



## BOREHOLE LOG

|  |                  |                  |                  |                             |  |
|--|------------------|------------------|------------------|-----------------------------|--|
| Project<br><b>Hillycroft</b>                   |                  |                  |                  | <b>BOREHOLE No<br/>BH08</b> |  |
| Job No<br>23-087                               | Date<br>24-02-23 | Ground Level (m) | Co-Ordinates ( ) |                             |  |
| Contractor<br><b>Arc Environmental Limited</b> |                  |                  |                  | Sheet<br>1 of 1             |  |

| SAMPLES & TESTS |         |             | Water | STRATA        |         |  |   | Geology | Instrument/<br>Backfill |
|-----------------|---------|-------------|-------|---------------|---------|--|---|---------|-------------------------|
| Depth           | Type No | Test Result |       | Reduced Level | Legend  | Depth (Thickness)  | DESCRIPTION                                   |         |                         |
| 0.05-0.15       | J/D     |             |       | X X X X       | 0.05    | Asphalt (MADE GROUND)  |   |         |                         |
|                 |         |             |       |               |         | 0.15   | Black gravel fill (MADE GROUND)               |         |                         |
| 0.40-0.60       | J/D     |             |       |               | - - - - | (0.65)   | Light brown mottled grey CLAY (RESIDUAL SOIL) |         |                         |
| 0.80-1.00       | B       | N=12        |       | - - - -       | 0.80    | Firm medium brown mottled grey CLAY (RESIDUAL SOIL)                            |   |         |                         |
| 1.00-1.45       | SPT     |             |       |               | - - - - | (0.80)   |   |         |                         |
| 1.40-1.60       | B       |             |       |               | - - - - | 1.60   |   |         |                         |
| 1.80-2.00       | B       | 74<br>Blows |       | - - - -       | (0.71)  | Weak orangish brown weathered MUDSTONE (PENNINE LOWER COAL MEASURES FORMATION) |   |         |                         |
| 2.00-2.31       | SPT     |             |       |               | - - - - | 2.31   |   |         |                         |

AGS3 UK BH LOGS 23-087 HILLYCROFT.GPJ AGS3 ALL.GDT 3/3/23

| Boring Progress and Water Observations |      |       |              |                |           | Chiselling |    |       | Water Added |    | GENERAL REMARKS                                 |
|--|------|-------|--------------|----------------|-----------|------------|----|-------|-------------|----|---|
| Date                                   | Time | Depth | Casing Depth | Casing Dia. mm | Water Dpt | From       | To | Hours | From        | To |   |
|  |      |       |              |                |           |            |    |       |             |    | Borehole remained dry during exploratory period |

|  |   |   |                        |
|--|---|---|------------------------|
| All dimensions in metres<br>Scale 1:25 | Client<br><b>Stephen Smith Construction</b> | Method/<br>Plant Used<br><b>Windowless Sampling</b> | Logged By<br><b>DO</b> |
|--|---|---|------------------------|



Arc Environmental Limited  
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## DRILLHOLE LOG

|  |  |                  |                 |                              |  |
|--|--|------------------|-----------------|------------------------------|--|
| Project<br><b>Hillycroft</b>                   |  |                  |                 | DRILLHOLE No<br><b>RBH01</b> |  |
| Job No<br><b>23-087</b>                        | Date<br><b>20-03-23</b><br><b>20-03-23</b> | Ground Level (m) | Co-Ordinates () |                              |  |
| Contractor<br><b>Arc Environmental Limited</b> |  |                  |                 | Sheet<br><b>1</b>            |  |

| RUN DETAILS |               |                        | STRATA       |        |                    |                 |        | of 2 | Geology | Instrument/<br>Backfill |
|-------------|---------------|------------------------|--------------|--------|--------------------|-----------------|--------|------|---------|-------------------------|
| Depth       | TCR (SCR) RQD | (SPT) Fracture Spacing | Red'cd Level | Legend | Depth (Thick-ness) | DESCRIPTION     |        |      |         |                         |
|             |               |                        |              |        |                    | Discontinuities | Detail | Main |         |                         |
|             |               |                        |              | X      | 0.20               |                 |        |      |         |                         |
|             |               |                        |              | -      | 0.50               |                 |        |      |         |                         |
|             |               |                        |              | -      | (1.90)             |                 |        |      |         |                         |
|             |               |                        |              | -      | 2.40               |                 |        |      |         |                         |
|             |               |                        |              | -      | (1.90)             |                 |        |      |         |                         |
|             |               |                        |              | -      | 4.30               |                 |        |      |         |                         |
|             |               |                        |              | -      | 4.70               |                 |        |      |         |                         |
|             |               |                        |              | X      | (1.90)             |                 |        |      |         |                         |
|             |               |                        |              | -      | 6.60               |                 |        |      |         |                         |
|             |               |                        |              | -      |                    |                 |        |      |         |                         |

| Drilling Progress and Water Observations |      |       |        |             |        |                | Rotary Flush |     |       |         | GENERAL REMARKS |
|--|------|-------|--------|-------------|--------|----------------|--------------|-----|-------|---------|-----------------|
| Date                                     | Time | Depth | Casing | Core Dia mm | Strike | Water Standing | From         | To  | Type  | Returns |                 |
|  |      |       |        |             |        |                | 0            | 4.7 | Water | 100     |                 |
|  |      |       |        |             |        |                | 4.7          | 6.6 | Water | 0       |                 |
|  |      |       |        |             |        |                | 6.6          | 25  | Water | 100     |                 |

|   |   |  |                        |
|---|---|--|------------------------|
| All dimensions in metres<br>Scale 1:81.25 | Client<br><b>Stephen Smith Construction</b> | Method/<br>Plant Used<br><b>Open Hole Rotary</b> | Logged By<br><b>DT</b> |
|---|---|--|------------------------|

AGS3 UK DH BH LOGS 23-087 HILLYCROFT.GPJ AGS3\_ALL.GDT 31/3/23



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## DRILLHOLE LOG

|  |                              |                  |                  |                              |  |
|--|------------------------------|------------------|------------------|------------------------------|--|
| Project<br><b>Hillycroft</b>                   |                              |                  |                  | DRILLHOLE No<br><b>RBH01</b> |  |
| Job No<br><b>23-087</b>                        | Date<br>20-03-23<br>20-03-23 | Ground Level (m) | Co-Ordinates ( ) |                              |  |
| Contractor<br><b>Arc Environmental Limited</b> |                              |                  |                  | Sheet<br><b>2</b>            |  |

of 2

| RUN DETAILS |               |                        | STRATA       |        |                    |                 |        |      | Geology  | Instrument/<br>Backfill |  |
|-------------|---------------|------------------------|--------------|--------|--------------------|-----------------|--------|------|--|-------------------------|--|
| Depth       | TCR (SCR) RQD | (SPT) Fracture Spacing | Red'cd Level | Legend | Depth (Thick-ness) | DESCRIPTION     |        |      |  |                         |  |
|             |               |                        |              |        |                    | Discontinuities | Detail | Main |  |                         |  |
|             |               |                        |              |        | (18.40)            |                 |        |      | SOLID DRILLING. No flush returns. Drillers description. <i>(continued)</i> |                         |  |
|             |               |                        |              |        | 25.00              |                 |        |      |  |                         |  |

AGS3 UK DH BH LOGS 23-087 HILLYCROFT.GPJ AGS3\_ALL.GDT 31/3/23

| Drilling Progress and Water Observations  |       |       |        |             |        |                | Rotary Flush                                |    |  |         | GENERAL REMARKS   |
|---|-------|-------|--------|-------------|--------|----------------|---|----|--|---------|---|
| Date                                      | Time  | Depth | Casing | Core Dia mm | Strike | Water Standing | From  | To | Type   | Returns |   |
| 20-03-23                                  | 00.00 | 25.00 | 1.50   | 100mm       |        |                |   |    |  |         | All descriptions based on drillers interpretations of cuttings brought to surface and drilling rates maintained |
| All dimensions in metres<br>Scale 1:81.25 |       |       |        |             |        |                | Client<br><b>Stephen Smith Construction</b> |    | Method/<br>Plant Used<br><b>Open Hole Rotary</b> |         |   |



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## DRILLHOLE LOG

|  |                                      |                  |                  |                              |                   |
|--|--------------------------------------|------------------|------------------|------------------------------|-------------------|
| Project<br><b>Hillycroft</b>                   |                                      |                  |                  | DRILLHOLE No<br><b>RBH02</b> |                   |
| Job No<br><b>23-087</b>                        | Date<br><b>20-03-23<br/>21-03-23</b> | Ground Level (m) | Co-Ordinates ( ) |                              |                   |
| Contractor<br><b>Arc Environmental Limited</b> |                                      |                  |                  |                              | Sheet<br><b>1</b> |

| RUN DETAILS |               |                        | STRATA       |                            |                   |                 |        | of 2  | Geology | Instrument/<br>Backfill |
|-------------|---------------|------------------------|--------------|----------------------------|-------------------|-----------------|--------|---|---------|-------------------------|
| Depth       | TCR (SCR) RQD | (SPT) Fracture Spacing | Red'cd Level | Legend                     | Depth (Thickness) | DESCRIPTION     |        |   |         |                         |
|             |               |                        |              |                            |                   | Discontinuities | Detail | Main  |         |                         |
|             |               |                        |              | [Cross-hatch pattern]      | 0.50              |                 |        | Grass overlying dark brown topsoil. Drillers description (MADE GROUND)                      |         |                         |
|             |               |                        |              | [Horizontal lines pattern] | 1.00              |                 |        | Dark grey CLAY. Drillers description (RESIDUAL SOIL)  |         |                         |
|             |               |                        |              | [Horizontal lines pattern] | (1.80)            |                 |        | Light brown CLAY. Drillers description (RESIDUAL SOIL)                                      |         |                         |
|             |               |                        |              | [Horizontal lines pattern] | 2.80              |                 |        |   |         |                         |
|             |               |                        |              | [Horizontal lines pattern] | (3.70)            |                 |        | Dark grey and brown MUDSTONE recovered as shale. Drillers description (LOWER COAL MEASURES) |         |                         |
|             |               |                        |              | [Horizontal lines pattern] | 6.50              |                 |        |   |         |                         |
|             |               |                        |              | [Cross-hatch pattern]      | (2.40)            |                 |        | BROKEN GROUND with small VOIDS noted. No flush returns. Drillers description.               |         |                         |
|             |               |                        |              | [Cross-hatch pattern]      | 8.90              |                 |        | SOLID DRILLING. No flush returns. Drillers description.                                     |         |                         |

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| Drilling Progress and Water Observations |      |       |        |             |        |                | Rotary Flush |     |       |         | GENERAL REMARKS |
|--|------|-------|--------|-------------|--------|----------------|--------------|-----|-------|---------|-----------------|
| Date                                     | Time | Depth | Casing | Core Dia mm | Strike | Water Standing | From         | To  | Type  | Returns |                 |
|  |      |       |        |             |        |                | 0            | 6.5 | Water | 100     |                 |
|  |      |       |        |             |        |                | 6.5          | 8.9 | Water | 0       |                 |
|  |      |       |        |             |        |                | 8.9          | 20  | Water | 100     |                 |

All descriptions based on drillers interpretations of cuttings brought to surface and drilling rates maintained

|   |   |  |                        |
|---|---|--|------------------------|
| All dimensions in metres<br>Scale 1:81.25 | Client<br><b>Stephen Smith Construction</b> | Method/<br>Plant Used<br><b>Open Hole Rotary</b> | Logged By<br><b>DT</b> |
|---|---|--|------------------------|



