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| DESCRIPTION  LEGEND  DEPTH (m)  TYPE/ DEPTH (m)  RESULT FROM TO  Grass onto soft very low strength dark brown sandy organic CLAY with frequent rootlets. TOPSOIL  Soft to firm low strength brown sandy CLAY.  DEVENSIAN TILL  Firm high strength orangish brown sandy CLAY.  DEVENSIAN TILL  HVP 0.40 33 0.40 PP 0.40 110  Firm high strength orangish brown sandy CLAY.  DEVENSIAN TILL  HVP 0.70 79 0.70 | (m) TYPE  D |
|---|-------------|
| Grass onto soft very low strength dark brown sandy organic CLAY with frequent rootlets. TOPSOIL  Soft to firm low strength brown sandy CLAY.  DEVENSIAN TILL  Firm high strength orangish brown sandy CLAY.  0.25  HVP 0.40  33  0.40  PP 0.40  110   |             |
| TOPSOIL  Soft to firm low strength brown sandy CLAY.  DEVENSIAN TILL  HVP 0.40 33 0.40 PP 0.40 110  Firm high strength orangish brown sandy CLAY.   |             |
| DEVENSIAN TILL  HVP 0.40 33 0.40 PP 0.40 110  Firm high strength orangish brown sandy CLAY.   | D           |
| DEVENSIAN TILL  HVP 0.40 33 0.40 PP 0.40 110  Firm high strength orangish brown sandy CLAY.   | D           |
| Firm high strength orangish brown sandy CLAY.   | D           |
| Firm high strength orangish brown sandy CLAY.   | <b>I</b>    |
| Firm nigh strength orangish brown sandy CLAY.   |             |
| DEVENSIAN TILL  |             |
|   | D           |
| <del></del>   |             |
|   |             |
| Selff high has a wing your high shown the dayle have you and a CLAV   |             |
| Stiff high becoming very high strength dark brown sandy CLAY.  DEVENSIAN TILL  HVP 1.10 125 PP 1.10 110   |             |
| FF 1.10   110   |             |
| <u> </u>  |             |
| <u> </u>  |             |
| HVP 1.50 152 1.50   | D           |
| PP 1.50   128   |             |
|   |             |
|   |             |
|   |             |
|   |             |
| HVP 2.10 258  |             |
| PP 2.10   217   |             |
| <del></del>   |             |
| Very stiff very high strength brown slightly silty CLAY.  |             |
| DEVENSIAN TILL +===   |             |
| HVP 2.60 228  |             |
| PP 2.60   225   |             |
|   | D           |
| 7   |             |
| _   |             |
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| 7   1   |             |
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|   |             |

Notes: Trial pit sides remained upright and stable upon completion.

| Ground level (mAOD)   | Co-ordinates                        | <b>Title</b> Trial pit record                          | <b>Surface breaking</b><br>No |
|---|-------------------------------------|--|-------------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | Dimensions (W x L)<br>0.60m x 2.50m | Date of excavation (range if applicable)<br>16/02/2016 | <b>Appendix</b><br>C          |
|   | <b>Method of excavation</b> JCB 3CX | <b>Location plan on drawing number</b><br>02b          | TP104                         |

|   |                    | DEPTH | WATER  |                    | RESULTS |             | Samplin | 1G  |
|---|--------------------|-------|--------|--------------------|---------|-------------|---------|-----|
| DESCRIPTION   | LEGEND             | (m)   | STRIKE | TYPE/<br>DEPTH (m) | RESULT  | FROM<br>(m) | TO (m)  | TYF |
| Grass onto soft dark brown very sandy organic CLAY.                           | _\\\\\\\           |       |        | DEI III (III)      |         | (111)       |         |     |
| PSOIL   |                    |       |        |                    |         | 0.10        |         | В   |
|   | -W                 |       |        |                    |         |             |         | _   |
|   |                    |       |        |                    |         |             |         |     |
|   |                    |       |        |                    |         |             |         |     |
| 5 U   |                    | 0.35  |        |                    |         |             |         |     |
| t medium strength brown slightly silty slightly sandy CLAY.                   | +                  |       |        |                    |         |             |         |     |
| VENSIAN TILL  |                    | ]     |        | HVP 0.50           | 52      | 0.50        |         | В   |
|   |                    | ļ     |        | PP 0.50            | 60      | 0.50        |         |     |
|   | +                  | ł     |        | PF 0.50            | 60      |             |         |     |
|   |                    | 0.70  |        |                    |         |             |         |     |
| m high strength brown slightly silty slightly sandy CLAY.                     |                    | 0.70  |        |                    |         |             |         |     |
| VENSIAN TILL  | +                  | 1     |        |                    |         |             |         |     |
|   | <del>-</del>       | 1     |        |                    |         |             |         |     |
|   | <u> </u>           |       |        | HVP 0.90           | 79      | 0.90        |         | E   |
|   |                    | 1     |        | PP 0.90            | 100     |             |         |     |
|   | <del>-</del> [-]-] |       |        |                    |         |             |         |     |
|   | 1-5-5              | -     |        |                    |         |             |         |     |
|   | ]                  | 1     |        |                    |         |             |         |     |
|   |                    | ]     |        |                    |         |             |         |     |
| m 1.3m depth, becoming stiff.   | +                  |       |        |                    |         |             |         |     |
| a Liam depail, decorning stijj.   |                    | 1     |        | 111/0 1 10         | 00      |             |         |     |
|   | I                  | 1     |        | HVP 1.40           | 99      |             |         |     |
|   | +                  | ł     |        | PP 1.40            | 105     |             |         |     |
|   | +                  | 1     |        |                    |         |             |         |     |
|   | <u></u>            | 1     |        |                    |         |             |         |     |
|   |                    | l     |        |                    |         |             |         |     |
|   |                    | 1     |        |                    |         |             |         |     |
| ff very high strength brown mottled grey CLAY with occasional gravels of fine | <del></del>        | 1.80  |        |                    |         |             |         |     |
| medium sandstone.   | 1                  | -     |        |                    |         |             |         |     |
| VENSIAN TILL  |                    | 1     |        |                    |         |             |         |     |
| VENSIAN TILL  | <del></del>        |       |        | HVP 2.00           | 149     | 2.00        |         | ı   |
|   |                    | ł     |        | PP 2.00            | 183     |             |         |     |
|   | ]                  | 1     |        |                    |         |             |         |     |
|   | <del>-</del>       |       |        |                    |         | 2.20        |         |     |
|   | +                  |       |        |                    |         |             |         |     |
| ff brown slightly silty CLAY with occasional cobbles of sandstone.            |                    | 2.30  |        |                    |         |             |         |     |
| /ENSIAN TILL  | <del></del>        | ]     |        |                    |         |             |         |     |
| ·   | +===               |       |        |                    |         |             |         |     |
|   |                    |       | I I    |                    |         |             |         |     |
|   |                    | 1     |        |                    |         |             |         |     |
|   |                    |       |        |                    |         |             |         |     |
|   |                    |       |        |                    |         |             |         |     |
|   |                    |       |        |                    |         |             |         |     |
|   |                    |       |        |                    |         |             |         |     |
| n 2.8m depth, becoming very stiff.  |                    |       |        |                    |         |             |         |     |
| n 2.8m depth, becoming very stiff.  |                    |       |        |                    |         |             |         |     |
| m 2.8m depth, becoming very stiff.  |                    |       |        |                    |         |             |         |     |
| n 2.8m depth, becoming very stiff.  |                    |       |        |                    |         |             |         |     |
| m 2.8m depth, becoming very stiff.  |                    |       |        |                    |         |             |         |     |
| m 2.8m depth, becoming very stiff.  |                    |       |        |                    |         |             |         |     |
|   |                    | 3.20  |        |                    |         |             |         |     |
| m 2.8m depth, becoming very stiff.  TRIAL PIT TERMINATED AT 3.20m             |                    | 3.20  |        |                    |         |             |         |     |
|   |                    | 3.20  |        |                    |         |             |         |     |
|   |                    | 3.20  |        |                    |         |             |         |     |
|   |                    | 3.20  |        |                    |         |             |         |     |
|   |                    | 3.20  |        |                    |         |             |         |     |
|   |                    | 3.20  |        |                    |         |             |         |     |

Notes: Trial pit sides remained upright and stable upon completion.

| Ground level (mAOD)   | Co-ordinates                            | <b>Title</b><br>Trial pit record                       | Surface breaking<br>No |
|---|---|--|------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | <b>Dimensions (W x L)</b> 0.60m x 2.50m | Date of excavation (range if applicable)<br>16/02/2016 | <b>Appendix</b><br>C   |
|   | Method of excavation<br>JCB 3CX         | <b>Location plan on drawing number</b><br>02b          | TP105                  |

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|  |             | DEPTH | WATER  | TEST RESULTS        |            | SAMPLIN     |        | IG   |  |
|--|-------------|-------|--------|---------------------|------------|-------------|--------|------|--|
| DESCRIPTION  | LEGEND      | (m)   | STRIKE | TYPE/<br>DEPTH (m)  | RESULT     | FROM<br>(m) | TO (m) | TYPE |  |
| Grass onto soft dark brown sandy organic CLAY with frequent rootlets.  | - 33.033.0  |       |        | DECTIT (III)        |            |             |        |      |  |
| TOPSOIL  |             |       |        |                     |            | 0.10        |        | D    |  |
|  |             |       |        |                     |            |             |        |      |  |
|  | -(())(()    |       |        |                     |            |             |        |      |  |
| Firm to stiff medium and high strength grey brown slightly silty slightly sandy  |             | 0.40  |        |                     |            |             |        |      |  |
| slightly gravelly CLAY. Gravel consists of medium to coarse sandstone and  | +==         |       |        | HVP 0.50            | 85         | 0.50        |        | D    |  |
| mudstone.  |             |       |        | PP 0.50             | 47         |             |        |      |  |
| DEVENSIAN TILL   | <u></u>     |       |        |                     |            |             |        |      |  |
|  |             |       |        | HVP 0.80            | 82         |             |        |      |  |
|  |             |       |        | PP 0.80             | 87         |             |        |      |  |
|  |             |       |        |                     |            |             |        |      |  |
| Stiff very high strength brown mottled bluish grey CLAY.   |             | 1.00  |        |                     |            |             |        |      |  |
| DEVENSIAN TILL   |             |       |        |                     |            | 1.10        |        | D    |  |
|  |             |       |        | HVP 1.20            | 167        |             |        |      |  |
|  | ===         |       |        | PP 1.20             | 175        |             |        |      |  |
|  | <del></del> |       |        |                     |            |             |        |      |  |
| from 1.5m depth, becoming very stiff and friable.  | <del></del> |       |        |                     |            |             |        |      |  |
| from 1.5m depth, becoming very stiff and mable.  | <u> </u>    |       |        |                     |            |             |        |      |  |
|  |             |       |        |                     |            |             |        |      |  |
|  |             |       |        |                     |            |             |        |      |  |
|  |             |       |        |                     |            |             |        |      |  |
|  | 1           |       |        |                     |            |             |        |      |  |
|  |             |       |        |                     |            |             |        |      |  |
|  |             | ]     |        | HVP 2.10            | 167        | 2.10        |        | D    |  |
|  |             |       |        |                     |            |             |        |      |  |
|  |             |       |        |                     |            |             |        |      |  |
| COMPLETE AND ADDRESS OF AN ADDRESS OF A STATE OF A STAT |             | 2.40  |        |                     |            |             |        |      |  |
| Stiff high strength brown slightly silty CLAY with occasional gravels of fine mudstone.  |             |       |        |                     |            |             |        |      |  |
| DEVENSIAN TILL   |             |       |        |                     |            |             |        |      |  |
|  | ===         |       |        |                     |            |             |        |      |  |
|  |             |       |        |                     |            |             |        |      |  |
|  |             |       |        |                     |            |             |        |      |  |
| TRIAL PIT TERMINATED AT 2.90m  |             | 2.90  |        | HVP 2.90<br>PP 2.90 | 122<br>138 | 2.90        |        | D    |  |
|  | _           |       |        | 11 2.50             | 130        |             |        |      |  |
|  |             |       |        |                     |            |             |        |      |  |
|  | _           |       |        |                     |            |             |        |      |  |
|  | -           |       |        |                     |            |             |        |      |  |
|  | 7           |       |        |                     |            |             |        |      |  |
|  | 4           |       |        |                     |            |             |        |      |  |
|  | 1           |       |        |                     |            |             |        |      |  |
|  | _           |       |        |                     |            |             |        |      |  |
|  | -           |       |        |                     |            |             |        |      |  |
|  | 7           |       |        |                     |            |             |        |      |  |
|  | 7           |       |        |                     |            |             |        |      |  |
|  |             |       |        |                     |            |             |        |      |  |

Notes: Trial pit sides remained upright and stable upon completion.

| Ground level (mAOD)   | Co-ordinates                            | <b>Title</b><br>Trial pit record                       | <b>Surface breaking</b><br>No |
|---|---|--|-------------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | <b>Dimensions (W x L)</b> 0.60m x 2.50m | Date of excavation (range if applicable)<br>16/02/2016 | <b>Appendix</b><br>C          |
|   | Method of excavation<br>JCB 3CX         | <b>Location plan on drawing number</b><br>02b          | TP106                         |

|   |          | DEDT | MATER           | TEST F              | RESULTS  | <u> </u>    | SAMPLIN | lG  |
|---|----------|------|-----------------|---------------------|----------|-------------|---------|-----|
| DESCRIPTION   | LEGEND   | (m)  | WATER<br>STRIKE | TYPE/<br>DEPTH (m)  | RESULT   | FROM<br>(m) | TO (m)  | TYP |
| Grass onto soft dark brown sandy CLAY with frequent rootlets and occasional | - 3//3// |      |                 | DEI III (III)       |          |             |         |     |
| ravels of medium sandstone.   |          |      |                 |                     |          | 0.10        |         | D   |
| OPSOIL  |          |      |                 |                     |          |             |         |     |
|   | - 350355 |      |                 |                     |          |             |         |     |
|   |          | 0.35 |                 |                     |          |             |         |     |
| m high strength orangish brown slightly sandy slightly gravelly silty CLAY. |          | 0.33 |                 |                     |          |             |         |     |
| ravel consists of fine to medium sandstone.                                 | +===     | 1    |                 | LIVEREE             | 70       | 0.50        |         | [   |
| VENSIAN TILL  |          |      |                 | HVP 0.50<br>PP 0.50 | 78<br>82 | 0.50        |         |     |
|   |          |      |                 | PP 0.50             | 02       |             |         |     |
|   |          |      |                 |                     |          |             |         |     |
|   |          | 1    |                 |                     |          |             |         |     |
|   |          | 0.85 |                 |                     |          |             |         |     |
| m high strength dark brown mottled bluish grey CLAY with occasional gravels |          | 0.83 |                 | HVP 0.90            | 103      |             |         |     |
| medium to coarse sandstone and mudstone.                                    |          |      |                 | PP 0.90             | 110      |             |         |     |
| VENSIAN TILL  |          | 1    |                 |                     |          |             |         |     |
|   |          | 1    |                 |                     |          |             |         |     |
|   |          | -    |                 |                     |          |             |         |     |
| m 1.2m depth, becoming stiff.   |          | 1    |                 |                     |          |             |         |     |
|   | +===     | 1    |                 |                     |          |             |         |     |
|   |          |      |                 | HVP 1.40            | 116      | 1.40        |         | 1   |
| ulder of mudstone in southern end of pit at 1.4m depth.                     | +        | -    |                 | PP 1.40             | 142      |             |         | •   |
|   |          |      |                 |                     |          |             |         |     |
|   |          | -    |                 |                     |          |             |         |     |
|   | T-I-I    |      |                 |                     |          |             |         |     |
|   | <u></u>  | -    |                 |                     |          |             |         |     |
|   |          |      |                 |                     |          |             |         |     |
|   |          | ]    |                 |                     |          |             |         |     |
|   |          | 1    |                 |                     |          |             |         |     |
|   |          |      |                 |                     |          |             |         |     |
|   |          | 1    |                 |                     |          |             |         |     |
|   |          | ]    |                 |                     |          |             |         |     |
|   |          | -    |                 |                     |          |             |         |     |
|   |          | ]    |                 |                     |          |             |         |     |
|   | +        | -    |                 |                     |          |             |         |     |
|   |          | 1    |                 |                     |          |             |         |     |
| ff high strength brown slightly silty CLAY.                                 |          | 2.50 |                 |                     |          |             |         |     |
| EVENSIAN TILL   | <u> </u> | ]    |                 | HVP 2.60            | 125      |             |         |     |
| VENSION TIEL  |          | -    |                 | PP 2.60             | 160      |             |         |     |
|   | <u></u>  | ]    |                 | 11 2.00             | 100      |             |         |     |
|   |          | 2.80 |                 |                     |          |             |         |     |
| TRIAL PIT TERMINATED AT 2.80m   | -        |      |                 |                     |          |             |         |     |
|   |          |      |                 |                     |          |             |         |     |
|   | -        |      |                 |                     |          |             |         |     |
|   | 1        |      |                 |                     |          |             |         |     |
|   | -        |      |                 |                     |          |             |         |     |
|   |          |      |                 |                     |          |             |         |     |
|   | 7        |      |                 |                     |          |             |         |     |
|   |          |      |                 |                     |          |             |         |     |
|   | 1        |      |                 |                     |          |             |         |     |
|   | 4        |      |                 |                     |          |             |         |     |
|   | Ⅎ        |      |                 |                     |          |             |         |     |
|   | ]        |      |                 |                     |          |             |         |     |
|   | 4        |      |                 |                     |          |             |         |     |
|   | 4        |      |                 | l                   |          |             |         |     |

Notes: Trial pit sides remained upright and stable upon completion. Infiltration testing performed.

| Ground level (mAOD)   | Co-ordinates                            | <b>Title</b> Trial pit record                          | <b>Surface breaking</b><br>No |
|---|---|--|-------------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | <b>Dimensions (W x L)</b> 0.60m x 2.50m | Date of excavation (range if applicable)<br>17/02/2016 | <b>Appendix</b><br>C          |
|   | Method of excavation JCB 3CX            | <b>Location plan on drawing number</b><br>02b          | TP107                         |

