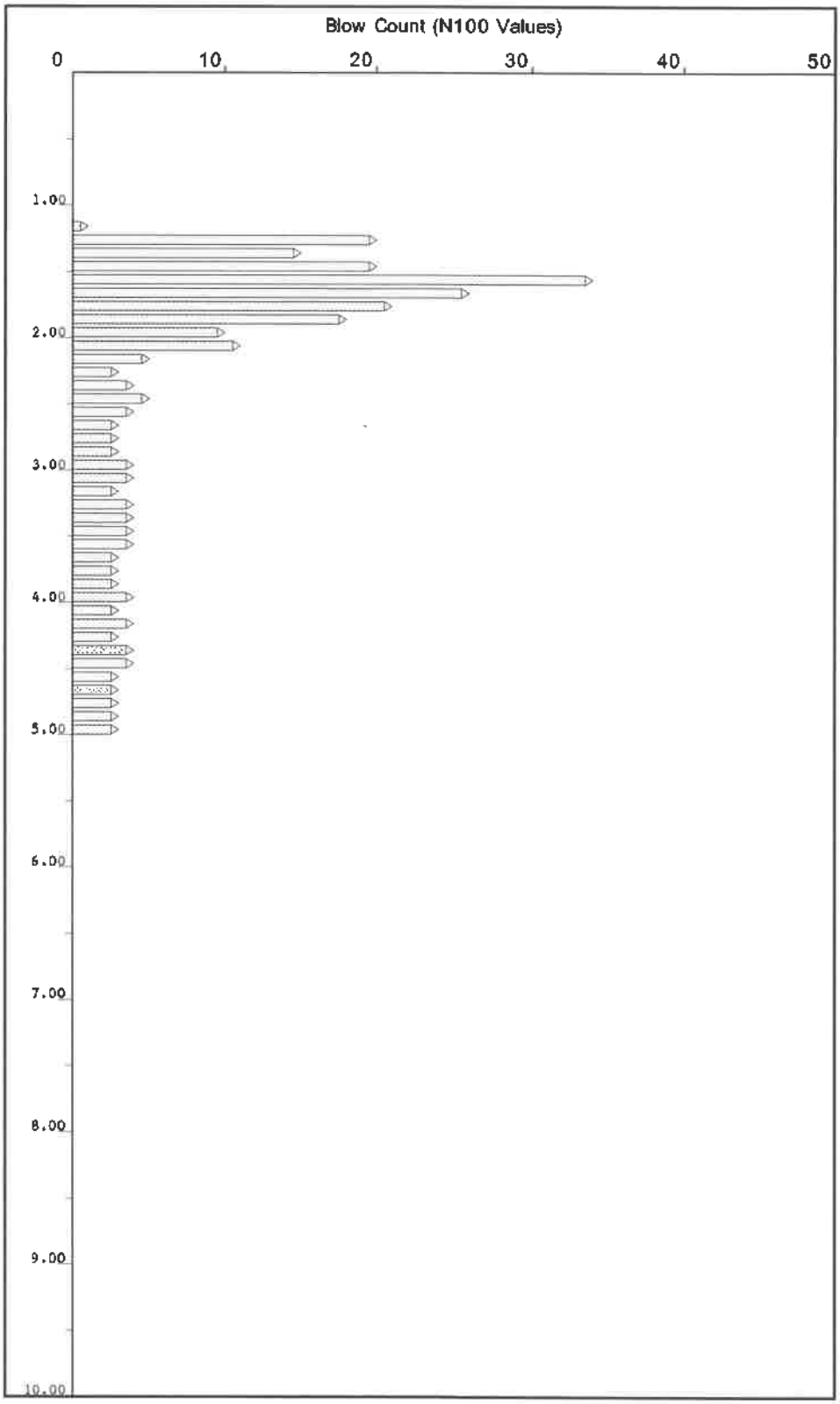
GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 10/04/19 Project Number 14727	PROBE No DP126 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

Depth (m)	Torque	Blows (100mm)
.1		-
.2		-
.3		-
.4		-
.5		-
.6		-
.7		-
.8		-
.9		-
1.0		-
.1		-
.2		1
.3		20
.4		15
.5		20
.6		34
.7		26
.8		21
.9		18
2.0		10
.1		11
.2		5
.3		3
.4		4
.5		5
.6		4
.7		3
.8		3
.9		3
3.0		4
.1		4
.2		3
.3		4
.4		4
.5		4
.6		4
.7		3
.8		3
.9		3
4.0		4
.1		3
.2		4
.3		3
.4		4
.5		4
.6		3
.7		3
.8		3
.9		3
5.0		3



Remarks :	Hammer	63.5 kg	14727
	Standard Drop	750 mm	
	Cone	50 mm dia	
	Rod	8kg / 35 mm	

GROUND ENGINEERING LIMITED
Tel: 01733-566666
www.groundengineering.co.uk

Site: BRILL PLACE, LONDON NW1

TRIAL PIT
DP127

Date: 10/04/19

Pit Size: 0.30m L x 0.30m W x 1.00m D.

529865 mE 183131 mN
Ground Level: 19.54m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
0.20	D1			MADE GROUND - Soft, dark brown and brown mottled, slightly sandy, slightly gravelly, silty CLAY. Gravel of angular to sub-rounded flint, brick, concrete and ash.		0.30	19.24
0.70	D2			MADE GROUND - Soft, brown, slightly sandy, slightly gravelly, silty CLAY with some concrete cobbles. Gravel of angular to sub-rounded concrete, flint, brick, concrete and ash.		1.00	18.54
				Pit completed at 1.00m depth			

KEY
- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ▽ Water Strike
- ▼ Water Rise
- ▼c Level on completion
- MP - Mackintosh Probe
- P( ) - Hand Penetrometer Cohesion ( ) kPa
- V - Vane Shear Test Cohesion ( ) kPa

REMARKS
1. Live roots observed to at least 1.00m depth
2. Pit dry
3. Pit sides stable
4. Hole extended by dynamic probe to refusal at 2.00m depth

Project No 14727

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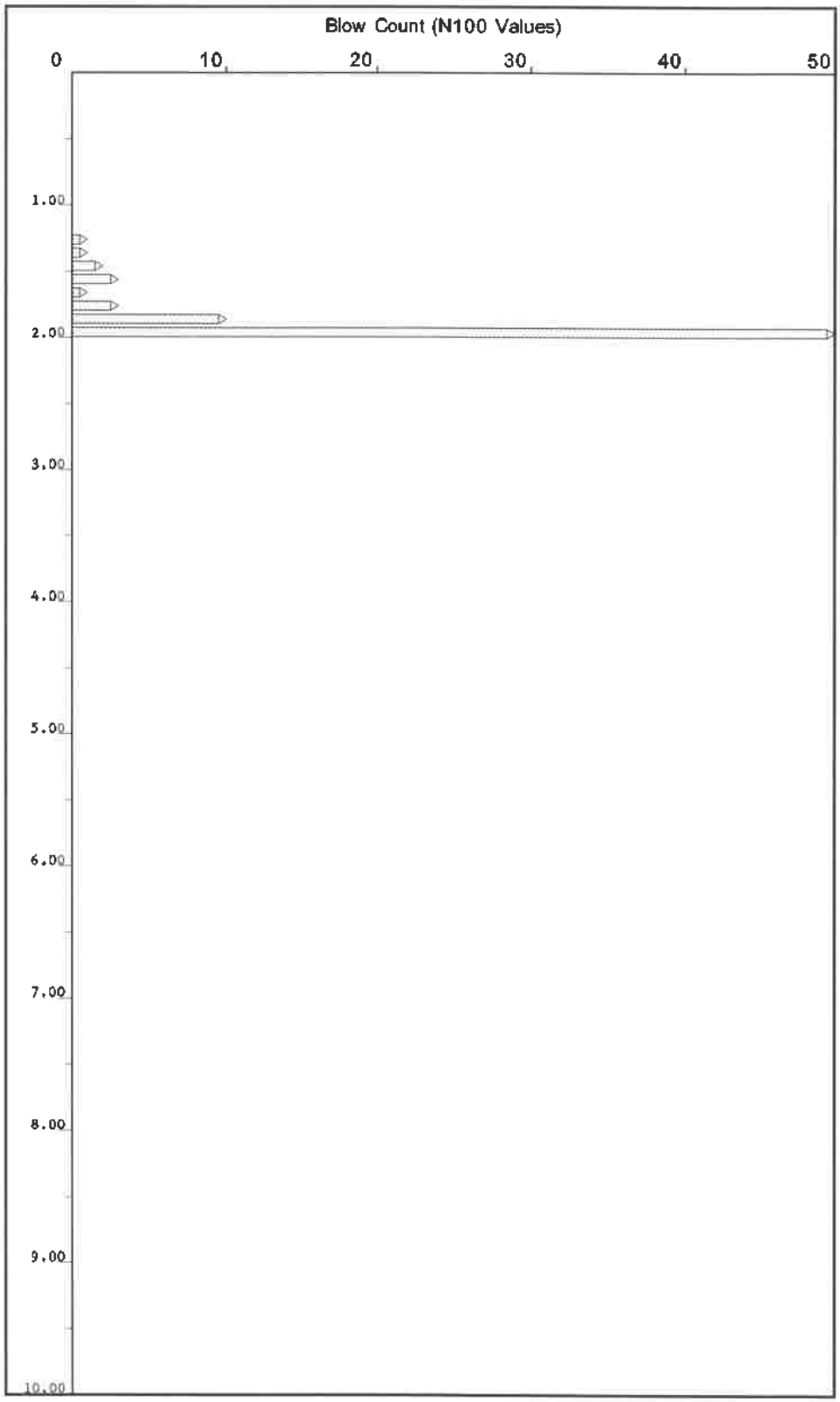
GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk	DYNAMIC PROBE PENETRATION TEST	Date 10/04/19 Project Number 14727	PROBE No DP127 Sheet 1 of 1
Method BS 1377 : Part 9 : Clause 3.2 (DPSH)	Client ED JERSEY LIMITED	Site BRILL PLACE, LONDON NW1	

Depth (m)	Torque	Blows (100mm)
.1		-
.2		-
.3		-
.4		-
.5		-
.6		-
.7		-
.8		-
.9		-
1.0		-
.1		-
.2		1
.3		1
.4		2
.5		3
.6		1
.7		3
.8		10
.9		50
2.0		



Remarks :	Hammer	63.5 kg	14727
	Standard Drop	750 mm	
	Cone	50 mm dia	
	Rod	8kg / 35 mm	

Groundwater/Gas Monitoring Record

GROUND ENGINEERING LIMITED

Site: **Brill Place, London NW1**

Report Ref: C14727

Date	Borehole	Methane (% v/v)		Carbon Dioxide (% v/v)		Oxygen (% v/v)		Flow Rate (l/hr)	Atmosph. Pressure (mb)	Depth of Well (m)	Depth to Groundwater (m)
		Peak	Steady	Peak	Steady	Min.	Max.				
18/04/19	WS 101	<0.1	<0.1	0.5	0.5	19.7	19.7	<0.1	1022	1.40	Dry
	WS 102A	<0.1	<0.1	0.9	0.9	19.5	19.5	<0.1	1022	1.00	Dry
	WS 103	<0.1	<0.1	1.1	1.1	19.3	19.3	<0.1	1022	2.50	Dry
	WS 104B	<0.1	<0.1	1.2	1.2	19.0	19.0	<0.1	1022	1.10	Dry

Groundwater/Gas Monitoring Record **GROUND ENGINEERING LIMITED**

Site: **Brill Place, London NW1**

Report Ref: C14727

Date	Borehole	Methane (% v/v)		Carbon Dioxide (% v/v)		Oxygen (% v/v)		Flow Rate (l/hr)	Atmosph. Pressure (mb)	Depth of Well (m)	Depth to Groundwater (m)
		Peak	Steady	Peak	Steady	Min.	Max.				
23/04/19	WS 101	<0.1	<0.1	0.6	0.6	19.4	19.4	<0.1	997	1.40	Dry
	WS 102A	<0.1	<0.1	0.9	0.9	19.3	19.3	<0.1	997	1.00	Dry
	WS 103	<0.1	<0.1	0.8	0.8	19.2	19.2	<0.1	997	2.50	Dry
	WS 104B	<0.1	<0.1	1.6	1.6	18.8	18.8	<0.1	997	1.10	Dry