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## DRILLHOLE LOG

|  |                                      |                  |                 |                              |  |
|--|--------------------------------------|------------------|-----------------|------------------------------|--|
| Project<br><b>Hillycroft</b>                   |                                      |                  |                 | DRILLHOLE No<br><b>RBH02</b> |  |
| Job No<br><b>23-087</b>                        | Date<br><b>20-03-23<br/>21-03-23</b> | Ground Level (m) | Co-Ordinates () |                              |  |
| Contractor<br><b>Arc Environmental Limited</b> |                                      |                  |                 | Sheet<br><b>2</b>            |  |

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| RUN DETAILS |               |                        | STRATA       |        |                    |                 |        |      | Geology  | Instrument/<br>Backfill |  |
|-------------|---------------|------------------------|--------------|--------|--------------------|-----------------|--------|------|--|-------------------------|--|
| Depth       | TCR (SCR) RQD | (SPT) Fracture Spacing | Red'cd Level | Legend | Depth (Thick-ness) | DESCRIPTION     |        |      |  |                         |  |
|             |               |                        |              |        |                    | Discontinuities | Detail | Main |  |                         |  |
|             |               |                        |              |        | (11.10)            |                 |        |      | SOLID DRILLING. No flush returns. Drillers description. <i>(continued)</i> |                         |  |
|             |               |                        |              |        | 20.00              |                 |        |      |  |                         |  |

AGS3 UK DH BH LOGS 23-087 HILLYCROFT.GPJ AGS3\_ALL.GDT 31/3/23

| Drilling Progress and Water Observations  |       |       |        |             |        |                | Rotary Flush                                |    |  |         | GENERAL REMARKS   |
|---|-------|-------|--------|-------------|--------|----------------|---|----|--|---------|---|
| Date                                      | Time  | Depth | Casing | Core Dia mm | Strike | Water Standing | From  | To | Type   | Returns |   |
| 20-03-23                                  | 00.00 | 20.00 | 1.50   | 100mm       |        |                |   |    |  |         | All descriptions based on drillers interpretations of cuttings brought to surface and drilling rates maintained |
| All dimensions in metres<br>Scale 1:81.25 |       |       |        |             |        |                | Client<br><b>Stephen Smith Construction</b> |    | Method/<br>Plant Used<br><b>Open Hole Rotary</b> |         |   |



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## DRILLHOLE LOG

|  |  |                  |                  |                              |  |
|--|--|------------------|------------------|------------------------------|--|
| Project<br><b>Hillycroft</b>                   |  |                  |                  | DRILLHOLE No<br><b>RBH03</b> |  |
| Job No<br><b>23-087</b>                        | Date<br><b>21-03-23</b><br><b>21-03-23</b> | Ground Level (m) | Co-Ordinates ( ) |                              |  |
| Contractor<br><b>Arc Environmental Limited</b> |  |                  |                  | Sheet<br><b>1</b>            |  |

| RUN DETAILS |               |                        | STRATA       |                            |                   |                 |        | of 2  |         |                      |
|-------------|---------------|------------------------|--------------|----------------------------|-------------------|-----------------|--------|---|---------|----------------------|
| Depth       | TCR (SCR) RQD | (SPT) Fracture Spacing | Red'cd Level | Legend                     | Depth (Thickness) | DESCRIPTION     |        |   | Geology | Instrument/ Backfill |
|             |               |                        |              |                            |                   | Discontinuities | Detail | Main  |         |                      |
|             |               |                        |              | [Cross-hatch pattern]      | 0.10              |                 |        | Black asphalt. Drillers description (MADE GROUND)   |         |                      |
|             |               |                        |              | [Horizontal lines pattern] | 0.30              |                 |        | Black ashy gravel sub base. Drillers description (MADE GROUND)                              |         |                      |
|             |               |                        |              | [Horizontal lines pattern] | 0.50              |                 |        | Dark grey CLAY. Drillers description (RESIDUAL SOIL)  |         |                      |
|             |               |                        |              | [Horizontal lines pattern] | (1.50)            |                 |        | Light brown CLAY. Drillers description (RESIDUAL SOIL)                                      |         |                      |
|             |               |                        |              | [Horizontal lines pattern] | 2.00              |                 |        | Dark grey and brown MUDSTONE recovered as shale. Drillers description (LOWER COAL MEASURES) |         |                      |
|             |               |                        |              | [Horizontal lines pattern] | (4.90)            |                 |        |   |         |                      |
|             |               |                        |              | [Horizontal lines pattern] | 6.90              |                 |        |   |         |                      |
|             |               |                        |              | [Cross-hatch pattern]      | (2.30)            |                 |        | BROKEN GROUND with small VOIDS noted. No flush returns. Drillers description.               |         |                      |
|             |               |                        |              | [Cross-hatch pattern]      | 9.20              |                 |        | SOLID DRILLING. No flush returns. Drillers description.                                     |         |                      |

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| Drilling Progress and Water Observations |      |       |        |             |        |                | Rotary Flush |     |       |         | GENERAL REMARKS |
|--|------|-------|--------|-------------|--------|----------------|--------------|-----|-------|---------|-----------------|
| Date                                     | Time | Depth | Casing | Core Dia mm | Strike | Water Standing | From         | To  | Type  | Returns |                 |
|  |      |       |        |             |        |                | 0            | 6.9 | Water | 100     |                 |
|  |      |       |        |             |        |                | 6.9          | 9.2 | Water | 0       |                 |
|  |      |       |        |             |        |                | 9.2          | 20  | Water | 100     |                 |

All descriptions based on drillers interpretations of cuttings brought to surface and drilling rates maintained

|   |   |  |                        |
|---|---|--|------------------------|
| All dimensions in metres<br>Scale 1:81.25 | Client<br><b>Stephen Smith Construction</b> | Method/<br>Plant Used<br><b>Open Hole Rotary</b> | Logged By<br><b>DT</b> |
|---|---|--|------------------------|



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## DRILLHOLE LOG

|  |  |                  |                  |                              |  |
|--|--|------------------|------------------|------------------------------|--|
| Project<br><b>Hillycroft</b>                   |  |                  |                  | DRILLHOLE No<br><b>RBH03</b> |  |
| Job No<br><b>23-087</b>                        | Date<br><b>21-03-23</b><br><b>21-03-23</b> | Ground Level (m) | Co-Ordinates ( ) |                              |  |
| Contractor<br><b>Arc Environmental Limited</b> |  |                  |                  | Sheet<br><b>2</b>            |  |

of 2

| RUN DETAILS |               |                        | STRATA       |        |                    |                 |        |      | Geology  | Instrument/<br>Backfill |
|-------------|---------------|------------------------|--------------|--------|--------------------|-----------------|--------|------|--|-------------------------|
| Depth       | TCR (SCR) RQD | (SPT) Fracture Spacing | Red'cd Level | Legend | Depth (Thick-ness) | DESCRIPTION     |        |      |  |                         |
|             |               |                        |              |        |                    | Discontinuities | Detail | Main |  |                         |
|             |               |                        |              |        | (10.80)            |                 |        |      | SOLID DRILLING. No flush returns. Drillers description. <i>(continued)</i> |                         |
|             |               |                        |              |        | 20.00              |                 |        |      |  |                         |

AGS3 UK DH BH LOGS 23-087 HILLYCROFT.GPJ AGS3\_ALL.GDT 31/3/23

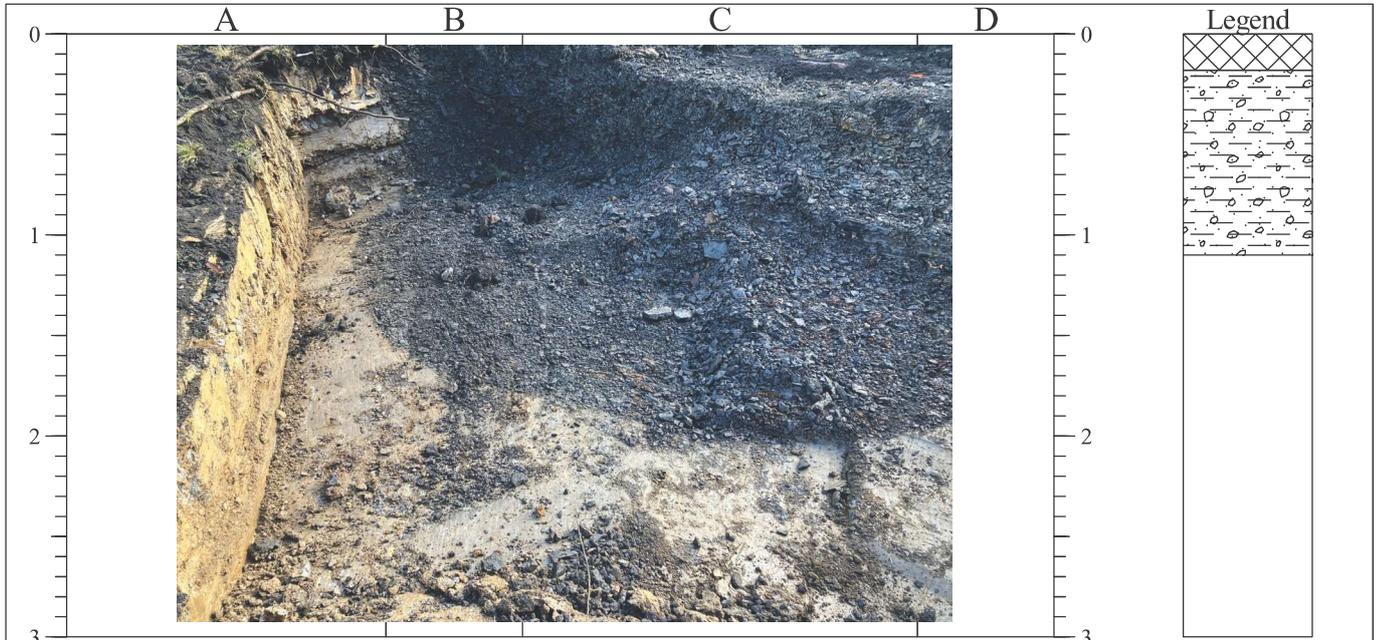
| Drilling Progress and Water Observations  |       |       |        |             |        |                | Rotary Flush                                |    |  |         | GENERAL REMARKS   |
|---|-------|-------|--------|-------------|--------|----------------|---|----|--|---------|---|
| Date                                      | Time  | Depth | Casing | Core Dia mm | Strike | Water Standing | From  | To | Type   | Returns |   |
| 21-03-23                                  | 00.00 | 20.00 | 1.50   | 100mm       |        |                |   |    |  |         | All descriptions based on drillers interpretations of cuttings brought to surface and drilling rates maintained |
| All dimensions in metres<br>Scale 1:81.25 |       |       |        |             |        |                | Client<br><b>Stephen Smith Construction</b> |    | Method/<br>Plant Used<br><b>Open Hole Rotary</b> |         |   |



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## TRIAL PIT LOG

|  |                         |                  |                 |  |
|--|-------------------------|------------------|-----------------|--|
| Project<br><b>Hillycroft, Gildersome</b>       |                         |                  |                 | <b>TRIAL PIT No</b><br><br><b>TP01</b> |
| Job No<br><b>23-087</b>                        | Date<br><b>23-02-23</b> | Ground Level (m) | Co-Ordinates () |  |
| Contractor<br><b>Arc Environmental Limited</b> |                         |                  |                 | Sheet<br><b>1 of 1</b>                 |



| STRATA    |    |  | SAMPLES & TESTS |     |                     |
|-----------|----|--|-----------------|-----|---------------------|
| Depth     | No | DESCRIPTION  | Depth           | No  | Remarks/Tests       |
| 0.00-0.18 |    | Grass overlying dark brown clayey topsoil with coal, shale and mudstone fragments (MADE GROUND)<br>Firm to stiff (medium to high strength) light to medium brown / orange mottled grey slightly sandy slightly gravelly CLAY | 0.00-0.15       | J/D | 74kN/m <sup>2</sup> |
| 0.18-1.10 |    |  | 0.75            | V   |                     |