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|  |             | DESTU | TED             | TEST RESULTS        |          | SAMPLING     |          |        |
|--|-------------|-------|-----------------|---------------------|----------|--------------|----------|--------|
| DESCRIPTION  | LEGEND      | (m)   | WATER<br>STRIKE | TYPE/               | RESULT   | FROM         | TO (m)   | TYPE   |
| Constant of the state of the st | **********  | ,     |                 | DEPTH (m)           | KESOLI   | (m)          | 10 (111) | 11112  |
| Grass onto soft medium strength brown sandy gravelly CLAY with frequent rootlets. Gravel consists of medium to coarse brick, timber and sandstone.   | - ⊒‱        |       |                 | HVP 0.10            | 15       | 0.10         |          | D      |
| MADE GROUND  | -           |       |                 | PP 0.10             | 60       | 0.10         |          |        |
| Soft medium strength brown sandy gravelly CLAY. Gravel consists of fine to   |             | 0.20  |                 |                     | •        |              |          |        |
| coarse brick, timber, ceramic, sandstone and occasional half brick.  | -           |       |                 |                     |          |              |          |        |
| MADE GROUND  | →           |       |                 |                     |          |              |          |        |
| cut sandstone blocks up to 0.1x0.4x0.2m in size at 0.3m depth.   |             |       |                 | 111/0 0 50          | C.A      | 0.50         |          | В      |
|  |             |       |                 | HVP 0.50<br>PP 0.50 | 64<br>98 | 0.50<br>0.50 |          | B<br>D |
|  | - ⊒‱        |       |                 | 11 0.50             | 50       | 0.50         |          |        |
|  |             |       |                 |                     |          |              |          |        |
|  | - □         |       |                 |                     |          |              |          |        |
|  | -           |       |                 |                     |          |              |          |        |
|  | ₹           |       |                 |                     |          |              |          |        |
|  | -           |       |                 | HVP 1.00            | 46       |              |          |        |
|  | 7           |       |                 | PP 1.00             | 60       |              |          |        |
| cut sandstone blocks up to 0.2x0.2x0.2m in size at 1.1m depth.   |             | 1.20  |                 |                     |          |              |          |        |
| Firm to stiff high and very high strength reddish brown slightly sandy slightly  |             | 1.20  |                 |                     |          |              |          |        |
| gravelly CLAY. Gravel consists of medium mudstone.   |             | }     |                 |                     |          |              |          |        |
| DEVENSIAN TILL   | +===        |       |                 | HVP 1.40            | 134      |              |          |        |
|  | <u> </u>    | 1     |                 |                     |          |              |          |        |
|  | +===        | -     |                 |                     |          |              |          |        |
| from 1.6m depth, becoming stiff.   |             | ]     |                 |                     |          |              |          |        |
|  |             |       |                 |                     |          |              |          |        |
|  |             |       |                 |                     |          | 1.80         |          | D      |
|  |             | 1     |                 | UVD 1 00            | 182      |              |          |        |
|  |             |       |                 | HVP 1.90            | 182      |              |          |        |
|  |             | -     |                 |                     |          | 2.00         |          | D      |
|  |             | 1     |                 |                     |          |              |          |        |
|  |             |       |                 |                     |          |              |          |        |
|  | +===        |       |                 |                     |          |              |          |        |
|  | 1           |       |                 |                     |          |              |          |        |
|  | +====       | -     |                 | HVP 2.40            | 170      |              |          |        |
| from 2.5m depth, becoming very stiff.  | <del></del> | 1     |                 |                     |          |              |          |        |
| L. Jrom 2.5m deput, becoming very sujj.  | <u> </u>    |       |                 |                     |          |              |          |        |
|  |             |       |                 |                     |          |              |          |        |
|  | <u> </u>    | ]     |                 |                     |          |              |          |        |
| TRIAL PIT TERMINATED AT 2.80m  |             | 2.80  |                 | HVP 2.80            | 134      |              |          |        |
|  | 7           |       |                 |                     |          |              |          |        |
|  |             |       |                 |                     |          |              |          |        |
|  | 7           |       |                 |                     |          |              |          |        |
|  | _           |       |                 |                     |          |              |          |        |
|  | -           |       |                 |                     |          |              |          |        |
|  |             |       |                 |                     |          |              |          |        |
|  | -           |       |                 |                     |          |              |          |        |
|  | 7           |       |                 |                     |          |              |          |        |
|  | _           |       |                 |                     |          |              |          |        |
|  | 7           |       |                 |                     |          |              |          |        |
|  | _           |       |                 |                     |          |              |          |        |
|  | 4           |       |                 |                     |          |              |          |        |
|  |             |       |                 |                     |          |              |          |        |
|  | -           |       |                 |                     |          |              |          |        |
|  | 1           |       |                 |                     |          |              |          |        |
|  |             | 1     | ı               |                     |          | 1            | <u> </u> |        |

Notes: Some collapse of trial pit sides between 0.2m and 1.0m depth.

| Ground level (mAOD)   | Co-ordinates                            | <b>Title</b><br>Trial pit record                       | <b>Surface breaking</b><br>No |
|---|---|--|-------------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | <b>Dimensions (W x L)</b> 0.60m x 2.50m | Date of excavation (range if applicable)<br>17/02/2016 | <b>Appendix</b><br>C          |
|   | Method of excavation<br>JCB 3CX         | <b>Location plan on drawing number</b><br>02b          | TP108                         |

| environmental  | and  | gootoobnicol  | concultanta |
|----------------|------|---------------|-------------|
| environnientai | allu | geoleciiiicai | Consultants |

|   |              |      |        | PTH WATER TEST RESULT: |        | S SAMP      |        | NG |
|---|--------------|------|--------|------------------------|--------|-------------|--------|----|
| DESCRIPTION   | LEGEND       | (m)  | STRIKE |                        | RESULT | FROM<br>(m) | TO (m) |    |
| Grass onto soft dark brown very sandy organic CLAY with frequent rootlets and                               | - 333333     |      |        |                        |        |             |        |    |
| occasional roots.   |              |      |        |                        |        | 0.10        |        | D  |
| TOPSOIL   | 7//////      |      |        |                        |        |             |        |    |
|   |              | 0.30 |        |                        |        |             |        |    |
| Firm medium strength brown mottled grey silty sandy CLAY.   |              | 0.30 |        |                        |        |             |        |    |
| DEVENSIAN TILL  | 1            |      |        | HVP 0.40               | 97     |             |        |    |
|   | +            | -    |        |                        |        | 0.50        |        | D  |
|   | <u> </u>     | 1    |        |                        |        |             |        |    |
| from 0.6m depth, becoming soft with occasional roots.   | +===         |      |        | 10.00.0.70             | **     |             |        |    |
|   |              | -    |        | HVP 0.70               | 46     |             |        |    |
|   | <del></del>  | 1    |        |                        |        |             |        |    |
|   |              | -    |        |                        |        |             |        |    |
|   | _===         |      |        | HVP 1.00               | 59     |             |        |    |
|   | 7            |      |        | HAN 1.00               | 29     |             |        |    |
|   | <u> </u>     | -    |        |                        |        |             |        |    |
| Emplish describe the control of the control of the control of the control of                                |              | 1.20 |        |                        |        |             |        |    |
| firm high strength brown mottled bluish grey CLAY with occasional gravels of medium mudstone and quartzite. |              | -    |        | HVP 1.30               | 90     | 1.30        |        | D  |
| DEVENSIAN TILL  |              | ]    |        | UAL 1.30               | 90     | 1.50        |        | b  |
| DEVERSIANT TIES   | #==          |      |        |                        |        |             |        |    |
| from 1.5m depth, becoming stiff.  | +            | -    |        |                        |        |             |        |    |
| anton xom depth, accoming styl.   | 1            | 1    |        | HVP 1.60               | 190    |             |        |    |
|   | +===         | -    |        | 1101 1.00              | 130    |             |        |    |
|   |              | 1    |        |                        |        |             |        |    |
|   | +===         |      |        |                        |        |             |        |    |
|   | 1            | -    |        |                        |        | 1.90        |        | D  |
|   |              |      |        |                        |        | 1.50        |        |    |
|   | T            |      |        |                        |        |             |        |    |
|   |              | ]    |        |                        |        |             |        |    |
|   |              | 2.20 |        |                        |        |             |        |    |
| Stiff high and very high strength brown slightly silty CLAY with occasional                                 | +            | -    |        | 111/10 2 20            | 155    |             |        |    |
| gravels of medium mudstone. DEVENSIAN TILL  | <del></del>  |      |        | HVP 2.30               | 155    |             |        |    |
| DEVENDIAR TIEL  |              | 1    |        |                        |        |             |        |    |
|   | +===         | -    |        |                        |        |             |        |    |
|   | <u> </u>     | 1    |        |                        |        |             |        |    |
|   | +====        | -    |        |                        |        |             |        |    |
|   |              | ]    |        |                        |        |             |        |    |
|   | <del>-</del> |      |        |                        |        |             |        |    |
|   |              | -    |        |                        |        |             |        |    |
|   |              |      |        |                        |        |             |        |    |
|   |              |      |        |                        |        |             |        |    |
|   | 1-1-1        | -    |        | HVP 3.10               | 140    |             |        |    |
|   | 1            |      |        |                        |        |             |        |    |
|   |              | 2 20 |        |                        |        |             |        |    |
| TRIAL PIT TERMINATED AT 3.30m   |              | 3.30 |        |                        |        |             |        |    |
|   | _            |      |        |                        |        |             |        |    |
|   | -            |      |        |                        |        |             |        |    |
|   | 1            |      |        |                        |        |             |        |    |
|   | -            |      |        |                        |        |             |        |    |
|   | 7            |      |        |                        |        |             |        |    |
|   | -            |      |        |                        |        |             |        |    |
|   | 7            |      |        |                        |        |             |        |    |
|   | -            |      |        |                        |        |             |        |    |
|   |              |      |        |                        |        |             |        |    |

Notes: Trial pit sides remained upright and stable upon completion.

| Ground level (mAOD)   | Co-ordinates                        | <b>Title</b><br>Trial pit record                       | <b>Surface breaking</b><br>No |
|---|-------------------------------------|--|-------------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | Dimensions (W x L)<br>0.60m x 2.50m | Date of excavation (range if applicable)<br>17/02/2016 | <b>Appendix</b><br>C          |
|   | <b>Method of excavation</b> JCB 3CX | <b>Location plan on drawing number</b><br>02b          | TP109                         |

| DESCRIPTION  LEGEND  DEPTH (m)  STRIKE  TYPE/ DEPTH (m)  TYPE/ DEPTH (m)  TYPE/ DEPTH (m)  TYPE/ DEPTH (m)  RESULTS  TYPE/ DEPTH (m)  TYPE/ DEPTH (m)  TYPE/ DEPTH (m)  RESULTS  TYPE/ DEPTH (m)  TYPE/ DEPTH (m)  RESULTS  TYPE/ DEPTH (m)  TYPE/ DEPTH (m)  RESULTS  TYPE/ DEPTH (m)  RESULTS  TYPE/ DEPTH (m)  RESULTS  TYPE/ DEPTH (m)  RESULTS  TYPE/ DEPTH (m)  RESULTS  TYPE/ DEPTH (m)  TYPE/ DEPTH (m)  TYPE/ DEPTH (m)  TYPE/ DEPTH (m)  RESULTS  TYPE/ DEPTH (m)  TYPE/ DEP | 0.50 | 10 (m) | TYPE D |
|--|------|--------|--------|
| Grass onto firm low strength dark brown sandy organic CLAY with frequent rootlets. TOPSOIL  Firm medium becoming high strength orangish brown slightly sandy silty CLAY.  DEVENSIAN TILL  Stiff medium strength brown mottled bluish grey CLAY.  DEVENSIAN TILL  Stiff high strength brown mottled bluish grey slightly sandy gravelly CLAY. Gravel consists of fine to medium mudstone.  DEPTH (m)  DEPTH (m)  0.30  0.30  HVP 0.50 64 PP 0.50 48  PP 0.80 102  1.10  HVP 1.20 88 PP 1.20 70  HVP 1.70 137 PP 1.70 188  | 0.50 |        | D      |
| rootlets. TOPSOIL  Firm medium becoming high strength orangish brown slightly sandy silty CLAY.  DEVENSIAN TILL  HVP 0.50 64 PP 0.50 48  HVP 0.80 88 PP 0.80 102  Stiff medium strength brown mottled bluish grey CLAY.  DEVENSIAN TILL  Stiff high strength brown mottled bluish grey slightly sandy gravelly CLAY. Gravel consists of fine to medium mudstone.  DEVENSIAN TILL  1.60 HVP 1.70 137 PP 1.70 188  | 0.50 |        |        |
| TOPSOIL  Firm medium becoming high strength orangish brown slightly sandy slity CLAY.  DEVENSIAN TILL  HVP 0.50 64 PP 0.50 48 PP 0.80 102  Stiff medium strength brown mottled bluish grey CLAY.  DEVENSIAN TILL  Stiff high strength brown mottled bluish grey slightly sandy gravelly CLAY. Gravel consists of fine to medium mudstone.  DEVENSIAN TILL  1.60 HVP 1.70 137 PP 1.70 188   | 0.50 |        |        |
| Firm medium becoming high strength orangish brown slightly sandy silty CLAY.  DEVENSIAN TILL  Stiff medium strength brown mottled bluish grey CLAY.  DEVENSIAN TILL  Stiff high strength brown mottled bluish grey slightly sandy gravelly CLAY. Gravel consists of fine to medium mudstone.  DEVENSIAN TILL  0.30  HVP 0.50 64 PP 0.50 48  HVP 1.20 88 PP 1.20 70  Stiff high strength brown mottled bluish grey slightly sandy gravelly CLAY. Gravel consists of fine to medium mudstone.  DEVENSIAN TILL  | 1.10 |        | D      |
| DEVENSIAN TILL  HVP 0.50 64 PP 0.50 48  HVP 0.80 88 PP 0.80 102  Stiff medium strength brown mottled bluish grey CLAY. DEVENSIAN TILL  HVP 1.20 88 PP 1.20 70  Stiff high strength brown mottled bluish grey slightly sandy gravelly CLAY. Gravel consists of fine to medium mudstone.  DEVENSIAN TILL  1.60  HVP 1.70 137 PP 1.70 188   | 1.10 |        | D      |
| Stiff medium strength brown mottled bluish grey CLAY.  DEVENSIAN TILL  Stiff high strength brown mottled bluish grey slightly sandy gravelly CLAY. Gravel consists of fine to medium mudstone.  DEVENSIAN TILL  1.60  HVP 1.70  PP 1.70  1.88  | 1.10 |        | D      |
| Stiff medium strength brown mottled bluish grey CLAY.  DEVENSIAN TILL  Stiff high strength brown mottled bluish grey slightly sandy gravelly CLAY. Gravel consists of fine to medium mudstone.  DEVENSIAN TILL  HVP 1.20 88 PP 1.20 1.60 HVP 1.70 137 PP 1.70 188  | 1.10 |        | D      |
| Stiff medium strength brown mottled bluish grey CLAY.  DEVENSIAN TILL  Stiff high strength brown mottled bluish grey slightly sandy gravelly CLAY. Gravel consists of fine to medium mudstone.  DEVENSIAN TILL  PP 0.50  48  HVP 0.80  PP 0.80  1.10  HVP 1.20  88  PP 1.20  70  HVP 1.70  137  PP 1.70  188   | 1.10 |        | D      |
| Stiff medium strength brown mottled bluish grey CLAY.  DEVENSIAN TILL  Stiff high strength brown mottled bluish grey slightly sandy gravelly CLAY. Gravel consists of fine to medium mudstone.  DEVENSIAN TILL  HVP 1.20 88 PP 1.20 70  HVP 1.70 137 PP 1.70 188   | 1.10 |        |        |
| Stiff medium strength brown mottled bluish grey CLAY. DEVENSIAN TILL  Stiff high strength brown mottled bluish grey slightly sandy gravelly CLAY. Gravel consists of fine to medium mudstone. DEVENSIAN TILL  1.10 HVP 1.20 88 PP 1.20 1.60 HVP 1.70 137 PP 1.70 188   | 1.10 |        |        |
| Stiff medium strength brown mottled bluish grey CLAY. DEVENSIAN TILL  Stiff high strength brown mottled bluish grey slightly sandy gravelly CLAY. Gravel consists of fine to medium mudstone. DEVENSIAN TILL  1.10 HVP 1.20 88 PP 1.20 1.60 HVP 1.70 137 PP 1.70 188   | 1.10 |        |        |
| Stiff medium strength brown mottled bluish grey CLAY. DEVENSIAN TILL  Stiff high strength brown mottled bluish grey slightly sandy gravelly CLAY. Gravel consists of fine to medium mudstone. DEVENSIAN TILL  1.10 HVP 1.20 88 PP 1.20 1.60 HVP 1.70 137 PP 1.70 188   | 1.10 |        |        |
| Stiff medium strength brown mottled bluish grey CLAY.  DEVENSIAN TILL  Stiff high strength brown mottled bluish grey slightly sandy gravelly CLAY. Gravel consists of fine to medium mudstone.  DEVENSIAN TILL  1.10  HVP 1.20 88 PP 1.20 1.60  HVP 1.70 137 PP 1.70 188   | 1.10 |        |        |
| Stiff medium strength brown mottled bluish grey CLAY.  DEVENSIAN TILL  Stiff high strength brown mottled bluish grey slightly sandy gravelly CLAY. Gravel consists of fine to medium mudstone.  DEVENSIAN TILL  HVP 1.20 88 PP 1.20 1.60 HVP 1.70 137 PP 1.70 188  |      |        |        |
| Stiff medium strength brown mottled bluish grey CLAY.  DEVENSIAN TILL  Stiff high strength brown mottled bluish grey slightly sandy gravelly CLAY. Gravel consists of fine to medium mudstone.  DEVENSIAN TILL  HVP 1.20 88 PP 1.20 1.60 HVP 1.70 137 PP 1.70 188  |      |        |        |
| Stiff medium strength brown mottled bluish grey CLAY.  DEVENSIAN TILL  Stiff high strength brown mottled bluish grey slightly sandy gravelly CLAY. Gravel consists of fine to medium mudstone.  DEVENSIAN TILL  HVP 1.20 88 PP 1.20 1.60 HVP 1.70 137 PP 1.70 188  |      |        | (      |
| Stiff high strength brown mottled bluish grey slightly sandy gravelly CLAY. Gravel consists of fine to medium mudstone.  DEVENSIAN TILL  HVP 1.20 PP 1.20  HVP 1.70 137 PP 1.70 188  |      |        | D      |
| Stiff high strength brown mottled bluish grey slightly sandy gravelly CLAY. Gravel consists of fine to medium mudstone.  DEVENSIAN TILL  PP 1.20  T.60  HVP 1.70  1.88   |      |        |        |
| Stiff high strength brown mottled bluish grey slightly sandy gravelly CLAY. Gravel consists of fine to medium mudstone.  DEVENSIAN TILL  1.60  HVP 1.70 137 PP 1.70 188  |      |        |        |
| consists of fine to medium mudstone.  DEVENSIAN TILL  HVP 1.70 188   |      |        |        |
| consists of fine to medium mudstone.  DEVENSIAN TILL  HVP 1.70 188   |      |        | 1      |
| consists of fine to medium mudstone.  DEVENSIAN TILL  HVP 1.70 188   |      |        | 1      |
| consists of fine to medium mudstone.  DEVENSIAN TILL  HVP 1.70 188   |      |        | 1      |
| DEVENSIAN TILL PP 1.70 188   |      |        | 1      |
|  |      |        | D      |
| Very stiff high strength brown occasionally sandy occasionally gravelly CLAY.  |      |        | ĺ      |
| Very stiff high strength brown occasionally sandy occasionally gravelly CLAY.  |      |        | 1      |
| Very stiff high strength brown occasionally sandy occasionally gravelly CLAY.  |      |        | 1      |
| very suit night strength brown occasionally saidy occasionally gravelly CLAt. $\exists $   |      |        | 1      |
| Gravel consists of medium sandstone and mudstone.  |      |        | 1      |
| DEVENISIAN TILL  |      |        | 1      |
| from 2m depth, becoming very stiff. HVP 2.20 143   |      |        | 1      |
| 4 <u>-</u>   |      |        | 1      |
| 1:-::-1  |      |        | 1      |
| +  |      |        | 1      |
| <del></del>  |      |        | 1      |
| <del></del> -  |      |        | 1      |
| <u> </u>   |      |        | 1      |
|  |      |        | 1      |
| 1-7-7-1  |      |        | 1      |
| - <del></del>  |      |        | 1      |
|  | 3.00 |        | D      |
|  |      |        | -      |
| TRIAL PIT TERMINATED AT 3.10m  |      |        |        |
| -       PP 3.10   85   |      |        |        |
| ]  |      |        |        |
|  |      |        |        |
| 1  |      |        |        |
| -  |      |        |        |
|  |      |        |        |
|  |      |        |        |
| 1  |      |        |        |
| -  |      |        |        |
| 1  |      |        |        |
| 4   1  |      |        | 1      |
|  |      |        | 1      |

Notes: Trial pit sides remained upright and stable upon completion.

