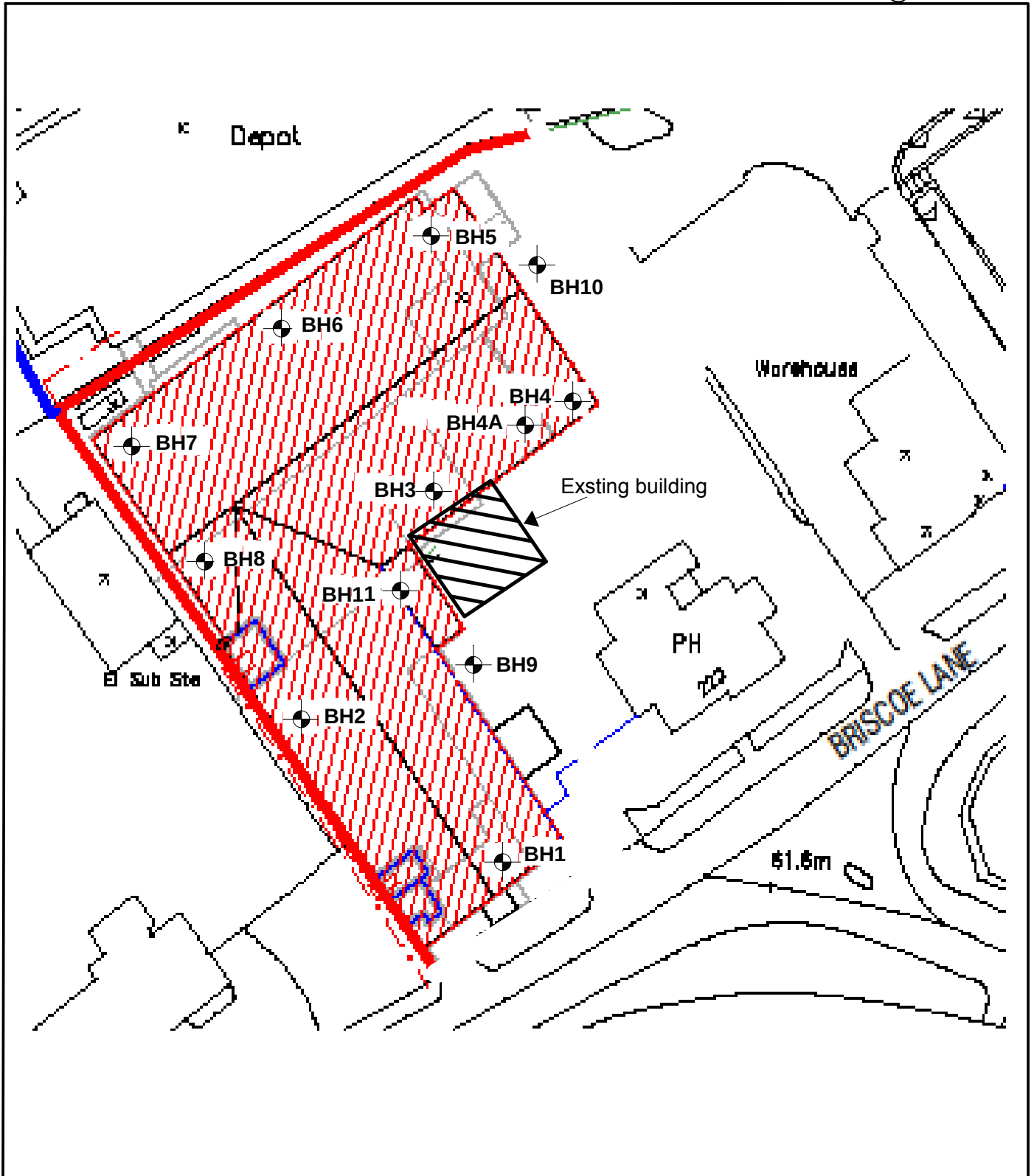


# MINI · SOIL · SURVEYS

MINI SOIL SURVEYS (NORTHERN) LTD. 12 BEECH WALK, LEIGH, LANCS. WN7 3LH

Tel: (01942) 269769

mssnorth@btinternet.com



## KEY PLAN

**SITE: ARKADY INDUSTRIAL ESTATE MANCHESTER**

Not to Scale : diagrammatic only: all dimensions are in metres

(BH. = Borehole TP. = Trial Pit)