AGS3\_UK\_TP\_BH\_LOGS\_23-087\_HILLYCROFT.GPJ\_AGS3\_ALL\_GDT\_4/5/23

|  |   |
|--|---|
| Shoring/Support:<br>Stability:<br><br> | <b>GENERAL REMARKS</b><br><br>Trial pit remained dry and stable during exploratory period |
|--|---|

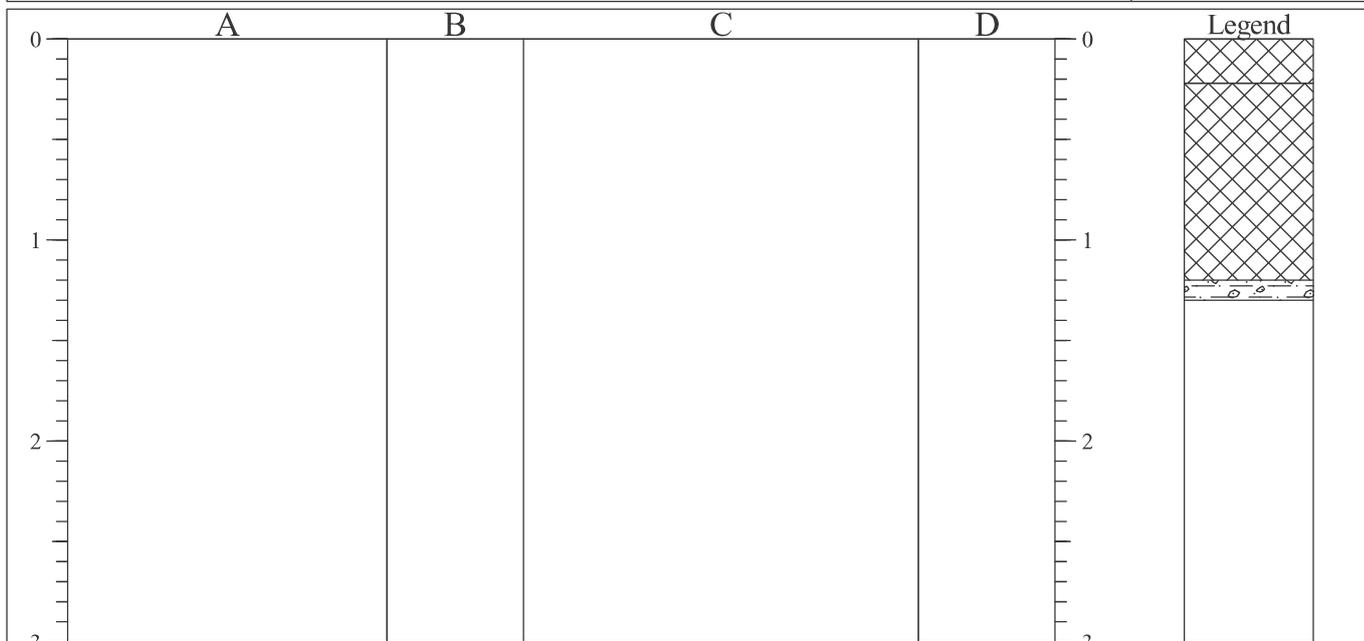
|  |   |   |                        |
|--|---|---|------------------------|
| All dimensions in metres<br>Scale 1:37.5 | Client<br><b>Stephen Smith Construction</b> | Method/<br>Plant Used<br><b>Tracked Excavator</b> | Logged By<br><b>PB</b> |
|--|---|---|------------------------|



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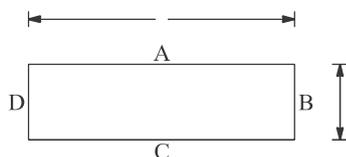
## TRIAL PIT LOG

|  |                         |                  |                  |  |
|--|-------------------------|------------------|------------------|--|
| Project<br><b>Hillycroft, Gildersome</b>       |                         |                  |                  | <b>TRIAL PIT No</b><br><br><b>TP02</b> |
| Job No<br><b>23-087</b>                        | Date<br><b>23-02-23</b> | Ground Level (m) | Co-Ordinates ( ) |  |
| Contractor<br><b>Arc Environmental Limited</b> |                         |                  |                  | Sheet<br><b>1 of 1</b>                 |



| STRATA    |    |   | SAMPLES & TESTS |     |               |
|-----------|----|---|-----------------|-----|---------------|
| Depth     | No | DESCRIPTION   | Depth           | No  | Remarks/Tests |
| 0.00-0.22 |    | Grass overlying dark brown / black clayey topsoil with coal, shale and mudstone fragments (MADE GROUND)                         | 0.00-0.15       | J/D |               |
| 0.22-1.20 |    | Firm dark brown / grey very clayey fragmented shale, mudstone and coal with occasional sandstone (colliery spoil) (MADE GROUND) | 0.50-0.60       | J/D |               |
| 1.20-1.30 |    | Firm (medium strength) medium brown / orange mottled grey slightly sandy slightly gravelly CLAY                                 |                 |     |               |

Shoring/Support:  
Stability:



### GENERAL REMARKS

Trial pit remained dry and stable during exploratory period

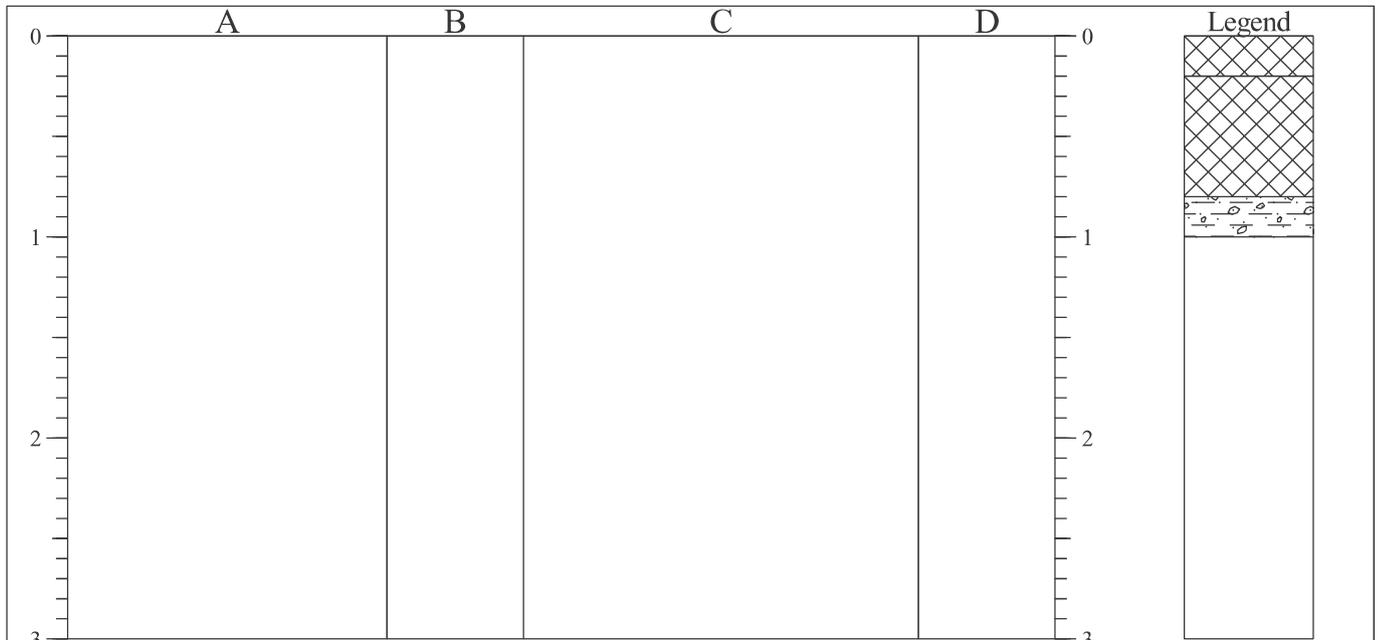
AGS3\_UK\_TP\_BH\_LOGS\_23-087\_HILLYCROFT.GPJ\_AGS3\_ALL\_GDT\_4/5/23

|  |   |   |                        |
|--|---|---|------------------------|
| All dimensions in metres<br>Scale 1:37.5 | Client<br><b>Stephen Smith Construction</b> | Method/<br>Plant Used<br><b>Tracked Excavator</b> | Logged By<br><b>PB</b> |
|--|---|---|------------------------|



## TRIAL PIT LOG

|  |                         |                  |                 |  |
|--|-------------------------|------------------|-----------------|--|
| Project<br><b>Hillycroft, Gildersome</b>       |                         |                  |                 | <b>TRIAL PIT No</b><br><br><b>TP03</b> |
| Job No<br><b>23-087</b>                        | Date<br><b>23-02-23</b> | Ground Level (m) | Co-Ordinates () |  |
| Contractor<br><b>Arc Environmental Limited</b> |                         |                  |                 | Sheet<br><b>1 of 1</b>                 |



| STRATA    |    |   | SAMPLES & TESTS |     |               |
|-----------|----|---|-----------------|-----|---------------|
| Depth     | No | DESCRIPTION   | Depth           | No  | Remarks/Tests |
| 0.00-0.20 |    | Grass overlying dark brown / black slightly sandy topsoil with some coal, mudstone and occasional brick fragments (MADE GROUND)             | 0.00-0.10       | J/D |               |
| 0.20-0.80 |    | Dark brown / black soily ashy very sandy clay with some half bricks and shale, mudstone, coal and occasional timber fragments (MADE GROUND) | 0.40-0.55       | J/D |               |
| 0.80-1.00 |    | Firm (medium strength) medium brown / orange mottled grey slightly sandy slightly gravelly CLAY   |                 |     |               |

AGS3\_UK\_TP\_BH\_LOGS\_23-087\_HILLYCROFT.GPJ\_AGSS3\_ALL\_GDT\_4/5/23

|   |  |
|---|--|
| <p>Shoring/Support:<br/>Stability:</p> <div style="text-align: center;"> </div> | <p><b>GENERAL REMARKS</b></p> <p>Trial pit remained dry and stable during exploratory period</p> |
|---|--|