Groundwater/Gas Monitoring Record

GROUND ENGINEERING LIMITED

Site: **Brill Place, London NW1**

Report Ref: **C14727**

Date	Borehole	Methane (% v/v)		Carbon Dioxide (% v/v)		Oxygen (% v/v)		Flow Rate (l/hr)	Atmosph. Pressure (mb)	Depth of Well (m)	Depth to Groundwater (m)
		Peak	Steady	Peak	Steady	Min.	Max.				
26/04/19	WS 101	<0.1	<0.1	0.9	0.9	19.4	19.4	<0.1	1008	1.40	Dry
	WS 102A	<0.1	<0.1	1.5	1.5	18.6	18.6	<0.1	1008	1.00	Dry
	WS 103	<0.1	<0.1	1.2	1.2	19.0	19.0	<0.1	1008	2.50	Dry
	WS 104B	<0.1	<0.1	1.5	1.5	18.9	18.9	<0.1	1008	1.10	Dry

Groundwater/Gas Monitoring Record **GROUND ENGINEERING LIMITED**

Site: **Brill Place, London NW1**

Report Ref: C14727

Date	Borehole	Methane (% v/v)		Carbon Dioxide (% v/v)		Oxygen (% v/v)		Flow Rate (l/hr)	Atmosph. Pressure (mb)	Depth of Well (m)	Depth to Groundwater (m)
		Peak	Steady	Peak	Steady	Min.	Max.				
29/04/19	WS 101	<0.1	<0.1	0.9	0.9	19.9	19.9	<0.1	1026	1.40	Dry
	WS 102A	<0.1	<0.1	0.6	0.6	20.2	20.2	<0.1	1026	1.00	Dry
	WS 103	<0.1	<0.1	1.2	1.2	19.3	19.3	<0.1	1026	2.50	Dry
	WS 104B	<0.1	<0.1	0.2	0.2	20.4	20.4	<0.1	1026	1.10	Dry

Groundwater/Gas Monitoring Record **GROUND ENGINEERING LIMITED**

Site: **Brill Place, London NW1**

Report Ref: C14727

Date	Borehole	Methane (% v/v)		Carbon Dioxide (% v/v)		Oxygen (% v/v)		Flow Rate (l/hr)	Atmosph. Pressure (mb)	Depth of Well (m)	Depth to Groundwater (m)
		Peak	Steady	Peak	Steady	Min.	Max.				
04/05/19	WS 101	<0.1	<0.1	0.7	0.7	20.2	20.2	<0.1	1006	1.40	Dry
	WS 102A	<0.1	<0.1	0.3	0.3	20.3	20.3	<0.1	1006	1.00	Dry
	WS 103	<0.1	<0.1	0.9	0.9	19.9	19.9	<0.1	1006	2.50	Dry
	WS 104B	<0.1	<0.1	<0.1	<0.1	20.6	20.6	<0.1	1006	1.10	Dry

Groundwater/Gas Monitoring Record

GROUND ENGINEERING LIMITED

Site: **Brill Place, London NW1**

Report Ref: **C14727**

Date	Borehole	Methane (% v/v)		Carbon Dioxide (% v/v)		Oxygen (% v/v)		Flow Rate (l/hr)	Atmosph. Pressure (mb)	Depth of Well (m)	Depth to Groundwater (m)
		Peak	Steady	Peak	Steady	Min.	Max.				
07/05/19	WS 101	<0.1	<0.1	1.1	1.1	19.9	19.9	<0.1	1015	1.40	Dry
	WS 102A	<0.1	<0.1	0.6	0.6	20.0	20.0	<0.1	1015	1.00	Dry
	WS 103	<0.1	<0.1	0.9	0.9	19.9	19.9	<0.1	1015	2.50	Dry
	WS 104B	<0.1	<0.1	0.5	0.5	20.2	20.2	<0.1	1015	1.10	Dry

APPENDIX 1 – CHEMICAL TEST RESULTS

UKAS TESTING
2183

Chemtest
The right chemistry to deliver results
Chemtest Ltd.
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	19-13609-1		
Initial Date of Issue:	29-Apr-2019		
Client	Ground Engineering Limited		
Client Address:	Newark Road Peterborough Cambridgeshire PE1 5UA		
Contact(s):	Steve Fleming		
Project	C14727 Brill Place, London NW1		
Quotation No.:		**Date Received:**	23-Apr-2019
Order No.:	C14727	**Date Instructed:**	23-Apr-2019
No. of Samples:	20		
Turnaround (Wkdays):	5	**Results Due:**	29-Apr-2019
Date Approved:	29-Apr-2019		
Approved By:			
Details:	Robert Monk, Technical Manager		

Chemtest
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Results - Soil

Project: C14727 Brill Place, London NW1

Client: Ground Engineering Limited					Chemtest Job No.:	19-13609	19-13609	19-13609	19-13609	19-13609	19-13609	19-13609	19-13609
Quotation No.:					Chemtest Sample ID.:	814387	814388	814389	814390	814391	814392	814393	814394
					Client Sample ID.:	D5	D1	D4	D1	D3	D2	D8	D11
					Sample Location:	WS101	WS101A	WS101A	WS102A	WS102A	WS103	WS103	WS103
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	1.30	0.10	1.00	0.20	1.00	0.40	2.30	3.00
					Date Sampled:	11-Apr-2019	11-Apr-2019	11-Apr-2019	11-Apr-2019	11-Apr-2019	10-Apr-2019	10-Apr-2019	10-Apr-2019
					Asbestos Lab:	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
pH	U	2010		N/A		8.7	9.9	9.0	8.1	8.8	8.4	7.9	7.8
Moisture	N	2030	%	0.020		15	9.6	15	18	13	13	21	19
Boron	N	2450	mg/kg	0.40		5.2	6.5	6.1	5.6	5.8	8.0	6.2	8.3
Sulphate (2:1 Water Soluble) as SO4	U	2120	g/l	0.010		0.063	0.28	0.13	0.026	0.073	0.10	0.78	1.0
Cyanide (Free)	U	2300	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	U	2450	mg/kg	1.0		12	14	17	13	20	18	9.0	41
Cadmium	U	2450	mg/kg	0.10		0.19	0.21	0.34	0.28	0.29	0.30	< 0.10	0.14
Chromium	U	2450	mg/kg	1.0		21	24	25	24	28	31	39	44
Copper	U	2450	mg/kg	0.50		25	33	59	31	52	35	30	34
Mercury	U	2450	mg/kg	0.10		0.27	0.22	0.42	0.32	0.75	0.84	< 0.10	0.10
Nickel	U	2450	mg/kg	0.50		19	22	21	17	24	30	34	56
Lead	U	2450	mg/kg	0.50		420	130	900	210	290	190	29	25
Selenium	U	2450	mg/kg	0.20		0.33	< 0.20	0.87	1.3	0.61	0.81	0.70	1.9
Zinc	U	2450	mg/kg	0.50		170	88	120	91	100	100	63	96
Chromium (Hexavalent)	N	2490	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter	U	2625	%	0.40		< 0.40	1.9	5.9	1.9	1.3	2.6	< 0.40	0.47
Acenaphthene	U	2700	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.25
Acenaphthylene	U	2700	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.56
Anthracene	U	2700	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.24	< 0.10	0.42
Benzo[a]anthracene	U	2700	mg/kg	0.10		< 0.10	7.9	11	1.4	1.8	0.88	< 0.10	< 0.10
Benzo[a]pyrene	U	2700	mg/kg	0.10		< 0.10	8.2	10	1.4	1.9	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	U	2700	mg/kg	0.10		< 0.10	8.8	9.6	2.2	2.7	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	U	2700	mg/kg	0.10		< 0.10	5.6	5.7	1.2	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	U	2700	mg/kg	0.10		< 0.10	4.2	5.1	1.1	1.2	< 0.10	< 0.10	< 0.10
Chrysene	U	2700	mg/kg	0.10		< 0.10	9.0	11	1.9	2.3	0.95	< 0.10	< 0.10
Dibenz(a,h)Anthracene	U	2700	mg/kg	0.10		< 0.10	1.6	1.3	0.73	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	U	2700	mg/kg	0.10		2.0	16	26	2.4	3.7	1.5	< 0.10	0.65
Fluorene	U	2700	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.46
Indeno(1,2,3-c,d)Pyrene	U	2700	mg/kg	0.10		< 0.10	5.7	5.6	0.92	< 0.10	< 0.10	< 0.10	< 0.10
Naphthalene	U	2700	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	U	2700	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.95	< 0.10	1.3
Pyrene	U	2700	mg/kg	0.10		2.1	16	25	2.5	3.8	1.7	< 0.10	0.67
Total Of 16 PAH's	U	2700	mg/kg	2.0		4.1	83	110	16	17	6.2	< 2.0	4.3
Total Phenols	U	2920	mg/kg	0.30		< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
ACM Type	U	2192		N/A		-	-	-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Chemtest
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Project: C14727 Brill Place, London NW1

Results - Soil

Client: Ground Engineering Limited					Chemtest Job No.:	19-13609	19-13609	19-13609	19-13609	19-13609	19-13609	19-13609	19-13609
Quotation No.:					Chemtest Sample ID.:	814387	814388	814389	814390	814391	814392	814393	814394
					Client Sample ID.:	D5	D1	D4	D1	D3	D2	D8	D11
					Sample Location:	WS101	WS101A	WS101A	WS102A	WS102A	WS103	WS103	WS103
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	1.30	0.10	1.00	0.20	1.00	0.40	2.30	3.00
					Date Sampled:	11-Apr-2019	11-Apr-2019	11-Apr-2019	11-Apr-2019	11-Apr-2019	10-Apr-2019	10-Apr-2019	10-Apr-2019
					Asbestos Lab:	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Detection Stage	U	2192		N/A		-	-	-	-	-	-	-	-
Asbestos by Gravimetry	U	2192	%	0.001									
Total Asbestos	N	2192	%	0.001									
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	U	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	U	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	U	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	U	2680	mg/kg	1.0		< 1.0	19	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	U	2680	mg/kg	1.0		47	80	24	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0		47	100	24	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	U	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	U	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0		< 1.0	35	8.3	22	30	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	U	2680	mg/kg	1.0		9.1	480	86	120	97	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	7.5	4.4	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		9.1	520	95	150	130	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		56	620	120	150	130	< 10	< 10	< 10
Benzene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Resorcinol	U	2920	mg/kg	0.050		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Phenol	U	2920	mg/kg	0.050		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cresols	U	2920	mg/kg	0.050		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Xylenols	U	2920	mg/kg	0.050		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
1-Naphthol	N	2920	mg/kg	0.050		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Trimethylphenols	U	2920	mg/kg	0.050		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050