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12 Beech Walk Leigh Lancs. WN7 3LH

**Site:- ARKADY INDUSTRIAL ESTATE MANCHESTER**

Job No. NTH 2707

Date:- 2/3/20

**BH No.1**

| Description                                                                                                                       | Depth | Leg | Test/<br>Depth        | Value |
|-----------------------------------------------------------------------------------------------------------------------------------|-------|-----|-----------------------|-------|
| 270mm concrete, 12mm steel at 100mm and 210mm on 30mm polystyrene over dark brown/grey clayey sand and mixed gravel. MADE GROUND. |       |     | 0.3 DS                |       |
| Stiff becoming very stiff brown occasionally grey mottled sandy CLAY with some mixed gravel. Becoming laminated below 2.3m,       | 0.90  |     | 1.1 SV Cu = 95kN/m2   |       |
|                                                                                                                                   |       |     | 1.5 DS                |       |
|                                                                                                                                   |       |     | 1.8 SPT N = 28        |       |
|                                                                                                                                   |       |     | 2.3 SV Cu = 140+kN/m2 |       |
|                                                                                                                                   |       |     | 3.0 DS                |       |
|                                                                                                                                   |       |     | 3.6 SPT N = 38        |       |
|                                                                                                                                   |       |     | 4.2 SPT N = 39        |       |
|                                                                                                                                   | 5.00  |     |                       |       |

SPT @ 1.8m 6/6/6,7,7,8 @ 3.6m 88/9/9,10,9,10 @ 4.2m 9/10/10,9,10,10  
Borehole dry.

Key: SPT (standard penetration test). SV (shear vane). DS (disturbed sample). U38 (38mm undisturbed sample).

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**Site:- ARKADY INDUSTRIAL ESTATE MANCHESTER**

Job No. NTH 2707

Date:- 2/3/20

**BH No.2**

| Description                                                                                                                                                    | Depth | Leg | Test/<br>Depth | Value |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|----------------|-------|
| 160mm concrete, 12mm steel at 100mm on dpm on 30mm polystyrene over 80mm sandy angular gravel over 190mm concrete over brown sandy angular gravel.MADE GROUND. |       |     |                |       |
| Soft dark brown/grey sandy ashy clay with gravel, cinder, brick fragments and some bands of ash and cinder. Becoming firm with depth.<br>MADE GROUND           | 0.60  |     | 0.6 DS         |       |
|                                                                                                                                                                |       |     | 1.2 SPT N = 8  |       |
|                                                                                                                                                                |       |     | 1.6 DS         |       |
|                                                                                                                                                                |       |     | 1.8 SPT N = 6  |       |
|                                                                                                                                                                |       |     | 2.4 SPT N = 16 |       |
| Stiff becoming very stiff brown/grey laminated sandy CLAY with rare mixed gravel.                                                                              | 2.50  |     | 3.0 DS         |       |
|                                                                                                                                                                |       |     | 3.6 SPT N = 36 |       |
|                                                                                                                                                                |       |     | 4.8 SPT N = 40 |       |
|                                                                                                                                                                | 5.20  |     |                |       |

SPT @1.2m 2/2/2,2,2,2 @ 1.8m 2/1/2,1,2,1 @ 2.4m 3/4/4,3,4,5 @ 3.6m 7/8/8,9,9,10  
@ 4.8m 9/10/10,10,9,11  
Borehole dry.

Key: SPT (standard penetration test). SV (shear vane). DS (disturbed sample). U38 (38mm undisturbed sample).

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**Site:- ARKADY INDUSTRIAL ESTATE MANCHESTER**

Job No. NTH 2707

Date:- 3/3/20

**BH No.3**

| Description                                                                                                                                           | Depth | Leg | Test/<br>Depth       | Value |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|----------------------|-------|
| 160mm concrete on 140mm concrete, 6mm steel at 100mm, on dpm over loose dark brown sandy ash and cinder with gravel and brick fragments. MADE GROUND. |       |     |                      |       |
| Firm/stiff dark brown sandy occasionally organic clay with some fine gravel, cinder and fine brick fragments. MADE GROUND                             | 0.40  |     | 0.4 DS               |       |
| Stiff becoming very stiff brown/grey sandy CLAY with occasional fine gravel. Becoming laminated below 1.4m.                                           | 0.90  |     | 1.0 DS               |       |
|                                                                                                                                                       |       |     | 1.2 SPT N = 18       |       |
|                                                                                                                                                       |       |     | 1.7 SV Cu = 130kN/m2 |       |
|                                                                                                                                                       |       |     | 2.4 SPT N = 35       |       |
|                                                                                                                                                       |       |     | 3.6 SPT N = 38       |       |
|                                                                                                                                                       | 4.00  |     |                      |       |

SPT @ 1.2m 3/3/4,4,5,5 @ 2.4m 7/8/8,9,9,9 @ 3.6m 9/10/9,10,9,10  
Wet from standing water on site. Standing water on completion at 2.9m.