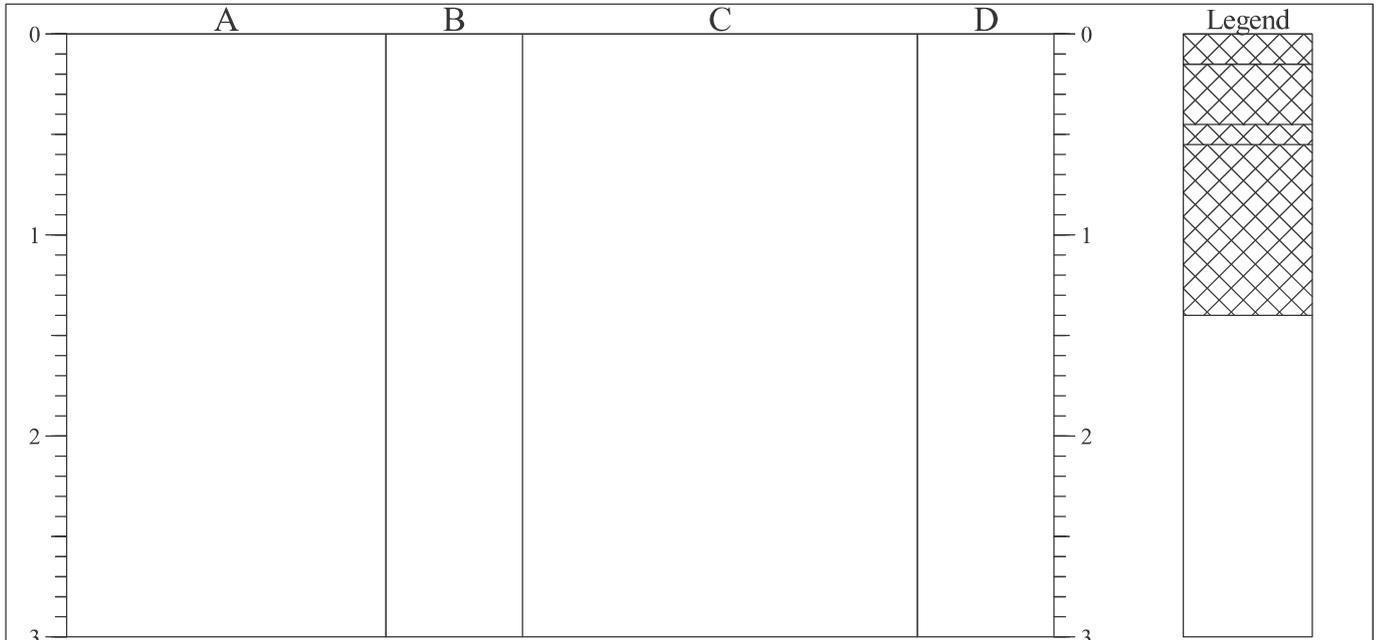
|  |   |   |                        |
|--|---|---|------------------------|
| All dimensions in metres<br>Scale 1:37.5 | Client<br><b>Stephen Smith Construction</b> | Method/<br>Plant Used<br><b>Tracked Excavator</b> | Logged By<br><b>PB</b> |
|--|---|---|------------------------|



Arc Environmental Limited  
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 Durham DH7 8PN  
 Telephone: 0191 378 6380

## TRIAL PIT LOG

|  |                         |                  |                 |                              |
|--|-------------------------|------------------|-----------------|------------------------------|
| Project<br><b>Hillycroft, Gildersome</b>       |                         |                  |                 | <b>TRIAL PIT No<br/>TP04</b> |
| Job No<br><b>23-087</b>                        | Date<br><b>23-02-23</b> | Ground Level (m) | Co-Ordinates () |                              |
| Contractor<br><b>Arc Environmental Limited</b> |                         |                  |                 | Sheet<br><b>1 of 1</b>       |



| STRATA    |    |  | SAMPLES & TESTS |     |               |
|-----------|----|--|-----------------|-----|---------------|
| Depth     | No | DESCRIPTION  | Depth           | No  | Remarks/Tests |
| 0.00-0.15 |    | Grass overlying grey / dark brown very clayey friable topsoil with occasional mudstone and shale fragments (MADE GROUND)             | 0.00-0.15       |     |               |
| 0.15-0.45 |    | Dark brown / grey slightly ashy soily clay / clayey soil with some sandstone, brick, shale and coal fragments (MADE GROUND)          |                 |     |               |
| 0.45-0.55 |    | Soft to firm orange / brown silty sandy clay (MADE GROUND)   |                 |     |               |
| 0.55-1.40 |    | Loose black / grey / brown locally white and buff clayey sandy ashy clinker, shale, mudstone and coal (colliery spoil) (MADE GROUND) | 0.60-0.70       | J/D |               |

AGS3\_UK\_TP\_BH\_LOGS\_23-087\_HILLYCROFT.GPJ\_AGSS3\_ALL\_GDT\_4/5/23

|   |   |
|---|---|
| <p>Shoring/Support:<br/>Stability:</p> <div style="text-align: center;"> </div> | <p><b>GENERAL REMARKS</b></p> <p>Trial pit remained dry during exploratory period. Slight side wall collapse from c.0.80m</p> |
|---|---|

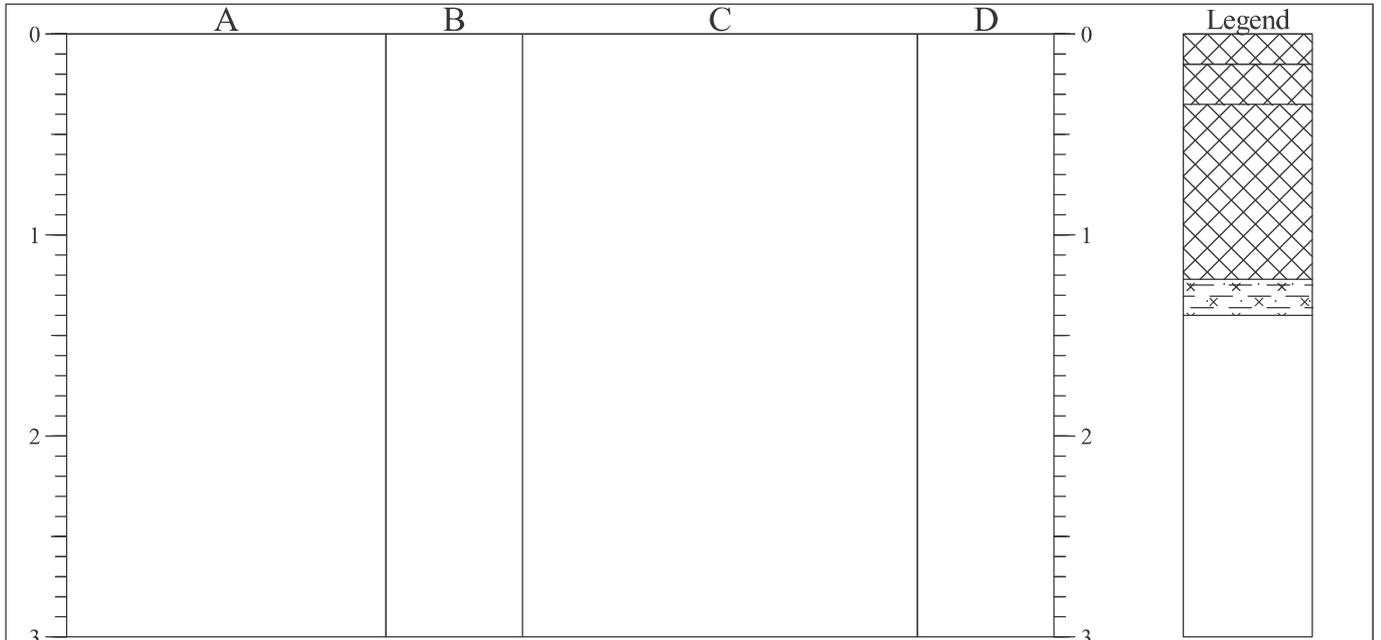
|  |   |   |                        |
|--|---|---|------------------------|
| All dimensions in metres<br>Scale 1:37.5 | Client<br><b>Stephen Smith Construction</b> | Method/<br>Plant Used<br><b>Tracked Excavator</b> | Logged By<br><b>PB</b> |
|--|---|---|------------------------|



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## TRIAL PIT LOG

|  |                         |                  |                 |  |
|--|-------------------------|------------------|-----------------|--|
| Project<br><b>Hillicroft, Gildersome</b>       |                         |                  |                 | <b>TRIAL PIT No</b><br><br><b>TP05</b> |
| Job No<br><b>23-087</b>                        | Date<br><b>23-02-23</b> | Ground Level (m) | Co-Ordinates () |  |
| Contractor<br><b>Arc Environmental Limited</b> |                         |                  |                 | Sheet<br><b>1 of 1</b>                 |



| STRATA    |    |   | SAMPLES & TESTS |     |               |
|-----------|----|---|-----------------|-----|---------------|
| Depth     | No | DESCRIPTION   | Depth           | No  | Remarks/Tests |
| 0.00-0.15 |    | Grass overlying dark brown / black clayey topsoil with some coal, mudstone and occasional brick fragments (MADE GROUND)<br>Firm dark grey / brown friable silty clay with numerous roots and coal fragments (MADE GROUND)<br>Bands of dark grey clayey mudstone, shale and coal (colliery spoil) and soft to firm orange / brown silty clay with numerous roots (MADE GROUND) | 0.00-0.10       | J/D |               |
| 0.15-0.35 |    |   | 0.30-0.45       | J/D |               |
| 0.35-1.22 |    |   |                 |     |               |
| 1.22-1.40 |    | Firm olive / brown mottled grey slightly sandy silty CLAY   |                 |     |               |

AGS3\_UK\_TP\_BH\_LOGS\_23-087\_HILLYCROFT.GPJ\_AGS3\_ALL\_GDT\_4/5/23

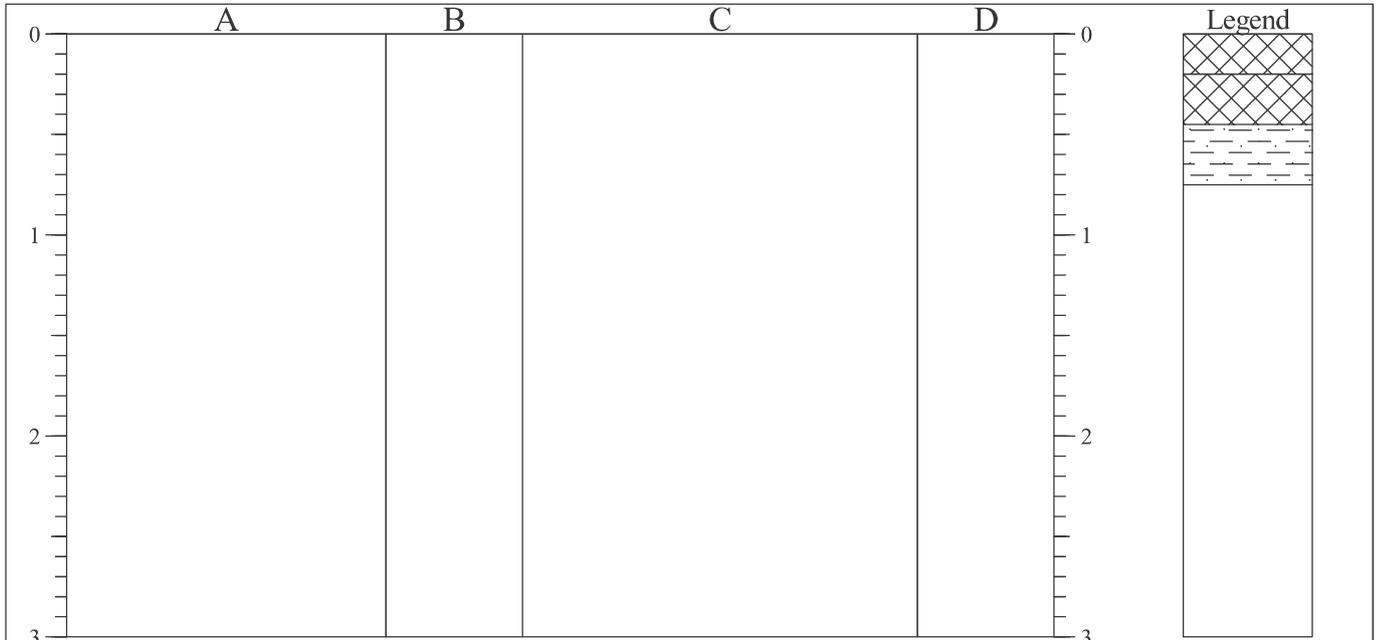
|   |  |
|---|--|
| <p><b>Shoring/Support:</b><br/><b>Stability:</b></p> <div style="text-align: center;"> </div> | <p><b>GENERAL REMARKS</b></p> <p>Trial pit remained dry and stable during exploratory period</p> |
|---|--|

|  |   |   |                        |
|--|---|---|------------------------|
| All dimensions in metres<br>Scale 1:37.5 | Client<br><b>Stephen Smith Construction</b> | Method/<br>Plant Used<br><b>Tracked Excavator</b> | Logged By<br><b>PB</b> |
|--|---|---|------------------------|