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Results - Soil

Project: C14727 Brill Place, London NW1

Client: Ground Engineering Limited		Chemtest Job No.:			19-13609	19-13609	19-13609	19-13609	19-13609	19-13609	19-13609	19-13609
Quotation No.:		Chemtest Sample ID.:			814395	814396	814397	814398	814399	814400	814401	814402
		Client Sample ID.:			D16	D2	D5	D7	D2	D2	D3	D1
		Sample Location:			WS103	WS104	WS104	WS104	WS104A	DP101	DP110	DP115
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			4.70	0.30	1.20	1.80	0.40	0.70	0.50	0.30
		Date Sampled:			10-Apr-2019	10-Apr-2019	10-Apr-2019	10-Apr-2019	10-Apr-2019	08-Apr-2019	09-Apr-2019	09-Apr-2019
		Asbestos Lab:			LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
pH	U	2010		N/A	7.9	8.0	8.9	8.2	9.4	9.0	8.8	9.2
Moisture	N	2030	%	0.020	22	18	15	19	14	16	18	6.0
Boron	N	2450	mg/kg	0.40	12	7.0	8.0	11	5.5	7.5	6.6	9.1
Sulphate (2:1 Water Soluble) as SO4	U	2120	g/l	0.010	0.82	0.043	0.12	0.080	0.11	0.064	0.023	0.15
Cyanide (Free)	U	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	[B] < 0.50	< 0.50	< 0.50
Arsenic	U	2450	mg/kg	1.0	14	14	22	11	16	17	18	20
Cadmium	U	2450	mg/kg	0.10	0.80	0.29	0.36	0.10	0.34	0.25	0.31	0.46
Chromium	U	2450	mg/kg	1.0	47	34	120	50	26	31	38	16
Copper	U	2450	mg/kg	0.50	32	31	56	31	29	38	36	15
Mercury	U	2450	mg/kg	0.10	< 0.10	0.40	0.49	< 0.10	0.28	0.67	0.65	0.19
Nickel	U	2450	mg/kg	0.50	48	28	29	45	21	27	28	12
Lead	U	2450	mg/kg	0.50	19	160	350	26	400	300	240	290
Selenium	U	2450	mg/kg	0.20	0.94	1.2	0.78	0.75	1.0	0.85	0.74	0.36
Zinc	U	2450	mg/kg	0.50	73	91	160	70	80	97	110	63
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter	U	2625	%	0.40	0.64	3.3	8.1	0.43	3.3	2.6	1.7	0.91
Acenaphthene	U	2700	mg/kg	0.10	< 0.10	1.2	0.68	< 0.10	1.2	< 0.10	< 0.10	< 0.10
Acenaphthylene	U	2700	mg/kg	0.10	< 0.10	0.30	0.85	< 0.10	0.41	< 0.10	< 0.10	< 0.10
Anthracene	U	2700	mg/kg	0.10	< 0.10	1.0	1.4	< 0.10	1.0	0.32	0.40	1.1
Benzo[a]anthracene	U	2700	mg/kg	0.10	< 0.10	1.6	3.3	< 0.10	2.4	0.76	1.5	1.9
Benzo[a]pyrene	U	2700	mg/kg	0.10	< 0.10	< 0.10	2.9	< 0.10	1.5	< 0.10	1.6	1.5
Benzo[b]fluoranthene	U	2700	mg/kg	0.10	< 0.10	< 0.10	3.5	< 0.10	2.4	< 0.10	1.7	2.2
Benzo[g,h,i]perylene	U	2700	mg/kg	0.10	< 0.10	< 0.10	2.4	< 0.10	1.0	< 0.10	1.3	1.3
Benzo[k]fluoranthene	U	2700	mg/kg	0.10	< 0.10	< 0.10	1.8	< 0.10	0.98	< 0.10	0.99	0.92
Chrysene	U	2700	mg/kg	0.10	< 0.10	1.8	3.3	< 0.10	2.4	0.79	1.6	1.9
Dibenz(a,h)Anthracene	U	2700	mg/kg	0.10	< 0.10	< 0.10	0.28	< 0.10	0.19	< 0.10	0.13	0.14
Fluoranthene	U	2700	mg/kg	0.10	< 0.10	5.4	7.6	< 0.10	7.6	1.3	3.2	4.9
Fluorene	U	2700	mg/kg	0.10	< 0.10	0.80	0.86	< 0.10	0.70	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	2700	mg/kg	0.10	< 0.10	< 0.10	2.0	< 0.10	0.90	< 0.10	1.3	1.0
Naphthalene	U	2700	mg/kg	0.10	< 0.10	2.0	2.7	< 0.10	1.6	< 0.10	< 0.10	< 0.10
Phenanthrene	U	2700	mg/kg	0.10	< 0.10	6.4	6.1	< 0.10	6.7	0.99	1.9	3.8
Pyrene	U	2700	mg/kg	0.10	< 0.10	5.1	7.3	< 0.10	7.4	1.4	3.2	4.5
Total Of 16 PAH's	U	2700	mg/kg	2.0	< 2.0	26	47	< 2.0	38	5.6	19	25
Total Phenols	U	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
ACM Type	U	2192		N/A	-	-	Fibres/Clumps	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	Amosite	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

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Results - Soil

Project: C14727 Brill Place, London NW1

Client: Ground Engineering Limited		Chemtest Job No.:			19-13609	19-13609	19-13609	19-13609	19-13609	19-13609	19-13609	19-13609
Quotation No.:		Chemtest Sample ID.:			814395	814396	814397	814398	814399	814400	814401	814402
		Client Sample ID.:			D16	D2	D5	D7	D2	D2	D3	D1
		Sample Location:			WS103	WS104	WS104	WS104	WS104A	DP101	DP110	DP115
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			4.70	0.30	1.20	1.80	0.40	0.70	0.50	0.30
		Date Sampled:			10-Apr-2019	10-Apr-2019	10-Apr-2019	10-Apr-2019	10-Apr-2019	08-Apr-2019	09-Apr-2019	09-Apr-2019
		Asbestos Lab:			LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
ACM Detection Stage	U	2192		N/A	-	-	Stereo Microscopy	-	-	-	-	-
Asbestos by Gravimetry	U	2192	%	0.001			<0.001					
Total Asbestos	N	2192	%	0.001			<0.001					
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	[B] < 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	U	2680	mg/kg	1.0	< 1.0	6.5	4.1	< 1.0	4.6	[B] < 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0	< 1.0	20	20	< 1.0	16	[B] < 1.0	< 1.0	7.1
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	45	33	< 1.0	60	[B] < 1.0	< 1.0	57
Aromatic TPH >C21-C35	U	2680	mg/kg	1.0	< 1.0	62	64	< 1.0	100	[B] < 1.0	< 1.0	96
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.2	[B] < 1.0	< 1.0	2.8
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	130	120	< 5.0	190	[B] < 5.0	< 5.0	160
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	130	120	< 10	190	[B] < 10	< 10	160
Benzene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Toluene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Ethylbenzene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
m & p-Xylene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
o-Xylene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Resorcinol	U	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Phenol	U	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cresols	U	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Xylenols	U	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
1-Naphthol	N	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Trimethylphenols	U	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050

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Results - Soil

Project: C14727 Brill Place, London NW1

Client: Ground Engineering Limited					Chemtest Job No.:	19-13609	19-13609	19-13609	19-13609
Quotation No.:					Chemtest Sample ID.:	814403	814404	814405	814406
					Client Sample ID.:	D2	D1	D2	D1
					Sample Location:	DP117	DP121	DP126	DP127
					Sample Type:	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.70	0.30	0.70	0.20
					Date Sampled:	09-Apr-2019	10-Apr-2019	10-Apr-2019	10-Apr-2019
					Asbestos Lab:	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL
Determinand	**Accred.**	**SOP**	**Units**	**LOD**					
pH	U	2010		N/A		9.5	8.7	8.6	8.8
Moisture	N	2030	%	0.020		9.8	13	12	16
Boron	N	2450	mg/kg	0.40		10	14	12	9.9
Sulphate (2:1 Water Soluble) as SO4	U	2120	g/l	0.010		0.12	0.12	< 0.010	0.029
Cyanide (Free)	U	2300	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	U	2450	mg/kg	1.0		19	15	14	15
Cadmium	U	2450	mg/kg	0.10		0.51	0.63	0.25	0.54
Chromium	U	2450	mg/kg	1.0		26	31	28	26
Copper	U	2450	mg/kg	0.50		28	30	35	51
Mercury	U	2450	mg/kg	0.10		0.28	0.43	0.52	0.38
Nickel	U	2450	mg/kg	0.50		17	22	27	19
Lead	U	2450	mg/kg	0.50		220	140	170	130
Selenium	U	2450	mg/kg	0.20		0.73	1.2	0.86	1.2
Zinc	U	2450	mg/kg	0.50		140	90	82	120
Chromium (Hexavalent)	N	2490	mg/kg	0.50		< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter	U	2625	%	0.40		2.6	1.9	1.7	3.8
Acenaphthene	U	2700	mg/kg	0.10		< 0.10	< 0.10	1.6	< 0.10
Acenaphthylene	U	2700	mg/kg	0.10		< 0.10	< 0.10	1.2	< 0.10
Anthracene	U	2700	mg/kg	0.10		0.73	0.48	3.0	0.49
Benzo[a]anthracene	U	2700	mg/kg	0.10		2.2	0.74	4.7	1.1
Benzo[a]pyrene	U	2700	mg/kg	0.10		2.3	< 0.10	3.6	< 0.10
Benzo[b]fluoranthene	U	2700	mg/kg	0.10		2.7	< 0.10	4.1	< 0.10
Benzo[g,h,i]perylene	U	2700	mg/kg	0.10		1.9	< 0.10	2.3	< 0.10
Benzo[k]fluoranthene	U	2700	mg/kg	0.10		1.3	< 0.10	2.1	< 0.10
Chrysene	U	2700	mg/kg	0.10		2.2	1.3	4.4	1.3
Dibenz(a,h)Anthracene	U	2700	mg/kg	0.10		0.22	< 0.10	0.34	< 0.10
Fluoranthene	U	2700	mg/kg	0.10		4.5	1.7	14	2.5
Fluorene	U	2700	mg/kg	0.10		< 0.10	< 0.10	1.2	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	2700	mg/kg	0.10		1.7	< 0.10	2.1	< 0.10
Naphthalene	U	2700	mg/kg	0.10		< 0.10	< 0.10	4.6	< 0.10
Phenanthrene	U	2700	mg/kg	0.10		2.3	0.80	13	1.4
Pyrene	U	2700	mg/kg	0.10		4.6	1.7	13	2.5
Total Of 16 PAH's	U	2700	mg/kg	2.0		27	6.7	75	9.3
Total Phenols	U	2920	mg/kg	0.30		< 0.30	< 0.30	< 0.30	< 0.30
ACM Type	U	2192		N/A		-	-	-	-
Asbestos Identification	U	2192	%	0.001		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

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Results - Soil

Project: C14727 Brill Place, London NW1

Client: Ground Engineering Limited			Chemtest Job No.:		19-13609	19-13609	19-13609	19-13609
Quotation No.:			Chemtest Sample ID.:		814403	814404	814405	814406
			Client Sample ID.:		D2	D1	D2	D1
			Sample Location:		DP117	DP121	DP126	DP127
			Sample Type:		SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.70	0.30	0.70	0.20
			Date Sampled:		09-Apr-2019	10-Apr-2019	10-Apr-2019	10-Apr-2019
			Asbestos Lab:		LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
ACM Detection Stage	U	2192		N/A	-	-	-	-
Asbestos by Gravimetry	U	2192	%	0.001				
Total Asbestos	N	2192	%	0.001				
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	U	2680	mg/kg	1.0	37	20	< 1.0	43
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	37	20	< 5.0	43
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	U	2680	mg/kg	1.0	< 1.0	< 1.0	4.2	< 1.0
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0	< 1.0	< 1.0	55	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	11	6.8	270	< 1.0
Aromatic TPH >C21-C35	U	2680	mg/kg	1.0	65	33	380	20
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	11	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	75	40	720	20
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	110	60	720	63
Benzene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Resorcinol	U	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Phenol	U	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cresols	U	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Xylenols	U	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050
1-Naphthol	N	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Trimethylphenols	U	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050

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Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
814400		D2	DP101	08-Apr-2019	B	Amber Glass 250ml
814400		D2	DP101	08-Apr-2019	B	Plastic Tub 500g

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Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

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Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis
The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis **TPH**, **BTEX**, VOCs, SVOCs, PCBs, Phenols
For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

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UKAS TESTING
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Final Report

Report No.:	19-13614-1		
Initial Date of Issue:	01-May-2019		
Client	Ground Engineering Limited		
Client Address:	Newark Road Peterborough Cambridgeshire PE1 5UA		
Contact(s):	Steve Fleming		
Project	C14727 Brill Place, London NW1		
Quotation No.:		**Date Received:**	23-Apr-2019
Order No.:	C14727	**Date Instructed:**	23-Apr-2019
No. of Samples:	6		
Turnaround (Wkdays):	7	**Results Due:**	01-May-2019
Date Approved:	01-May-2019		
Approved By:			
Details:	Robert Monk, Technical Manager		

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Results - 2 Stage WAC

Project: C14727 Brill Place, London NW1

							Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	19-13614						**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Chemtest Sample ID:	814413								
Sample Ref:									
Sample ID:	D4								
Sample Location:	WS101A								
Top Depth(m):	1.00								
Bottom Depth(m):									
Sampling Date:	11-Apr-2019								
Determinand	**SOP**	**Accred.**	**Units**						
Total Organic Carbon	2625	U	%			1.2	3	5	6
Loss On Ignition	2610	U	%			2.4	--	--	10
Total BTEX	2760	U	mg/kg			< 0.010	6	--	--
Total PCBs (7 Congeners)	2815	U	mg/kg			< 0.10	1	--	--
TPH Total WAC (Mineral Oil)	2670	U	mg/kg			100	500	--	--
Total (Of 17) PAH's	2700	N	mg/kg			2.7	100	--	--
pH	2010	U				10.6	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg			0.035	--	To evaluate	To evaluate
Eluate Analysis			**2:1 mg/l**	**8:1 mg/l**	**2:1 mg/kg**	**Cumulative mg/kg 10:1**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1450	U	0.0025	0.0028	< 0.050	< 0.050	0.5	2	25
Barium	1450	U	0.012	0.0073	< 0.50	< 0.50	20	100	300
Cadmium	1450	U	< 0.00010	< 0.00010	< 0.010	< 0.010	0.04	1	5
Chromium	1450	U	0.0098	0.0011	< 0.050	< 0.050	0.5	10	70
Copper	1450	U	0.037	0.010	0.073	0.057	2	50	100
Mercury	1450	U	< 0.00050	< 0.00050	< 0.0010	< 0.0050	0.01	0.2	2
Molybdenum	1450	U	0.031	0.0055	0.062	0.094	0.5	10	30
Nickel	1450	U	0.0037	0.0017	< 0.050	< 0.050	0.4	10	40
Lead	1450	U	0.0012	0.0078	< 0.010	0.068	0.5	10	50
Antimony	1450	U	0.0080	0.0042	0.016	0.048	0.06	0.7	5
Selenium	1450	U	0.0034	< 0.0010	< 0.010	< 0.010	0.1	0.5	7
Zinc	1450	U	0.0032	< 0.0010	< 0.50	< 0.50	4	50	200
Chloride	1220	U	11	3.2	22	44	800	15000	25000
Fluoride	1220	U	0.55	0.32	1.1	3.5	10	150	500
Sulphate	1220	U	130	31	260	470	1000	20000	50000
Total Dissolved Solids	1020	N	290	120	570	1400	4000	60000	100000
Phenol Index	1920	U	1.5	0.16	3.0	3.7	1	-	-
Dissolved Organic Carbon	1610	U	35	25	68	260	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.175
Moisture (%)	12