| Ground level (mAOD)   | Co-ordinates                            | <b>Title</b><br>Trial pit record                       | <b>Surface breaking</b><br>No |
|---|---|--|-------------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | <b>Dimensions (W x L)</b> 0.60m x 2.50m | Date of excavation (range if applicable)<br>17/02/2016 | <b>Appendix</b><br>C          |
|   | Method of excavation<br>JCB 3CX         | <b>Location plan on drawing number</b><br>02b          | TP110                         |

|   |             | DEDT | WATER  | TEST F             | RESULTS |             | SAMPLIN | IG   |
|---|-------------|------|--------|--------------------|---------|-------------|---------|------|
| DESCRIPTION   | LEGEND      | (m)  | STRIKE | TYPE/<br>DEPTH (m) | RESULT  | FROM<br>(m) | TO (m)  | TYPE |
| Grass onto soft dark brown sandy CLAY with frequent rootlets.   | - 3/(3/(    |      |        | DEFIN (IIII)       |         |             |         |      |
| TOPSOIL   |             |      |        |                    |         | 0.10        |         | В    |
|   |             |      |        |                    |         |             |         |      |
| Soft to firm medium and high strength orangish brown silty CLAY with  | <u> </u>    | 0.30 |        |                    |         |             |         |      |
| occasional gravels and cobbles of medium to coarse sandstone.   |             |      |        | HVP 0.40           | 94      |             |         |      |
| DEVENSIAN TILL  | +           |      |        | PP 0.40            | 50      | 0.50        |         | В    |
|   |             | -    |        |                    |         |             |         |      |
|   |             |      |        |                    |         |             |         |      |
|   |             |      |        | HVP 0.80           | 76      |             |         |      |
|   |             | -    |        | PP 0.80            | 40      |             |         |      |
|   | ===         |      |        |                    |         |             |         |      |
|   |             | 1.10 |        |                    |         |             |         |      |
| Firm to stiff medium strength reddish brown mottled orange slightly gravelly CLAY. Gravel consists of medium sandstone and quartzite. |             | ]    |        | HVP 1.20           | 79      |             |         |      |
| DEVENSIAN TILL  |             | -    |        | PP 1.20            | 72      | 1.30        |         | В    |
|   | <del></del> |      |        |                    |         | 1.50        |         | ь    |
|   | +===        | 1.50 |        |                    |         |             |         |      |
| Stiff high and very high strength reddish brown mottled grey CLAY with  | -           | 1.50 |        |                    |         |             |         |      |
| occasional gravels of fine to medium sandstone and mudstone.  DEVENSIAN TILL  |             |      |        |                    |         |             |         | _    |
|   |             |      |        | HVP 1.70           | 149     | 1.70        |         | В    |
|   |             |      |        |                    |         |             |         |      |
|   |             |      |        |                    |         |             |         |      |
|   | ===         | -    |        |                    |         |             |         |      |
|   |             |      |        | HVP 2.10           | 175     |             |         |      |
|   |             |      |        |                    |         |             |         |      |
|   |             |      |        |                    |         |             |         |      |
|   |             | -    |        |                    |         |             |         |      |
| Stiff brown CLAY with occasional medium to coarse gravels and cobbles of  |             | 2.50 |        |                    |         |             |         |      |
| sandstone and mudstone.   |             | ]    |        |                    |         |             |         |      |
| DEVENSIAN TILL  |             |      |        |                    |         |             |         |      |
|   | 1           |      |        |                    |         |             |         |      |
|   | <del></del> | -    |        |                    |         |             |         |      |
| TRIAL PIT TERMINATED AT 3.00m   |             | 3.00 |        |                    |         |             |         |      |
| INACTI I ENGINALES AL SOOTI   | 1           |      |        |                    |         |             |         |      |
|   | 1           |      |        |                    |         |             |         |      |
|   | _           |      |        |                    |         |             |         |      |
|   |             |      |        |                    |         |             |         |      |
|   | _           |      |        |                    |         |             |         |      |
|   | _           |      |        |                    |         |             |         |      |
|   | _           |      |        |                    |         |             |         |      |
|   | -           |      |        |                    |         |             |         |      |
|   | 7           |      |        |                    |         |             |         |      |
|   | 7           |      |        |                    |         |             |         |      |
|   |             |      |        |                    |         |             |         |      |

Notes: Trial pit sides remained upright and stable upon completion.

| Ground level (mAOD)   | Co-ordinates                               | <b>Title</b><br>Trial pit record                       | <b>Surface breaking</b><br>No |
|---|--|--|-------------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | <b>Dimensions (W x L)</b><br>0.60m x 2.50m | Date of excavation (range if applicable)<br>17/02/2016 | <b>Appendix</b><br>C          |
|   | Method of excavation<br>JCB 3CX            | <b>Location plan on drawing number</b><br>02b          | TP111                         |

|   |            | DEDT | WATER  | TEST               | RESULTS |             | SAMPLIN | IG   |
|---|------------|------|--------|--------------------|---------|-------------|---------|------|
| DESCRIPTION   | LEGEND     | (m)  | STRIKE | TYPE/<br>DEPTH (m) | RESULT  | FROM<br>(m) | TO (m)  | TYPE |
| Grass onto soft dark brown sandy organic CLAY with occasional gravels of      | - 3/(13/(1 |      |        | DEPTH (III)        |         | (m)         |         |      |
| medium sandstone and frequent rootlets.                                       |            |      |        |                    |         | 0.10        |         | D    |
| TOPSOIL   |            |      |        |                    |         |             |         |      |
| Firm medium strength slightly silty sandy orangish brown CLAY with occasional |            | 0.30 |        |                    |         |             |         |      |
| gravels of sandstone.   |            |      |        |                    |         |             |         |      |
| DEVENSIAN TILL  | #==        |      |        | HVP 0.50           | 73      | 0.50        |         | D    |
|   | <u> </u>   |      |        | 1111 0.00          | ,,      | 0.50        |         | _    |
|   |            |      |        |                    |         |             |         |      |
|   |            |      |        |                    |         |             |         |      |
|   |            |      |        |                    |         |             |         |      |
|   |            |      |        |                    |         |             |         |      |
|   |            |      |        |                    |         |             |         |      |
| from 1.1m depth, becoming very sandy.   |            |      |        |                    |         |             |         |      |
| pyron acar depart meaning sery during.  | 1          |      |        | HVP 1.20           | 157     |             |         |      |
|   |            |      |        |                    |         |             |         |      |
|   |            |      |        |                    |         |             |         |      |
|   | ===        |      |        |                    |         |             |         |      |
|   |            |      |        |                    |         |             |         |      |
|   |            |      |        |                    |         |             |         |      |
|   |            |      |        |                    |         |             |         |      |
| Very stiff very high strength reddish brown mottled grey CLAY with occasional | ===        | 1.80 |        |                    |         |             |         |      |
| gravels and cobbles of medium to coarse sandstone and mudstone.               | 1          |      |        |                    |         |             |         |      |
| DEVENSIAN TILL  |            |      |        | HVP 2.00           | 198     | 2.00        |         | D    |
|   |            |      |        |                    |         |             |         |      |
|   |            |      |        |                    |         |             |         |      |
| from 2.2m depth, becoming friable.  |            |      |        |                    |         |             |         |      |
|   |            |      |        |                    |         |             |         |      |
|   |            |      |        |                    |         |             |         |      |
|   |            |      |        |                    |         |             |         |      |
| Stiff very high strength brown slightly silty CLAY.                           | -          | 2.60 |        |                    |         |             |         |      |
| DEVENSIAN TILL  |            |      |        |                    |         |             |         |      |
|   |            |      |        | HVP 2.80           | 198     |             |         |      |
|   |            |      |        |                    |         |             |         |      |
|   |            | 3.00 |        |                    |         |             |         |      |
| TRIAL PIT TERMINATED AT 3.00m   | -          | 3.00 |        |                    |         |             |         |      |
|   | 7          |      |        |                    |         |             |         |      |
|   | 1          |      |        |                    |         |             |         |      |
|   | _          |      |        |                    |         |             |         |      |
|   |            |      |        |                    |         |             |         |      |
|   | $\exists$  |      |        |                    |         |             |         |      |
|   | 7          |      |        |                    |         |             |         |      |
|   | 1          |      |        |                    |         |             |         |      |
|   |            |      |        |                    |         |             |         |      |
|   | _          |      |        |                    |         |             |         |      |
|   | 7          |      |        |                    |         |             |         |      |
|   |            |      |        |                    |         |             |         |      |

Notes: Trial pit sides remained upright and stable upon completion.

| Ground level (mAOD)   | Co-ordinates                               | <b>Title</b> Trial pit record                          | <b>Surface breaking</b><br>No |
|---|--|--|-------------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | <b>Dimensions (W x L)</b><br>0.60m x 2.50m | Date of excavation (range if applicable)<br>17/02/2016 | <b>Appendix</b><br>C          |
|   | Method of excavation<br>JCB 3CX            | <b>Location plan on drawing number</b><br>02b          | TP112                         |

|   |                     | DEPTH    | WATER    |                     | RESULTS  |             | SAMPLIN | 1G   |
|---|---------------------|----------|----------|---------------------|----------|-------------|---------|------|
| DESCRIPTION   | LEGEND              | (m)      | STRIKE   | TYPE/<br>DEPTH (m)  | RESULT   | FROM<br>(m) | TO (m)  | TYPE |
| Grass onto soft dark sandy organic CLAY with frequent rootlets. TOPSOIL             | -                   |          |          | • •                 |          | 0.10        |         | D    |
|   | -                   |          |          |                     |          |             |         |      |
|   | 3                   |          |          |                     |          |             |         |      |
| Firm medium strength orangish brown slightly sandy slightly gravelly silty CLAY.    | . <u>//////////</u> | 0.40     |          |                     |          |             |         |      |
| Gravel consists of fine to medium mudstone. DEVENSIAN TILL                          | +===                |          |          | HVP 0.50<br>PP 0.50 | 64<br>47 |             |         | _    |
|   |                     |          |          |                     |          | 0.60        |         | D    |
|   | ===                 |          |          |                     |          |             |         |      |
|   |                     |          |          |                     |          |             |         |      |
| Stiff medium strength becoming high and very high strength reddish brown            | · <del>  [</del>    | 1.00     |          |                     |          |             |         |      |
| mottled bluish grey CLAY with occasional gravels of medium quartzite and sandstone. |                     |          |          | HVP 1.10            | 91<br>60 | 1.10        |         | D    |
| sandstone. DEVENSIAN TILL   |                     |          |          | PP 1.10             | υO       |             |         |      |
|   |                     |          |          |                     |          |             |         |      |
|   |                     |          |          |                     |          |             |         |      |
| from 1.5m depth, becoming very stiff:   |                     |          |          |                     |          |             |         |      |
|   |                     |          |          | HVP 1.70            | 175      |             |         |      |
|   |                     |          |          |                     |          |             |         |      |
|   |                     |          |          |                     |          |             |         |      |
|   | ]===                |          |          |                     |          |             |         |      |
|   |                     |          |          |                     |          |             |         |      |
|   | #33                 |          |          |                     |          |             |         |      |
|   |                     |          |          | HVP 2.40            | 144      | 2.40        |         | D    |
| Stiff very high strength brown slightly silty CLAY.                                 | +===                | 2.50     |          |                     |          |             |         |      |
| DEVENSIAN TILL  |                     |          |          |                     |          |             |         |      |
|   |                     |          |          |                     |          |             |         |      |
|   | ===                 |          |          |                     |          |             |         |      |
|   |                     |          |          |                     |          | 3.00        |         | D    |
|   |                     |          |          |                     |          |             |         |      |
| TRIAL PIT TERMINATED AT 3.20m   | +                   | 3.20     |          | HVP 3.20            | 155      |             |         |      |
|   | ]                   |          |          |                     |          |             |         |      |
|   | =                   |          |          |                     |          |             |         |      |
|   | =                   |          |          |                     |          |             |         |      |
|   |                     |          |          |                     |          |             |         |      |
|   | =                   |          |          |                     |          |             |         |      |
|   | 1                   |          |          |                     |          |             |         |      |
| Note: Trial nit sides remained unright and stable upon completion                   |                     | <u> </u> | <u> </u> |                     | <u> </u> | 1           |         |      |

Notes: Trial pit sides remained upright and stable upon completion.

| Ground level (mAOD)   | Co-ordinates                               | <b>Title</b> Trial pit record                          | <b>Surface breaking</b><br>No |
|---|--|--|-------------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | <b>Dimensions (W x L)</b><br>0.60m x 2.50m | Date of excavation (range if applicable)<br>17/02/2016 | <b>Appendix</b><br>C          |
|   | Method of excavation<br>JCB 3CX            | <b>Location plan on drawing number</b><br>02b          | TP113                         |

|  |             | DEPTH V | WATER  |                    | RESULTS | SAMPLIN |         |
|--|-------------|---------|--------|--------------------|---------|---------|---------|
| DESCRIPTION  | LEGEND      | (m)     | STRIKE | TYPE/<br>DEPTH (m) | RESULT  | FROM TO | (m) TYP |
| Grass onto soft dark brown very sandy organic CLAY with frequent rootlets.     | -3///3//    |         |        | DEF III (III)      |         | (11)    | -       |
| OPSOIL   |             |         |        |                    |         | 0.10    | D       |
|  |             |         |        |                    |         |         |         |
|  |             |         |        |                    |         |         |         |
|  | - 33333     |         |        |                    |         |         |         |
| ft becoming firm medium strength orangish brown slightly silty slightly sandy  |             | 0.40    |        |                    |         |         |         |
| AY.  | +           |         |        | HVP 0.50           | 65      | 0.50    | [       |
| VENSIAN TILL   | F           |         |        | PP 0.50            | 88      |         |         |
|  | <u> </u>    | 1       |        |                    |         |         |         |
|  |             |         |        |                    |         |         |         |
|  |             | }       |        |                    |         |         |         |
|  |             |         |        | HVP 0.90           | 58      |         |         |
|  |             | -       |        | PP 0.90            | 70      |         |         |
|  |             |         |        |                    |         |         |         |
|  | 1           |         |        |                    |         |         |         |
|  |             | -       |        |                    |         |         |         |
|  |             | ]       |        | HVP 1.30           | 65      | 1.30    |         |
|  | 1           |         |        | PP 1.30            | 68      |         |         |
|  | +===        | -       |        |                    |         |         |         |
| m 1.5m depth, becoming stiff and friable.                                      | <del></del> | ]       |        |                    |         |         |         |
|  | <u> </u>    |         |        |                    |         |         |         |
| ma hinh akun mak undalah hanyu CIAV wikh angani mal mayula af madiyun          |             | 1.70    |        | HVP 1.70           | 127     | 1.70    |         |
| rm high strength reddish brown CLAY with occasional gravels of medium udstone. | <u> </u>    | 1       |        |                    |         |         |         |
| EVENSIAN TILL  |             |         |        |                    |         |         |         |
|  | 1           | -       |        |                    |         |         |         |
|  |             | ]       |        |                    |         |         |         |
|  |             |         |        |                    |         |         |         |
|  |             | -       |        |                    |         |         |         |
|  | +===        |         |        |                    |         |         |         |
|  | 1           |         |        | HVP 2.30           | 120     |         |         |
| longer friable and occasional gravels of mudstone from 2.4m depth.             | +===        | -       |        |                    |         |         |         |
| ,  | <u> </u>    | 1       |        |                    |         |         |         |
|  |             |         |        |                    |         |         |         |
|  |             |         |        |                    |         |         |         |
| TRIAL PIT TERMINATED AT 2.70m  |             | 2.70    |        |                    |         |         |         |
|  | -           |         |        |                    |         |         |         |
|  | 7           |         |        |                    |         |         |         |
|  |             |         |        |                    |         |         |         |
|  | 4           |         |        |                    |         |         |         |
|  | 1           |         |        |                    |         |         |         |
|  | _           |         |        |                    |         |         |         |
|  | 7           |         |        |                    |         |         |         |
|  | _           |         |        |                    |         |         |         |
|  | -           |         |        |                    |         |         |         |
|  | 1           |         |        |                    |         |         |         |
|  | -           |         |        |                    |         |         |         |
|  | _           |         |        |                    |         |         |         |
|  | 4           |         |        |                    |         |         |         |
|  |             | 1       | ı 1    |                    |         | 1 1     | 1       |

Notes: Trial pit sides remained upright and stable upon completion. Infiltration testing performed.

| Ground level (mAOD)   | Co-ordinates                            | <b>Title</b><br>Trial pit record                       | <b>Surface breaking</b><br>No |
|---|---|--|-------------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | <b>Dimensions (W x L)</b> 0.60m x 3.20m | Date of excavation (range if applicable)<br>17/02/2016 | <b>Appendix</b><br>C          |
|   | Method of excavation<br>JCB 3CX         | <b>Location plan on drawing number</b><br>02b          | TP114                         |

|   |              | DEPTH | WATER  |                    | RESULTS |             | SAMPLIN | NG   |
|---|--------------|-------|--------|--------------------|---------|-------------|---------|------|
| DESCRIPTION   | LEGEND       | (m)   | STRIKE | TYPE/<br>DEPTH (m) | RESULT  | FROM<br>(m) | TO (m)  | TYPE |
| Grass onto soft dark brown very sandy organic CLAY with frequent rootlets. TOPSOIL            | -            |       |        |                    |         | 0.10        |         | В    |
| IOPSOIL   | -            |       |        |                    |         | 0.10        |         | ь    |
|   | 7            | 0.70  |        |                    |         |             |         |      |
| Firm medium becoming high strength brown slightly gravelly silty CLAY with                    |              | 0.30  |        | 111/0 0 40         | 70      |             |         |      |
| occasional cobbles of sandstone. Gravel consists of medium to coarse sandstone and quartzite. | <del></del>  | 1     |        | HVP 0.40           | 73      | 0.50        |         | ь    |
| DEVENSIAN TILL  |              |       |        |                    |         | 0.50        |         | В    |
|   |              |       |        |                    |         |             |         |      |
|   |              |       |        |                    |         |             |         |      |
|   | 1            |       |        | HVP 0.80           | 88      |             |         |      |
|   |              |       |        |                    |         |             |         |      |
| Firm to stiff medium becoming high strength reddish brown mottled bluish grey                 |              | 1.00  |        |                    |         |             |         | _    |
| CLAY with occasional gravels of fine sandstone and mudstone. DEVENSIAN TILL                   |              |       |        |                    |         | 1.10        |         | В    |
|   |              |       |        | HVP 1.20           | 76      |             |         |      |
|   |              | -     |        |                    |         |             |         |      |
|   | #33          |       |        |                    |         |             |         |      |
|   | <del>+</del> |       |        |                    |         |             |         |      |
| from 1.6m depth, becoming stiff.  | ===          |       |        |                    |         |             |         |      |
|   | ==           |       |        |                    |         |             |         |      |
|   |              | ]     |        | HVP 1.80           | 119     |             |         |      |
|   |              |       |        |                    |         |             |         |      |
|   |              |       |        |                    |         |             |         |      |
|   |              |       |        |                    |         |             |         |      |
|   |              |       |        |                    |         |             |         |      |
|   | 1==          |       |        |                    |         |             |         |      |
|   | #==          |       |        |                    |         |             |         |      |
| Stiff high strength reddish brown CLAY with occasional cobbles of mudstone.                   |              | 2.50  |        |                    |         |             |         |      |
| DEVENSIAN TILL  | ===          |       |        |                    |         |             |         |      |
|   | ===          |       |        | HVP 2.70           | 140     | 2.70        |         | В    |
|   | ===          | ]     |        |                    |         |             |         |      |
|   | ===          | 1     |        |                    |         |             |         |      |
|   |              |       |        |                    |         |             |         |      |
| TRIAL PIT TERMINATED AT 3.10m   | +            | 3.10  |        |                    |         |             |         |      |
|   | 1            |       |        |                    |         |             |         |      |
|   | 1            |       |        |                    |         |             |         |      |
|   | =            |       |        |                    |         |             |         |      |
|   | 7            |       |        |                    |         |             |         |      |
|   | 7            |       |        |                    |         |             |         |      |
|   | 7            |       |        |                    |         |             |         |      |
|   | 7            |       |        |                    |         |             |         |      |
|   | 7            |       |        |                    |         |             |         |      |
|   |              |       |        |                    |         |             |         |      |

Notes: Trial pit sides remained upright and stable upon completion.