## TRIAL PIT LOG

|  |                         |                  |                 |  |
|--|-------------------------|------------------|-----------------|--|
| Project<br><b>Hillicroft, Gildersome</b>       |                         |                  |                 | <b>TRIAL PIT No</b><br><br><b>TP06</b> |
| Job No<br><b>23-087</b>                        | Date<br><b>23-02-23</b> | Ground Level (m) | Co-Ordinates () |  |
| Contractor<br><b>Arc Environmental Limited</b> |                         |                  |                 | Sheet<br><b>1 of 1</b>                 |



| STRATA    |    |   |           | SAMPLES & TESTS |                           |  |
|-----------|----|---|-----------|-----------------|---------------------------|--|
| Depth     | No | DESCRIPTION   | Depth     | No              | Remarks/Tests             |  |
| 0.00-0.20 |    | Grass / vegetation overlying dark brown / black clayey topsoil with coal, shale, mudstone and brick fragments (MADE GROUND) | 0.05-0.15 | J/D             |                           |  |
| 0.20-0.45 |    | Dark brown / grey very clayey fragmented shale, mudstone and coal with occasional sandstone (colliery spoil) (MADE GROUND)  | 0.20-0.40 | J/D             |                           |  |
| 0.45-0.75 |    | Firm (medium strength) light to medium brown / orange mottled grey slightly sandy CLAY                                      | 0.50      | CBR             |                           |  |
|           |    |   | 0.50      | V               | 2%<br>64kN/m <sup>2</sup> |  |
|           |    |   | 0.60-0.75 | D               |                           |  |

AGS3\_UK\_TP\_BH\_LOGS\_23-087\_HILLYCROFT.GPJ\_AGS3\_ALL\_GDT\_4/5/23

|   |  |
|---|--|
| <p>Shoring/Support:<br/>Stability:</p> <div style="text-align: center;"> </div> | <p><b>GENERAL REMARKS</b></p> <p>Trial pit remained dry and stable during exploratory period</p> |
|---|--|

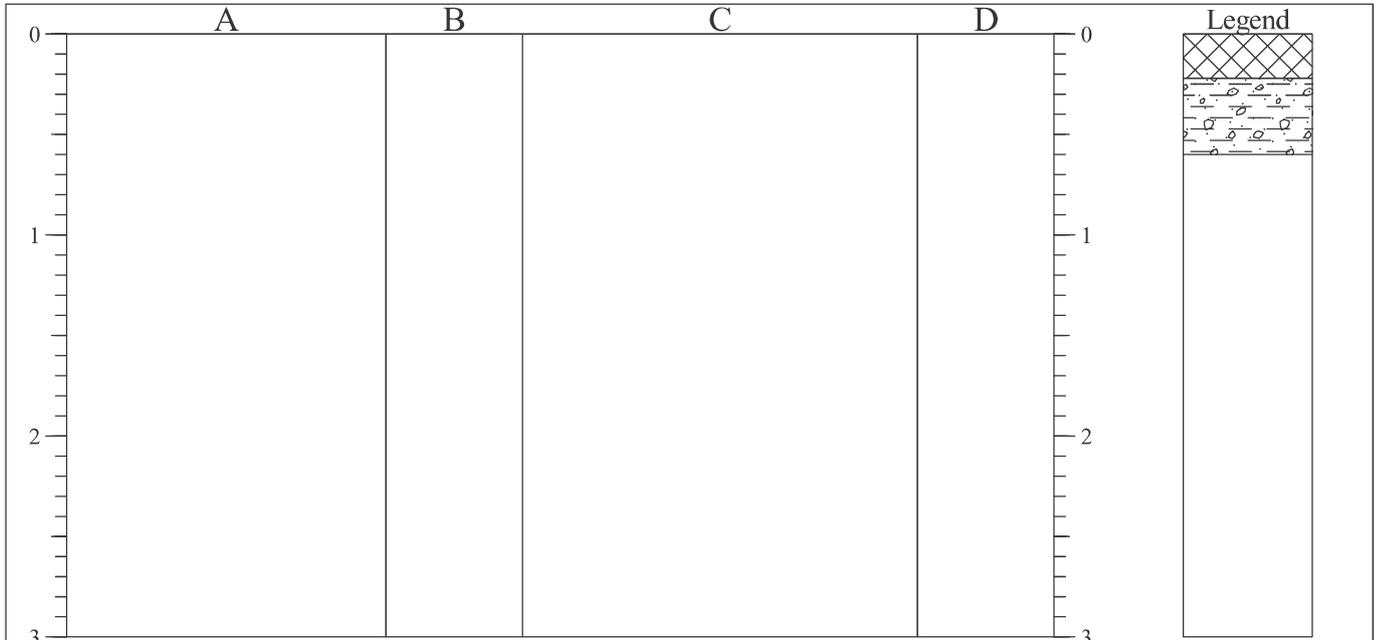
|  |   |   |                        |
|--|---|---|------------------------|
| All dimensions in metres<br>Scale 1:37.5 | Client<br><b>Stephen Smith Construction</b> | Method/<br>Plant Used<br><b>Tracked Excavator</b> | Logged By<br><b>PB</b> |
|--|---|---|------------------------|



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## TRIAL PIT LOG

|  |                         |                  |                 |                              |
|--|-------------------------|------------------|-----------------|------------------------------|
| Project<br><b>Hillicroft, Gildersome</b>       |                         |                  |                 | <b>TRIAL PIT No<br/>TP07</b> |
| Job No<br><b>23-087</b>                        | Date<br><b>23-02-23</b> | Ground Level (m) | Co-Ordinates () |                              |
| Contractor<br><b>Arc Environmental Limited</b> |                         |                  |                 | Sheet<br><b>1 of 1</b>       |



| STRATA    |    |   | SAMPLES & TESTS           |               |                               |
|-----------|----|---|---------------------------|---------------|-------------------------------|
| Depth     | No | DESCRIPTION   | Depth                     | No            | Remarks/Tests                 |
| 0.00-0.22 |    | Black soil with coal, shale, mudstone and ash fragments and occasional small sandstone cobble   |                           |               |                               |
| 0.22-0.60 |    | Firm (medium strength) medium brown / orange mottled grey slightly sandy slightly gravelly CLAY | 0.30<br>0.40-0.50<br>0.50 | CBR<br>D<br>V | 2%<br><br>68kN/m <sup>2</sup> |

AGS3\_UK\_TP\_BH\_LOGS\_23-087\_HILLYCROFT.GPJ\_AGSS3\_ALL\_GDT\_4/5/23

|   |  |
|---|--|
| <p>Shoring/Support:<br/>Stability:</p> <div style="text-align: center;"> </div> | <p><b>GENERAL REMARKS</b></p> <p>Trial pit remained dry and stable during exploratory period</p> |
|---|--|

|  |   |   |                        |
|--|---|---|------------------------|
| All dimensions in metres<br>Scale 1:37.5 | Client<br><b>Stephen Smith Construction</b> | Method/<br>Plant Used<br><b>Tracked Excavator</b> | Logged By<br><b>PB</b> |
|--|---|---|------------------------|

# Arc Environmental Ground Gas & Groundwater Monitoring Certificate

|  |
|--|
| <b>Site:</b> Hillycroft, Gildersome, Leeds |
| <b>Ref:</b> 23-087                         |



| Visit | Date       | Time  | Equipment | Weather               | Initials | Comments | Borehole | Gas Flow (l/hr) | Atmospheric Pressure (mb) | Trend |         | Methane (% v/v) |         | Methane (% LEL) |         | Carbon Dioxide (% v/v) |         | Oxygen (% v/v) |       | Hydrocarbons (GFM 435 only) |               | Other Gases (PPM) |    |  | Depth to Water (m Bgl) |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-------|------------|-------|-----------|-----------------------|----------|----------|----------|-----------------|---------------------------|-------|---------|-----------------|---------|-----------------|---------|------------------------|---------|----------------|-------|-----------------------------|---------------|-------------------|----|--|------------------------|--|------|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|       |            |       |           |                       |          |          |          |                 |                           | R/F/S | Initial | Steady          | Initial | Steady          | Initial | Steady                 | Initial | Steady         | Hex % | PID Cf                      | (isobutylene) | H <sub>2</sub> S  | CO |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1     | 09/03/2023 | 09:00 | GFMA30    | LIGHT RAIN            | TMCL     |          |          | <0.1            | 1014                      | F     |         | 0.0             |         | 0.0             |         | 1.9                    |         | 17.0           |       |                             |               |                   |    |  |                        |  | DRY  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         | 0.0             |         | 0.0             |         | 2.3                    |         | 15.9           |       |                             |               |                   |    |  |                        |  | DRY  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         | 0.0             |         | 0.0             |         | 0.0                    |         | 17.9           |       |                             |               |                   |    |  |                        |  |      | DRY  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2     | 20/03/2023 | 09:40 | GFMA30    | OVERCAST              | TMCL     |          |          | <0.1            | 996                       | F     |         | 0.0             |         | 0.0             |         | 1.9                    |         | 16.7           |       |                             |               |                   |    |  |                        |  | 2.89 |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         | 0.0             |         | 0.0             |         | 2.3                    |         | 16.6           |       |                             |               |                   |    |  |                        |  | DRY  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         | 0.0             |         | 0.0             |         | 2.3                    |         | 16.5           |       |                             |               |                   |    |  |                        |  |      | 1.66 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3     | 11/04/2023 | 13:12 | GFMA30    | Dry/sunny             | NIL      |          |          | <0.1            | 991                       | F     |         | 0.0             |         | 0.0             |         | 1.9                    |         | 16.9           |       |                             |               |                   |    |  |                        |  | 1.62 |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         | 0.0             |         | 0.0             |         | 2.5                    |         | 16.1           |       |                             |               |                   |    |  |                        |  | DRY  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         | 0.0             |         | 0.0             |         | 4.6                    |         | 12.6           |       |                             |               |                   |    |  |                        |  |      | 1.26 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4     | 28/04/2023 | 12:00 | GFMA30    | OVERCAST / LIGHT RAIN | TMCL     |          |          | <0.1            | 994                       | R     |         | 0.0             |         | 0.0             |         | 1.7                    |         | 19.4           |       |                             |               |                   |    |  |                        |  | 2.91 |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         | 0.0             |         | 0.0             |         | 3.9                    |         | 18.5           |       |                             |               |                   |    |  |                        |  | DRY  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         | 0.0             |         | 0.0             |         | 7.2                    |         | 12.4           |       |                             |               |                   |    |  |                        |  |      | 1.52 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5     |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6     |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|       |            |       |           |                       |          |          |          |                 |                           |       |         |                 |         |                 |         |                        |         |                |       |                             |               |                   |    |  |                        |  |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Notes:  
 Detection limits - Methane = 0.0%, Carbon Dioxide = 0.0%, LEL = 0.0%, Oxygen = 0.0%, Flow = 0.1l/hr  
 Monitoring order is from Left to Right across table  
 Monitoring should be for Not Less than 3 minutes. However, if high concentrations of gases initially recorded, monitoring should be for up to 10 minutes  
 NA = Not applicable  
 = Off the scale