Leachate Test Information	
Leachant volume 1st extract/l	0.327
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.268

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Results - 2 Stage WAC

Project: C14727 Brill Place, London NW1

							Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	19-13614						**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Chemtest Sample ID:	814414								
Sample Ref:									
Sample ID:	D3								
Sample Location:	WS102A								
Top Depth(m):	1.00								
Bottom Depth(m):									
Sampling Date:	11-Apr-2019								
Determinand	**SOP**	**Accred.**	**Units**						
Total Organic Carbon	2625	U	%			1.7	3	5	6
Loss On Ignition	2610	U	%			3.6	--	--	10
Total BTEX	2760	U	mg/kg			< 0.010	6	--	--
Total PCBs (7 Congeners)	2815	U	mg/kg			< 0.10	1	--	--
TPH Total WAC (Mineral Oil)	2670	U	mg/kg			77	500	--	--
Total (Of 17) PAH's	2700	N	mg/kg			44	100	--	--
pH	2010	U				8.8	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg			0.053	--	To evaluate	To evaluate
Eluate Analysis			**2:1 mg/l**	**8:1 mg/l**	**2:1 mg/kg**	**Cumulative mg/kg 10:1**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1450	U	0.0049	0.0067	< 0.050	0.065	0.5	2	25
Barium	1450	U	0.011	0.0054	< 0.50	< 0.50	20	100	300
Cadmium	1450	U	< 0.00010	< 0.00010	< 0.010	< 0.010	0.04	1	5
Chromium	1450	U	0.0082	0.0010	< 0.050	< 0.050	0.5	10	70
Copper	1450	U	0.0084	0.0029	< 0.050	< 0.050	2	50	100
Mercury	1450	U	< 0.00050	< 0.00050	< 0.0010	< 0.0050	0.01	0.2	2
Molybdenum	1450	U	0.031	0.0055	0.062	0.084	0.5	10	30
Nickel	1450	U	0.0016	0.0013	< 0.050	< 0.050	0.4	10	40
Lead	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	0.5	10	50
Antimony	1450	U	0.050	0.031	0.099	0.33	0.06	0.7	5
Selenium	1450	U	0.0014	< 0.0010	< 0.010	< 0.010	0.1	0.5	7
Zinc	1450	U	0.0016	< 0.0010	< 0.50	< 0.50	4	50	200
Chloride	1220	U	16	6.0	32	71	800	15000	25000
Fluoride	1220	U	0.85	0.47	1.7	5.1	10	150	500
Sulphate	1220	U	180	38	350	540	1000	20000	50000
Total Dissolved Solids	1020	N	340	130	670	1500	4000	60000	100000
Phenol Index	1920	U	0.14	0.090	< 0.30	0.96	1	-	-
Dissolved Organic Carbon	1610	U	20	17	< 50	170	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.175
Moisture (%)	11

Leachate Test Information	
Leachant volume 1st extract/l	0.328
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.198

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Results - 2 Stage WAC

Project: C14727 Brill Place, London NW1

							Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	19-13614						**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Chemtest Sample ID:	814415								
Sample Ref:									
Sample ID:	D11								
Sample Location:	WS103								
Top Depth(m):	3.00								
Bottom Depth(m):									
Sampling Date:	10-Apr-2019								
Determinand	**SOP**	**Accred.**	**Units**						
Total Organic Carbon	2625	U	%			0.33	3	5	6
Loss On Ignition	2610	U	%			4.9	--	--	10
Total BTEX	2760	U	mg/kg			< 0.010	6	--	--
Total PCBs (7 Congeners)	2815	U	mg/kg			< 0.10	1	--	--
TPH Total WAC (Mineral Oil)	2670	U	mg/kg			< 10	500	--	--
Total (Of 17) PAH's	2700	N	mg/kg			< 2.0	100	--	--
pH	2010	U				7.7	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg			0.010	--	To evaluate	To evaluate
Eluate Analysis			**2:1 mg/l**	**8:1 mg/l**	**2:1 mg/kg**	**Cumulative mg/kg 10:1**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	2	25
Barium	1450	U	0.0031	0.0017	< 0.50	< 0.50	20	100	300
Cadmium	1450	U	< 0.00010	< 0.00010	< 0.010	< 0.010	0.04	1	5
Chromium	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	10	70
Copper	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	2	50	100
Mercury	1450	U	< 0.00050	< 0.00050	< 0.0010	< 0.0050	0.01	0.2	2
Molybdenum	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	10	30
Nickel	1450	U	0.0012	0.0011	< 0.050	< 0.050	0.4	10	40
Lead	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	0.5	10	50
Antimony	1450	U	0.0012	< 0.0010	< 0.010	< 0.010	0.06	0.7	5
Selenium	1450	U	0.0013	0.0010	< 0.010	0.010	0.1	0.5	7
Zinc	1450	U	< 0.0010	< 0.0010	< 0.50	< 0.50	4	50	200
Chloride	1220	U	21	12	41	130	800	15000	25000
Fluoride	1220	U	0.33	0.70	< 1.0	6.6	10	150	500
Sulphate	1220	U	110	69	210	730	1000	20000	50000
Total Dissolved Solids	1020	N	210	160	420	1600	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.030	< 0.30	< 0.50	1	-	-
Dissolved Organic Carbon	1610	U	7.0	14	< 50	140	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.175
Moisture (%)	18

Leachate Test Information	
Leachant volume 1st extract/l	0.311
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.172

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Results - 2 Stage WAC

Project: C14727 Brill Place, London NW1

							Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	19-13614						**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Chemtest Sample ID:	814416								
Sample Ref:									
Sample ID:	D16								
Sample Location:	WS103								
Top Depth(m):	4.70								
Bottom Depth(m):									
Sampling Date:	10-Apr-2019								
Determinand	**SOP**	**Accred.**	**Units**						
Total Organic Carbon	2625	U	%			0.45	3	5	6
Loss On Ignition	2610	U	%			5.1	--	--	10
Total BTEX	2760	U	mg/kg			< 0.010	6	--	--
Total PCBs (7 Congeners)	2815	U	mg/kg			< 0.10	1	--	--
TPH Total WAC (Mineral Oil)	2670	U	mg/kg			< 10	500	--	--
Total (Of 17) PAH's	2700	N	mg/kg			< 2.0	100	--	--
pH	2010	U				7.7	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg			0.0040	--	To evaluate	To evaluate
Eluate Analysis			**2:1 mg/l**	**8:1 mg/l**	**2:1 mg/kg**	**Cumulative mg/kg 10:1**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	2	25
Barium	1450	U	0.013	0.0028	< 0.50	< 0.50	20	100	300
Cadmium	1450	U	< 0.00010	< 0.00010	< 0.010	< 0.010	0.04	1	5
Chromium	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	10	70
Copper	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	2	50	100
Mercury	1450	U	< 0.00050	< 0.00050	< 0.0010	< 0.0050	0.01	0.2	2
Molybdenum	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	10	30
Nickel	1450	U	0.0014	0.0011	< 0.050	< 0.050	0.4	10	40
Lead	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	0.5	10	50
Antimony	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	0.06	0.7	5
Selenium	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	0.1	0.5	7
Zinc	1450	U	0.016	0.0032	< 0.50	< 0.50	4	50	200
Chloride	1220	U	19	4.5	37	55	800	15000	25000
Fluoride	1220	U	0.66	0.51	1.3	5.2	10	150	500
Sulphate	1220	U	1200	230	2300	3000	1000	20000	50000
Total Dissolved Solids	1020	N	1400	330	2700	4000	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.030	< 0.30	< 0.50	1	-	-
Dissolved Organic Carbon	1610	U	9.2	14	< 50	140	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.175
Moisture (%)	20

Leachate Test Information	
Leachant volume 1st extract/l	0.307
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.128

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Results - 2 Stage WAC

Project: C14727 Brill Place, London NW1

							Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	19-13614						**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Chemtest Sample ID:	814417								
Sample Ref:									
Sample ID:	D7								
Sample Location:	WS104								
Top Depth(m):	1.80								
Bottom Depth(m):									
Sampling Date:	10-Apr-2019								
Determinand	**SOP**	**Accred.**	**Units**						
Total Organic Carbon	2625	U	%			0.21	3	5	6
Loss On Ignition	2610	U	%			5.1	--	--	10
Total BTEX	2760	U	mg/kg			< 0.010	6	--	--
Total PCBs (7 Congeners)	2815	U	mg/kg			< 0.10	1	--	--
TPH Total WAC (Mineral Oil)	2670	U	mg/kg			48	500	--	--
Total (Of 17) PAH's	2700	N	mg/kg			< 2.0	100	--	--
pH	2010	U				7.7	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg			0.0090	--	To evaluate	To evaluate
Eluate Analysis			**2:1 mg/l**	**8:1 mg/l**	**2:1 mg/kg**	**Cumulative mg/kg 10:1**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	2	25
Barium	1450	U	0.0030	0.0031	< 0.50	< 0.50	20	100	300
Cadmium	1450	U	< 0.00010	< 0.00010	< 0.010	< 0.010	0.04	1	5
Chromium	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	10	70
Copper	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	2	50	100
Mercury	1450	U	< 0.00050	< 0.00050	< 0.0010	< 0.0050	0.01	0.2	2
Molybdenum	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	10	30
Nickel	1450	U	0.0012	0.0011	< 0.050	< 0.050	0.4	10	40
Lead	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	0.5	10	50
Antimony	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	0.06	0.7	5
Selenium	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	0.1	0.5	7
Zinc	1450	U	0.0020	< 0.0010	< 0.50	< 0.50	4	50	200
Chloride	1220	U	8.1	6.1	16	62	800	15000	25000
Fluoride	1220	U	0.34	1.2	< 1.0	11	10	150	500
Sulphate	1220	U	59	40	120	410	1000	20000	50000
Total Dissolved Solids	1020	N	120	140	240	1300	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.030	< 0.30	< 0.50	1	-	-
Dissolved Organic Carbon	1610	U	8.5	14	< 50	140	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.175
Moisture (%)	20

Leachate Test Information	
Leachant volume 1st extract/l	0.305
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.150