| Ground level (mAOD)   | Co-ordinates                        | <b>Title</b> Trial pit record                          | <b>Surface breaking</b><br>No |
|---|-------------------------------------|--|-------------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | Dimensions (W x L)<br>0.60m x 2.50m | Date of excavation (range if applicable)<br>17/02/2016 | <b>Appendix</b><br>C          |
|   | Method of excavation JCB 3CX        | <b>Location plan on drawing number</b><br>02b          | TP115                         |

|  |              |              |                 | TEST F    | RESULTS |      | SAMPLIN  | lG    |
|--|--------------|--------------|-----------------|-----------|---------|------|----------|-------|
| DESCRIPTION  | LEGEND       | DEPTH<br>(m) | WATER<br>STRIKE | TYPE/     | RESULT  | FROM | TO (m)   |       |
| Firm dark hyper year candy CLAV with accessional gravele of fine conditions and                  | X//8X//8     | (,           | 0111111         | DEPTH (m) | RESOLI  | (m)  | 10 (111) | IIIFE |
| Firm dark brown very sandy CLAY with occasional gravels of fine sandstone and frequent rootlets. |              |              |                 |           |         | 0.10 |          | D     |
| TOPSOIL  | - 3503350    |              |                 |           |         | 0.20 |          | _     |
|  | -            |              |                 |           |         |      |          |       |
| Firm high strength dark brown gravelly CLAY. Gravel consists of fine to coarse                   |              | 0.30         |                 |           |         |      |          |       |
| sandstone and mudstone.  | +            |              |                 | HVP 0.40  | 94      | 0.40 |          | D     |
| DEVENSIAN TILL   | ==           |              |                 |           |         |      |          |       |
|  |              | 0.60         |                 |           |         |      |          |       |
| Firm to stiff high strength orangish brown slightly silty CLAY with occasional                   |              | 0.00         |                 |           |         |      |          |       |
| gravels of medium sandstone. DEVENSIAN TILL  |              |              |                 |           |         | 0.70 |          | D     |
| DEVENSIAN TILL   | <u></u>      |              |                 | HVP 0.80  | 76      |      |          |       |
|  |              |              |                 |           |         |      |          |       |
|  |              |              |                 |           |         |      |          |       |
|  |              |              |                 |           |         |      |          |       |
|  |              |              |                 |           |         |      |          |       |
|  |              |              |                 | HVP 1.20  | 99      |      |          |       |
| Firm medium strength brown mottled bluish grey CLAY.   | -            | 1.30         |                 |           |         |      |          |       |
| DEVENSIAN TILL   |              |              |                 |           |         | 1.40 |          | D     |
|  | +===         |              |                 | HVP 1.50  | C7      |      |          | _     |
|  |              |              |                 | HVP 1.50  | 67      |      |          |       |
| Stiff high becoming very high strength brown mottled bluish grey friable CLAY.                   | <u> </u>     | 1.60         |                 |           |         |      |          |       |
| DEVENSIAN TILL   |              |              |                 |           |         |      |          |       |
|  | <del>-</del> |              |                 | HVP 1.80  | 140     |      |          |       |
|  |              |              |                 |           |         |      |          |       |
|  |              |              |                 |           |         |      |          |       |
|  |              |              |                 |           |         |      |          |       |
|  |              |              |                 |           |         |      |          |       |
|  |              |              |                 |           |         |      |          |       |
|  |              |              |                 |           |         |      |          |       |
|  | <del>-</del> |              |                 |           |         |      |          |       |
|  |              |              |                 |           |         |      |          |       |
|  |              |              |                 |           |         |      |          |       |
|  |              |              |                 | HVP 2.60  | 198     |      |          |       |
|  |              |              |                 |           |         |      |          |       |
|  | <u></u>      |              |                 |           |         |      |          |       |
|  | -===         |              |                 |           |         |      |          |       |
|  |              |              |                 |           |         |      |          |       |
| Stiff high strength reddish brown slightly silty CLAY with occasional gravels of                 | +==          | 3.00         |                 | HVP 3.00  | 146     |      |          |       |
| medium mudstone.   |              | 3.10         |                 |           |         |      |          |       |
| DEVENSIAN TILL   | 1            |              |                 |           |         |      |          |       |
| TRIAL PIT TERMINATED AT 3.10m  | -            |              |                 |           |         |      |          |       |
|  | 7            |              |                 |           |         |      |          |       |
|  |              |              |                 |           |         |      |          |       |
|  | 4            |              |                 |           |         |      |          |       |
|  | 7            |              |                 |           |         |      |          |       |
|  | _            |              |                 |           |         |      |          |       |
|  | 7            |              |                 |           |         |      |          |       |
|  |              |              |                 |           |         |      |          |       |
|  | +            |              |                 |           |         |      |          |       |
|  | 7            |              |                 |           |         |      |          |       |
|  |              |              |                 |           | 1       |      |          |       |

Notes: Trial pit sides remained upright and stable upon completion.

| Ground level (mAOD)   | Co-ordinates                               | <b>Title</b> Trial pit record                          | <b>Surface breaking</b><br>No |
|---|--|--|-------------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | <b>Dimensions (W x L)</b><br>0.60m x 2.50m | Date of excavation (range if applicable)<br>17/02/2016 | <b>Appendix</b><br>C          |
|   | Method of excavation<br>JCB 3CX            | <b>Location plan on drawing number</b><br>02b          | TP116                         |

|  |             | DEDTU | WATER  | TEST I             | RESULTS |             | SAMPLING |      |  |
|--|-------------|-------|--------|--------------------|---------|-------------|----------|------|--|
| DESCRIPTION  | LEGEND      | (m)   | STRIKE | TYPE/<br>DEPTH (m) | RESULT  | FROM<br>(m) | TO (m)   | TYPE |  |
| Grass onto soft dark brown sandy organic CLAY with frequent rootlets.                                      | -           |       |        | 22 (,              |         |             |          |      |  |
| TOPSOIL  |             |       |        |                    |         | 0.10        |          | D    |  |
| Firm medium strength orangish brown slightly silty CLAY with occasional gravels                            |             | 0.25  |        |                    |         |             |          |      |  |
| of coarse sandstone.   | <del></del> |       |        |                    |         |             |          |      |  |
| DEVENSIAN TILL   | ===         | 1     |        | HVP 0.40           | 76      |             |          |      |  |
|  |             |       |        |                    |         | 0.50        |          | D    |  |
| from 0.6m depth, becoming mottled grey in colour.  |             | 1     |        |                    |         |             |          |      |  |
|  | ===         | ]     |        |                    |         |             |          |      |  |
|  |             | ]     |        | HVP 0.80           | 61      |             |          |      |  |
|  |             |       |        |                    |         |             |          |      |  |
|  | ===         | 1     |        |                    |         |             |          |      |  |
| Firm high strength orange mottled grey CLAY.   | -           | 1.10  |        |                    |         |             |          |      |  |
| DEVENSIAN TILL   |             | 1     |        | HVP 1.20           | 84      | 1.20        |          | D    |  |
|  |             | ]     |        |                    |         |             |          |      |  |
|  |             |       |        |                    |         |             |          |      |  |
|  | +==         |       |        |                    |         |             |          |      |  |
|  |             |       |        | HVP 1.60           | 120     |             |          |      |  |
|  |             |       |        |                    |         |             |          |      |  |
|  | ===         |       |        |                    |         |             |          |      |  |
| Vow. stiff row high strongth angues weathled grow frields CLAV   |             | 1.90  |        |                    |         |             |          |      |  |
| Very stiff very high strength orange mottled grey friable CLAY. DEVONSIAN TILL                             | -           |       |        | HVP 2.00           | 169     | 2.00        |          | D    |  |
|  |             |       |        |                    |         |             |          |      |  |
|  |             |       |        |                    |         |             |          |      |  |
|  |             |       |        |                    |         |             |          |      |  |
|  |             |       |        |                    |         |             |          |      |  |
|  | ===         | 2.50  |        |                    |         |             |          |      |  |
| Stiff very high strength brown slightly silty CLAY with occasional gravels and cobbles of coarse mudstone. |             | 2.50  |        |                    |         |             |          |      |  |
| DEVENSIAN TILL   |             |       |        |                    |         |             |          |      |  |
|  |             |       |        |                    |         |             |          |      |  |
|  |             |       |        |                    |         |             |          |      |  |
|  |             | 3.00  |        | HVP 3.00           | 182     |             |          |      |  |
| TRIAL PIT TERMINATED AT 3.00m  | -           | 3.00  |        | HVF 3.00           | 102     |             |          |      |  |
|  | 3           |       |        |                    |         |             |          |      |  |
|  | -           |       |        |                    |         |             |          |      |  |
|  | 7           |       |        |                    |         |             |          |      |  |
|  | 7           |       |        |                    |         |             |          |      |  |
|  | 7           |       |        |                    |         |             |          |      |  |
|  | 7           |       |        |                    |         |             |          |      |  |
|  | 1           |       |        |                    |         |             |          |      |  |
|  | 1           |       |        |                    |         |             |          |      |  |
|  | =           |       |        |                    |         |             |          |      |  |
|  |             | 1     |        |                    |         | 1           |          |      |  |

Notes: Trial pit sides remained upright and stable upon completion.

| Ground level (mAOD)   | Co-ordinates                            | <b>Title</b><br>Trial pit record                       | <b>Surface breaking</b><br>No |
|---|---|--|-------------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | <b>Dimensions (W x L)</b> 0.60m x 2.50m | Date of excavation (range if applicable)<br>17/02/2016 | <b>Appendix</b><br>C          |
|   | Method of excavation<br>JCB 3CX         | <b>Location plan on drawing number</b><br>02b          | TP117                         |

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|   |             | ПЕВТІ | WATER  |                    | RESULTS |             | SAMPLIN | lG   |
|---|-------------|-------|--------|--------------------|---------|-------------|---------|------|
| DESCRIPTION   | LEGEND      | (m)   | STRIKE | TYPE/<br>DEPTH (m) | RESULT  | FROM<br>(m) | TO (m)  | TYPE |
| Grass onto soft dark brown very sandy organic CLAY with frequent rootlets                                     | - %(%)      |       |        | DEFIN (III)        |         |             |         |      |
| TOPSOIL   |             |       |        |                    |         | 0.10        |         | D    |
| Firm medium strength orangish brown slightly silty slightly sandy CLAY with                                   | <u> </u>    | 0.20  |        |                    |         |             |         |      |
| occasional gravels of medium sandstone.   |             | 1     |        |                    |         |             |         |      |
| DEVENSIAN TILL  |             | 0.40  |        |                    |         |             |         |      |
| Stiff high strength brown mottled bluish grey slightly sandy CLAY with occasional gravels of medium mudstone. |             |       |        | HVP 0.50           | 100     | 0.50        |         | D    |
| DEVENSIAN TILL  |             | }     |        | PP 0.50            | 90      | 0.50        |         | ,    |
|   | <del></del> | -     |        |                    |         |             |         |      |
|   |             | ]     |        |                    |         |             |         |      |
|   |             | 1     |        |                    |         |             |         |      |
|   |             |       |        |                    |         |             |         |      |
|   | -           |       |        | HVP 1.00           | 109     |             |         |      |
|   |             | }     |        | PP 1.00            | 100     | 1.10        |         | D    |
|   |             | -     |        |                    |         |             |         | -    |
|   |             | ]     |        |                    |         |             |         |      |
|   | 1           | 1     |        |                    |         |             |         |      |
|   |             |       |        | HVP 1.40           | 96      |             |         |      |
|   |             | 1     |        |                    |         |             |         |      |
| from 1.6m depth, becoming very stiff and friable.   |             |       |        |                    |         |             |         |      |
|   |             | -     |        |                    |         |             |         |      |
|   |             | 1     |        |                    |         | 1.80        |         | D    |
|   |             |       |        | HVP 1.90           | 119     |             |         |      |
|   |             |       |        | UAL 1'20           | 119     |             |         |      |
|   |             |       |        |                    |         |             |         |      |
|   | ===         |       |        |                    |         |             |         |      |
|   |             |       |        |                    |         |             |         |      |
|   |             |       |        |                    |         |             |         |      |
| Very stiff high strength brown slightly silty CLAY with occasional cobbles of                                 | ===         | 2.40  |        | HVP 2.40           | 137     |             |         |      |
| sandstone.  | ===         | 1     |        |                    |         |             |         |      |
| DEVENSIAN TILL  | ===         |       |        |                    |         |             |         |      |
|   |             |       |        |                    |         |             |         |      |
|   | ===         |       |        |                    |         | ,           |         | _    |
|   |             | }     |        |                    |         | 2.80        |         | D    |
|   |             | -     |        |                    |         |             |         |      |
| TRIAL PIT TERMINATED AT 3.00m   |             | 3.00  |        |                    |         |             |         |      |
|   | 4           |       |        |                    |         |             |         |      |
|   | 7           |       |        |                    |         |             |         |      |
|   | 7           |       |        |                    |         |             |         |      |
|   | _           |       |        |                    |         |             |         |      |
|   | _           |       |        |                    |         |             |         |      |
|   | -           |       |        |                    |         |             |         |      |
|   | 7           |       |        |                    |         |             |         |      |
|   | _           |       |        |                    |         |             |         |      |
|   | _           |       |        |                    |         |             |         |      |
|   | -           |       |        |                    |         |             |         |      |
|   | 7           |       |        |                    |         |             |         |      |
|   |             | 1     | 1      |                    |         | 1           |         |      |

Notes: Trial pit sides remained upright and stable upon completion.

| Ground level (mAOD)   | Co-ordinates                               | <b>Title</b><br>Trial pit record                       | <b>Surface breaking</b><br>No |
|---|--|--|-------------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | <b>Dimensions (W x L)</b><br>0.60m x 2.50m | Date of excavation (range if applicable)<br>18/02/2016 | <b>Appendix</b><br>C          |
|   | Method of excavation<br>JCB 3CX            | <b>Location plan on drawing number</b><br>02b          | TP118                         |

|  |  |       |        | TECT      | DECLUTE | 1    | CANADIIA | NC. |
|--|--|-------|--------|-----------|---------|------|----------|-----|
| DESCRIPTION  | LEGEND   | DEPTH | WATER  |           | RESULIS |      |          | I   |
| DESCRIPTION  | LEGEND   | (m)   | STRIKE | DEPTH (m) | RESULT  |      | TO (m)   | TYP |
| Grass onto soft dark brown very sandy organic CLAY with frequent rootlets.   | -\\\\\\  |       |        |           |         | ()   |          |     |
| TOPSOIL  |  |       |        |           |         | 0.10 |          | D   |
|  |  |       |        |           |         |      |          |     |
|  | -  |       |        |           |         |      |          |     |
|  |  | 0.35  |        |           |         |      |          |     |
| irm orangish brown slightly silty slightly sandy CLAY with occasional gravels of   |  | 0.55  |        |           |         |      |          |     |
| nedium sandstone.<br>DEVENSIAN TILL  | T  | ]     |        |           |         | 0.50 |          | Ь   |
| EVENSIAN TILL  |  |       |        | UVD 0 C0  | 70      |      |          | _   |
|  | <del>-</del>   | -     |        | HVP 0.60  | 79      |      |          |     |
|  | <u></u>  | 1     |        |           |         |      |          |     |
| Contribution of the bound of th | - 1  | 0.80  |        |           |         |      |          |     |
| irm high strength greyish brown slightly gravelly CLAY. Gravel consists of nedium sandstone.   |  | ]     |        | HVD 0 00  | 70      |      |          |     |
| EVENSIAN TILL  |  |       |        | 1101 0.30 | 75      |      |          |     |
| oulder sized pockets of sand at south end of pit between 0.8m and 1.0m depth.  | <u> </u>   | -     |        |           |         | 1.00 |          | C   |
|  | -[-]-[   |       |        | HVP 1.10  | 144     |      |          |     |
|  | ]  | -     |        |           |         |      |          |     |
|  |  |       |        |           |         |      |          |     |
| tiff very high becoming high strength reddish brown mottled grey CLAY with   |  | 1.30  |        |           |         |      |          |     |
| ccasional gravels of coarse sandstone.   | +====  | -     |        |           |         | 1.40 | 0.10     | C   |
| EVENSIAN TILL  | LEGEND   DEPTH   WATER   TYPE/ DEPTH (m)   RESULT   FROM (m)   TO (m)   TYPE |       |        |           |         |      |          |     |
|  |  |       |        |           |         |      |          |     |
|  | F==  | ]     |        |           |         |      |          |     |
|  | <u> </u>   |       |        |           |         |      |          |     |
|  |  | -     |        |           |         |      |          |     |
|  |  | ]     |        |           |         |      |          |     |
|  |  |       |        |           |         |      |          |     |
|  |  |       |        |           |         |      |          |     |
|  |  |       |        | HVP 2.10  | 175     |      |          |     |
|  | <u> </u>   | -     |        |           |         |      |          |     |
|  |  |       |        |           |         |      |          |     |
|  | 1  |       |        |           |         |      |          |     |
|  | +  | -     |        |           |         |      |          |     |
|  | 1  |       |        |           |         |      |          |     |
|  | +  | 1     |        |           |         |      |          |     |
|  |  | ]     |        |           |         |      | TO (m)   |     |
|  | 1-1-1  |       |        |           |         |      |          |     |
|  |  | -     |        | HVP 2.80  | 109     | 2.80 |          | [   |
|  |  | ]     |        |           |         |      |          |     |
|  |  |       |        |           |         |      |          |     |
| TRIAL PIT TERMINATED AT 3.00m  |  | 3.00  |        |           |         |      |          |     |
|  | -  |       |        |           |         |      |          |     |
|  | 1  |       |        |           |         |      |          |     |
|  | -  |       |        |           |         |      |          |     |
|  | 7  |       |        |           |         |      |          |     |
|  | _  |       |        |           |         |      |          |     |
|  | 4  |       |        |           |         |      |          |     |
|  | _  |       |        |           |         |      |          |     |
|  | 7  |       |        |           |         |      |          |     |
|  | _  |       |        |           |         |      |          |     |
|  |  |       |        |           |         |      | 1        | 1   |

Notes: Trial pit sides remained upright and stable upon completion.

| Ground level (mAOD)   | Co-ordinates                        | <b>Title</b><br>Trial pit record                       | <b>Surface breaking</b><br>No |
|---|-------------------------------------|--|-------------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | Dimensions (W x L)<br>0.60m x 2.50m | Date of excavation (range if applicable)<br>18/02/2016 | <b>Appendix</b><br>C          |
|   | <b>Method of excavation</b> JCB 3CX | <b>Location plan on drawing number</b><br>02b          | TP119                         |

|  |        | DEDTU | MATER           | TEST                | RESULTS  |              | SAMPLIN | NG.    |
|--|--------|-------|-----------------|---------------------|----------|--------------|---------|--------|
| DESCRIPTION  | LEGEND | (m)   | WATER<br>STRIKE | TYPE/<br>DEPTH (m)  | RESULT   | FROM         | TO (m)  | TYPE   |
| Grass onto soft dark brown very sandy organic CLAY with frequent roots and occasional cobbles of sandstone.  | -      |       |                 | DEPTH (III)         |          | (m)<br>0.10  |         | D      |
| TOPSOIL  |        |       |                 |                     |          |              |         |        |
| Firm medium strength orangish brown slightly silty sandy CLAY with occasional gravels and cobbles of medium sandstone.  DEVENSIAN TILL                                   |        | 0.40  |                 | HVP 0.50<br>PP 0.50 | 70<br>65 | 0.50         |         | D      |
| Firm to stiff medium to high strength orangish brown mottled bluish grey sandy   |        | 1.00  |                 |                     |          |              |         |        |
| CLAY. DEVENSIAN TILL   |        |       |                 | HVP 1.10<br>PP 1.10 | 79<br>75 | 1.10         |         | D      |
| Chiff high shape the bassar protein deliving array alighety conductively CLAY with   |        | 1.70  |                 | HVP 1.50            | 94       |              |         |        |
| Stiff high strength brown mottled bluish grey slightly sandy friable CLAY with occasional coarse gravels and cobbles of mudstone and quartzite.  DEVENSIAN TILL          |        |       |                 | HVP 1.90            | 137      | 1.90<br>2.00 |         | D<br>D |
| Very stiff very high strength brown mottled bluish grey slightly silty slightly sandy friable CLAY with occasional coarse gravels and cobbles of mudstone and quartzite. |        | 2.50  |                 | HVP 2.40            | 143      |              |         |        |
| DEVENSIAN TILL   |        |       |                 | HVP 2.90            | 167      |              |         |        |
| TRIAL PIT TERMINATED AT 3.20m  |        | 3.20  |                 | HVP 3.20            | 213      |              |         |        |

Notes: Trial pit sides remained upright and stable upon completion.