Ci = PID compensation factor (1-10) - Must be used to multiply the PID reading to give an accurate measure of the total hydrocarbons in the borehole when methane is present  
 Hex = Hexane (Valid and in range up to 2000%) - Recorded when abnormally high methane is present.  
 PID = Pico Ionisation Detector (Calibrated to Isobutylene)

**Appendix C –**

**LKC Profile Logs**

# Trial Pit Log

|                            |                     |                                      |                 |                  |                             |
|----------------------------|---------------------|--------------------------------------|-----------------|------------------|-----------------------------|
| Project: Appletree Cottage |                     | Client: Will Brown and Leanne Megson |                 | Date: 20/10/2023 |                             |
| Project No. : LKC 23 1535  |                     | Contractor: LKC                      |                 | Equipment:       |                             |
| Location Number<br>HD101   | Location Type<br>TP | Level                                | Logged By<br>CD | Scale<br>1:25    | Page Number<br>Sheet 1 of 1 |

| Depth       | Samples / Tests  | Depth (m) | Legend | Stratum Description   | Level (m) |
|-------------|------------------|-----------|--------|---|-----------|
| 0.15 - 0.50 | PID=0.2ppm<br>ES | 0.15      |        | MADE GROUND: Tarmac.  | 0.5       |
|             |                  | 0.50      |        | MADE GROUND: Light greyish-brown SAND and GRAVEL with frequent brick fragments, occasional ash, plastic and metal waste.  |           |
| 0.50 - 0.80 | PID=0.1ppm<br>ES | 0.50      |        | MADE GROUND: Dark grey gravelly CLAY with occasional brick fragments. Gravel is fine to coarse, angular to subrounded, comprising sandstone. Organic odour present. | 1.0       |
|             |                  | 0.80      |        | End of Trial Pit at 0.80m   |           |
|             |                  |           |        |   | 1.5       |
|             |                  |           |        |   | 2.0       |
|             |                  |           |        |   | 2.5       |
|             |                  |           |        |   | 3.0       |
|             |                  |           |        |   | 3.5       |
|             |                  |           |        |   | 4.0       |
|             |                  |           |        |   | 4.5       |
|             |                  |           |        |   | 5.0       |



| Pit Dimensions |           |           | Pit Stability |
|----------------|-----------|-----------|---------------|
| Length (m)     | Width (m) | Depth (m) | Stable        |
| 0.50           | 0.50      | 0.80      |               |

Remarks:  
Pit filled with rainwater up to 0.4mbgl.

# Trial Pit Log

|                            |                     |                                      |                 |                  |                             |
|----------------------------|---------------------|--------------------------------------|-----------------|------------------|-----------------------------|
| Project: Appletree Cottage |                     | Client: Will Brown and Leanne Megson |                 | Date: 20/10/2023 |                             |
| Project No. : LKC 23 1535  |                     | Contractor: LKC                      |                 | Equipment:       |                             |
| Location Number<br>HD102   | Location Type<br>TP | Level                                | Logged By<br>CD | Scale<br>1:25    | Page Number<br>Sheet 1 of 1 |

| Depth       | Samples / Tests  | Depth (m) | Legend | Stratum Description  | Level (m) |
|-------------|------------------|-----------|--------|--|-----------|
| 0.30 - 0.50 | PID=0.3ppm<br>ES | 0.30      |        | MADE GROUND: Tarmac  |           |
| 0.50 - 0.90 | PID=0.1ppm<br>ES | 0.50      |        | MADE GROUND: Light greyish brown SAND and GRAVEL with frequent brick fragments, occasional plastic and metal waste. Sand is fine to coarse, gravel is fine to coarse, subangular to angular, comprising limestone and sandstone. | 0.5       |
|             |                  | 0.90      |        | MADE GROUND: Dark grey slightly gravelly CLAY with rare brick fragments. Gravel is fine to medium, angular to subrounded, comprising sandstone. Slight organic odour.  |           |
|             |                  |           |        | End of Trial Pit at 0.90m  | 1.0       |
|             |                  |           |        |  | 1.5       |
|             |                  |           |        |  | 2.0       |
|             |                  |           |        |  | 2.5       |
|             |                  |           |        |  | 3.0       |
|             |                  |           |        |  | 3.5       |
|             |                  |           |        |  | 4.0       |
|             |                  |           |        |  | 4.5       |
|             |                  |           |        |  | 5.0       |



| Pit Dimensions |           |           | Pit Stability |
|----------------|-----------|-----------|---------------|
| Length (m)     | Width (m) | Depth (m) | Stable        |
| 0.50           | 0.50      | 0.90      |               |

Remarks:  
Pit filled with rainwater up to 0.35mbgl.

# Trial Pit Log

|                            |                     |                                      |                 |                  |                             |
|----------------------------|---------------------|--------------------------------------|-----------------|------------------|-----------------------------|
| Project: Appletree Cottage |                     | Client: Will Brown and Leanne Megson |                 | Date: 20/10/2023 |                             |
| Project No. : LKC 23 1535  |                     | Contractor: LKC                      |                 | Equipment:       |                             |
| Location Number<br>HD103   | Location Type<br>TP | Level                                | Logged By<br>CD | Scale<br>1:25    | Page Number<br>Sheet 1 of 1 |

| Depth       | Samples / Tests  | Depth (m) | Legend | Stratum Description   | Level (m) |
|-------------|------------------|-----------|--------|---|-----------|
| 0.15 - 0.45 | PID=0.2ppm<br>ES | 0.15      |        | MADE GROUND: Tarmac   |           |
| 0.45 - 0.80 | PID=0.3ppm<br>ES | 0.45      |        | MADE GROUND: Light greyish brown SAND and GRAVEL with frequent brick fragments and occasional plastic and ash. Sand is fine to coarse. Gravel is fine to coarse, angular to subangular, comprising limestone and sandstone. | 0.5       |
|             |                  | 0.80      |        | MADE GROUND: Dark grey very gravelly CLAY with occasional brick fragments. Gravel is fine to medium, angular to subrounded, comprising sandstone. Organic odour present.  |           |
|             |                  |           |        | End of Trial Pit at 0.80m   | 1.0       |
|             |                  |           |        |   | 1.5       |
|             |                  |           |        |   | 2.0       |
|             |                  |           |        |   | 2.5       |
|             |                  |           |        |   | 3.0       |
|             |                  |           |        |   | 3.5       |
|             |                  |           |        |   | 4.0       |
|             |                  |           |        |   | 4.5       |
|             |                  |           |        |   | 5.0       |



| Pit Dimensions |           |           | Pit Stability |
|----------------|-----------|-----------|---------------|
| Length (m)     | Width (m) | Depth (m) | Stable        |
| 0.50           | 0.50      | 0.80      |               |

Remarks:  
Pit filled with rainwater up to 0.45mbgl.

## **Appendix D –**

# **Contamination Results & Generic Soil Assessment Criteria**



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**Derwentside Environmental Testing Services Ltd**  
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Rose Lane  
Lenham Heath  
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ME17 2JN  
t: 01622 850410

## **DETS Report No: 23-13250**

**Site Reference:** LKC 23 1535

**Project / Job Ref:** Appletree Cottage, Morley

**Order No:** LKC231535KR

**Sample Receipt Date:** 25/10/2023

**Sample Scheduled Date:** 25/10/2023

**Report Issue Number:** 1

**Reporting Date:** 31/10/2023

**Authorised by:**

Kevin Old  
Operations Director

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.



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**Tel : 01622 850410**



**Soil Analysis Certificate**

|   |                        |               |               |               |  |
|---|------------------------|---------------|---------------|---------------|--|
| <b>DETS Report No: 23-13250</b>                     | <b>Date Sampled</b>    | 20/10/23      | 20/10/23      | 20/10/23      |  |
| <b>LK Consult Limited</b>                           | <b>Time Sampled</b>    | None Supplied | None Supplied | None Supplied |  |
| <b>Site Reference: LKC 23 1535</b>                  | <b>TP / BH No</b>      | HD101         | HD102         | HD103         |  |
| <b>Project / Job Ref: Appletree Cottage, Morley</b> | <b>Additional Refs</b> | None Supplied | None Supplied | None Supplied |  |
| <b>Order No: LKC231535KR</b>                        | <b>Depth (m)</b>       | 0.15 - 0.50   | 0.50 - 0.90   | 0.45 - 0.80   |  |
| <b>Reporting Date: 31/10/2023</b>                   | <b>DETS Sample No</b>  | 682229        | 682230        | 682231        |  |

| Determinand                           | Unit     | RL     | Accreditation | (n)          |              |              |
|---------------------------------------|----------|--------|---------------|--------------|--------------|--------------|
| Asbestos Screen <sup>(S)</sup>        | N/a      | N/a    | ISO17025      | Not Detected | Not Detected | Not Detected |
| pH                                    | pH Units | N/a    | MCERTS        | 8.2          | 6.1          | 6.9          |
| W/S Sulphate as SO <sub>4</sub> (2:1) | mg/l     | < 10   | MCERTS        | 48           | 39           | 19           |
| W/S Sulphate as SO <sub>4</sub> (2:1) | g/l      | < 0.01 | MCERTS        | 0.05         | 0.04         | 0.02         |
| Organic Matter (SOM)                  | %        | < 0.1  | MCERTS        | 5.3          | 1.6          | 11.5         |
| Arsenic (As)                          | mg/kg    | < 2    | MCERTS        | 8            | 4            | 18           |
| Cadmium (Cd)                          | mg/kg    | < 0.2  | MCERTS        | 0.5          | < 0.2        | 0.2          |
| Chromium (Cr)                         | mg/kg    | < 2    | MCERTS        | 9            | 16           | 23           |
| Chromium (hexavalent)                 | mg/kg    | < 2    | NONE          | < 2          | < 2          | < 2          |
| Copper (Cu)                           | mg/kg    | < 4    | MCERTS        | 41           | 28           | 38           |
| Lead (Pb)                             | mg/kg    | < 3    | MCERTS        | 58           | 18           | 54           |
| Mercury (Hg)                          | mg/kg    | < 1    | MCERTS        | < 1          | < 1          | < 1          |
| Nickel (Ni)                           | mg/kg    | < 3    | MCERTS        | 7            | 22           | 14           |
| Selenium (Se)                         | mg/kg    | < 2    | MCERTS        | < 2          | < 2          | < 2          |
| Vanadium (V)                          | mg/kg    | < 1    | MCERTS        | 15           | 15           | 24           |
| Zinc (Zn)                             | mg/kg    | < 3    | MCERTS        | 67           | 83           | 77           |

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion  
 Subcontracted analysis (S)