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Results - 2 Stage WAC

Project: C14727 Brill Place, London NW1

							Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	19-13614						**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
Chemtest Sample ID:	814418								
Sample Ref:									
Sample ID:	D2								
Sample Location:	DP117								
Top Depth(m):	0.70								
Bottom Depth(m):									
Sampling Date:	09-Apr-2019								
Determinand	**SOP**	**Accred.**	**Units**						
Total Organic Carbon	2625	U	%			1.7	3	5	6
Loss On Ignition	2610	U	%			3.8	--	--	10
Total BTEX	2760	U	mg/kg			< 0.010	6	--	--
Total PCBs (7 Congeners)	2815	U	mg/kg			< 0.10	1	--	--
TPH Total WAC (Mineral Oil)	2670	U	mg/kg			130	500	--	--
Total (Of 17) PAH's	2700	N	mg/kg			45	100	--	--
pH	2010	U				10.8	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg			0.059	--	To evaluate	To evaluate
Eluate Analysis			**2:1 mg/l**	**8:1 mg/l**	**2:1 mg/kg**	**Cumulative mg/kg 10:1**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg**		
Arsenic	1450	U	0.0036	0.0053	< 0.050	0.051	0.5	2	25
Barium	1450	U	0.019	0.013	< 0.50	< 0.50	20	100	300
Cadmium	1450	U	< 0.00010	< 0.00010	< 0.010	< 0.010	0.04	1	5
Chromium	1450	U	0.062	0.0088	0.12	0.16	0.5	10	70
Copper	1450	U	0.11	0.026	0.22	0.15	2	50	100
Mercury	1450	U	< 0.00050	< 0.00050	< 0.0010	< 0.0050	0.01	0.2	2
Molybdenum	1450	U	0.013	0.0021	< 0.050	< 0.050	0.5	10	30
Nickel	1450	U	0.0079	0.0025	< 0.050	< 0.050	0.4	10	40
Lead	1450	U	< 0.0010	0.0043	< 0.010	0.037	0.5	10	50
Antimony	1450	U	0.0035	0.0021	< 0.010	0.023	0.06	0.7	5
Selenium	1450	U	0.0019	0.0015	< 0.010	0.016	0.1	0.5	7
Zinc	1450	U	0.0029	0.0022	< 0.50	< 0.50	4	50	200
Chloride	1220	U	30	9.0	60	120	800	15000	25000
Fluoride	1220	U	0.48	0.38	< 1.0	3.9	10	150	500
Sulphate	1220	U	180	30	360	500	1000	20000	50000
Total Dissolved Solids	1020	N	380	140	750	1700	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.030	< 0.30	< 0.50	1	-	-
Dissolved Organic Carbon	1610	U	53	17	100	220	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.175
Moisture (%)	10

Leachate Test Information	
Leachant volume 1st extract/l	0.330
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.231

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Test Methods

SOP	Title	Parameters included	Method summary
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1450	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.
2010	pH Value of Soils	pH	pH Meter
2015	Acid Neutralisation Capacity	Acid Reserve	Titration
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2610	Loss on Ignition	loss on ignition (LOI)	Determination of the proportion by mass that is lost from a soil by ignition at 550°C.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS
640	Characterisation of Waste (Leaching)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge

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Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis
The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols
For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Appendix D

ASSESSMENT APPROACH

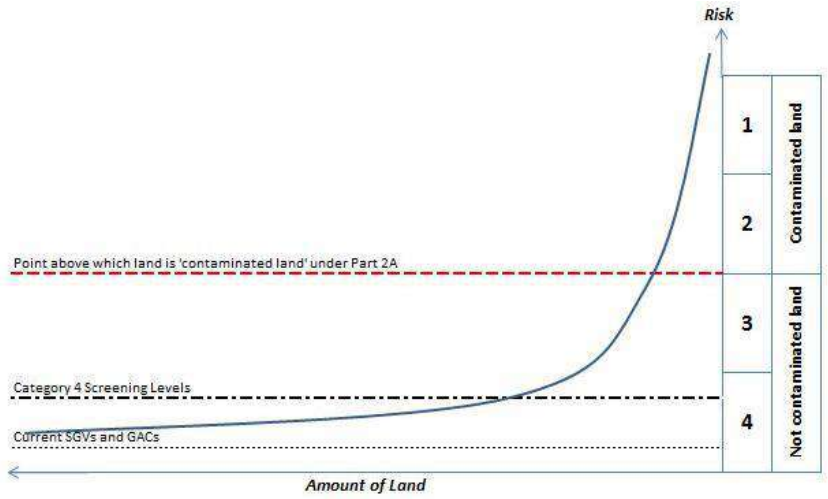
METHODOLOGY FOR THE DERIVATION OF GENERIC QUANTITATIVE ASSESSMENT CRITERIA TO EVALUATE RISKS TO HUMAN HEALTH FROM SOIL & GROUNDWATER CONTAMINATION

UK APPROACH

In the UK, the potential risks to human health from contamination in the ground are usually evaluated through a generic quantitative risk assessment (GQRA) approach. This allows generic and conservative exposure assumptions to be readily applied to risk assessments, and can be a useful tool for rapidly screening data and to identify those contaminants or scenarios that could benefit from further investigation and/or site-specific detailed quantitative risk assessment (DQRA). Current industry good practice is to use the approach presented in the Environment Agency (EA) publications SR2[1] and SR3[2]. This approach allows the derivation of Generic Assessment Criteria (GACs), primarily for chronic exposure.

In April 2012, the Department of Environment, Food and Rural Affairs (Defra) published updated statutory guidance[3] which introduced a four category approach to determining whether land in England and Wales is contaminated or not on the grounds of significant possibility of significant harm (SPOSH). **Figure 1** presents a graphical representation of the categories.

Figure 1: Four Categories for Determining if Land Represent a SPOSH



Cases classified as Category 1 are considered to be SPOSH based on actual evidence or an unacceptably high probability of harm existing. Category 4 cases are those where there is no risk, or a low risk of SPOSH.

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[1] Environment Agency '*Human Health Toxicological Assessment of Contaminants in Soil',* Report SC050021/SR2. January 2009.
[2] Environment Agency '*Updated Technical Background to the CLEA Model*,' Report SC050021/SR3. January 2009.
[3] Defra '*Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance'.* April 2012.

GACs represent a minimal risk level, well within Category 4. A 2014 publication by Contaminated Land: Applicatons in Real Environments (CL:AIRE),SP1010[4] and endorsed by Defra[5] provided an approach to determine Category 4 Screening Levels (C4SLs) which are higher than the GACs whilst being "more pragmatic but still strongly precautionary". It also provided C4SLs for six contaminants of concern. Although the C4SLs were designed to support Part 2A assessments to determine 'contaminated land' they are specifically mentioned, along with reference to the Part 2A statutory guidance, by the Department for Communities and Local Government (DCLG) for use in a planning context[6].

An updated version the Contaminated Land Exposure Assessment (CLEA) Workbook (v1.071) was released by the EA in September 2015 to take into account the publication of SP1010. The updates comprised: additional toxicity data for the six chemicals for which C4SLs were derived; two new public open space land use scenarios; updated exposure parameters; options to run the model using C4SL exposure assumptions; and increased functionality. There were no changes to algorithms, so it is still possible to replicate the withdrawn SGVs using the input parameters held within v1.071.

It should be noted that the four category approach has not been adopted in Scotland under Part 2A or the planning regime. The Part 2A statutory guidance applicable in Scotland (Paper SE/2006/44 dated May 2006) does not reflect the changes introduced by Defra in April 2012 which allow for the use of C4SLs within Part 2A risk assessments. Additionally, it is considered that the principal of 'minimal risk' should still apply under planning in Scotland, based on current guidance.

WSP APPROACH

Following the withdrawal of the SGVs, and in the absence of an industry-wide, accepted set of GACs it is down to individual practitioners to derive their own soil assessment criteria. WSP has used the approach provided within SR2, SR3, SP1010, CLEA Workbook v1.071and SR4[7] to produce a set of minimal risk GACs. The chemical-specific data within two key publications were considered during their production: CL:AIRE 2010[8] and LQM 2015[9]. Both documents provide comprehensive sets of GACs for different contaminants of concern.

The LQM Suitable For Use Levels (S4ULs) have selected exposure parameters consistent with the C4SL exposure scenarios. This approach was rejected by WSP as not representing minimal risk. However, the LQM S4UL document was critically reviewed and the approach and chemical input parameters were utilised where considered to be appropriate.

An industry-led C4SL Working Group is in the process of deriving a larger set of C4SLs in the near future, for approximately 20 contaminants. This will include a critical review of the chemical input data for all selected substances, and may therefore lead to further amendments to the chemical input data used in the WSP in-house screening values. It is considered likely that the contaminant list will

[4] CL:AIRE *'Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination'* SP1010, Final Project Report (Revision 2). September 2014.
[5] Defra 'SP1010: *Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination – Policy Companion Document'*. December 2014.
[6] DCLG Planning Practice Guidance '*Land Affected by Contamination'*, particularly Paragraphs 001 and 007. Ref IDs: 33-001-20140306 & 33-007-20140612.
[7] Environment Agency '*CLEA Software (Version 1.05) Handbook (and Software)',* Report SC050021/SR4. September 2009.
[8] CL:AIRE 'The EIC/AGS/CL:AIRE *Soil Generic Assessment Criteria for Human Health Risk Assessment'.* ISBN 978-1-05046-20-1. January 2010.
[9] Nathanail et al '*The LQM/CIEH S4ULs for Human Health Risk Assessment'*, Land Quality Press, ISBN 978-0-9931084-0-2. 2015.

crossover with the 2009 EIC/AGS/CL:AIRE GACs. As such, this document was not critically reviewed by WSP.

WSP's current approach to the assessment of risks to human health is to continue to evaluate minimal risk through the use of in-house derived GACs, and to use the published C4SLs as a secondary tier of assessment until such time as additional C4SLs are published and/or in-house values are derived.

EXPOSURE MODELS

LAND USES

WSP has largely adopted the exposure assumptions of the generic land use scenarios included within SR3, with two additional public open space scenarios included from within SP1010:

- Residential with homegrown produce consumption;
- Residential without homegrown produce consumption;
- Allotments;
- Commercial;
- Public open space near residential housing (POS_{resi}); and
- Public park (POS_{park}).

Exceptions are described in the following Sections.

SOIL PROPERTIES

SR3 assumes a sandy loam soil with a pH of 7 and a Soil Organic Matter (SOM) content of 6% for its generic land uses, based on the geographical spread of topsoils in the UK. WSP has adopted these default values. In addition, GACs based on an SOM of 1% and 2.5% have been derived, based on common experience of the nature of Made Ground and lack of topsoil on many brownfield sites.

RECEPTOR CHARACTERISTICS AND BEHAVIOURS

SP1010 provides some updated exposure parameters for long-term inhalation rates[10] and the consumption rates for homegrown produce[11] compared to those provided in SR3. This data was used to derived WSP's GACs.

The changes in inhalation rates do not apply to the allotment generic land use scenario, as these are based on the breathing rates for short-term exposure of light to moderate intensity activity which were derived from a study that was not updated in USEPA 2011, so the SR3 rates were retained.

[10] USEPA, National Centre for Environmental Assessment '*Exposure Factors Handbook: 2011 Edition*' EPA/600/R-09/052F. September 2011.
[11] National Diet and Nutrition Survey 2008/2009 to 2010/2011.

CHEMICAL DATA

PHYSICO-CHEMICAL PARAMETERS

Physico-chemical properties for the contaminants for which GACs have been derived have been obtained following critical review of the following hierarchy of data sources:

1. Environment Agency/Defra SGV reports where available;
2. Environment Agency '*Compilation of Data for Priority Organic Pollutants for Derivation of Soil Guideline Values*', Report SC050021/SR7, November 2008; and
3. Published fate and transport reviews within Nathanail et. al 2015 and CL:AIRE 2010.

Where appropriate, and where sufficient data is available, values were adjusted to reflect a UK soil temperature of 10ºC (e.g. K_{aw}).

TOXICOLOGICAL DATA

Toxicological data for the derivation of minimal risk Health Criteria Values (HCV) for each contaminant was selected with due regard to the approach presented in SR2. Where appropriate, the following hierarchy of data sources was used:

1. UK toxicity reviews published by authoritative bodies including:
   - EA;
   - Public Health England (PHE);
   - Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment (COT); and
   - Committee on Carcinogenicity of Chemicals in Food, Consumer Products and the Environment (COC).
2. Authoritative European sources such as European Food Standards Agency (EFSA)
3. International organisations including:
   - World Health Organisation (WHO); and
   - Joint FAO/WHO Expert Committee on Food Additives (JECFA).
4. Authoritative country-specific sources including:
   - United States Environmental Protection Agency (USEPA);
   - US Agency for Toxic Substances and Disease Registry (ATSDR);
   - US Integrated Risk Information System (IRIS); and
   - Netherlands National Institute for Public Health and the Environment (RIVM).

Factors such as the applicability of the data to human health (e.g. epidemiological vs. animal studies), the quality of the data, the level of uncertainty in the results and the age of the data were also taken into account in the final selection. Details for specific substances are available on request.

MEAN DAILY INTAKES

Estimations of background exposure for each threshold substance have been updated. In line with the SR2 approach, the exposure from non-threshold substances in the soil does not take into account exposure from other sources, and as such GACs were derived without consideration of the Mean Daily Intake (MDI) for those substances.

The data published by the EA in its series of TOX reports between 2002 and 2009 was evaluated to determine whether the values were considered to remain valid today. Values from these current UK published sources were not amended unless they were considered to be significantly different so that the GACs remained as comparable as possible with the revoked SGVs.