| Ground level (mAOD)   | Co-ordinates                        | <b>Title</b><br>Trial pit record                       | Surface breaking<br>No |
|---|-------------------------------------|--|------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | Dimensions (W x L)<br>0.60m x 2.50m | Date of excavation (range if applicable)<br>18/02/2016 | Appendix<br>-          |
|   | Method of excavation JCB 3CX        | <b>Location plan on drawing number</b><br>02b          | TP120                  |

|  |               |       |        |            | eotechnic | ,    |         |      |
|--|---------------|-------|--------|------------|-----------|------|---------|------|
| DESCRIPTION  | LEGEND        | DEPTH | WATER  |            | RESULTS   | FROM | SAMPLIN |      |
|  |               | (m)   | STRIKE | DEPTH (m)  | RESULT    | (m)  | TO (m)  | TYPE |
| Grass onto soft dark brown very sandy organic CLAY with frequent rootlets and  | - 3/(13/(1    |       |        |            |           |      |         |      |
| occasional gravels of medium sandstone.  | (1)(1)(2)     |       |        |            |           | 0.10 |         | В    |
| TOPSOIL  |               |       |        |            |           |      |         |      |
|  |               |       |        |            |           |      |         |      |
|  | -(/):(/)      |       |        |            |           |      |         |      |
| Firm low to medium strength orangish brown slightly sandy CLAY with  | - CHILINII    | 0.35  |        | 111/0 0 40 | 20        |      |         |      |
| occasional gravels and cobbles of coarse sandstone.  | I             | 1     |        | HVP 0.40   | 38        |      |         |      |
| DEVENSIAN TILL   |               | -     |        |            |           | 0.50 |         | В    |
| pockets of grey sandy at north end of pit between 0.5m and 0.9m depth.   |               | ]     |        |            |           |      |         |      |
|  | 1             | -     |        |            |           |      |         |      |
|  |               | 1     |        |            |           |      |         |      |
|  | <u> </u>      | ]     |        | 11/0 0 00  | 61        |      |         |      |
|  | 1-1-1-        | 1     |        | HVP 0.80   | 91        |      |         |      |
| Plane and the state of the stat | - <del></del> | 0.90  |        |            |           |      |         |      |
| Firm medium strength brown mottled grey sandy CLAY   |               |       |        |            |           | 1.00 |         |      |
| DEVENSIAN TILL   | <u> </u>      | 1     |        |            |           | 1.00 |         | В    |
|  |               | 1     |        | HVP 1.10   | 58        |      |         |      |
|  | 1             | -     |        |            |           |      |         |      |
|  |               | 1     |        |            |           |      |         |      |
| CUMITE A THE THE THE CLAY  | - ====        | 1.30  |        |            |           |      |         |      |
| Stiff high strength brown mottled grey and bluish grey CLAY.   | +====         | 1     |        | 111/04/40  | 0.4       |      |         |      |
| DEVENSIAN TILL   | <u> </u>      | 1     |        | HVP 1.40   | 94        |      |         |      |
|  | +====         | -     |        |            |           | 1.50 |         | В    |
|  | +             | 1     |        |            |           |      |         |      |
|  | <u></u>       | 1     |        |            |           |      |         |      |
|  |               | -     |        |            |           |      |         |      |
|  |               | 1     |        |            |           |      |         |      |
|  |               | ]     |        | HVP 1.80   | 134       |      |         |      |
|  | - 1           | 1.90  |        |            |           |      |         |      |
| Very stiff very high strength brown mottled grey and bluish grey friable CLAY.   |               | 1.50  |        |            |           |      |         |      |
| DEVENSIAN TILL   |               |       |        |            |           |      |         |      |
|  | <u> </u>      | 1     |        |            |           |      |         |      |
|  | -[            | 1     |        |            |           |      |         |      |
|  | <del>-</del>  | -     |        | HVP 2.20   | 160       |      |         |      |
|  |               | 1     |        |            |           |      |         |      |
|  | +             |       |        |            |           |      |         |      |
|  | +===          | 1     |        |            |           |      |         |      |
|  |               | 1     |        |            |           |      |         |      |
|  | +====         | -     |        |            |           |      |         |      |
|  |               | 1     |        |            |           |      |         |      |
|  |               | 2.70  |        |            |           |      |         |      |
| Stiff high strength brown slightly silty CLAY with occasional gravels of medium  | +====         | 2.70  |        |            |           |      |         |      |
| mudstone.  | <del>-</del>  | 1     |        |            |           |      |         |      |
| DEVENSIAN TILL   |               |       |        | HVP 2.90   | 140       |      |         |      |
|  |               | 1     |        | HVF 2.50   | 140       |      |         |      |
|  |               | 1     |        |            |           |      |         |      |
|  | . 1           | 3.10  |        |            |           | 3.10 |         | В    |
| TRIAL PIT TERMINATED AT 3.10m  | _             | 3.10  |        |            |           | 3.10 |         |      |
|  | -             |       |        |            |           |      |         |      |
|  | j             |       |        |            |           |      |         |      |
|  | 4             |       |        |            |           |      |         |      |
|  | -             |       |        |            |           |      |         |      |
|  |               |       |        |            |           |      |         |      |
|  | 4             |       |        |            |           |      |         |      |
|  | 4             |       |        |            |           |      |         |      |
|  | -             |       |        |            |           |      |         |      |
|  | ]             |       |        |            |           |      |         |      |
|  | 4             |       |        |            |           |      |         |      |

Notes: Trial pit sides remained upright and stable upon completion.

| Ground level (mAOD)   | Co-ordinates                        | <b>Title</b><br>Trial pit record                       | <b>Surface breaking</b><br>No |
|---|-------------------------------------|--|-------------------------------|
| Groundwater observations Slight seepage in sand between 0.5m and 0.7m | Dimensions (W x L)<br>0.60m x 2.50m | Date of excavation (range if applicable)<br>18/02/2016 | <b>Appendix</b><br>C          |
| depth.  | Method of excavation  JCB 3CX       | <b>Location plan on drawing number</b><br>02b          | TP121                         |

|  |        | DEDTU | WATER  | TEST                | RESULTS    |             | SAMPLIN | lG   |
|--|--------|-------|--------|---------------------|------------|-------------|---------|------|
| DESCRIPTION  | LEGEND | (m)   | STRIKE | TYPE/               | RESULT     | FROM        | TO (m)  | TYPE |
| Grass onto high strength dark brown very sandy organic CLAY with occasional gravels of medium sandstone and quartzite and frequent rootlets.  TOPSOIL          | -      |       |        | DEPTH (m)           |            | (m)<br>0.10 |         | D    |
| Firm high strength brown mottled grey slightly silty slightly gravelly sandy CLAY. Gravel consists of medium to coarse sandstone and quartzite. DEVENSIAN TILL |        | 0.25  |        |                     |            |             |         |      |
|  |        |       |        | HVP 0.50<br>PP 0.50 | 75<br>100  | 0.50        |         | D    |
| Stiff high strength brown mottled bluish grey slightly sandy slightly gravelly CLAY. Gravel consists of sandstone and quartzite.                               |        | 0.80  |        | HVP 0.90            | 114        | 0.90        |         | D    |
| DEVENSIAN TILL   |        |       |        | PP 0.90             | 130        |             |         |      |
| Very stiff very high strength brown mottled bluish grey slightly gravelly sandy CLAY. Gravel consists of sandstone and quartzite.  DEVENSIAN TILL              |        | 1.40  |        | HVP 1.50<br>PP 1.50 | 186<br>193 |             |         |      |
|  |        |       |        |                     |            | 1.80        |         | D    |
| from 2.1m depth, becoming slightly silty.  |        |       |        | HVP 2.20            | 170        |             |         |      |
|  |        |       |        |                     |            |             |         |      |
| TRIAL PIT TERMINATED AT 3.10m  |        | 3.10  |        | HVP 3.10            | 179        |             |         |      |
|  |        |       |        |                     |            |             |         |      |
|  | _      |       |        |                     |            |             |         |      |

Notes: Trial pit sides remained upright and stable upon completion.

| Ground level (mAOD)   | Co-ordinates                        | <b>Title</b> Trial pit record                          | <b>Surface breaking</b><br>No |
|---|-------------------------------------|--|-------------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | Dimensions (W x L)<br>0.60m x 2.50m | Date of excavation (range if applicable)<br>18/02/2016 | <b>Appendix</b><br>C          |
|   | Method of excavation JCB 3CX        | <b>Location plan on drawing number</b><br>02b          | TP122                         |

|   |              | DEPTH | WATER  |                    | RESULTS |             | SAMPLIN | IG   |
|---|--------------|-------|--------|--------------------|---------|-------------|---------|------|
| DESCRIPTION   | LEGEND       | (m)   | STRIKE | TYPE/<br>DEPTH (m) | RESULT  | FROM<br>(m) | TO (m)  | TYPE |
| Grass onto soft dark brown sandy organic CLAY with frequent rootlets.   | -}           |       |        |                    |         |             |         |      |
| TOPSOIL   |              |       |        |                    |         | 0.10        |         | D    |
| Firm medium strength orangish brown slightly silty slightly sandy CLAY with   |              | 0.25  |        |                    |         |             |         |      |
| occasional gravels of fine to medium sandstone.   | 1            | -     |        |                    |         |             |         |      |
| DEVENSIAN TILL  | <del>+</del> | -     |        |                    |         |             |         |      |
|   | <u> </u>     | -     |        | HVP 0.50           | 71      | 0.50        |         | D    |
|   |              |       |        |                    |         |             |         |      |
|   | <u> </u>     |       |        |                    |         |             |         |      |
|   | 1            |       |        |                    |         |             |         |      |
|   | <u> </u>     | -     |        |                    |         |             |         |      |
|   |              |       |        | HVP 1.00           | 61      |             |         |      |
| Firm to stiff medium strength orangish brown mottled grey slightly silty CLAY   | - ====       | 1.10  |        |                    |         |             |         |      |
| with occasional gravels of medium sandstone and quartzite.  | <del></del>  |       |        |                    |         | 1.20        |         | D    |
| DEVENSIAN TILL  | <del></del>  |       |        |                    |         |             |         |      |
|   | <del>+</del> |       |        | HVP 1.40           | 56      |             |         |      |
|   | +===         | 1     |        |                    |         |             |         |      |
|   | ===          |       |        |                    |         |             |         |      |
|   |              | 1     |        | HVP 1.70           | 52      |             |         |      |
|   |              |       |        |                    |         |             |         |      |
|   | . ===        | 1.90  |        |                    |         |             |         |      |
| Stiff very high strength reddish brown mottled bluish grey slightly sandy CLAY with occasional gravels of sandstone and medium quartzite. |              | 1.50  |        |                    |         |             |         |      |
| DEVENSIAN TILL  |              | 1     |        | HVP 2.10           | 172     | 2.10        |         | D    |
|   |              | 1     |        | HVP 2.20           | 155     | 2.10        |         | U    |
|   | +===         |       |        | HVF 2.20           | 133     |             |         |      |
|   | +===         |       |        |                    |         |             |         |      |
|   | Ŧ===         | 1     |        |                    |         |             |         |      |
|   | <del></del>  | ]     |        |                    |         |             |         |      |
| from 2.6m depth, becoming stiff and friable.  | <del></del>  |       |        | HVP 2.60           | 179     |             |         |      |
|   | <del></del>  | 1     |        |                    |         |             |         |      |
|   | ===          | 1     |        |                    |         |             |         |      |
|   | ===          | ]     |        |                    |         |             |         |      |
|   | <del></del>  |       |        |                    |         |             |         |      |
| TRIAL PIT TERMINATED AT 3,10m   | - +          | 3.10  |        |                    |         |             |         |      |
|   |              |       |        |                    |         |             |         |      |
|   | _            |       |        |                    |         |             |         |      |
|   | 1            |       |        |                    |         |             |         |      |
|   | _            |       |        |                    |         |             |         |      |
|   | _            |       |        |                    |         |             |         |      |
|   | 3            |       |        |                    |         |             |         |      |
|   | 3            |       |        |                    |         |             |         |      |
|   | 7            |       |        |                    |         |             |         |      |
|   | 1            |       |        |                    |         |             |         |      |
| Nate: Trial nit sides remained unright and stable upon completion   |              |       |        |                    |         | •           |         |      |

Notes: Trial pit sides remained upright and stable upon completion.

| Ground level (mAOD)   | Co-ordinates                            | <b>Title</b><br>Trial pit record                       | <b>Surface breaking</b><br>No |
|---|---|--|-------------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | <b>Dimensions (W x L)</b> 0.60m x 2.50m | Date of excavation (range if applicable)<br>18/02/2016 | <b>Appendix</b><br>C          |
|   | Method of excavation<br>JCB 3CX         | <b>Location plan on drawing number</b><br>02b          | TP123                         |

|   |             | ı    |        |                     | eotechni   | 1           |         |            |
|---|-------------|------|--------|---------------------|------------|-------------|---------|------------|
| DESCRIPTION   | LEGEND      |      | WATER  |                     | RESULTS    |             | SAMPLIN | <b>N</b> G |
| DESCRIPTION   | LEGEND      | (m)  | STRIKE | TYPE/<br>DEPTH (m)  | RESULT     | FROM<br>(m) | TO (m)  | TYPE       |
| Grass onto soft high strength dark brown sandy organic CLAY with frequent   | - 3/10/3/10 |      |        |                     |            | (,,,,       |         |            |
| rootlets.   |             |      |        |                     |            | 0.10        |         | D          |
| TOPSOIL   |             |      |        |                     |            |             |         |            |
|   | ->>>>>>     | 0.70 |        |                     |            |             |         |            |
| Firm medium strength orangish brown mottled grey slightly silty slightly sandy  |             | 0.30 |        |                     |            |             |         |            |
| CLAY with occasional gravels of medium to coarse sandstone and quartzite.   |             |      |        | HVP 0.40            | 88         |             |         |            |
| DEVENSIAN TILL  | 1           |      |        | PP 0.40             | 75         | 0.50        |         | D          |
|   |             |      |        |                     |            |             |         |            |
|   |             |      |        |                     |            |             |         |            |
|   |             | 1    |        |                     |            |             |         |            |
|   |             |      |        | HVP 0.80            | 73         |             |         |            |
|   |             |      |        | PP 0.80             | 70         |             |         |            |
|   |             |      |        |                     |            |             |         |            |
|   | <u> </u>    |      |        |                     |            |             |         |            |
| boulder of grey mudstone at 1.1m depth  |             |      |        | HVP 1.10            | 68         | 1.10        |         | D          |
| , , , , , , , , , , , , , , , , , , ,   | 1           |      |        | PP 1.10             | 50         |             |         |            |
|   |             |      |        |                     |            |             |         |            |
|   | <u> </u>    |      |        |                     |            |             |         |            |
|   | +           |      |        |                     |            |             |         |            |
|   | <del></del> | 1    |        | HVP 1.50            | 100        |             |         |            |
|   |             | 1.00 |        | PP 1.50             | 90         |             |         |            |
| Firm orangish brown mottled grey CLAY with occasional gravels of medium   |             | 1.60 |        |                     |            |             |         |            |
| sandstone and mudstone.   | <u></u>     |      |        |                     |            |             |         |            |
| DEVENSIAN TILL  |             | 1.80 |        |                     |            |             |         |            |
| Stiff high becoming very high strength brown mottled bluish grey slightly sandy friable CLAY with occasional gravels of medium sandstone. |             |      |        |                     |            | 1.90        |         | D          |
| DEVENSIAN TILL  |             |      |        |                     |            | 1.50        |         | Ь          |
| DEATHOUGH HEE   |             |      |        | HVP 2.00            | 135        |             |         |            |
|   |             | 1    |        | PP 2.00             | 155        |             |         |            |
|   |             |      |        |                     |            |             |         |            |
|   |             |      |        |                     |            |             |         |            |
|   | 1           |      |        |                     |            |             |         |            |
| from 2.4m depth, becoming very stiff.   | +===        |      |        | HVP 2.40            | 213        |             |         |            |
|   | <u> </u>    |      |        | PP 2.40             | 225        |             |         |            |
|   |             |      |        |                     |            |             |         |            |
|   |             |      |        |                     |            |             |         |            |
|   | <u></u>     |      |        |                     |            |             |         |            |
|   |             |      |        |                     |            |             |         |            |
|   |             |      |        |                     |            | 2.90        |         | D          |
|   |             |      |        |                     |            |             |         | _          |
| TRIAL PIT TERMINATED AT 3.00m   |             | 3.00 |        | HVP 3.00<br>PP 3.00 | 213<br>225 |             |         |            |
|   | -           |      |        | PP 3.UU             | 225        |             |         |            |
|   | 7           |      |        |                     |            |             |         |            |
|   | _           |      |        |                     |            |             |         |            |
|   | 7           |      |        |                     |            |             |         |            |
|   |             |      |        |                     |            |             |         |            |
|   | 7           |      |        |                     |            |             |         |            |
|   | _           |      |        |                     |            |             |         |            |
|   | 4           |      |        |                     |            |             |         |            |
|   |             |      |        |                     |            |             |         |            |
|   | _           |      |        |                     |            |             | 1       |            |

Notes: Trial pit sides remained upright and stable upon completion.

| Ground level (mAOD)   | Co-ordinates                               | <b>Title</b> Trial pit record                          | <b>Surface breaking</b><br>No |
|---|--|--|-------------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | <b>Dimensions (W x L)</b><br>0.60m x 2.50m | Date of excavation (range if applicable)<br>18/02/2016 | <b>Appendix</b><br>C          |
|   | Method of excavation<br>JCB 3CX            | <b>Location plan on drawing number</b><br>02b          | TP124                         |

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|   |        | DEST |                 | TEST F             | RESULTS |              | SAMPLIN  | lG      |
|---|--------|------|-----------------|--------------------|---------|--------------|----------|---------|
| DESCRIPTION   | LEGEND | (m)  | WATER<br>STRIKE | TYPE/              | RESULT  | FROM         |          | TYPE    |
| Grass onto soft medium strength dark brown slightly gravelly very sandy CLAY. Gravel consists of sandstone, limestone and timber.                       | -      | ()   |                 | DEPTH (m) HVP 0.10 | 67      | (m)<br>0.10  | 10 (111) | D       |
| MADE GROUND   | -      | 0.35 |                 | 1141 0.10          | 0,      | 0.10         |          | J       |
| Soft medium strength reddish brown slightly sandy gravelly CLAY. Gravel consists of fine to coarse brick, sandstone, loose wire and glass.  MADE GROUND |        | 0.55 |                 | HVP 0.50           | 58      | 0.50<br>0.51 |          | D<br>ES |
| Firm high strength brown CLAY with occasional gravels of sandstone and  |        | 1.00 |                 |                    |         |              |          |         |
| occasional rootlets. MADE GROUND  |        |      |                 | HVP 1.10           | 122     | 1.20         |          | D       |
| Stiff high strength orangish brown slightly silty CLAY. DEVENSIAN TILL  |        | 1.40 |                 | HVP 1.50           | 94      |              |          |         |
| from 1.8m depth, becoming very stiff:   |        |      |                 | HVP 1.90           | 141     | 1.70         |          | В       |
|   |        |      |                 | HVF 1.50           | 141     |              |          |         |
| Stiff very high strength reddish brown mottled grey occasionally sandy CLAY with occasional gravels of medium sandstone.  DEVENSIAN TILL                |        | 2.20 |                 | HVP 2.40           | 190     |              |          |         |
|   |        |      |                 |                    |         |              |          |         |
| TRIAL PIT TERMINATED AT 3.10m   |        | 3.10 |                 | HVP 3.10           | 198     | 3.10         |          | В       |
|   | -      |      |                 |                    |         |              |          |         |

Notes: Trial pit sides remained upright and stable upon completion.

| Ground level (mAOD)   | Co-ordinates                            | <b>Title</b><br>Trial pit record                       | <b>Surface breaking</b><br>No |
|---|---|--|-------------------------------|
| <b>Groundwater observations</b> No groundwater encountered. | <b>Dimensions (W x L)</b> 0.60m x 2.50m | Date of excavation (range if applicable)<br>18/02/2016 | <b>Appendix</b><br>C          |
|   | Method of excavation<br>JCB 3CX         | <b>Location plan on drawing number</b><br>02b          | TP125                         |



### **Key to legends**

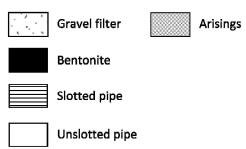
| Composit   | e materials, soils and lithe     | ology                                 |                    |   |                 |
|--|----------------------------------|---------------------------------------|--------------------|---|-----------------|
|  | Topsoil                          |                                       | Made Ground        | 0000  | Boulders        |
|  | Chalk                            |                                       | Clay               |   | Coal            |
| 0 0 0 0 0 0  | Cobbles                          | 0000                                  | Cobbles & Boulders |   | Concrete        |
|  | Gravel                           |                                       | Limestone          |   | Mudstone        |
| is able able at<br>able able able<br>is able able at | Peat                             |                                       | Sand               |   | Sand and Gravel |
|  | Sandstone                        | * * * * * * * * * * * * * * * * * * * | Silt               | $\overline{\times} \times \overline{\times} \times \overline{\times}$ | Silt / Clay     |
| Note: Comp   | osite soil types are signified b | y combined                            | symbols.           | X X X X X X X X X X X X X X X X X X X                                 | Siltstone       |

### Key to 'test results' and 'sampling' columns

| Records depth that the test was carried out (i.e.: at 2.10m or between  | From (m)  |  |   |
|---|---|--|---|
|   |   | Records  | depth of sampling   |
| DID. Dhata lanisation Datastan assult   |   | D  | Disturbed sample  |
| (ppm equivalent Isobutylene)  |   | В  | Bulk disturbed sample   |
| PP – Pocket penetrometer result<br>(kN/m²)<br>HVP – Hand held shear vane result<br>(kN/m²)  |   | ES   | Environmental sample comprising plastic and/or glass container  |
| undrained shear strength by applying a factor of 50. Where at least 3 results obtained at same depth then an average value may be reported. | Туре  | W  | Water sample  |
| SPT – Standard Penetration Test result<br>(uncorrected)<br>SPT(c) – Standard Penetration Test<br>result (solid cone) (uncorrected)          |   | U (32)   | Undisturbed sample 100mr<br>diameter sampler with<br>number of blows of driving<br>equipment required to<br>obtain sample   |
|   | PP – Pocket penetrometer result (kN/m²) HVP – Hand held shear vane result (kN/m²) PP result converted to an equivalent undrained shear strength by applying a factor of 50. Where at least 3 results obtained at same depth then an average value may be reported.  SPT – Standard Penetration Test result (uncorrected) SPT(c) – Standard Penetration Test | (ppm equivalent Isobutylene) PP – Pocket penetrometer result (kN/m²) HVP – Hand held shear vane result (kN/m²) PP result converted to an equivalent undrained shear strength by applying a factor of 50. Where at least 3 results obtained at same depth then an average value may be reported.  SPT – Standard Penetration Test result (uncorrected) SPT(c) – Standard Penetration Test | PID - Photo Ionisation Detector result (ppm equivalent Isobutylene) PP - Pocket penetrometer result (kN/m²) HVP - Hand held shear vane result (kN/m²) PP result converted to an equivalent undrained shear strength by applying a factor of 50. Where at least 3 results obtained at same depth then an average value may be reported.  SPT - Standard Penetration Test result (uncorrected) SPT(c) - Standard Penetration Test |

Described at foot of log and shown in the 'water strike'

| column.  |  |
|----------|--|
| •        | = water level observed after specified delay in drilling |
| $\nabla$ | = water strike   |
|          |  |



### **Density**

Density recorded in brackets inferred from density testing and soil descriptions from across the site (i.e.: [Medium dense]).