(n) Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation



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| <b>Soil Analysis Certificate - Speciated PAHs</b>   |                        |               |               |               |  |
|---|------------------------|---------------|---------------|---------------|--|
| <b>DETS Report No: 23-13250</b>                     | <b>Date Sampled</b>    | 20/10/23      | 20/10/23      | 20/10/23      |  |
| <b>LK Consult Limited</b>                           | <b>Time Sampled</b>    | None Supplied | None Supplied | None Supplied |  |
| <b>Site Reference: LKC 23 1535</b>                  | <b>TP / BH No</b>      | HD101         | HD102         | HD103         |  |
| <b>Project / Job Ref: Appletree Cottage, Morley</b> | <b>Additional Refs</b> | None Supplied | None Supplied | None Supplied |  |
| <b>Order No: LKC231535KR</b>                        | <b>Depth (m)</b>       | 0.15 - 0.50   | 0.50 - 0.90   | 0.45 - 0.80   |  |
| <b>Reporting Date: 31/10/2023</b>                   | <b>DETS Sample No</b>  | 682229        | 682230        | 682231        |  |

| <b>Determinand</b>     | <b>Unit</b> | <b>RL</b> | <b>Accreditation</b> | <b>(n)</b> |       |       |
|------------------------|-------------|-----------|----------------------|------------|-------|-------|
| Naphthalene            | mg/kg       | < 0.1     | MCERTS               | < 0.1      | < 0.1 | < 0.1 |
| Acenaphthylene         | mg/kg       | < 0.1     | MCERTS               | < 0.1      | < 0.1 | < 0.1 |
| Acenaphthene           | mg/kg       | < 0.1     | MCERTS               | < 0.1      | < 0.1 | < 0.1 |
| Fluorene               | mg/kg       | < 0.1     | MCERTS               | < 0.1      | < 0.1 | < 0.1 |
| Phenanthrene           | mg/kg       | < 0.1     | MCERTS               | < 0.1      | < 0.1 | 0.15  |
| Anthracene             | mg/kg       | < 0.1     | MCERTS               | < 0.1      | < 0.1 | < 0.1 |
| Fluoranthene           | mg/kg       | < 0.1     | MCERTS               | < 0.1      | < 0.1 | < 0.1 |
| Pyrene                 | mg/kg       | < 0.1     | MCERTS               | < 0.1      | < 0.1 | < 0.1 |
| Benzo(a)anthracene     | mg/kg       | < 0.1     | MCERTS               | < 0.1      | < 0.1 | < 0.1 |
| Chrysene               | mg/kg       | < 0.1     | MCERTS               | < 0.1      | < 0.1 | < 0.1 |
| Benzo(b)fluoranthene   | mg/kg       | < 0.1     | MCERTS               | < 0.1      | < 0.1 | < 0.1 |
| Benzo(k)fluoranthene   | mg/kg       | < 0.1     | MCERTS               | < 0.1      | < 0.1 | < 0.1 |
| Benzo(a)pyrene         | mg/kg       | < 0.1     | MCERTS               | < 0.1      | < 0.1 | < 0.1 |
| Indeno(1,2,3-cd)pyrene | mg/kg       | < 0.1     | MCERTS               | < 0.1      | < 0.1 | < 0.1 |
| Dibenz(a,h)anthracene  | mg/kg       | < 0.1     | MCERTS               | < 0.1      | < 0.1 | < 0.1 |
| Benzo(ghi)perylene     | mg/kg       | < 0.1     | MCERTS               | < 0.1      | < 0.1 | < 0.1 |
| Total EPA-16 PAHs      | mg/kg       | < 1.6     | MCERTS               | < 1.6      | < 1.6 | < 1.6 |

(n) Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation



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| Soil Analysis Certificate - Sample Descriptions |  |
|---|--|
| DETS Report No: 23-13250                        |  |
| LK Consult Limited                              |  |
| Site Reference: LKC 23 1535                     |  |
| Project / Job Ref: Appletree Cottage, Morley    |  |
| Order No: LKC231535KR                           |  |
| Reporting Date: 31/10/2023                      |  |

| DETS Sample No | TP / BH No | Additional Refs | Depth (m)   | Moisture Content (%) | Sample Matrix Description                 |
|----------------|------------|-----------------|-------------|----------------------|---|
| 682229         | HD101      | None Supplied   | 0.15 - 0.50 | 9.3                  | Brown clayey gravel with stones and brick |
| 682230         | HD102      | None Supplied   | 0.50 - 0.90 | 18                   | Brown sandy clay                          |
| 682231         | HD103      | None Supplied   | 0.45 - 0.80 | 27.8                 | Brown sandy clay                          |

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample <sup>1/5</sup>

Unsuitable Sample <sup>U/5</sup>

**Soil Analysis Certificate - Methodology & Miscellaneous Information**

**DETS Report No: 23-13250**

**LK Consult Limited**

**Site Reference: LKC 23 1535**

**Project / Job Ref: Appletree Cottage, Morley**

**Order No: LKC231535KR**

**Reporting Date: 31/10/2023**

| Matrix | Analysed On | Determinand   | Brief Method Description   | Method No |
|--------|-------------|---|--|-----------|
| Soil   | D           | Boron - Water Soluble   | Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES  | E012      |
| Soil   | AR          | BTEX  | Determination of BTEX by headspace GC-MS   | E001      |
| Soil   | D           | Cations   | Determination of cations in soil by aqua-regia digestion followed by ICP-OES   | E002      |
| Soil   | D           | Chloride - Water Soluble (2:1)  | Determination of chloride by extraction with water & analysed by ion chromatography  | E009      |
| Soil   | AR          | Chromium - Hexavalent   | Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphénylcarbazide followed by colorimetry | E016      |
| Soil   | AR          | Cyanide - Complex   | Determination of complex cyanide by distillation followed by colorimetry   | E015      |
| Soil   | AR          | Cyanide - Free  | Determination of free cyanide by distillation followed by colorimetry  | E015      |
| Soil   | AR          | Cyanide - Total   | Determination of total cyanide by distillation followed by colorimetry   | E015      |
| Soil   | D           | Cyclohexane Extractable Matter (CEM)  | Gravimetrically determined through extraction with cyclohexane   | E011      |
| Soil   | AR          | Diesel Range Organics (C10 - C24)   | Determination of hexane/acetone extractable hydrocarbons by GC-FID   | E004      |
| Soil   | AR          | Electrical Conductivity   | Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement                             | E022      |
| Soil   | AR          | Electrical Conductivity   | Determination of electrical conductivity by addition of water followed by electrometric measurement  | E023      |
| Soil   | D           | Elemental Sulphur   | Determination of elemental sulphur by solvent extraction followed by GC-MS   | E020      |
| Soil   | AR          | EPH (C10 - C40)   | Determination of acetone/hexane extractable hydrocarbons by GC-FID   | E004      |
| Soil   | AR          | EPH Product ID  | Determination of acetone/hexane extractable hydrocarbons by GC-FID   | E004      |
| Soil   | AR          | EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)   | Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS  | E004      |
| Soil   | D           | Fluoride - Water Soluble  | Determination of Fluoride by extraction with water & analysed by ion chromatography  | E009      |
| Soil   | D           | Fraction Organic Carbon (FOC)   | Determination of TOC by combustion analyser.   | E027      |
| Soil   | D           | Organic Matter (SOM)  | Determination of TOC by combustion analyser.   | E027      |
| Soil   | D           | TOC (Total Organic Carbon)  | Determination of TOC by combustion analyser.   | E027      |
| Soil   | AR          | Exchangeable Ammonium   | Determination of ammonium by discrete analyser.  | E029      |
| Soil   | D           | FOC (Fraction Organic Carbon)   | Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate                     | E010      |
| Soil   | D           | Loss on Ignition @ 450oC  | Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace                                       | E019      |
| Soil   | D           | Magnesium - Water Soluble   | Determination of water soluble magnesium by extraction with water followed by ICP-OES  | E025      |
| Soil   | D           | Metals  | Determination of metals by aqua-regia digestion followed by ICP-OES  | E002      |
| Soil   | AR          | Mineral Oil (C10 - C40)   | Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge  | E004      |
| Soil   | AR          | Moisture Content  | Moisture content; determined gravimetrically   | E003      |
| Soil   | D           | Nitrate - Water Soluble (2:1)   | Determination of nitrate by extraction with water & analysed by ion chromatography   | E009      |
| Soil   | D           | Organic Matter  | Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate                                 | E010      |
| Soil   | AR          | PAH - Speciated (EPA 16)  | Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards                | E005      |
| Soil   | AR          | PCB - 7 Congeners   | Determination of PCB by extraction with acetone and hexane followed by GC-MS   | E008      |
| Soil   | D           | Petroleum Ether Extract (PEE)   | Gravimetrically determined through extraction with petroleum ether   | E011      |
| Soil   | AR          | pH  | Determination of pH by addition of water followed by electrometric measurement   | E007      |
| Soil   | AR          | Phenols - Total (monohydric)  | Determination of phenols by distillation followed by colorimetry   | E021      |
| Soil   | D           | Phosphate - Water Soluble (2:1)   | Determination of phosphate by extraction with water & analysed by ion chromatography   | E009      |
| Soil   | D           | Sulphate (as SO4) - Total   | Determination of total sulphate by extraction with 10% HCl followed by ICP-OES   | E013      |
| Soil   | D           | Sulphate (as SO4) - Water Soluble (2:1)   | Determination of sulphate by extraction with water & analysed by ion chromatography  | E009      |
| Soil   | D           | Sulphate (as SO4) - Water Soluble (2:1)   | Determination of water soluble sulphate by extraction with water followed by ICP-OES   | E014      |
| Soil   | AR          | Sulphide  | Determination of sulphide by distillation followed by colorimetry  | E018      |
| Soil   | D           | Sulphur - Total   | Determination of total sulphur by extraction with aqua-regia followed by ICP-OES   | E024      |
| Soil   | AR          | SVOC  | Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS   | E006      |
| Soil   | AR          | Thiocyanate (as SCN)  | Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry  | E017      |
| Soil   | D           | Toluene Extractable Matter (TEM)  | Gravimetrically determined through extraction with toluene   | E011      |
| Soil   | D           | Total Organic Carbon (TOC)  | Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate                                 | E010      |
| Soil   | AR          | TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)         | Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS       | E004      |
| Soil   | AR          | TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44) | Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS       | E004      |
| Soil   | AR          | VOCS  | Determination of volatile organic compounds by headspace GC-MS   | E001      |
| Soil   | AR          | VPH (C6-C8 & C8-C10)  | Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID  | E001      |

**D Dried**  
**AR As Received**



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**List of HWOL Acronyms and Operators**

|   |
|---|
| <b>DETS Report No: 23-13250</b>                     |
| <b>LK Consult Limited</b>                           |
| <b>Site Reference: LKC 23 1535</b>                  |
| <b>Project / Job Ref: Appletree Cottage, Morley</b> |
| <b>Order No: LKC231535KR</b>                        |
| <b>Reporting Date: 31/10/2023</b>                   |

| Acronym   | Description   |
|-----------|---|
| HS        | Headspace analysis  |
| EH        | Extractable Hydrocarbons - i.e. everything extracted by the solvent |
| CU        | Clean-up - e.g. by florisil, silica gel                             |
| 1D        | GC - Single coil gas chromatography                                 |
| 2D        | GC-GC - Double coil gas chromatography                              |
| Total     | Aliphatics & Aromatics  |
| AL        | Aliphatics only   |
| AR        | Aromatics only  |
| #1        | EH_2D_Total but with humics mathematically subtracted               |
| #2        | EH_2D_Total but with fatty acids mathematically subtracted          |
| <u>  </u> | Operator - underscore to separate acronyms (exception for +)        |
| +         | Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total   |

|               |
|---------------|
| Det - Acronym |
|               |
|               |