ORAL MEAN DAILY INTAKES

Oral MDI were generally estimated as the sum of exposure via the ingestion of food and drinking water using the default adult physiological parameters presented in Table 3.3 of SR2.

Data on the exposure of substances from food ingestion was generally obtained from UK Total Diet Studies (TDS) published by the Food Standards Agency (FSA) and its predecessor the Ministry of Agriculture, Fisheries and Food (MAFF) and from studies commissioned by COT. Where no UK-specific data was available, MDI were derived from the European Food Safety Authority (EFSA), Health Canada and US sources. This was a rare occurrence, and in these instances, the data was evaluated to determine its applicability to the UK.

Data on the concentrations of substances in tap water was obtained from a variety of sources. UK data was used where available, with preference given to Drinking Water Inspectorate (DWI) 2014 data from water company tap water testing (LOD, 1st and 99th percentile data is available). Where the substance was not included in tap water testing, other UK sources of information were considered including:

- à DWI data from water company tap water testing from previous years;
- à COT; and
- à FSA.

Where UK data was not available, a number of other data sources were considered, largely WHO International Programme on Chemical Safety (IPCS) Concise International Chemical Assessment Documents (CICADs) and background documents for the development of Guidelines for Drinking Water Quality, using professional judgement on the relevance of the data to the UK. The final decision on the MDI from drinking water was made using professional judgement on the balance of relevance and probability, taking into account the detection limit where not detected, Koc and solubility, reduction in use of the substance, banned substances, tight controls (e.g. on explosives) and with due consideration to the SR2 instruction that “if no data or information in background exposure are available, background exposure should be assumed to be negligible and the MDI set to zero….”.

Data from other countries was generally not used because it was considered that the hydrogeology of these countries along with industrial practices were unlikely to be reflective of the UK.

INHALATION MEAN DAILY INTAKES

Inhalation MDIs were based on estimates of average daily exposure by the inhalation pathway and calculated using the default adult physiological parameters presented in Table 3.3 of SR2.

The inhalation MDIs were generally estimated using background exposure data from the UK, derived from Defra's UK-AIR: Air Information Resource[12], which provides ambient air quality data from a number of sites forming a UK-wide monitoring network. The MDIs for heavy metals were based on rolling annual average metal mass concentration data from Defra's UK Heavy Metals Monitoring Network from the period October 2009 to September 2010[13].

Information for some substances was obtained from UK sources including Environment Agency TOX reports and data from the UK Expert Panel on Air Quality Standards (EPAQS). Where recent UK data was not available, data was sourced from the International Programme on Chemical Safety (IPCS), the World Health Organisation (WHO), the Agency for Toxic Substances and Diseases Registry (ATSDR), Health Canada, and various other peer-reviewed sources summarised by LQM/CIEH[14].

For other substances, where no data or information on background exposure was available, background exposure was assumed to be negligible and the MDI set at 0.5*TDI in accordance with guidance in SR2.

PLANT UPTAKE

Soil to plant concentration factors are available in CLEA v1.071 for arsenic, cadmium, hexavalent chromium, lead, mercury, nickel and selenium. For all remaining inorganic chemicals, concentration factors were obtained using the PRISM model. Substance-specific correction factors have been selected in accordance with the guidance established within SR3. This is consistent to the approach utilised in the derivation of the LQM S4UL and the EIC/AGS/CL:AIRE GAC.

Where there is a lack of appropriate data to enable the derivation of specific soil to plant concentrations factors for organic chemicals, plant uptake was modelled within CLEA v1.071 using the generic equations recommended within SR3, as follows:

- Green Vegetables – Ryan et al. (1988);
- Root Vegetables – Trapp (2002);
- Tuber Vegetables – Trapp et al. (2007); and
- Tree Fruit – Trapp et al. (2003).

There are no suitable models available for modelling uptake for herbaceous fruit or shrub fruit. Exposure is considered negligible.

[12] Crown 2016 copyright Defra via uk-air.defra.gov.uk, licenced under the Open Government Licence (OGL).
[13] Defra, 2013 Spreadsheet of historic data for multiple years for the Metals network. Available online at: http://uk-air.defra.gov.uk/data/metals-data. [Accessed 13/03/2016].
[14] LQM/CIEH, 2015. The LQM/CIEH S4ULs for Human Health Risk Assessment.

SOIL SATURATION LIMITS

GACs are not limited to their theoretical soil saturation within CLEA, although where either the aqueous or the vapour-based saturation is exceeded, this is highlighted within the Workbook (compared with the lower of the two values). This affects pathways which depend on partitioning calculations so in reality this only affects the vapour pathways and is relevant to organic substances and other substances, such as elemental mercury, that have a significant volatile component. However, the Workbook highlights saturation for direct contact pathways to indicate to the user where further qualitative consideration of free phase contamination at the surface may be required.

Where the lower of the two saturation limits is exceeded and the vapour pathway is the only exposure route being considered, the chronic risks to human health are likely to be negligible. Further evaluation could be undertaken using an alternative model suitable for evaluating non-aqueous phase liquids (NAPLs), such as the Johnson & Ettinger (J&E) approach described in USEPA 2003. However, WSP considers that if NAPLs are suspected, given the known limitations and over-simplifications of J&E, soil vapour monitoring is a more accurate way of assessing potential risks.

Where the lower saturation limit is exceeded for the vapour pathway and a number of exposure routes are being considered, then the contribution from the NAPL via vapour inhalation to the overall exposure can be evaluated using the procedure provided in SR4. WSP would evaluate this as part of a DQRA process or through soil vapour monitoring on-site to determine site-specific soil vapour concentrations.

CHEMICAL SPECIFIC ASSUMPTIONS

CYANIDES

Cyanide has high acute toxicity, and short term exposure is an important consideration when assessing the risks from soils contaminated with cyanide. The primary risk to human receptors from free cyanide in soils is an acute risk.

There is no current UK guidance available for calculating acute risks from free cyanide. Consequently, GAC for acute exposure were derived using the algorithms presented in MADEP 1992[15] and assuming a one-off ingestion of 10g of soil (this conservative value has been taken as an upper bound estimate for a one-off soil ingestion rate amongst children). Receptor body weights have been selected according to the critical receptor for each exposure scenario. The lowest of the chronic and acute GAC for each land use scenario were adopted by WSP. Brinckerhoff.

LEAD

The SGV for lead was withdrawn by the EA in 2009, and in 2011 the EA withdrew their published TOX report in light of new scientific evidence. The C4SL for lead was derived using the latest scientific evidence from a large human dataset. As such, no chemical-specific margin was applied in the derivation of the C4SL for lead. It may be possible for WSP to derive a GAC for lead using the same dataset and applying a chemical-specific margin, but the value is likely to be lower than UK natural background concentrations. Therefore, WSP has adopted the toxicological data used to derive the C4SLs in deriving the GAC for lead until such time as alternative GACs are published by an authoritative body. The relative bioavailability was set at 100% in line with the approach taken for other GACs, whereas the C4SL assumes 60% for soil and 64% for airborne dust. Thus, the WSP GAC are lower than the C4SLs.

[15] MADEP '*Background Documentation for the Development of an "Available Cyanide" Benchmark Concentration'* 1992. http://www.mass.gov/dep/toxics/cn_soil.htm

POLYCYCLIC AROMATIC HYDROCARBONS

WSP's approach to the assessment of polycyclic aromatic hydrocarbons (PAHs) uses the surrogate marker approach. BaP was used as a surrogate marker for all genotoxic PAHs in line with the Health Protection Agency 2010[16] recommendations and SP1010. This assumes that the PAH profile of the data is similar to that of the coal tars used in the Culp *et al* oral carcinogenicity study from which the toxicity data for BaP was produced. In reality, this profile has been shown by HPA to be applicable on the majority of contaminated sites based on assessment of sites across the country.

The alternative is the Toxic Equivalency Factor (TEF) approach which uses a reference compound and assigns TEFs for other compounds based on estimates of potency. Key uncertainties with this approach include the assumption that all compounds have the same toxic mechanism of action within the body and that no compounds with a greater potency than the reference compound are present. It is considered by the HPA that the TEF approach is likely to under predict the true carcinogenicity of PAHs and therefore favours the surrogate marker approach.

For these reasons, WSP considers that the adoption of BaP as a surrogate marker for genotoxic PAHs, as opposed to the TEF approach, is reasonable. In rare cases where the PAH profile may differ from the wide definitions of the Culp *et al* study the user should discuss their project with an experienced risk assessor. In addition, WSP has derived a GAC for naphthalene, which is commonly a risk driver due to its high volatility, relative to other PAH compounds.

TRIMETHYLBENZENES

The GAC for trimethylbenzenes can be used for the assessment of any individual isomer (1,2,3-trimethylbenzene, 1,2,4-trimethylbenzene or 1,3,5-trimethylbenzene), or a mixture of the three isomers.

CHEMICAL GROUPS

For a number of chemical groups, the available toxicity data is for combinations of chemicals. Given that the physico-chemical parameters may differ between the chemicals, the GACs for the chemicals within the groups have been calculated and then the lowest GAC selected to represent the entire group. This was the approach taken by the EA for m-, o- and p-xylenes, and has also been adopted by WSP for:

- 2-chlorophenol, 2,4-dichlorophenol, 2,4,6-trichlorophenol and 2,3,4,6-tetrachlorophenol;
- 2-, 3- and 4-methylphenol (total cresols);
- aldrin and dieldrin; and
- α- and β-endosulphan.

[16] HPA Contaminated Land Information Sheet '*Risk Assessment Approaches for Polycyclic Aromatic Hydrocarbons (PAHs)* 2010

EXPOSURE TO VAPOURS

INHALATION OF MEASURED VAPOURS

WSP has derived a set of soil vapour GACs (GAC_{sv}) that allow for the assessment of measured site soil vapour concentrations, using J&E, in order to establish potential risks via indoor inhalation of vapours. This methodology enables a more robust assessment of exposure via the inhalation of soil vapours indoors than using CLEA-derived soil GAC, as it is based upon measured soil vapour concentrations beneath the site. It also allows for the assessment of vapours from all source terms (i.e. groundwater, soil or NAPL). Outdoor inhalation was not included. WSP considers that the indoor inhalation pathway is the significantly dominant risk-driver.

The generic land use scenarios within CLEA (residential and commercial) that were used to derive the soil GAC were used to define the receptor and building characteristics for the soil vapour GAC. Only residential and commercial generic land use scenarios include the indoor inhalation of vapours pathway.

The GAC_{sv} were derived for three different soil types; sand, sandy loam and clay, reflecting the importance of this parameter within the J&E model. A depth to contamination of 0.85 m below the base of the building foundation was assumed (i.e. 1 m below ground level). This differs from the depth assumed for the soil GAC (0.5 m bgl), but was selected by WSP as a reasonable worst case scenario.

It is acknowledged that the J&E commonly over-predicts indoor vapour concentrations. In particular, it will significantly over-predict vapour concentrations for suspended floor slabs, which many new builds are constructed with, it does not take into account lateral migration and assumes an infinite source of contamination at steady state conditions. In addition, it is common for soil gas/vapour wells to be installed with at least 1 m of plain riser at the surface and this equates to a total depth of 0.85 m below the building foundation plus a 0.15 m thick foundation, and so is more representative of the depth that samples will be taken from.

The TDSIs and IDs for each substance were converted from $\mu gkg^{-1}_{bw}day^{-1}$ to μgm^{-3} using the standard conversions quoted in Table 3.3 of SR2, thereby replacing the need to model C_{air} in the equation:

$$C_{air} = \alpha . C_{vap} . 1{,}000{,}000 cm^3 m^{-3}$$

Where:

C_{air} is the concentration of vapours within the building, mg^{-3}
α is the steady state attenuation coefficient between soil and indoor air, dimensionless
C_{vap} is the soil vapour concentration, $mgcm^{-3}$

The target concentrations within indoor air for each substance (C_{air}) are a function of receptor inhalation rates and occupancy periods, as defined by the site conceptual exposure model (assuming standard CLEA occupancy periods and receptors).

The attenuation factor was calculated using J&E (Equation 10.4 in SR3) and the resulting C_{vap} is equivalent to the GAC_{sv} for the modelled exposure scenario.

Where reported soil vapour concentrations exceed the relevant saturated vapour concentration, free product may occur, and the user should discuss their project with an experienced risk assessor.

INHALATION OF GROUNDWATER-DERIVED VAPOURS

WSP has derived a set of groundwater GACs (GAC_{gw}) to evaluate the potential risks through the indoor inhalation of groundwater-derived vapours by first applying the approach described above for the derivation of the WSP GAC_{sv} to determine the acceptable concentration in soil vapour directly above the water table.