Key: SPT (standard penetration test). SV (shear vane). DS (disturbed sample). U38 (38mm undisturbed sample).

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**Site:- ARKADY INDUSTRIAL ESTATE MANCHESTER**

Job No. NTH 2707

Date:- 3/3/20

**BH No.4**

| Description                                                           | Depth | Leg | Test/<br>Depth | Value |
|-----------------------------------------------------------------------|-------|-----|----------------|-------|
| Concrete. Unable to drill further. Borehole abandoned and re-located. |       |     |                |       |
|                                                                       | 1.00  |     |                |       |

Key: SPT (standard penetration test). SV (shear vane). DS (disturbed sample). U38 (38mm undisturbed sample).

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Job No. NTH 2707

Date:- 3/3/20

**BH No.4A**

| Description                                                                                                                  | Depth | Leg | Test/<br>Depth                         | Value |
|------------------------------------------------------------------------------------------------------------------------------|-------|-----|----------------------------------------|-------|
| 145mm concrete, 6mm steel at 95mm on dpm over compact dark brown/grey sand ash and gravel with brick fragments. MADE GROUND. |       |     | 0.2 DS                                 |       |
| Firm/stiff dark brown/grey sandy clay with gravel, some cinder and occasional brick fragments. MADE GROUND.                  | 0.30  |     |                                        |       |
| Medium dense light brown sand and angular sandstone gravel with some brick fragments. MADE GROUND.                           | 0.90  |     | 1.2 SPT N = 12                         |       |
| Firm dark grey sandy organic clay with occasional cinder and fine brick fragments. MADE GROUND.                              | 1.30  |     | 1.5 DS                                 |       |
| Stiff becoming very stiff brown/grey sandy laminated CLAY.                                                                   | 1.50  |     | 1.7 SV Cu = 125kN/m2<br>1.8 SPT N = 24 |       |
|                                                                                                                              |       |     | 3.6 SPT N = 39                         |       |
|                                                                                                                              | 4.00  |     |                                        |       |

SPT @ 1.2m 7/8/6,3,1,2 @ 1.8m 3/4/5,6,6,7 @ 3.6m 10/10/10,9,10,10  
Borehole dry.

Key: SPT (standard penetration test). SV (shear vane). DS (disturbed sample). U38 (38mm undisturbed sample).

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**Site:- ARKADY INDUSTRIAL ESTATE MANCHESTER**

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Date:- 3/3/20

**BH No.5**

| Description                                                                                                                                              | Depth | Leg | Test/<br>Depth                                                                                                                | Value |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-------------------------------------------------------------------------------------------------------------------------------|-------|
| 200mm concrete, 8mm steel at 170mm on dpm on 25mm polystyrene over compacted brown/grey sandy clayey angular gravel and brick fragments.<br>MADE GROUND. |       |     | 0.3 DS                                                                                                                        |       |
| Stiff becoming very stiff brown/grey sandy CLAY with some mixed gravel.<br>Becoming laminated below 1.3m.                                                | 0.90  |     | 1.0 DS<br>1.2 SPT N = 20<br><br>1.7 SV Cu = 125kN/m2<br><br>2.4 SPT N = 36<br><br>3.6 SPT N = 38<br><br>4.1 SV Cu = 140+kN/m2 |       |
|                                                                                                                                                          | 4.60  |     |                                                                                                                               |       |

SPT @ 1.2m 3/4/4,5,5,6 @ 2.4m 8/8/8,9,9,10 @ 3.6m 8/9/9,9,10,10  
Borehole dry.

Key: SPT (standard penetration test). SV (shear vane). DS (disturbed sample). U38 (38mm undisturbed sample).

