




|  |            |  |            |                                     |   |  |                                      |   |   |              |
|--|------------|--|------------|-------------------------------------|---|--|--------------------------------------|---|---|--------------|
|  <b>British Geological Survey</b><br>NATURAL ENVIRONMENT RESEARCH COUNCIL |            |  |            |                                     |   | <b>Site</b><br>M1 WIDENING JUNCTION 21 TO 30 PRELIMINARY GI-<br>CONTRACT 2 |                                      |   | <b>Borehole<br/>Number</b><br><b>RC1218</b> |              |
| <b>Machine:</b><br><b>Flush :</b><br><b>Core Dia: mm</b><br><b>Method :</b>  |            | <b>Casing Diameter</b><br>140mm cased to 2.60m |            | <b>Ground Level (mOD)</b><br>112.45 |   | <b>Client</b><br>Highways Agency   |                                      | <b>Job<br/>Number</b><br>WAL060099  |   |              |
|  |            | <b>Location</b><br>445231 E 364655 N           |            | <b>Dates</b><br>19/09/2006          |   | <b>Engineer</b><br>Arup  |                                      | <b>Sheet</b><br>1/1   |   |              |
| <b>Depth<br/>(m)</b>   | <b>TCR</b> | <b>SCR</b>                                     | <b>RQD</b> | <b>FI</b>                           | <b>Field Records</b>                                    | <b>Level<br/>(mOD)</b>   | <b>Depth<br/>(m)<br/>(Thickness)</b> | <b>Description</b>  | <b>Legend</b>                               | <b>Water</b> |
| 0.00   | OH         |  | 0          | 0                                   | Groundwater was not apparent during boring(1) at 0.00m. |  |                                      | INSPECTION PIT  |   | ▽1           |
|  |            |  |            |                                     |   |  | (1.20)                               |   |   |              |
|  | 90         | 82   | 0          | 0                                   |   | 111.25   | 1.20                                 | OPEN HOLE   |   |              |
|  |            |  |            |                                     |   |  | (1.20)                               |   |   |              |
| 2.40-2.70<br>2.40  |            |  |            |                                     | 10.15/26.24<br>SPT 50/150                               | 110.05   | 2.40                                 |   |   |              |
| 2.85   | 94         | 88   | 26         | 0                                   | P1  |  |                                      | Moderately strong (variably moderately weak) grey brown locally speckled black fine to medium grained SANDSTONE, occasionally with very narrow dark grey wispy non persistent laminae. Orange brown to red brown discolouration penetrating throughout, frequent dark brown and black discolouration on fracture surfaces. Fractures, horizontal to subhorizontal very closely and medium spaced, smooth, planar and undulating, open; subvertical (70 degrees), closely spaced (140), smooth planar and undulating, open, frequently with thinly laminated ferrous mineralisation up to 3mm. |   |              |
| 3.35   |            |  | 0          | 0                                   |   |  |                                      |   |   |              |
| 3.65   |            |  |            |                                     |   |  | (3.40)                               |   |   |              |
| 4.55   |            |  | 0          | 0                                   | P2  |  |                                      | At 4.65m; rounded dissolution vugs (20mm).  |   |              |
| 5.20   |            |  |            |                                     | P3  |  |                                      |   |   |              |
| 5.80   | 90         | 77   | 4          | 0                                   |   | 106.65   | 5.80                                 | Between 5.80m and 6.30m; recovered as stiff extremely closely fissured friable silt/clay, structure not apparent. Very weak becoming weak (variably very weak) light grey thinly to thickly laminated MUDSTONE with closely spaced  |   |              |
| 6.35   |            |  | 0          | 0                                   |   |  |                                      | At 6.40m; 40mm bed strong ironstone.<br>Between 6.45m and 6.85m; structure not apparent, recovered as soft grey very gravelly silt/clay.<br>At 6.70m; 35mm bed of strong ironstone.   |   |              |
| 6.85   |            |  |            |                                     |   |  | (2.50)                               | very thin beds of strong brown ironstone. Fractures, where evident subhorizontal (10 to 35 degrees), very closely and closely spaced (40/50/85), smooth, planar, vertical non persistent, smooth, planar.   |   |              |
| 7.30   |            |  | 0          | 0                                   | P4  |  |                                      | At 7.70m; 60mm bed of strong ironstone.   |   |              |
| 7.90   |            |  |            |                                     |   |  |                                      |   |   |              |
|  | 89         | 89   | 22         | 0                                   |   | 104.15   | 8.30                                 | Weak thinly laminated brittle black COAL with occasional flecks of pyrite. Fractures, horizontal, extremely closely spaced, incipient, planar, vertical, frequently irregular, generally persistent to 80mm.  |   |              |
| 9.45<br>9.35   |            |  |            |                                     | P5  |  | (1.70)                               | Between 9.60m and 9.65m; very weak thinly laminated grey mudstone with frequent carbonised plant remains (5mmx40mm).<br>From 9.75m to 9.90m; soft grey SILT/CLAY with rare carbonised plant remains.<br>From 9.90m to 10.00m; moderately strong dark grey SILTSTONE with frequent narrow carbonised plant remains (4mmx25mm).   |   |              |
| 9.95   |            |  |            |                                     | 19/09/2006:<br>P6                                       | 102.45   | 10.00                                |   |   |              |
| <b>Remarks</b>   |            |  |            |                                     |   |  |                                      | <b>Scale<br/>(approx)</b><br>1:50   | <b>Logged<br/>By</b><br>TL                  |              |
|  |            |  |            |                                     |   |  |                                      | <b>Figure No.</b>   |   |              |
|  |            |  |            |                                     |   |  |                                      |   |   |              |