## GAC Threshold by Location

**Job Name** Appletree Cottage  
**Job Number** LKC 23 1535  
**Assessment Threshold Used** Residential w/ Homegrown Produ

| SOIL TYPE             |             |             |             |
|-----------------------|-------------|-------------|-------------|
| SAMPLE LOCATION       | HD101       | HD102       | HD103       |
| DEPTH (m)             | 0.15 - 0.50 | 0.50 - 0.90 | 0.45 - 0.80 |
| Arsenic               | 37          | 37          | 37          |
| Beryllium             | 1.7         | 1.7         | 1.7         |
| Boron                 | 290         | 290         | 290         |
| Cadmium               | 11          | 11          | 11          |
| Copper                | 2400        | 2400        | 2400        |
| Chromium (III)        | 910         | 910         | 910         |
| Chromium (VI)         | 6           | 6           | 6           |
| Cyanide, Free         | 140         | 140         | 140         |
| Cyanide, total        | 140         | 140         | 140         |
| Lead                  | 200         | 200         | 200         |
| Mercury, Elemental    | 58          | 58          | 58          |
| Mercury, inorganic    | 1100        | 1100        | 1100        |
| Mercury, Methyl       | 320         | 320         | 320         |
| Nickel                | 180         | 180         | 180         |
| Selenium              | 250         | 250         | 250         |
| Vanadium              | 410         | 410         | 410         |
| Zinc                  | 3700        | 3700        | 3700        |
| Monohydric Phenol     | -           | -           | -           |
| Asbestos Quantication | 0.01        | 0.01        | 0.01        |
| Organic matter        | 5.30        | 1.60        | 11.50       |
| Acenaphthene          | 1100        | 510         | 1100        |
| Acenaphthylene        | 920         | 420         | 920         |
| Anthracene            | 11000       | 5400        | 11000       |
| Benzo(a)anthracene    | 13          | 11          | 13          |
| Benzo(a)pyrene        | 5           | 5           | 5           |
| Benzo(b)fluoranthene  | 3.7         | 3.3         | 3.7         |
| Benzo(ghi)perylene    | 350         | 340         | 350         |
| Benzo(k)fluoranthene  | 100         | 93          | 100         |
| Chrysene              | 27          | 22          | 27          |
| Dibenzo(ah)anthracene | 0.3         | 0.28        | 0.3         |
| Fluoranthene          | 890         | 560         | 890         |
| Fluorene              | 860         | 400         | 860         |
| Indeno(123-cd)pyrene  | 41          | 36          | 41          |
| Naphthalene           | 13          | 5.6         | 13          |
| Phenanthrene          | 440         | 220         | 440         |
| Pyrene                | 2000        | 1200        | 2000        |
| Ali >C5-C6            | 160         | 78          | 160         |
| Ali >C6-C8            | 530         | 230         | 530         |
| Ali >C8-C10           | 150         | 65          | 150         |
| Ali >C10-C12          | 760         | 330         | 760         |
| Ali >C12-C16          | 4300        | 2400        | 4300        |
| Ali >C16-C21          | 110000      | 92000       | 110000      |
| Ali >C21-C35          | 110000      | 92000       | 110000      |
| Ali >C35-C44          | 110000      | 92000       | 110000      |
| Total Aliphatics      | -           | -           | -           |
| Aro >C5-C7            | 300         | 140         | 300         |
| Aro >C7-C8            | 660         | 290         | 660         |
| Aro >C8-C10           | 190         | 83          | 190         |
| Aro >C10-C12          | 380         | 180         | 380         |
| Aro >C12-C16          | 660         | 330         | 660         |
| Aro >C16-C21          | 930         | 540         | 930         |
| Aro >C21-C35          | 1700        | 1500        | 1700        |
| Aro >C35-C44          | 1700        | 1500        | 1700        |
| Total Aromatics       | -           | -           | -           |
| TPH (Ali & Aro)       | -           | -           | -           |
| BTEX - Benzene        | 870         | 870         | 870         |
| BTEX - Toluene        | 660         | 290         | 660         |
| BTEX - Ethyl Benzene  | 260         | 110         | 260         |
| BTEX - o Xylene       | 330         | 140         | 330         |
| BTEX - m Xylene       | 320         | 140         | 320         |
| BTEX - p Xylene       | 310         | 130         | 310         |
| BTEX - m&p Xylene     | 310000      | 130000      | 310000      |

**Appendix E –**

**UK HSA Radon Report**

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Address searched: Appletree Cottage, Gildersome Lane, Gildersome, Morley, Leeds, LS27 7BJ

Date of report: 12 October 2023

## **Guidance for existing properties**

### **Is this property in a radon Affected Area? - No**

A radon Affected Area is defined as where the radon level in at least one property in every hundred is estimated to exceed the Action Level.

### **The estimated probability of the property being above the Action Level for radon is: 0-1%**

The probability result is only valid for properties above ground. All basement and cellar areas are considered to be at additional risk from high radon levels.

The result may not be valid for buildings larger than 25 metres.

If this site is for redevelopment, you should undertake a GeoReport provided by the British Geological Survey.

This report informs you of the estimated probability that this particular property is above the Action Level for radon. This does not necessarily mean there is a radon problem in the property; the only way to find out whether it is above or below the Action Level is to carry out a radon measurement in an existing property.

Radon Affected Areas are designated by the UK Health Security Agency. UKHSA advises that radon gas should be measured in all properties within Radon Affected Areas.

If you are buying a currently occupied property in a Radon Affected Area, you should ask the present owner whether radon levels have been measured in the property. If they have, ask whether the results were above the Radon Action Level and if so, whether remedial measures were installed, radon levels were re-tested, and the results of re-testing confirmed the effectiveness of the measures.

Further information is available from UKHSA or <https://www.ukradon.org>

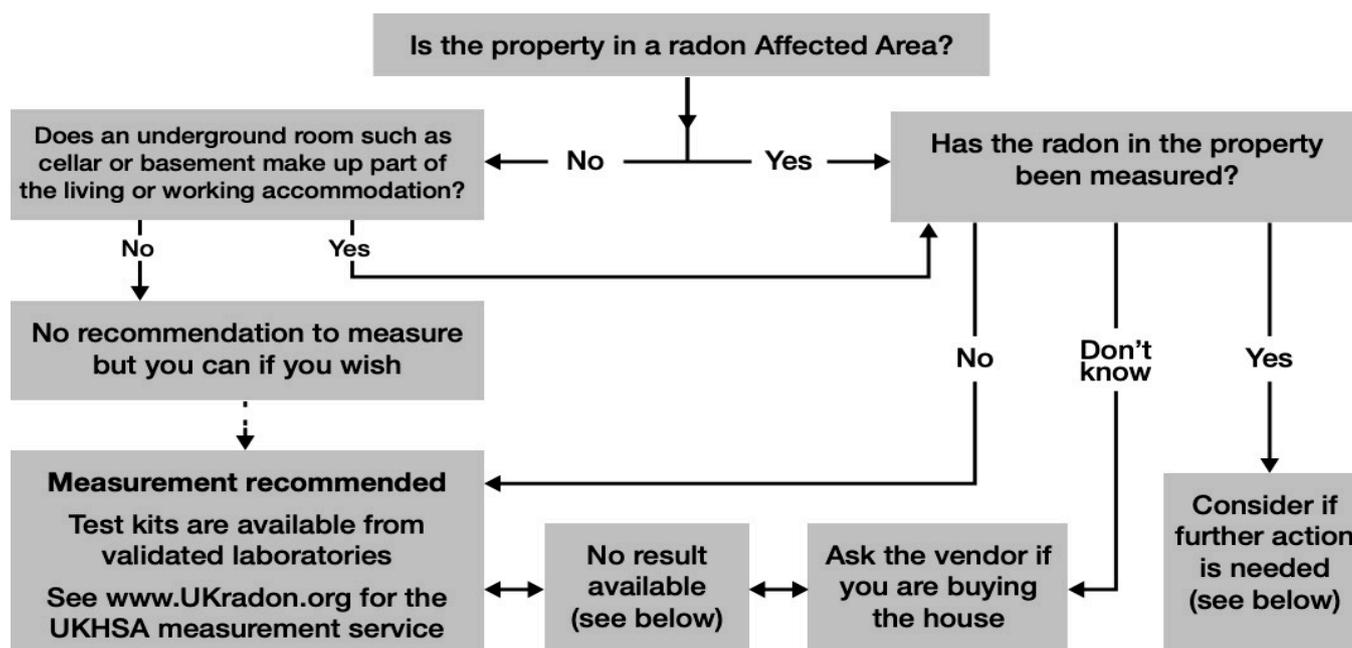
## **Guidance for new buildings and extensions to existing properties**

### **What is the requirement under Building Regulations for radon protection in new buildings and extensions at the property location? - None**

If you are buying a new property in a Radon Affected Area, you should ask the builder whether radon protective measures were incorporated in the construction of the property.

See the Radon and Building Regulations for more details.

## UKHSA guidance for occupiers and prospective purchases



**Existing radon test results:** There is no public record of individual radon measurements. Results of previous tests can only be obtained from the seller. Radon levels can be significantly affected by changes to the building or its use, particularly by alterations to the heating and ventilation which can also be affected by changes in occupier. If in doubt, test again for reassurance.

**Radon Bond:** This is simply a retained fund, the terms of which are negotiated between the purchaser and the vendor. It allows the conveyance of the property to proceed without undue delay. The purchaser is protected against the possible cost of radon reduction work and the seller does not lose sale proceeds if the result is low. Make sure the agreement allows enough time to complete the test, get the result and arrange the work if needed.

**High Results:** Exposure to high levels of radon increases the risk of developing lung cancer. If a test in a home gives a result at or above the Action Level of 200 Becquerels per cubic metre of air (Bq/m<sup>3</sup>), formal advice will be given to lower the level. Radon reduction will also be recommended if the occupants include smokers or ex-smokers when the radon level is at or above the Target Level of 100 Bq/m<sup>3</sup>; these groups have a higher risk. Information on health risks and radon reduction work is available from UKHSA. Guidance about radon reduction work is also available from some Local Authorities, the Building Research Establishment and specialist contractors.

UKHSA designated radon website: <https://www.ukradon.org>

Building Research Establishment: <http://www.bre.co.uk/page.jsp?id=3137>

# Appendix F –

## Report References

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- <sup>i</sup> Environment Agency, 2000, "Technical Aspects of Site Investigation", Technical Report P5-065/TR, Volumes I and II, Text Supplements.
- <sup>ii</sup> CIRIA, December 2007, "Assessing risks posed by hazardous ground gases to buildings", C665.
- <sup>iii</sup> DEFRA, December 2014, "Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination", SP1010, Policy Companion Document.
- <sup>iv</sup> CL:AIRE, September 2014, "Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination", SP1010, Final Project Report (Revision 2).
- <sup>v</sup> Environment Agency, January 2009, "Updated technical background to the CLEA model", Science Report SC050021/SR3.
- <sup>vi</sup> Environment Agency, January 2009, "Human health toxicological assessment of contaminants in soil", Science Report - Final SC050021/SR2.
- <sup>vii</sup> Environment Agency, January 2009, "A review of body weight and height data used within the Contaminated Land Exposure Assessment model (CLEA)", Project SC050021/Final Technical Review 1.
- <sup>viii</sup> Environment Agency, November 2008, "Compilation of data for priority organic pollutants for derivation of Soil Guideline Values", Science Report SC050021/SR7.
- <sup>ix</sup> CL:AIRE, January 2010, "Soil Generic Assessment Criteria for Human Health Risk Assessment".
- <sup>x</sup> Environment Agency, September 2009, "CLEA Software (Version 1.05) Handbook", Science Report SC050021/SR4.
- <sup>xi</sup> CL:AIRE, October 2021, "Good Practice for Risk Assessment for Coal Mine Gas Emissions. CL:AIRE, Buckinghamshire.
- <sup>xii</sup> CIRIA, January 2001, "Contaminated land risk assessment. A guide to good practice", C552.