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|    |  |        | DEPTH | WATER  | TEST F              | RESULTS    |             | SAMPLIN | NG.  |
|----|--|--------|-------|--------|---------------------|------------|-------------|---------|------|
| LL | DESCRIPTION  | LEGEND | (m)   | STRIKE | TYPE/<br>DEPTH (m)  | RESULT     | FROM<br>(m) | TO (m)  | TYPE |
|    | Grass onto soft dark brown organic CLAY with frequent rootlets and occasional sub-angular gravels of medium sandstone. TOPSOIL |        |       |        |                     |            | 0.10        |         | D    |
| ŀ  | Firm high strength brown slightly silty slightly sandy CLAY with occasional gravels of medium sandstone.                       |        | 0.30  |        |                     |            |             |         |      |
|    | DEVENSIAN TILL   |        |       |        | PP 0.50             | 80         | 0.50        |         | D    |
|    |  |        |       |        | DD 0 00             | 75         |             |         |      |
|    |  |        |       |        | PP 0.90             | 75         |             |         |      |
| -  | Stiff very high becoming high strength brown slightly gravelly CLAY.   |        | 1.30  |        |                     |            |             |         |      |
|    | Gravel consists of medium to coarse sandstone and mudstone. DEVENSIAN TILL   |        |       |        | HVP 1.40<br>PP 1.40 | 140<br>165 | 1.50        |         | D    |
|    | from 1.6m depth, becoming very stiff.  |        |       |        | HVP 1.80            | 213        |             |         |      |
|    |  |        |       |        | PP 1.80             | 220        |             |         |      |
|    |  |        |       |        | HVP 2.35<br>PP 2.35 | 94<br>113  |             |         |      |
|    |  |        |       |        | PP 2.70             | 120        | 2.70        |         | D    |
|    |  |        |       |        | 11 2.70             | 120        | 2.70        |         | J    |
|    | Firm medium strength light reddish brown CLAY with occasional gravels of medium mudstone.  DEVENSIAN TILL                      |        | 3.00  |        | PP 3.10             | 73         |             |         |      |
|    |  |        |       |        | PP 3.50             | 75         |             |         |      |
|    |  |        |       |        | HVP 3.70            | 64         |             |         |      |
|    |  |        |       |        | PP 3.90             | 63         | 3.80        |         | D    |
|    | BOREHOLE TERMINATED AT 4.00m   | -      | 4.00  |        |                     |            |             |         |      |
|    |  |        |       |        |                     |            |             |         |      |
|    |  | =      |       |        |                     |            |             |         |      |

Notes: For Dynamic Cone Penetration testing, refer to DCP101.

Ground level (mAOD) **Co-ordinates** Title **Surface breaking** 

**Groundwater observations** Date of excavation (range if applicable)

16/02/2016 No groundwater encountered.

Location plan on drawing number 02b

Driven tube sampler borehole record

**DTS101** 

No

D

**Appendix** 

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|     |   |              | DEDT | WATER   | TEST F    | RESULTS |      | SAMPLIN | NG.  |
|-----|---|--------------|------|---------|-----------|---------|------|---------|------|
| ᄔ   | DESCRIPTION   | LEGEND       | (m)  | STRIKE  | TYPE/     | RESULT  | FROM | TO (m)  | TYPE |
| +   | Grass onto soft dark brown sandy organic CLAY with frequent rootlets. | _\(\/.\\/.\  |      |         | DEPTH (m) |         | (m)  | ()      |      |
|     | TOPSOIL   |              |      |         |           |         |      |         |      |
|     |   | - 333333     | 0.25 |         |           |         | 0.20 |         | D    |
|     | Firm medium strength orangish brown slightly sandy silty CLAY         |              | 0.23 |         |           |         |      |         |      |
|     | DEVENSIAN TILL  | <u> </u>     |      |         |           |         | 0.40 |         | D    |
| h   | from 0.5m depth, becoming soft.                                       |              | 1    |         |           |         |      |         |      |
| ď   |   |              | ]    |         | HVP 0.60  | 77      |      |         |      |
|     |   |              |      |         |           |         |      |         |      |
| ŀ   | Firm brown slightly sandy slightly gravelly CLAY. Gravel consists of  |              | 0.80 |         |           |         |      |         |      |
|     | medium to coarse sandstone and mudstone.                              |              | -    |         |           |         | 0.90 |         | D    |
|     | DEVENSIAN TILL  |              | 1    |         |           |         |      |         |      |
|     |   |              |      |         |           |         |      |         |      |
|     |   |              | -    |         |           |         |      |         |      |
| f   | Stiff high strength brown CLAY.                                       |              | 1.30 |         | PP 1.35   | 137     |      |         |      |
|     | DEVENSIAN TILL  | #===         | 1    |         |           |         | 1.40 |         | D    |
|     |   |              | 1    |         | HVP 1.50  | 128     | 1    |         |      |
|     |   |              | 1    |         |           |         |      |         |      |
|     |   |              |      |         | PP 1.70   | 113     |      |         |      |
|     |   |              | -    |         |           |         |      |         |      |
|     |   |              | 1    |         |           |         |      |         |      |
|     |   | $\pm =$      |      |         |           |         |      |         |      |
|     |   |              |      | PP 2.10 | 123       | 123     |      |         |      |
|     |   | ]            |      |         |           |         |      |         |      |
|     |   |              |      |         |           |         |      |         |      |
|     |   |              |      |         |           |         |      |         |      |
|     |   | 7-           | 2.60 | PP 2.50 | 97        |         |      |         |      |
| ŀ   | Soft to firm medium strength reddish brown slightly silty CLAY.       |              | 2.60 |         |           |         |      |         |      |
|     | DEVENSIAN TILL  | <del>-</del> |      |         |           |         |      |         |      |
|     |   |              |      |         | HVP 2.80  | 65      |      |         |      |
|     |   | 1            |      |         | PP 2.80   | 48      |      |         |      |
|     |   | +            | -    |         |           |         |      |         |      |
|     |   |              | 1    |         |           |         |      |         |      |
|     |   |              |      |         | PP 3.20   | 62      |      |         |      |
|     |   | <del></del>  | 1    |         |           |         |      |         |      |
|     |   |              | ]    |         |           |         | 1    |         |      |
|     |   |              | 1    |         |           |         | 3.50 |         | D    |
|     |   |              | 1    |         | PP 3.60   | 52      | 1    |         |      |
|     |   |              |      |         |           |         |      |         |      |
|     |   |              |      |         |           |         |      |         |      |
|     |   |              | 1    |         |           |         |      |         |      |
| ŀ   | BOREHOLE TERMINATED AT 4.00m  |              | 4.00 |         | PP 4.00   | 38      |      |         |      |
|     |   | -            |      |         |           |         |      |         |      |
|     |   | -            |      |         |           |         |      |         |      |
|     |   | -            |      |         |           |         |      |         |      |
|     |   | =            |      |         |           |         |      |         |      |
|     |   | -            |      |         |           |         |      |         |      |
|     |   | =            |      |         |           |         |      |         |      |
|     |   | =            |      |         |           |         |      |         |      |
|     |   | -            |      |         |           |         |      |         |      |
|     |   | -            |      |         |           |         |      |         |      |
| - 1 |   |              | 1    | 1       |           |         | 1    |         |      |

**Notes:** For Dynamic Cone Penetration testing, refer to DCP102.

Ground level (mAOD) Co-ordinates Title Surface breaking

Driven tube sampler borehole record

Groundwater observations

No groundwater encountered.

Date of excavation (range if applicable)
16/02/2016

Location plan on drawing number 02b

**DTS102** 

No

D

**Appendix** 

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|    |  |         | DEPTH | WATER  |                     | RESULTS  |             | SAMPLIN | NG   |
|----|--|---------|-------|--------|---------------------|----------|-------------|---------|------|
| LL | DESCRIPTION  | LEGEND  | (m)   | STRIKE | TYPE/<br>DEPTH (m)  | RESULT   | FROM<br>(m) | TO (m)  | TYPE |
|    | Grass onto soft dark brown slightly sandy slightly gravelly organic CLAY | -       |       |        |                     |          | 0.10        |         | D    |
|    | with frequent rootlets. Gravel consists of medium mudstone. TOPSOIL      | -3///// |       |        |                     |          | 0.10        |         |      |
| ŀ  | Firm medium and high strength brown slightly gravelly CLAY. Gravel       | _ =     | 0.30  |        |                     |          |             |         |      |
| h  | consists of medium sandstone and mudstone.                               | ===     |       |        | PP 0.40             | 85       |             |         |      |
|    | DEVENSIAN TILL   |         |       |        |                     |          |             |         |      |
| ١  | cobble of sandstone at 0.4m depth.                                       | ===     |       |        | HVP 0.60            | 63       | 0.70        |         | D    |
|    |  |         |       |        | PP 0.80             | 55       | 0.70        |         | U    |
|    |  | ====    |       |        | 0.00                |          |             |         |      |
|    |  |         |       |        |                     |          |             |         |      |
| ŀ  | Firm medium strength orangish brown silty CLAY.                          | - +==   | 1.10  |        |                     |          |             |         |      |
|    | DEVENSIAN TILL   |         |       |        | PP 1.20             | 72       |             |         |      |
|    |  |         |       |        | HVP 1.40            | 94       |             |         |      |
|    |  |         |       |        | 1101 2110           | 5.       | 1.50        |         | D    |
|    |  | ====    |       |        | PP 1.60             | 68       |             |         |      |
|    |  |         |       |        |                     |          |             |         |      |
|    |  | ====    |       |        |                     |          |             |         |      |
| Ļ  |  |         |       |        |                     |          |             |         |      |
| ا  | from 2m depth, becoming dark brown mottled bluish grey in colour.        |         |       |        | PP 2.10             | 63       |             |         |      |
|    |  | ====    |       |        |                     |          |             |         |      |
|    |  |         |       |        |                     |          |             |         |      |
|    |  | ====    |       |        | 100000              |          |             |         |      |
| L  |  |         | 2.60  |        | HVP 2.50<br>PP 2.50 | 56<br>48 |             |         |      |
|    | Stiff high strength reddish brown slightly silty CLAY. DEVENSIAN TILL    | ===     |       |        |                     |          |             |         |      |
|    | DEACHSTON LIFE   |         |       |        | PP 2.80             | 112      |             |         |      |
|    |  |         | -     |        | HVP 2.90            | 122      |             |         |      |
|    |  | ===     | 1     |        |                     |          | 3.00        |         | D    |
|    |  |         |       |        | PP 3.20             | 185      |             |         |      |
|    |  |         |       |        | HVP 3.30            | 119      |             |         |      |
|    |  |         |       |        |                     |          |             |         |      |
|    |  |         | 1     |        |                     |          |             |         |      |
|    |  | <u></u> | 1     |        | PP 3.60             | 158      |             |         |      |
|    |  |         |       |        |                     |          |             |         |      |
|    |  |         |       |        | PP 3.90             | 115      |             |         |      |
| ŀ  | BOREHOLE TERMINATED AT 4.00m   |         | 4.00  |        |                     |          |             |         |      |
|    |  | =       |       |        |                     |          |             |         |      |
|    |  | 3       |       |        |                     |          |             |         |      |
|    |  | =       |       |        |                     |          |             |         |      |
|    |  |         |       |        |                     |          |             |         |      |
|    |  | 3       |       |        |                     |          |             |         |      |
|    |  | =       |       |        |                     |          | 1           |         |      |
|    |  | 3       |       |        |                     |          |             |         |      |
|    |  | 7       |       |        |                     |          |             |         |      |

Notes:

Ground level (mAOD) Co-ordinates

**Groundwater observations** 

No groundwater encountered.

Title

Driven tube sampler borehole record

**Surface breaking** No

,

**Date of excavation (range if applicable)**Applicable D

Appendix D

**Location plan on drawing number** 02b

**DTS103** 

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|      |   |          | ревти | WATER  | TEST                | RESULTS    |             | SAMPLIN | lG   |
|------|---|----------|-------|--------|---------------------|------------|-------------|---------|------|
| WELL | DESCRIPTION   | LEGEND   | (m)   | STRIKE | TYPE/<br>DEPTH (m)  | RESULT     | FROM<br>(m) | TO (m)  | TYPE |
|      | Grass onto soft dark brown sandy organic CLAY with occasional gravels of fine sandstone and frequent rootlets.          | =        |       |        | DEI III (III)       |            | 0.20        |         | D    |
|      | TOPSOIL  Firm medium becoming high strength orangish brown silty CLAY.  |          | 0.30  |        | PP 0.40             | 45         | 0.20        |         | D    |
|      | DEVENSIAN TILL  |          |       |        | 11 0.40             | 43         |             |         |      |
|      |   |          |       |        | HVP 0.80<br>PP 0.80 | 87<br>92   | 0.70        |         | D    |
|      |   |          | 1.10  |        | FF 0.60             | 32         |             |         |      |
|      | Stiff high strength brown mottled bluish grey occasionally sandy friable CLAY. DEVENSIAN TILL                           |          |       |        | PP 1.20             | 75         |             |         |      |
|      |   |          |       |        | HVP 1.50            | 213        | 1.40        |         | D    |
|      |   |          | 1.80  |        | PP 1.60             | 137        |             |         |      |
|      | Very stiff very high strength becoming medium strength at 4.0m depth reddish brown slightly silty CLAY.  DEVENSIAN TILL |          |       |        | PP 2.00             | 200        |             |         |      |
|      |   |          |       |        |                     |            |             |         |      |
|      |   |          |       |        | PP 2.40             | 197        |             |         |      |
|      |   |          |       |        |                     |            |             |         |      |
|      |   |          |       |        | PP 2.80<br>HVP 2.90 | 192<br>106 | 3.00        |         | D    |
|      |   |          |       |        | PP 3.20             | 188        | 3.00        |         | D    |
|      |   |          |       |        |                     |            |             |         |      |
|      |   |          |       |        | PP 3.60             | 143        |             |         |      |
|      |   |          |       |        |                     |            |             |         |      |
|      | BOREHOLE TERMINATED AT 4.00m  | =        | 4.00  |        | PP 4.00             | 67         |             |         |      |
|      |   |          |       |        |                     |            |             |         |      |
|      |   | <u>-</u> |       |        |                     |            |             |         |      |
|      |   |          |       |        |                     |            |             |         |      |
|      |   | -        |       |        |                     |            |             |         |      |

Notes:

**Co-ordinates** Ground level (mAOD)

Title

**Surface breaking** Driven tube sampler borehole record No

**Appendix** 

**Groundwater observations** 

No groundwater encountered.

Date of excavation (range if applicable) 16/02/2016

D

Location plan on drawing number 02b

**DTS104** 

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|     |  |               | DEDTH | WATER  | TEST               | RESULTS |      | SAMPLIN | NG   |
|-----|--|---------------|-------|--------|--------------------|---------|------|---------|------|
| ELL | DESCRIPTION  | LEGEND        | (m)   | STRIKE | TYPE/<br>DEPTH (m) | RESULT  | FROM | TO (m)  | TYPE |
| 1   | Grass onto soft dark brown slightly sandy organic CLAY with frequent             | - 3///3//     |       |        | DEPTH (III)        |         | (m)  |         |      |
|     | rootlets.  |               |       |        |                    |         | 0.15 |         | D    |
| ŀ   | TOPSOIL  |               | 0.25  |        |                    |         |      |         |      |
|     | Firm medium and high strength orangish brown slightly silty slightly sandy CLAY. | +             |       |        | PP 0.30            | 83      |      |         |      |
|     | DEVENSIAN TILL   |               | -     |        |                    |         |      |         |      |
|     |  | <del></del>   | 1     |        |                    |         |      |         |      |
|     |  | =             |       |        | DD 0 70            | 62      | 0.70 |         | _    |
|     |  |               | 1     |        | PP 0.70            | 63      | 0.70 |         | D    |
|     |  | <u> </u>      | -     |        |                    |         |      |         |      |
|     |  | _====         | 1     |        |                    |         |      |         |      |
|     |  |               | 1     |        | PP 1.10            | 77      |      |         |      |
|     |  |               | 1.20  |        | 11 1.10            |         |      |         |      |
|     | Stiff very high becoming high strength brown mottled bluish grey slightly        |               | 1.20  |        |                    |         |      |         |      |
|     | sandy CLAY.<br>DEVENSIAN TILL  | <u> </u>      |       |        | PP 1.40            | 192     | 1.40 |         | D    |
|     | DEVENSIAN TILL   |               |       |        |                    |         |      |         | _    |
|     |  |               | -     |        |                    |         |      |         |      |
|     |  | ===           | 1     |        |                    |         |      |         |      |
|     |  | =             | 1     |        | PP 1.80            | 220     |      |         |      |
|     |  |               | 1     |        |                    |         |      |         |      |
|     |  | <del></del>   | -     |        |                    |         |      |         |      |
|     |  | ===           | 1     |        |                    |         |      |         |      |
|     |  |               |       |        | PP 2.20            | 177     |      |         |      |
|     |  | <del>-</del>  | -     |        |                    |         |      |         |      |
|     |  |               | -     |        |                    |         |      |         |      |
|     |  | ===           | 1     |        |                    |         |      |         |      |
|     |  |               |       |        | PP 2.60            | 157     |      |         |      |
|     |  |               | 1     |        |                    |         |      |         |      |
|     |  |               |       |        |                    |         |      |         |      |
|     |  |               |       |        |                    |         |      |         |      |
|     |  |               | 1     |        | PP 3.00            | 93      | 3.00 |         | D    |
|     |  | +             | -     |        |                    |         |      |         |      |
| f   | Stiff high strength reddish brown slightly silty CLAY with occasional            |               | 3.20  |        |                    |         |      |         |      |
|     | gravels of coarse sandstone.   | <del>+-</del> | 1     |        | DD                 | 45-     |      |         |      |
|     | DEVENSIAN TILL   |               | 1     |        | PP 3.40            | 107     |      |         |      |
|     |  | <del></del>   | 1     |        |                    |         |      |         |      |
|     |  | <b>F</b> ==   | }     |        |                    |         |      |         |      |
|     |  | 1             | 1     |        | PP 3.80            | 77      |      |         |      |
|     |  |               | 1     |        | II DAU             | ''      |      |         |      |
| ļ   |  |               | 4.00  |        |                    |         |      |         |      |
|     | BOREHOLE TERMINATED AT 4.00m   | =             | 1.00  |        |                    |         |      |         |      |
|     |  | =             |       |        |                    |         |      |         |      |
|     |  | 7             |       |        |                    |         |      |         |      |
|     |  | 7             |       |        |                    |         |      |         |      |
|     |  | 7             |       |        |                    |         |      |         |      |
|     |  | 3             |       |        |                    |         |      |         |      |
|     |  | 3             |       |        |                    |         |      |         |      |
|     |  | 3             |       |        |                    |         |      |         |      |
|     |  | 3             |       |        |                    |         |      |         |      |
|     |  |               |       |        |                    |         |      |         |      |

Notes:

Ground level (mAOD) Co-ordinates

Title

Driven tube sampler borehole record

**Surface breaking** No

**Groundwater observations** 

No groundwater encountered.