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Job No. NTH 2707

Date:- 3/3/20

**BH No.6**

| Description                                                                                                  | Depth | Leg | Test/<br>Depth | Value          |
|--------------------------------------------------------------------------------------------------------------|-------|-----|----------------|----------------|
| 85mm concrete on 150mm polystyrene on 200mm concrete over compacted brown sandy angular gravel. MADE GROUND. |       |     |                |                |
| Stiff becoming very stiff brown/grey sandy CLAY with some mixed gravel. Becoming laminated below 1.3m.       | 0.55  |     | 0.45 DS        |                |
|                                                                                                              |       |     | 1.0 DS         |                |
|                                                                                                              |       |     | 1.1 SV         | Cu = 125kN/m2  |
|                                                                                                              |       |     | 1.8 SPT        | N = 32         |
|                                                                                                              |       |     | 2.3 SV         | Cu = 140+kN/m2 |
|                                                                                                              |       |     | 3.6 SPT        | N = 44         |
|                                                                                                              | 4.00  |     |                |                |

SPT @ 1.8m 6/7/7,8,8,9 @ 3.6m 9/10/10,11,11,12  
Borehole dry.

Key: SPT (standard penetration test). SV (shear vane). DS (disturbed sample). U38 (38mm undisturbed sample).

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**BH No.7**

| Description                                                                                                                  | Depth | Leg | Test/<br>Depth    | Value         |
|------------------------------------------------------------------------------------------------------------------------------|-------|-----|-------------------|---------------|
| 230mm concrete on dpm on 400mm concrete, 16mm steel at 240mm over compacted angular gravel and brick fragments. MADE GROUND. |       |     |                   |               |
| Loose sandy brick and angular gravel. MADE GROUND.                                                                           | 0.95  |     | 1.2 SPT           | N = 4         |
| Stiff becoming very stiff brown/grey sandy CLAY with rare mixed gravel. Becoming laminated below 2.1m                        | 1.70  |     | 1.7 DS<br>1.8 SPT | N = 15        |
|                                                                                                                              |       |     | 2.5 SV            | Cu = 130kN/m2 |
|                                                                                                                              |       |     | 3.6 SPT           | N = 36        |
|                                                                                                                              |       |     | 4.8 SPT           | N = 41        |
|                                                                                                                              | 5.20  |     |                   |               |

SPT @ 1.2m 1/1/1,1,1,1 @ 1.8m 2/2/3,3,4,5 @ 3.6m 8/9/8,9,9,10 @ 4.8m 9/9/10,10,10,11  
Borehole dry.

Key: SPT (standard penetration test). SV (shear vane). DS (disturbed sample). U38 (38mm undisturbed sample).

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Job No. NTH 2707

Date:- 2/3/20

**BH No.8**

| Description                                                                                                                        | Depth | Leg | Test/<br>Depth                                                       | Value |
|------------------------------------------------------------------------------------------------------------------------------------|-------|-----|----------------------------------------------------------------------|-------|
| 330mm concrete, 8mm steel at 130mm, over brown sandy clayey angular gravel with brick, cinder and concrete fragments. MADE GROUND. |       |     | 0.6 DS                                                               |       |
| Firm becoming stiff brown sandy CLAY with some mixed gravel and rare organic fibre. Possible made ground.                          | 1.20  |     | 1.2 SPT N = 10<br>1.4 DS<br>1.7 SV Cu = 70kN/m2                      |       |
| Stiff becoming very stiff brown/grey sandy laminated CLAY with rare mixed gravel.                                                  | 2.40  |     | 2.4 SPT N = 20<br>2.5 DS<br><br>3.6 SPT N = 32<br><br>4.8 SPT N = 39 |       |
|                                                                                                                                    | 5.20  |     |                                                                      |       |

SPT @ 1.2m 1/2/2,2,3,3 @ 2.4m 3/4/4,5,5,6 @ 3.6m 7/8/7,8,8,9 @ 4.8m 8/9/9,10,10,10  
Borehole dry.

Key: SPT (standard penetration test). SV (shear vane). DS (disturbed sample). U38 (38mm undisturbed sample).