The depth to groundwater was assumed to be 1 m bgl (i.e. 0.85 m below the base of the building foundation). This depth was considered to be more representative of commonly encountered groundwater conditions than the 0.5 m below the base of the building foundation (i.e. 0.65 m bgl) that is used by CLEA for an unsaturated source present in the overlying soil.

The GAC_{gw} was then back-calculated from the GAC_{sv} using the air-water partition coefficient (K_{aw}) for each substance.

The WSP Groundwater Vapour GAC are protective against a dissolved phase contaminant source only. If the presence of NAPL is suspected, the risks from this source will need to be assessed. Where reported groundwater concentrations exceed the relevant solubility limit, free product may occur, and the user should discuss their project with an experienced risk assessor.

Appendix E

SCREENING ASSESSMENT

Soil Analytical Results Screening Sheet

Site Name: Brill Place
Job Number: 70057370
Screening Criteria: Res No HG Veg 1% SOM

Determinant	No. Samples	Min mg/kg	Mean mg/kg	Max mg/kg	GAC mg/kg	# GAC Exceeds	WS101 1.30	WS101A 0.10	WS101A 1.00	WS102A 0.20	WS102A 1.00	WS103 0.40	WS103 2.30	WS103 3.00	WS103 4.70	WS104 0.30	WS104 1.20	WS104 1.80	WS104A 0.40	DP101 0.70	DP110 0.50	DP115 0.30	DP117 0.70	DP121 0.30	DP126 0.70	DP127 0.20
pH	20	7.8	8.68	9.9	No GAC	0	8.7	9.9	9	8.1	8.8	8.4	7.9	7.8	7.9	8	8.9	8.2	9.4	9	8.8	9.2	9.5	8.7	8.6	8.8
Moisture	20	< 0	15.12	22	No GAC	0	15	9.6	15	18	13	13	21	19	22	18	15	19	14	16	18	6	9.8	13	12	16
Boron	20	< 0	8.22	14	10500	0	5.2	6.5	6.1	5.6	5.8	8	6.2	8.3	12	7	8	11	5.5	7.5	6.6	9.1	10	14	12	9.9
Sulphate (2:1 Water Soluble) as SO4	20	< 0.01	0.21	1	#N/A	0	0.063	0.28	0.13	0.026	0.073	0.1	0.78	1	0.82	0.043	0.12	0.08	0.11	0.064	0.023	0.15	0.12	0.12	< 0.010	0.029
Cyanide (Free)	19	#VALUE!	#VALUE!	#VALUE!	15	0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	[B] < 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	20	< 0	16.95	41	35	1	12	14	17	13	20	18	9	41	14	14	22	11	16	17	18	20	19	15	14	15
Cadmium	20	< 0.1	0.33	0.8	87	0	0.19	0.21	0.34	0.28	0.29	0.3	< 0.10	0.14	0.8	0.29	0.36	0.1	0.34	0.25	0.31	0.46	0.51	0.63	0.25	0.54
Chromium	20	< 0	35.45	120	No GAC	0	21	24	25	24	28	31	39	44	47	34	120	50	26	31	38	16	26	31	28	26
Copper	20	< 0	35.55	59	7520	0	25	33	59	31	52	35	30	34	32	31	56	31	29	38	36	15	28	30	35	51
Mercury	20	< 0.1	0.38	0.84	56	0	0.27	0.22	0.42	0.32	0.75	0.84	< 0.10	0.1	< 0.10	0.4	0.49	< 0.10	0.28	0.67	0.65	0.19	0.28	0.43	0.52	0.38
Nickel	20	< 0	27.30	56	181	0	19	22	21	17	24	30	34	56	48	28	29	45	21	27	28	12	17	22	27	19
Lead	20	< 0	231.95	900	188	11	420	130	900	210	290	190	29	25	19	160	350	26	400	300	240	290	220	140	170	130
Selenium	20	< 0.2	0.87	1.9	430	0	0.33	< 0.20	0.87	1.3	0.61	0.81	0.7	1.9	0.94	1.2	0.78	0.75	1	0.85	0.74	0.36	0.73	1.2	0.86	1.2
Zinc	20	< 0	100.20	170	40400	0	170	88	120	91	100	100	63	96	73	91	160	70	80	97	110	63	140	90	82	120
Chromium (Hexavalent)	20	< 0.5	< 0.5	< 0.5	4.5	0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter	20	< 0.4	2.29	8.1	#N/A	0	< 0.40	1.9	5.9	1.9	1.3	2.6	< 0.40	0.47	0.64	3.3	8.1	0.43	3.3	2.6	1.7	0.91	2.6	1.9	1.7	3.8
Acenaphthene	20	< 0.1	0.32	1.6	B(a)P-S.A.	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.25	< 0.10	1.2	0.68	< 0.10	1.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.6	< 0.10
Acenaphthylene	20	< 0.1	0.24	1.2	B(a)P-S.A.	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.56	< 0.10	0.3	0.85	< 0.10	0.41	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.2	< 0.10
Anthracene	20	< 0.1	0.57	3	B(a)P-S.A.	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.24	< 0.10	0.42	< 0.10	1	1.4	< 0.10	1	0.32	0.4	1.1	0.73	0.48	3	0.49
Benzo(a)anthracene	20	< 0.1	2.18	11	B(a)P-S.A.	0	< 0.10	7.9	11	1.4	1.8	0.88	< 0.10	< 0.10	< 0.10	1.6	3.3	< 0.10	2.4	0.76	1.5	1.9	2.2	0.74	4.7	1.1
Benzo(a)pyrene	20	< 0.1	1.80	10	1.7	6	< 0.10	8.2	10	1.4	1.9	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.9	< 0.10	1.5	< 0.10	1.6	1.5	2.3	< 0.10	3.6	< 0.10
Benzo(b)fluoranthene	20	< 0.1	2.05	9.6	B(a)P-S.A.	0	< 0.10	8.8	9.6	2.2	2.7	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.5	< 0.10	2.4	< 0.10	1.7	2.2	2.7	< 0.10	4.1	< 0.10
Benzo(g,h,i)perylene	20	< 0.1	1.19	5.7	B(a)P-S.A.	0	< 0.10	5.6	5.7	1.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.4	< 0.10	1	< 0.10	1.3	1.3	1.9	< 0.10	2.3	< 0.10
Benzo(k)fluoranthene	20	< 0.1	1.03	5.1	B(a)P-S.A.	0	< 0.10	4.2	5.1	1.1	1.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.8	< 0.10	0.98	< 0.10	0.99	0.92	1.3	< 0.10	2.1	< 0.10
Chrysene	20	< 0.1	2.33	11	B(a)P-S.A.	0	< 0.10	9	11	1.9	2.3	0.95	< 0.10	< 0.10	< 0.10	1.8	3.3	< 0.10	2.4	0.79	1.6	1.9	2.2	1.3	4.4	1.3
Dibenz(a,h)Anthracene	20	< 0.1	0.30	1.6	#N/A	0	< 0.10	1.6	1.3	0.73	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.28	< 0.10	0.19	< 0.10	0.13	0.14	0.22	< 0.10	0.34	< 0.10
Fluoranthene	20	< 0.1	5.26	26	B(a)P-S.A.	0	2	16	26	2.4	3.7	1.5	< 0.10	0.65	< 0.10	5.4	7.6	< 0.10	7.6	1.3	3.2	4.9	4.5	1.7	14	2.5
Fluorene	20	< 0.1	0.28	1.2	B(a)P-S.A.	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.46	< 0.10	0.8	0.86	< 0.10	0.7	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.2	< 0.10
Indeno(1,2,3-c,d)Pyrene	20	< 0.1	1.12	5.7	#N/A	0	< 0.10	5.7	5.6	0.92	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2	< 0.10	0.9	< 0.10	1.3	1	1.7	< 0.10	2.1	< 0.10
Naphthalene	20	< 0.1	0.63	4.6	2.3	2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2	2.7	< 0.10	1.6	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	4.6	< 0.10
Phenanthrene	20	< 0.1	2.32	13	B(a)P-S.A.	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.95	< 0.10	1.3	< 0.10	6.4	6.1	< 0.10	6.7	0.99	1.9	3.8	2.3	0.8	13	1.4
Pyrene	20	< 0.1	5.14	25	B(a)P-S.A.	0	2.1	16	25	2.5	3.8	1.7	< 0.10	0.67	< 0.10	5.1	7.3	< 0.10	7.4	1.4	3.2	4.5	4.6	1.7	13	2.5
Total Of 16 PAH's	20	< 2	26.26	110	#N/A	0	4.1	83	110	16	17	6.2	< 2.0	4.3	< 2.0	26	47	< 2.0	38	5.6	19	25	27	6.7	75	9.3
Total Phenols	20	< 0.3	< 0.3	< 0.3	#N/A	0	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
ACM Type	0	#VALUE!	#VALUE!	#VALUE!	#N/A	0	-	-	-	-	-	-	-	-	-	-	Fibres/Clump	-	-	-	-	-	-	-	-	-
Asbestos Identification	0	#VALUE!	#VALUE!	#VALUE!	#N/A	0	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	Amosite	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete
ACM Detection Stage	0	#VALUE!	#VALUE!	#VALUE!	#N/A	0	-	-	-	-	-	-	-	-	-	-	ereo Microsc	-	-	-	-	-	-	-	-	-	-
Asbestos by Gravimetry	1	#VALUE!	#VALUE!	#VALUE!	#N/A	0											<0.001										
Total Asbestos	1	#VALUE!	#VALUE!	#VALUE!	#N/A	0											<0.001										
Aliphatics >C5-C6	20	< 1	< 1	< 1	42	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatics >C6-C8	20	< 1	< 1	< 1	104	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatics >C8-C10	20	< 1	< 1	< 1	27	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatics >C10-C12	20	< 1	< 1	< 1	132	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatics >C12-C16	20	< 1	< 1	< 1	1030	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatics >C16-C21	20	< 1	1.90	19	89100	0	< 1.0	19	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatics >C21-C35	20	< 1	13.25	80	89100	0	47	80	24	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	37	20	< 1.0	43
Aliphatics >C35-C44	20	< 1	< 1	< 1	89100	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	20	< 5	17.05	100	#N/A	0	47	100	24	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	37	20	< 5.0	43
Aromatics >EC5-EC7	20	< 1	< 1	< 1	372	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatics >EC7-EC8	20	< 1	< 1	< 1	853	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatics >EC8-EC10	20	< 1	< 1	< 1	47	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatics >EC10-EC12	20	< 1	1.77	6.5	248	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	6.5	4.1	< 1.0	4.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.2	< 1.0
Aromatics >EC12-EC16	20	< 1	6.66	55	1430	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	20	20	< 1.0	16	< 1.0	< 1.0	7.1	< 1.0	< 1.0	55	< 1.0
Aromatics >EC16-EC21	20	< 1	29.36	270	1340	0	< 1.0	35	8.3	22	30	< 1.0	< 1.0	< 1.0	< 1.0	45	33	< 1.0	60	< 1.0	< 1.0	57	11	6.8	270	< 1.0
Aromatics >EC21-EC35	20	< 1	80.96	480	1340	0	9.1	480	86	120	97	< 1.0	< 1.0	< 1.0	< 1.0	62	64	< 1.0	100	< 1.0	< 1.0	96	65	33	380	20
Aromatics >EC35-EC44	20	< 1	2.15	11	1340	0	< 1.0	< 1.0	< 1.0	7.5	4.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.2	< 1.0	< 1.0	2.8	< 1.0	< 1.0	11	< 1.0
Total Aromatic Hydrocarbons	20	< 5	119.71	720	#N/A	0	9.1	520	95	150	130	< 5.0	< 5.0	< 5.0	< 5.0	130	120	< 5.0	190	< 5.0	< 5.0	160	75	40	720	20
Total Petroleum Hydrocarbons	20	< 10	134.95	720	#N/A	0	56	620	120	150	130	< 10	< 10	< 10	< 10	130	120	< 10	190	< 10	< 10	160	110	60	720	63
Benzene	20	< 1	< 1	< 1	0.38	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	20	< 1	< 1	< 1	868	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	20	< 1	< 1	< 1	83	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	20	< 1	< 1	< 1	#N/A	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	20	< 1	< 1	< 1	79	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	20	< 1	< 1	< 1	#N/A	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Resorcinol	20	< 0.05	< 0.05	< 0.05	#N/A	0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Phenol	20	< 0.05	< 0.05	< 0.05	280	0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cresols	20	< 0.05	< 0.05	< 0.05	4450	0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Xylenols	20	< 0.05	< 0.05	< 0.05	#N/A	0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
1-Naphthol	20	< 0.05	< 0.05	< 0.05	#N/A	0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Trimethylphenols	20	< 0.05	< 0.05	< 0.05	#N/A	0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050