Date of excavation (range if applicable) 16/02/2016

Appendix D

Location plan on drawing number

02b

**DTS105** 

| environmental | and c | entechnical  | concultante |
|---------------|-------|--------------|-------------|
| environnentai | anu ç | eoteciiiicai | Consultants |

|      |   |              | рерти | WATER  |                     | RESULTS   |             | SAMPLIN | IG   |
|------|---|--------------|-------|--------|---------------------|-----------|-------------|---------|------|
| VELL | DESCRIPTION   | LEGEND       | (m)   | STRIKE | TYPE/<br>DEPTH (m)  | RESULT    | FROM<br>(m) | TO (m)  | TYPE |
|      | Grass onto soft dark brown slightly sandy organic CLAY with frequent                    | - 30000      |       |        |                     |           | 0.10        |         | D    |
|      | rootlets.<br>TOPSOIL  | - 333        |       |        |                     |           |             |         |      |
| }    | Firm to stiff medium and high strength orangish brown mottled dark                      | - =          | 0.30  |        |                     |           |             |         |      |
|      | brown slightly silty CLAY.  | 1            |       |        | PP 0.40             | 80        |             |         |      |
|      | DEVENSIAN TILL  |              | -     |        |                     |           |             |         |      |
|      |   |              | -     |        | HVP 0.60            | 101       |             |         |      |
|      |   |              | 1     |        |                     |           |             |         | _    |
|      |   |              | 1     |        | HVP 0.80<br>PP 0.80 | 213<br>60 | 0.80        |         | D    |
|      |   | ]=-:-        | 1     |        | 11 0.00             |           |             |         |      |
|      |   |              |       |        |                     |           |             |         |      |
|      |   | ====         | -     |        | PP 1.20             | 70        |             |         |      |
|      |   |              | -     |        |                     |           |             |         |      |
| -    | Caiff bigh attractable business as attled blivish again CLAV                            | - ===        | 1.40  |        |                     |           |             |         |      |
|      | Stiff very high strength brown mottled bluish grey CLAY. DEVENSIAN TILL                 | ====         |       |        |                     |           |             |         |      |
|      |   | <u></u>      |       |        | PP 1.60             | 180       |             |         |      |
|      |   |              |       |        |                     |           |             |         |      |
| ŀ    | from 1.8m depth, becoming very stiff.   |              | ł     |        |                     |           | 1.80        |         | D    |
|      |   |              | -     |        |                     |           |             |         |      |
|      |   | <del></del>  | 1     |        | PP 2.00             | 217       |             |         |      |
|      |   | <del></del>  | 1     |        |                     |           |             |         |      |
|      |   |              |       |        |                     |           |             |         |      |
|      | from 2.3m depth, becoming slightly gravelly with medium to coarse gravels of sandstone. |              | 1     |        | PP 2.40             | 200       |             |         |      |
|      |   | 1            | 1     |        | 11 2.40             | 200       |             |         |      |
|      |   |              | -     |        |                     |           |             |         |      |
|      |   | ===          | 1     |        |                     |           |             |         |      |
|      |   |              |       |        | PP 2.80             | 170       |             |         |      |
|      |   |              |       |        |                     |           |             |         |      |
| ŀ    | Stiff high and very high strength reddish brown slightly silty CLAY.                    |              | 3.00  |        |                     |           |             |         |      |
|      | DEVENSIAN TILL  |              | -     |        |                     |           |             |         |      |
|      |   |              | -     |        | PP 3.20             | 138       | 3.20        |         | D    |
|      |   | <u> </u>     | 1     |        |                     |           |             |         |      |
|      |   |              | 1     |        | HVP 3.50            | 149       |             |         |      |
|      |   |              | 1     |        | PP 3.60             | 170       |             |         |      |
|      |   |              |       |        |                     |           |             |         |      |
|      |   |              |       |        |                     |           |             |         |      |
|      |   | <del>-</del> | 1     |        |                     |           |             |         |      |
| ŀ    | BOREHOLE TERMINATED AT 4.00m  |              | 4.00  |        | PP 4.00             | 123       |             |         |      |
|      |   | =            |       |        |                     |           |             |         |      |
|      |   | 7            |       |        |                     |           |             |         |      |
|      |   | 3            |       |        |                     |           |             |         |      |
|      |   | 3            |       |        |                     |           |             |         |      |
|      |   | 4            |       |        |                     |           |             |         |      |
|      |   | =            |       |        |                     |           |             |         |      |
|      |   | 7            |       |        |                     |           |             |         |      |
|      |   | 7            |       |        |                     |           |             |         |      |
|      |   |              |       |        |                     |           |             |         |      |

Notes: For Dynamic Cone Penetration testing, refer to DCP103.

**Co-ordinates** Title Ground level (mAOD) **Surface breaking** Driven tube sampler borehole record No

**Groundwater observations** Date of excavation (range if applicable)

16/02/2016 No groundwater encountered.

Location plan on drawing number **DTS106** 

**Appendix** D

Report ref: STN3505NM-G02 Revision: 0

02b

environmental and geotechnical consultants

|      |   |             | DEDT | WATER  | TEST F    | RESULTS |      | SAMPLIN  | lG   |
|------|---|-------------|------|--------|-----------|---------|------|----------|------|
| VELL | DESCRIPTION   | LEGEND      | (m)  | STRIKE | TYPE/     | RESULT  | FROM | TO (m)   | TYPE |
|      | Grass onto soft dark brown sandy organic CLAY with frequent rootlets. | X//XXV/X    |      |        | DEPTH (m) | 112021  | (m)  | 10 (111) |      |
|      | TOPSOIL   | 3000        |      |        |           |         |      |          |      |
|      |   |             | 0.25 |        |           |         | 0.20 |          | D    |
|      | Soft medium strength orangish brown silty CLAY.                       |             | 0.23 |        | PP 0.30   | 42      |      |          |      |
|      | DEVENSIAN TILL  |             |      |        |           |         |      |          |      |
|      |   |             | 1    |        |           |         |      |          |      |
|      |   |             | 1    |        |           |         |      |          |      |
|      |   |             | 1    |        | PP 0.70   | 42      | 0.70 |          | D    |
| - 1  | from 0.8m depth, becoming firm.                                       |             | -    |        |           |         |      |          |      |
|      |   |             | -    |        |           |         |      |          |      |
|      |   |             | 1    |        | PP 1.00   | 85      |      |          |      |
|      |   |             |      |        |           |         |      |          |      |
|      |   |             | -    |        | PP 1.20   | 47      |      |          |      |
|      |   |             | 1    |        |           |         |      |          |      |
| ŀ    | Stiff very high strength brown friable CLAY.                          |             | 1.40 |        |           |         |      |          |      |
|      | DEVENSIAN TILL  |             | 1    |        |           |         |      |          |      |
|      |   |             | 1    |        |           |         |      |          |      |
|      |   |             |      |        |           |         | 1.70 |          | D    |
|      |   |             | 1    |        |           |         |      |          |      |
|      |   |             | 1    |        |           |         |      |          |      |
|      |   | <del></del> |      |        | PP 2.00   | 198     |      |          |      |
|      |   |             | 1    |        |           |         |      |          |      |
|      |   |             | -    |        |           |         |      |          |      |
|      |   | <u> </u>    | 1    |        |           |         |      |          |      |
|      |   |             | 1    |        | PP 2.40   | 212     |      |          |      |
|      |   |             | -    |        |           |         | 2.50 |          | D    |
|      |   |             | 1    |        |           |         |      |          |      |
|      |   |             |      |        |           |         |      |          |      |
|      |   |             | 1    |        | PP 2.80   | 192     |      |          |      |
|      |   |             |      |        |           |         |      |          |      |
| ı    | from 3m depth, becoming stiff.  |             | 1    |        |           |         |      |          |      |
|      |   |             | 1    |        |           |         |      |          |      |
|      |   |             | -    |        | PP 3.20   | 175     |      |          |      |
|      |   |             | 1    |        |           |         |      |          |      |
|      |   |             | 1    |        |           |         |      |          |      |
|      |   | 7-7-        | -    |        |           | 400     |      |          |      |
|      |   | ====        | 1    |        | PP 3.60   | 100     |      |          |      |
|      |   | ====        | 2.00 |        |           |         |      |          |      |
| İ    | Firm medium strength brown CLAY.                                      |             | 3.80 |        |           |         | 2.00 |          | _    |
|      | DEVENSIAN TILLfrom 3.8m depth, becoming firm.                         |             | 4.00 |        | PP 4.00   | 75      | 3.90 |          | D    |
|      | BOREHOLE TERMINATED AT 4.00m  | 3           | 4.00 |        | PF 4.00   | /3      |      |          |      |
|      |   | 3           |      |        |           |         |      |          |      |
|      |   | 3           |      |        |           |         |      |          |      |
|      |   | 3           |      |        |           |         |      |          |      |
|      |   | 4           |      |        |           |         |      |          |      |
|      |   | _           |      |        |           |         |      |          |      |
|      |   | 3           |      |        |           |         |      |          |      |
|      |   | ]           |      |        |           |         |      |          |      |
|      |   | 3           |      |        |           |         |      |          |      |
|      |   | 7           |      |        |           |         |      |          |      |
|      |   |             |      |        |           |         |      |          |      |

Notes:

No groundwater encountered.

Ground level (mAOD) Co-ordinates Title

Surface breaking

Groundwater observations Date of excavation (range if applicable)

Date of excavation (range if applicable)Appendix16/02/2016D

Location plan on drawing number

02b

Driven tube sampler borehole record

rawing number DTS107

No

environmental and geotechnical consultants

|    |  |                | ПЕРТИ | WATER. | TEST F             | RESULTS |             | SAMPLIN | NG   |
|----|--|----------------|-------|--------|--------------------|---------|-------------|---------|------|
| LL | DESCRIPTION  | LEGEND         | (m)   | STRIKE | TYPE/<br>DEPTH (m) | RESULT  | FROM<br>(m) | TO (m)  | TYPE |
|    | Grass onto soft dark brown sandy organic CLAY with frequent rootlets.                | - 3333         |       |        | DEFIN (III)        |         | 0.10        |         | D    |
|    | TOPSOIL  |                | 0.20  |        |                    |         | 0.10        |         |      |
|    | Firm low becoming medium strength orangish brown slightly silty CLAY. DEVENSIAN TILL |                | 5.25  |        | PP 0.30            | 37      |             |         |      |
|    | DEVENSIAN TILE   | <del></del>    |       |        |                    |         |             |         |      |
|    |  |                |       |        |                    |         |             |         |      |
|    |  |                | ]     |        |                    |         |             |         |      |
|    |  | <u> </u>       |       |        | PP 0.70            | 63      | 0.70        |         | D    |
|    |  | ====           |       |        |                    |         |             |         |      |
|    |  | 1              |       |        | 20.4.00            | 400     |             |         |      |
|    |  |                | 1 10  |        | PP 1.00            | 138     |             |         |      |
| ſ  | Stiff medium and high strength brown mottled grey slightly gravelly                  |                | 1.10  |        |                    |         |             |         |      |
|    | friable CLAY. Gravel consists of medium mudstone. DEVENSIAN TILL                     |                | 1     |        | PP 1.30            | 120     |             |         |      |
|    | DEVENSIAN TILL   | <u> </u>       |       |        | 11 1.50            | 120     |             |         |      |
|    |  |                |       |        |                    |         |             |         |      |
|    |  | +              | }     |        |                    |         |             |         |      |
|    |  |                | ]     |        | PP 1.70            | 72      | 1.70        |         | D    |
|    |  |                | ]     |        |                    |         |             |         |      |
|    |  |                | 1     |        |                    |         |             |         |      |
|    |  | +==            |       |        |                    |         |             |         |      |
|    |  |                | }     |        | PP 2.10            | 107     |             |         |      |
|    |  |                |       |        |                    |         |             |         |      |
|    |  | <del></del>    | 1     |        |                    |         |             |         |      |
|    |  | <u> </u>       |       |        | PP 2.50            | 97      |             |         |      |
|    |  |                | 2.60  |        | PP 2.30            | 31      |             |         |      |
|    | Firm medium strength reddish brown slightly silty CLAY.                              |                | 2.00  |        |                    |         |             |         |      |
|    | DEVENSIAN TILL   |                |       |        | PP 2.80            | 55      |             |         |      |
|    |  | +==            |       |        |                    |         |             |         |      |
|    |  | $\pm$          | }     |        |                    |         | 3.00        |         | D    |
|    |  | ===            | 1     |        |                    |         |             |         |      |
|    |  | <u> </u>       | 1     |        | PP 3.20            | 38      |             |         |      |
|    |  | <del>+</del>   |       |        |                    |         |             |         |      |
|    |  | 1              |       |        |                    |         |             |         |      |
|    |  | 1              | 1     |        | PP 3.60            | 47      |             |         |      |
|    |  |                | -     |        | PP 3.00            | 4/      |             |         |      |
|    |  | ===            | ]     |        |                    |         |             |         |      |
|    |  | <del></del>    |       |        |                    |         |             |         |      |
| -  | BOREHOLE TERMINATED AT 4.00m   | · <del>]</del> | 4.00  |        | PP 4.00            | 58      |             |         |      |
|    |  | 3              |       |        |                    |         |             |         |      |
|    |  | =              |       |        |                    |         |             |         |      |
|    |  | #              |       |        |                    |         |             |         |      |
|    |  | 7              |       |        |                    |         |             |         |      |
|    |  | 3              |       |        |                    |         |             |         |      |
|    |  | 3              |       |        |                    |         |             |         |      |
|    |  | 4              |       |        |                    |         |             |         |      |
|    |  | =              |       |        |                    |         |             |         |      |
|    |  | . 1            | 1     |        |                    |         | 1           | 1 1     |      |

Notes:

Ground level (mAOD) Co-ordinates

Title

Driven tube sampler borehole record

**Surface breaking** No

**Groundwater observations** 

No groundwater encountered.

Date of excavation (range if applicable)

**Appendix** D

16/02/2016

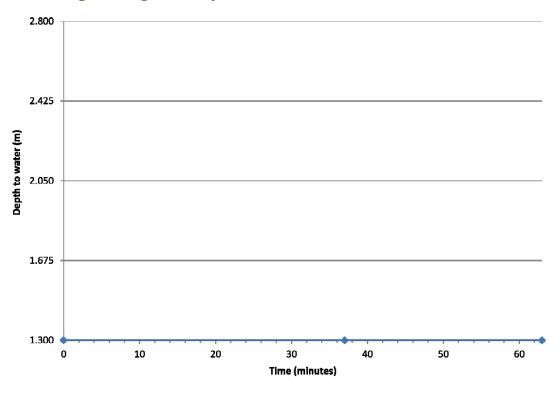
Location plan on drawing number

02b

**DTS108** 



### Plot showing time against depth to water:



### **Test observations:**

| Calculations | Ca | cu | lati | ons |
|--------------|----|----|------|-----|
|--------------|----|----|------|-----|

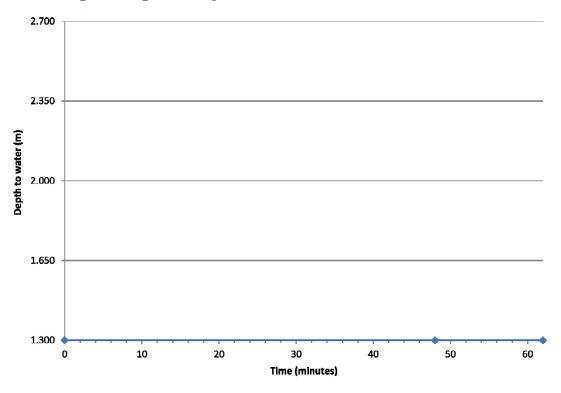
| TIME   | DEPTH TO  | TIME   | DEPTH TO  |
|--------|-----------|--------|-----------|
| (mins) | WATER (m) | (mins) | WATER (m) |
| 0      | 1.3       |        |           |
| 37     | 1.3       |        |           |
| 63     | 1.3       |        |           |
|        |           |        |           |
|        |           |        |           |
|        |           |        |           |
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|        |           |        |           |
|        |           |        |           |
|        |           |        |           |
|        |           |        |           |

No movement in water level over 63 minutes of monitoring therefore unable to calculate soil infiltration rate.

| Groundwater observations                          |                     | Title   |                |                                  |  |
|---|---------------------|---|----------------|----------------------------------|--|
| No groundwater encountered.                       |                     | Soil infiltration test<br>Research Establishm |                | •                                |  |
| Trial pit dimensions (width x length) 0.6m x 2.5m | Ground level<br>N/A | Location plan on dra                          | awing number   |                                  |  |
| Depth of trial pit at start of test (m) 2.8       | Co-ordinates        | Trial pit number<br>TP107                     | Cycle number 1 | Date of excavation<br>17/02/2016 |  |



### Plot showing time against depth to water:



### **Test observations:**

| Ca | lcu | lati | ons |
|----|-----|------|-----|
|----|-----|------|-----|

| TIME   | DEPTH TO  | TIME   | DEPTH TO  |
|--------|-----------|--------|-----------|
| (mins) | WATER (m) | (mins) | WATER (m) |
| 0      | 1.3       |        |           |
| 48     | 1.3       |        |           |
| 62     | 1.3       |        |           |
|        |           |        |           |
|        |           |        |           |
|        |           |        |           |
|        |           |        |           |
|        |           |        |           |
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|        |           |        |           |
|        |           |        |           |
|        |           |        |           |
|        |           |        |           |
|        |           |        |           |
|        |           |        |           |
|        |           |        |           |

No movement in water level over 62 minutes of monitoring therefore unable to calculate soil infiltration rate.

| Groundwater observations No groundwater encountered. |                     | Title<br>Soil infiltration test (<br>Research Establishm |              | •                                |
|--|---------------------|--|--------------|----------------------------------|
| Trial pit dimensions (width x length) 0.6m x 3.2m    | Ground level<br>N/A | Location plan on dra                                     | awing number |                                  |
| Depth of trial pit at start of test (m) 2.7          | Co-ordinates        | Trial pit number<br>TP114                                | Cycle number | Date of excavation<br>17/02/2016 |

Report ref: STN3505NM-G02

Northants NN11 8RR

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0001

Potential

Low Shrinkage Potential

### **Determination of Moisture Content and Atterberg Limits**

Client: Soiltechnics Limited Report No: 51021428/16/09 Client Address: Cedar Barn, Batch Number: DAM0059571

White Lodge

Walgrave Client Reference: STN3505NM

Postcode: NN6 9PY Sampled by: Client Date Sampled: Contact: Andy Keeler 16.02.16 Date Received: 21.03.16