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Job No. NTH 2707

Date:- 2/3/20

**BH No.9**

| Description                                                                                                                     | Depth | Leg | Test/<br>Depth | Value         |
|---------------------------------------------------------------------------------------------------------------------------------|-------|-----|----------------|---------------|
| 50mm tarmac over loose dark brown/black ash and cinder with sandstone fragments and some clinker. MADE GROUND.                  |       |     |                |               |
| Loose dark brown occasionally clayey sand and ash with brick fragments, cinder and some soft/firm clay inclusions. MADE GROUND. | 0.70  |     | 0.7 DS         |               |
|                                                                                                                                 |       |     | 1.2 SPT        | N = 7         |
|                                                                                                                                 |       |     | 1.8 SPT        | N = 8         |
| Stiff becoming very stiff brown/grey sandy laminated CLAY.                                                                      | 1.90  |     | 2.0 DS         |               |
|                                                                                                                                 |       |     | 2.4 SPT        | N = 18        |
|                                                                                                                                 |       |     | 2.9 SV         | Cu = 130kN/m2 |
|                                                                                                                                 |       |     | 3.0 DS         |               |
|                                                                                                                                 |       |     | 3.6 SPT        | N = 35        |
|                                                                                                                                 | 5.00  |     |                |               |

SPT @ 1.2m 1/1/3,2,1,1 @ 1.8m 1/2/1,2,2,3 @ 2.4m 3/3/4,5,4,5 @ 3.6m 8/8/8,9,9,9  
Water encountered and standing on completion at 1.6m.

Key: SPT (standard penetration test). SV (shear vane). DS (disturbed sample). U38 (38mm undisturbed sample).

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Job No. NTH 2707

Date:- 3/3/20

**BH No.10**

| Description                                                                                                                                                                 | Depth | Leg | Test/<br>Depth                    | Value |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|-----------------------------------|-------|
| 210mm concrete over compact dark brown/grey sand and angular gravel with brick and concrete fragments. MADE GROUND.                                                         |       |     |                                   |       |
| Stiff becoming very stiff below 1.0m brown sandy clay with some bands of sand and gravel, occasional fine brick fragments and some saturated timber fragments. MADE GROUND. | 0.35  |     | 0.3 DS                            |       |
|                                                                                                                                                                             |       |     | 1.0 DS                            |       |
|                                                                                                                                                                             |       |     | 1.2 SPT N = 21                    |       |
| Very stiff brown/grey sandy laminated CLAY with occasional fine gravel.                                                                                                     | 1.50  |     | 1.8 SPT N = 22                    |       |
|                                                                                                                                                                             |       |     | 2.3 SV Cu = 140+kN/m <sup>2</sup> |       |
|                                                                                                                                                                             |       |     | 2.4 SPT N = 32                    |       |
|                                                                                                                                                                             |       |     | 3.6 SPT N = 37                    |       |
|                                                                                                                                                                             | 4.00  |     |                                   |       |

SPT @ 1.2m 3/4/5,5,5,6 @ 1.8m 5/6/5,6,5,6 @ 2.4m 6/8/8,8,8,8 @ 3.6m 9/9/9,10,9,9  
Wet from standing water on site. Standing water on completion at 1.9m.

Key: SPT (standard penetration test). SV (shear vane). DS (disturbed sample). U38 (38mm undisturbed sample).

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**BH No.11**

| Description                                                                                                                                                            | Depth | Leg | Test/<br>Depth                                                                 | Value |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|--------------------------------------------------------------------------------|-------|
| 75mm concrete over 170mm concrete, 8mm steel at 90mm, on dpm on 70mm weak concrete on 165mm concrete on dpm over light brown/grey sand and angular gravel. MADE GROUND |       |     |                                                                                |       |
| Loose dark brown/black ash and cinder with fragmented brick (fragmented by sampler).MADE GROUND.                                                                       | 1.00  |     | 1.0 DS<br>1.2 SPT N = 6                                                        |       |
| Stiff occasionally firm dark grey sandy clay with some organic fibre and occasional fine brick fragments. MADE GROUND.                                                 | 1.60  |     | 1.8 SPT N = 8                                                                  |       |
| Stiff becoming very stiff brown/grey sandy laminated CLAY.                                                                                                             | 2.00  |     | 2.0 DS<br><br>2.4 SPT N = 20<br><br>2.9 SV Cu = 125kN/m2<br><br>3.6 SPT N = 38 |       |
|                                                                                                                                                                        | 5.00  |     |                                                                                |       |

SPT @ 1.2m 1/3/2,1,2,1 @ 1.8m 1/2/1,2,2,3 @ 2.4m 3/4/4,5,5,6 @ 3.6m 9/8/9,10,9,10  
Water encountered at 1.4m. Standing on completion at 1.7m.

Key: SPT (standard penetration test). SV (shear vane). DS (disturbed sample). U38 (38mm undisturbed sample).