B(a)P-S.A. - Benzo(a)pyrene used as surrogate for nonvolatile PAH risks

Soil Analytical Results Screening Sheet

Site Name: Brill Place
Job Number: 70057370
Screening Criteria: C4SL - Residential (without home-grown produce)

Determinant	No. Samples	Min mg/kg	Mean mg/kg	Max mg/kg	GAC mg/kg	# GAC Exceeds	WS101 1.30	WS101A 0.10	WS101A 1.00	WS102A 0.20	WS102A 1.00	WS103 0.40	WS103 2.30	WS103 3.00	WS103 4.70	WS104 0.30	WS104 1.20	WS104 1.80	WS104A 0.40	DP101 0.70	DP110 0.50	DP115 0.30	DP117 0.70	DP121 0.30	DP126 0.70	DP127 0.20
pH	20	7.8	8.68	9.9	No GAC	0	8.7	9.9	9	8.1	8.8	8.4	7.9	7.8	7.9	8	8.9	8.2	9.4	9	8.8	9.2	9.5	8.7	8.6	8.8
Moisture	20	< 0	15.12	22	No GAC	0	15	9.6	15	18	13	13	21	19	22	18	15	19	14	16	18	6	9.8	13	12	16
Boron	20	< 0	8.22	14	No GAC	0	5.2	6.5	6.1	5.6	5.8	8	6.2	8.3	12	7	8	11	5.5	7.5	6.6	9.1	10	14	12	9.9
Sulphate (2:1 Water Soluble) as SO4	20	< 0.01	0.21	1	No GAC	0	0.063	0.28	0.13	0.026	0.073	0.1	0.78	1	0.82	0.043	0.12	0.08	0.11	0.064	0.023	0.15	0.12	0.12	< 0.010	0.029
Cyanide (Free)	20	< 0.5	< 0.5	< 0.5	No GAC	0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	20	< 0	16.95	41	40	1	12	14	17	13	20	18	9	41	14	14	22	11	16	17	18	20	19	15	14	15
Cadmium	20	< 0.1	0.33	0.8	150	0	0.19	0.21	0.34	0.28	0.29	0.3	< 0.10	0.14	0.8	0.29	0.36	0.1	0.34	0.25	0.31	0.46	0.51	0.63	0.25	0.54
Chromium	20	< 0	35.45	120	No GAC	0	21	24	25	24	28	31	39	44	47	34	120	50	26	31	38	16	26	31	28	26
Copper	20	< 0	35.55	59	No GAC	0	25	33	59	31	52	35	30	34	32	31	56	31	29	38	36	15	28	30	35	51
Mercury	20	< 0.1	0.38	0.84	No GAC	0	0.27	0.22	0.42	0.32	0.75	0.84	< 0.10	0.1	< 0.10	0.4	0.49	< 0.10	0.28	0.67	0.65	0.19	0.28	0.43	0.52	0.38
Nickel	20	< 0	27.30	56	No GAC	0	19	22	21	17	24	30	34	56	48	28	29	45	21	27	28	12	17	22	27	19
Lead	20	< 0	231.95	900	310	4	420	130	900	210	290	190	29	25	19	160	350	26	400	300	240	290	220	140	170	130
Selenium	20	< 0.2	0.87	1.9	No GAC	0	0.33	< 0.20	0.87	1.3	0.61	0.81	0.7	1.9	0.94	1.2	0.78	0.75	1	0.85	0.74	0.36	0.73	1.2	0.86	1.2
Zinc	20	< 0	100.20	170	No GAC	0	170	88	120	91	100	100	63	96	73	91	160	70	80	97	110	63	140	90	82	120
Chromium (Hexavalent)	20	< 0.5	< 0.5	< 0.5	21	0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter	20	< 0.4	2.29	8.1	No GAC	0	< 0.40	1.9	5.9	1.9	1.3	2.6	< 0.40	0.47	0.64	3.3	8.1	0.43	3.3	2.6	1.7	0.91	2.6	1.9	1.7	3.8
Acenaphthene	20	< 0.1	0.32	1.6	No GAC	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.25	< 0.10	1.2	0.68	< 0.10	1.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.6	< 0.10
Acenaphthylene	20	< 0.1	0.24	1.2	No GAC	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.56	< 0.10	0.3	0.85	< 0.10	0.41	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.2	< 0.10
Anthracene	20	< 0.1	0.57	3	No GAC	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.24	< 0.10	0.42	< 0.10	1	1.4	< 0.10	1	0.32	0.4	1.1	0.73	0.48	3	0.49
Benzo(a)anthracene	20	< 0.1	2.18	11	No GAC	0	< 0.10	7.9	11	1.4	1.8	0.88	< 0.10	< 0.10	< 0.10	1.6	3.3	< 0.10	2.4	0.76	1.5	1.9	2.2	0.74	4.7	1.1
Benzo(a)pyrene	20	< 0.1	1.80	10	5.3	2	< 0.10	8.2	10	1.4	1.9	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.9	< 0.10	1.5	< 0.10	1.6	1.5	2.3	< 0.10	3.6	< 0.10
Benzo(b)fluoranthene	20	< 0.1	2.05	9.6	No GAC	0	< 0.10	8.8	9.6	2.2	2.7	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.5	< 0.10	2.4	< 0.10	1.7	2.2	2.7	< 0.10	4.1	< 0.10
Benzo(g,h,i)perylene	20	< 0.1	1.19	5.7	No GAC	0	< 0.10	5.6	5.7	1.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.4	< 0.10	1	< 0.10	1.3	1.3	1.9	< 0.10	2.3	< 0.10
Benzo(k)fluoranthene	20	< 0.1	1.03	5.1	No GAC	0	< 0.10	4.2	5.1	1.1	1.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.8	< 0.10	0.98	< 0.10	0.99	0.92	1.3	< 0.10	2.1	< 0.10
Chrysene	20	< 0.1	2.33	11	No GAC	0	< 0.10	9	11	1.9	2.3	0.95	< 0.10	< 0.10	< 0.10	1.8	3.3	< 0.10	2.4	0.79	1.6	1.9	2.2	1.3	4.4	1.3
Dibenz(a,h)Anthracene	20	< 0.1	0.30	1.6	No GAC	0	< 0.10	1.6	1.3	0.73	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.28	< 0.10	0.19	< 0.10	0.13	0.14	0.22	< 0.10	0.34	< 0.10
Fluoranthene	20	< 0.1	5.26	26	No GAC	0	2	16	26	2.4	3.7	1.5	< 0.10	0.65	< 0.10	5.4	7.6	< 0.10	7.6	1.3	3.2	4.9	4.5	1.7	14	2.5
Fluorene	20	< 0.1	0.28	1.2	No GAC	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.46	< 0.10	0.8	0.86	< 0.10	0.7	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.2	< 0.10
Indeno(1,2,3-c,d)Pyrene	20	< 0.1	1.12	5.7	No GAC	0	< 0.10	5.7	5.6	0.92	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2	< 0.10	0.9	< 0.10	1.3	1	1.7	< 0.10	2.1	< 0.10
Naphthalene	20	< 0.1	0.63	4.6	No GAC	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2	2.7	< 0.10	1.6	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	4.6	< 0.10
Phenanthrene	20	< 0.1	2.32	13	No GAC	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.95	< 0.10	1.3	< 0.10	6.4	6.1	< 0.10	6.7	0.99	1.9	3.8	2.3	0.8	13	1.4
Pyrene	20	< 0.1	5.14	25	No GAC	0	2.1	16	25	2.5	3.8	1.7	< 0.10	0.67	< 0.10	5.1	7.3	< 0.10	7.4	1.4	3.2	4.5	4.6	1.7	13	2.5
Total Of 16 PAH's	20	< 2	26.26	110	No GAC	0	4.1	83	110	16	17	6.2	< 2.0	4.3	< 2.0	26	47	< 2.0	38	5.6	19	25	27	6.7	75	9.3
Total Phenols	20	< 0.3	< 0.3	< 0.3	No GAC	0	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
ACM Type	0	#VALUE!	#VALUE!	#VALUE!		0	-	-	-	-	-	-	-	-	-	-	Fibres/Clump	-	-	-	-	-	-	-	-	-
Asbestos Identification	0	#VALUE!	#VALUE!	#VALUE!		0	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	Amosite	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete	sbestos Dete
ACM Detection Stage	0	#VALUE!	#VALUE!	#VALUE!		0	-	-	-	-	-	-	-	-	-	-	ereo Microsc	-	-	-	-	-	-	-	-	-
Asbestos by Gravimetry	1	#VALUE!	#VALUE!	#VALUE!		0											<0.001									
Total Asbestos	1	#VALUE!	#VALUE!	#VALUE!		0											<0.001									
Aliphatics >C5-C6	20	< 1	< 1	< 1	No GAC	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatics >C6-C8	20	< 1	< 1	< 1	No GAC	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatics >C8-C10	20	< 1	< 1	< 1	No GAC	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatics >C10-C12	20	< 1	< 1	< 1	No GAC	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatics >C12-C16	20	< 1	< 1	< 1	No GAC	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatics >C16-C21	20	< 1	1.90	19	No GAC	0	< 1.0	19	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatics >C21-C35	20	< 1	13.25	80	No GAC	0	47	80	24	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	37	20	< 1.0	43
Aliphatics >C35-C44	20	< 1	< 1	< 1	No GAC	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	20	< 5	17.05	100	No GAC	0	47	100	24	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	37	20	< 5.0	43
Aromatics >EC5-EC7	20	< 1	< 1	< 1	No GAC	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatics >EC7-EC8	20	< 1	< 1	< 1	No GAC	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatics >EC8-EC10	20	< 1	< 1	< 1	No GAC	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatics >EC10-EC12	20	< 1	1.77	6.5	No GAC	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	6.5	4.1	< 1.0	4.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.2	< 1.0
Aromatics >EC12-EC16	20	< 1	6.66	55	No GAC	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	20	20	< 1.0	16	< 1.0	< 1.0	7.1	< 1.0	< 1.0	55	< 1.0
Aromatics >EC16-EC21	20	< 1	29.36	270	No GAC	0	< 1.0	35	8.3	22	30	< 1.0	< 1.0	< 1.0	< 1.0	45	33	< 1.0	60	< 1.0	< 1.0	57	11	6.8	270	< 1.0
Aromatics >EC21-EC35	20	< 1	80.96	480	No GAC	0	9.1	480	86	120	97	< 1.0	< 1.0	< 1.0	< 1.0	62	64	< 1.0	100	< 1.0	< 1.0	96	65	33	380	20
Aromatics >EC35-EC44	20	< 1	2.15	11	No GAC	0	< 1.0	< 1.0	< 1.0	7.5	4.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.2	< 1.0	< 1.0	2.8	< 1.0	< 1.0	11	< 1.0
Total Aromatic Hydrocarbons	20	< 5	119.71	720	No GAC	0	9.1	520	95	150	130	< 5.0	< 5.0	< 5.0	< 5.0	130	120	< 5.0	190	< 5.0	< 5.0	160	75	40	720	20
Total Petroleum Hydrocarbons	20	< 10	134.95	720	No GAC	0	56	620	120	150	130	< 10	< 10	< 10	< 10	130	120	< 10	190	< 10	< 10	160	110	60	720	63
Benzene	20	< 1	< 1	< 1	3.3	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	20	< 1	< 1	< 1	No GAC	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	20	< 1	< 1	< 1	No GAC	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	20	< 1	< 1	< 1	No GAC	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	20	< 1	< 1	< 1	No GAC	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	20	< 1	< 1	< 1	No GAC	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Resorcinol	20	< 0.05	< 0.05	< 0.05	No GAC	0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Phenol	20	< 0.05	< 0.05	< 0.05	No GAC	0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cresols	20	< 0.05	< 0.05	< 0.05	No GAC	0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Xylenols	20	< 0.05	< 0.05	< 0.05	No GAC	0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
1-Naphthol	20	< 0.05	< 0.05	< 0.05	No GAC	0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Trimethylphenols	20	< 0.05	< 0.05	< 0.05	No GAC	0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050

B(a)P-S.A. - Benzo(a)pyrene used as surrogate for nonvolatile PAH risks

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