Site: Chipping Lane, Longbridge Tested From: 23.03.16-24.03.16

> Sample Type: Disturbed

**Test Results:** 

CT AV with Cilt

20

10

0

| Reference Location Depth (m) Molsture Content (%) Limit Plastic Limit Index 425μm  45274323 TP102 0.60 N/A 48 21 27 100  Low Plasticity Plasticity Plasticity Plasticity Plasticity Plasticity Plasticity Plasticity High Plasticity  CL Cl CH CV CE  High Shrinkage Potential  High Shrinkage Potential | Description: |       | Brown | CLA   | Y with S | Silt |    |         |   |     |   |         |               |     |   |       |                           |    |  |    |  |  |     |
|--|--------------|-------|-------|-------|----------|------|----|---------|---|-----|---|---------|---------------|-----|---|-------|---------------------------|----|--|----|--|--|-----|
| Low Plasticity Plasticity Plasticity Plasticity Plasticity High Plasticity  CL Cl CH CV CE  High Shrinkage Potential   | _            |       | Loca  | ation | Depth    | (m)  | M  | loistur | e | _   |   | Plastic | Plastic Limit |     | _ |       | % Passing<br>425μm        |    |  |    |  |  |     |
| Plasticity Plasticity Plasticity High Plasticity  CL CI CH CV CE  High Shrinkage Potential   | 45274323     |       | TP    | 102   | 0.60     |      |    | N/A     |   | N/A |   | N/A     |               | N/A |   | 48 21 |                           | 21 |  | 27 |  |  | 100 |
| CL CI CH CV CE  High Shrinkage Potential   |              |       |       | F     | -        |      |    |         |   | -   | _ |         |               | -   |   |       |                           |    |  |    |  |  |     |
| 60 High Shrinkage Potential  |              | ]   0 |       | CI    | . CI     |      | CI | CI CH   |   | cv  |   | CE      |               |     |   |       |                           |    |  |    |  |  |     |
|  |              | -     |       |       |          |      |    |         |   |     |   |         |               |     |   |       |                           |    |  |    |  |  |     |
| Medium Shrinkage   |              | -     |       |       |          |      |    |         |   |     |   |         |               |     |   | F     | otential                  |    |  |    |  |  |     |
| Medium Shrinkage   | pul £1 4     | -     |       |       |          |      |    |         |   |     |   |         |               |     |   |       |                           |    |  |    |  |  |     |
|  | lastici<br>3 |       |       |       |          |      |    |         |   |     |   |         |               |     |   |       | ım Shrinkage<br>Potential |    |  |    |  |  |     |

МН

60

Liquid Limit (%)

70

ΜV

80

ME

110

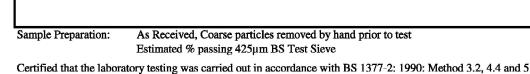
120

130

A Line

100

90



MI

20

30

10

Page: 1 of 1 [ ] M. Carr - Section Manager [✓] D. Berrill - Laboratory Manager Date: 04.04.16 Signed s Group

MI

50

40

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0001

### **Determination of Moisture Content and Atterberg Limits**

Client: Soiltechnics Limited Report No: 51021428/16/10 Client Address: Cedar Barn, Batch Number: DAM0059571

White Lodge

Walgrave Client Reference: STN3505NM

Postcode: NN6 9PY Sampled by: Client Date Sampled: Contact: Andy Keeler 16.02.16 Date Received: 21.03.16

Site: Chipping Lane, Longbridge Tested From: 23.03.16-24.03.16

> Sample Type: Disturbed

**Test Results:** 

| Description:            | Brown  | n CLA | Y     |       |     |                                 |     |                 |         |           |                    |      |                          |  |
|-------------------------|--|-------|-------|-------|-----|---------------------------------|-----|-----------------|---------|-----------|--------------------|------|--------------------------|--|
| Laboratory<br>Reference | Loc  | ation | Depth | n (m) | M   | Receive<br>Ioisture<br>ntent (% |     | Liquid<br>Limit | Plastic | Limit     | Plasticit<br>Index | -    | % Passing<br>425μm       |  |
| 45274324                | TP   | 106   | 2.1   | 0     | N/A |                                 |     | 44              | 1       | 8         | 26                 |      | 100                      |  |
| 9/                      | Low Intermediate High Very High Extremely Plasticity Plasticity Plasticity High Plasticity  80 |       |       |       |     |                                 |     |                 |         |           |                    |      |                          |  |
| 70                      | 1  | CI    |       |       | CI  | СН                              |     | cv              |         | CE        |                    |      |                          |  |
| 60                      | 1  |       |       |       |     |                                 |     |                 |         | $\langle$ |                    |      | h Shrinkage              |  |
|                         | 1  |       |       |       |     |                                 |     |                 |         |           |                    |      | Potential                |  |
| Plasticity Index        | 1  |       |       | Ш     |     |                                 |     |                 |         |           |                    |      |                          |  |
| ):<br>Serici            | 1  |       |       |       |     |                                 |     |                 |         |           |                    | Med  | lium Shrinkage           |  |
| 20                      | 1  |       |       | Ш     | •   |                                 |     |                 |         |           |                    |      | Potential                |  |
| 10                      | 1  |       |       |       |     |                                 |     |                 |         |           |                    |      | v Shrinkage<br>Potential |  |
| (                       | }  | мі    |       |       | МІ  | мн                              |     | MV              |         | ME        |                    |      |                          |  |
| ·                       |  | 10 2  | 0 30  | 4     | 0 5 | 50 60                           |     | 70 80           | 90 10   | 00 110    | 120 1              | 130  |                          |  |
|                         |  |       |       |       |     | Liquid                          | LIM | II (%)          |         |           | —-А                | Line |                          |  |

Sample Preparation:

As Received, Coarse particles removed by hand prior to test

Estimated % passing 425µm BS Test Sieve

Certified that the laboratory testing was carried out in accordance with BS 1377-2: 1990: Method 3.2, 4.4 and 5

Page: 1 of 1 [ ] M. Carr - Section Manager [✓] D. Berrill - Laboratory Manager Date: 04.04.16 Signed fics Group

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0001

### **Determination of Moisture Content and Atterberg Limits**

Client: Soiltechnics Limited Report No: 51021428/16/11
Client Address: Cedar Barn, Batch Number: DAM0059571

White Lodge

Walgrave Client Reference: STN3505NM

Postcode: NN6 9PY Sampled by: Client
Contact: Andy Keeler Date Sampled: 16.02.16
Date Received: 21.03.16

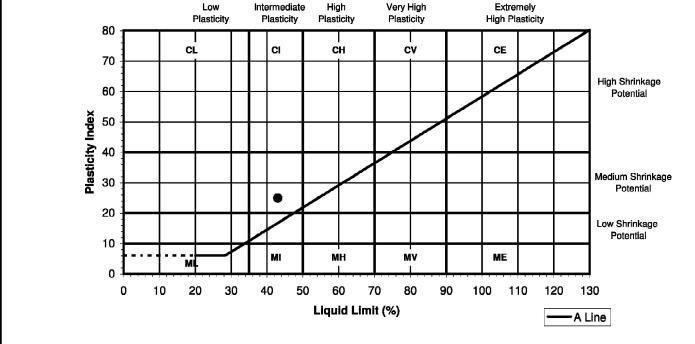
Site: Chipping Lane, Longbridge Tested From: 23.03.16-24.03.16

Sample Type: Disturbed

**Test Results:** 

Description: Brown CLAY with Silt

| Laboratory<br>Reference | Loca | ation | Depth             |   | M                     | Receiv<br>loistur<br>itent ( | e   | Liqu<br>Lim      |   | Plastic L | imit    | asticity<br>Index | % Passing 425μm  |
|-------------------------|------|-------|-------------------|---|-----------------------|------------------------------|-----|------------------|---|-----------|---------|-------------------|------------------|
| 45274325                | TP   | 107   | 0.50              | ) |                       | N/A                          | ,,, | 43               |   | 18        |         | 25                | 100              |
| 00                      |      | ſ     | Low<br>Plasticity |   | rmediate<br>lasticity | e Hig<br>Plasti              |     | Very I<br>Plasti | _ |           | Extremo |                   | ·                |
| 80<br>70                |      | CI    | <u>_</u>          |   | CI                    | C                            | Н   | C                | v | -         | CE      |                   |                  |
| /"                      |      |       |                   | П |                       |                              |     |                  |   |           | 7       |                   | Liliah Christman |



Sample Preparation:

As Received, Coarse particles removed by hand prior to test

Estimated % passing 425µm BS Test Sieve

Certified that the laboratory testing was carried out in accordance with BS 1377-2: 1990: Method 3.2, 4.4 and 5

Page: 1 of 1
Date: 04.04.16

Signed

[ ] M. Carr - Section Manager

[✓] D. Berrill - Laboratory Manager

For and on behalf of Environmental Scientifics Group

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0001

Low Shrinkage Potential

### **Determination of Moisture Content and Atterberg Limits**

Client: Soiltechnics Limited Report No: 51021428/16/12
Client Address: Cedar Barn, Batch Number: DAM0059571

White Lodge

Walgrave Client Reference: STN3505NM

Postcode: NN6 9PY Sampled by: Client
Contact: Andy Keeler Date Sampled: 16.02.16
Date Received: 21.03.16

Site: Chipping Lane, Longbridge Tested From: 23.03.16-24.03.16

Sample Type: Disturbed

**Test Results:** 

Description: Brown CLAY

20

10

0

| Description:            | Bro      | own (                                  | CLAY | (  |         |                        |                |       |                  |   |                               |                      |   |    |                           |       |
|-------------------------|----------|--|------|--|---------|------------------------|----------------|-------|------------------|---|-------------------------------|----------------------|---|----|---------------------------|-------|
| Laboratory<br>Reference | L        | Location   Depth (m)   Moisture   Liqu |      | ocation Depth (m) Moisture Liquid Plastic Limit In |         |                        |                |       | Piactic I imit   |   | Plastic Limit Plasticit Index |                      | - |    | 'assing<br>5μm            |       |
| 45274326                | 1        | TP10                                   | 09   | 1.3  | 0       |                        | N/A            |       | 50               |   | 2                             | 0                    |   | 30 | 1                         | 100   |
| 90                      |          |  | P    | Low<br>Plasticity                                  |         | ermediate<br>lasticity | e Hig<br>Plast |       | Very I<br>Plasti | _ |                               | Extreme<br>High Plas | - |    |                           |       |
|                         | 80       |  |      |  |         | CI                     | C              | CH CH |                  | v |                               | CE                   |   |    |                           |       |
| 70                      | ·十       | 1                                      |      |  | $\top$  |                        |                |       |                  |   |                               |                      |   |    | Lillah Obdaha             |       |
| 60                      | 1        |  |      |  |         |                        |                |       |                  |   |                               |                      |   |    | High Shrinka<br>Potential | ıge   |
| <b></b>                 | 1        | +                                      |      |  | +       |                        |                |       |                  |   |                               |                      |   |    |                           |       |
| 드<br><u>본</u> 40        |          |  |      |  | $\perp$ |                        |                |       |                  | _ |                               |                      |   |    |                           |       |
| stic                    | 1        |  |      |  |         |                        |                |       |                  |   |                               |                      |   |    | Medium Shrir              | nkage |
| <b>E</b> 30             | <b> </b> |  |      |  |         |                        |                |       |                  |   |                               |                      |   |    | Potentia                  |       |

МН

60

Liquid Limit (%)

70

ΜV

80

ME

110

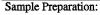
120

130

A Line

100

90



As Received, Coarse particles removed by hand prior to test

ΜI

50

40

Estimated % passing 425µm BS Test Sieve

30

М

20

10

Certified that the laboratory testing was carried out in accordance with BS 1377-2: 1990: Method 3.2, 4.4 and 5

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Date: 04.04.16
Signed
[ ] M. Carr - Section Manager
[ ] D. Berrill - Laboratory Manager

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### **Determination of Moisture Content and Atterberg Limits**

Client: Soiltechnics Limited Report No: 51021428/16/13
Client Address: Cedar Barn, Batch Number: DAM0059571

White Lodge

Walgrave Client Reference: STN3505NM

Postcode: NN6 9PY Sampled by: Client Contact: Andy Keeler Date Sampled: 16.02.16 Date Received: 21.03.16

Site: Chipping Lane, Longbridge Tested From: 23.03.16-24.03.16

Sample Type: Disturbed

**Test Results:** 

Description: Brown CLAY

| Description:            | Brown CLA                                    | Y                 |                          |                                   |                         |                     |                     |                              |
|-------------------------|--|-------------------|--------------------------|-----------------------------------|-------------------------|---------------------|---------------------|------------------------------|
| Laboratory<br>Reference | Location                                     | Depth (n          | ı) N                     | Received<br>Ioisture<br>ntent (%) | Liquid<br>Limit         | Plastic Limit       | Plasticity<br>Index | % Passing<br>425μm           |
| 45274327                | TP113  | 1.10              |                          | N/A                               | 45                      | 20                  | 25                  | 100                          |
| 80                      |  | Low<br>Plasticity | Intermedia<br>Plasticity |                                   | Very High<br>Plasticity | Extrem<br>High Plas |                     |                              |
| 70                      | ]   c  | L                 | CI                       | CH                                | cv                      | CE                  |                     |                              |
| 60                      | 1  |                   |                          |                                   |                         |                     | Hi                  | gh Shrinkage<br>Potential    |
|                         | 1  |                   |                          |                                   |                         |                     |                     | rotential                    |
| <u>pu</u> 40            | 1  |                   |                          |                                   |                         |                     |                     |                              |
| Plasticity Index        | 1  |                   |                          |                                   |                         |                     | Me                  | edium Shrinkage<br>Potential |
| 20                      |  |                   | •                        |                                   | igwdown                 | $\sqcup \sqcup$     | $\perp$             |                              |
| 10                      | <u>                                     </u> |                   | 4                        |                                   | igwdown                 | +                   | Lo                  | w Shrinkage<br>Potential     |
| 0                       |  |                   | MI                       | MH                                | MV                      | ME                  |                     |                              |
|                         | 0 10 2                                       | 20 30             | 40                       | 50 60<br><b>Liquid Lin</b>        |                         | 90 100 110          |                     | 7                            |
|                         |  |                   |                          |                                   | ( /-/                   |                     | ——A Line            | <u> </u>                     |

Sample Preparation:

As Received, Coarse particles removed by hand prior to test

Estimated % passing 425µm BS Test Sieve

Certified that the laboratory testing was carried out in accordance with BS 1377-2: 1990: Method 3.2, 4.4 and 5

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Date: 04.04.16

Signed

[ ] M. Carr - Section Manager

[√] D. Berrill - Laboratory Manager

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### **Determination of Moisture Content and Atterberg Limits**

Client: Soiltechnics Limited Report No: 51021428/16/14
Client Address: Cedar Barn, Batch Number: DAM0059571

White Lodge

Walgrave Client Reference: STN3505NM

Postcode: NN6 9PY Sampled by: Client
Contact: Andy Keeler Date Sampled: 16.02.16
Date Received: 21.03.16

Site: Chipping Lane, Longbridge Tested From: 23.03.16-24.03.16

Sample Type: Disturbed

Test Results:

Description: Brown CLAY

| Description:            |  | Brown | CLA   | Y    |      |    |    |                              |        |             |          |        |         |      |                   |                            |  |  |    |     |
|-------------------------|--|-------|-------|------|------|----|----|------------------------------|--------|-------------|----------|--------|---------|------|-------------------|----------------------------|--|--|----|-----|
| Laboratory<br>Reference |  | Loca  | ation | Dept | h (r | n) | M  | Receiv<br>Ioistur<br>1tent ( | e      | Liqu<br>Lim |          | Plasti | c Limit |      | asticity<br>Index | % Passing<br>425μm         |  |  |    |     |
| 45274328                |  | TP    | 119   | 1.   | 40   |    |    | N/A                          |        | 43          |          | 17     |         | 17   |                   | 17                         |  |  | 26 | 100 |
|                         | Low Intermediate High Very High Extremely Plasticity Plasticity Plasticity High Plasticity  80 |       |       |      |      |    |    |                              |        |             |          |        |         |      | •                 |                            |  |  |    |     |
|                         | 70   |       | CL CI |      |      |    | c  | Н                            | 0      | v           |          | CE     | _       |      |                   |                            |  |  |    |     |
|                         | 60   |       |       |      |      |    |    |                              |        |             |          |        |         |      |                   | High Shrinkage             |  |  |    |     |
| ×                       |  |       |       |      |      |    |    |                              |        |             |          |        |         |      |                   | Potential                  |  |  |    |     |
| Plasticity Index        | 40   |       |       |      |      |    |    |                              |        |             |          |        |         |      |                   |                            |  |  |    |     |
| astici                  | 30   |       |       |      |      |    |    |                              |        |             |          |        |         |      |                   | Medium Shrinkage           |  |  |    |     |
| •                       | 20   |       |       |      |      | 1  | •  |                              |        |             |          |        |         |      |                   | Potential                  |  |  |    |     |
|                         | 10   |       |       |      |      |    | _  |                              |        |             |          |        |         |      |                   | Low Shrinkage<br>Potential |  |  |    |     |
|                         | 0  |       | M     |      |      | ı  | МІ | M                            | Н      | N           | <b>V</b> |        | ME      |      |                   |                            |  |  |    |     |
|                         |  | 0 1   | 0 2   | 0 3  | 0    | 40 | 5  |                              |        |             | 0        | 90 1   | 00 11   | 0 12 | 20 130            | )                          |  |  |    |     |
|                         |  |       |       |      |      |    |    | Liqu                         | id Lim | it (%)      |          |        |         | -    | — A Lir           | ne                         |  |  |    |     |

Sample Preparation:

As Received, Coarse particles removed by hand prior to test

Estimated % passing 425µm BS Test Sieve

Certified that the laboratory testing was carried out in accordance with BS 1377-2: 1990: Method 3.2, 4.4 and 5

Page: 1 of 1 Date: 04.04.16 Signed [ ] M. Carr - Section Manager [ ] D. Berrill - Laboratory Manager For and on behalf of Environmental Scientifics Group

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### **Determination of Moisture Content and Atterberg Limits**

Client: Soiltechnics Limited Report No: 51021428/16/15
Client Address: Cedar Barn, Batch Number: DAM0059571

White Lodge

Walgrave Client Reference: STN3505NM

Postcode: NN6 9PY Sampled by: Client
Contact: Andy Keeler Date Sampled: 16.02.16
Date Received: 21.03.16

Site: Chipping Lane, Longbridge Tested From: 23.03.16-24.03.16

Sample Type: Disturbed

**Test Results:** 

Description: Brown CLAY

| Laboratory<br>Reference | Location | Depth             | ( <b>m</b> )         | M                    | Received<br>Ioisture<br>ntent (%) | Liquid<br>Limit         | Plastic Limit        | Plasticity<br>Index | % Passing<br>425μm           |  |  |  |
|-------------------------|----------|-------------------|----------------------|----------------------|-----------------------------------|-------------------------|----------------------|---------------------|------------------------------|--|--|--|
| 45274329                | TP120    | 1.9               | 0                    |                      | N/A                               | 41                      | 20                   | 21                  | 100                          |  |  |  |
| 80                      |          | Low<br>Plasticity |                      | rmediate<br>asticity | e High<br>Plasticity              | Very High<br>Plasticity | Extremo<br>High Plas |                     |                              |  |  |  |
| 70                      | 1   6    | CL                |                      | CI                   | CH                                | cv                      | CE                   |                     |                              |  |  |  |
| 60                      | 1        |                   | Ш                    |                      |                                   |                         |                      | H                   | ligh Shrinkage<br>Potential  |  |  |  |
|                         | 1        |                   | $\perp \! \! \perp$  |                      |                                   |                         |                      |                     | i otemai                     |  |  |  |
| <u>일</u><br>높 40        | 1        |                   | Щ                    |                      |                                   |                         |                      |                     |                              |  |  |  |
| Plasticity Index        |          |                   | $\perp \!\!\! \perp$ |                      |                                   |                         |                      | М                   | edium Shrinkage<br>Potential |  |  |  |
| 20                      | <u> </u> |                   | $\bot$               | _                    |                                   |                         |                      | Щ.                  |                              |  |  |  |
| 10                      | 1        |                   | A                    | _                    |                                   |                         |                      |                     | ow Shrinkage<br>Potential    |  |  |  |
| 0                       |          | +                 |                      | MI                   | MH                                | MV                      | ME                   |                     |                              |  |  |  |
|                         | 0 10     | 20 30             | 40                   | 5 5                  | 60 60<br><b>Liquid Li</b> n       | 70 80<br>nit (%)        | 90 100 110           | 120 130             | _                            |  |  |  |

Sample Preparation:

As Received, Coarse particles removed by hand prior to test

Estimated % passing 425µm BS Test Sieve

Certified that the laboratory testing was carried out in accordance with BS 1377-2: 1990: Method 3.2, 4.4 and 5

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Date: 04.04.16
Signed
[ ] M. Carr - Section Manager
[√] D. Berrill - Laboratory Manager
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