







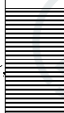



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|--|-----|--|-----|------------------------------------|---|---|-----------------------------|-----------------------------|-------------------------------------|--------------|
|  British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL | | | | | | Site M1 WIDENING JUNCTION 21 TO 30 PRELIMINARY GI- CONTRACT 2 | | | Borehole Number RC1260 | |
| Machine: Flush : Core Dia: mm Method : | | Casing Diameter 140mm cased to 28.60m | | Ground Level (mOD) 103.95 | | Client Highways Agency | | Job Number WAL060099A | | |
| | | Location 445334 E 364980 N | | Dates 01/11/2006- 02/11/2006 | | Engineer Arup | | Sheet 1/5 | | |
| Depth (m) | TCR | SCR | RQD | FI | Field Records | Level (mOD) | Depth (m) (Thickness) | Description | Legend | Water |
| 0.00 | OH | | 0 | 0 | Groundwater was not apparent during boring(1) at 0.00m. | | | OPEN HOLE | | ▽1 |
| Remarks | | | | | | | | | Scale (approx) | Logged By |
| | | | | | | | | | 1:50 | TL |
| | | | | | | | | | Figure No. | |

|  British Geological Survey <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small> | | | | | | Site M1 WIDENING JUNCTION 21 TO 30 PRELIMINARY GI-CONTRACT 2 | | Borehole Number RC1260 | | | |
|---|-----|-----|---|----|---------------|--|-----------------------|---|--|--|--|
| Machine: Flush : Core Dia: mm Method : | | | Casing Diameter 140mm cased to 28.60m Location 445334 E 364980 N | | | Ground Level (mOD) 103.95 Dates 01/11/2006-02/11/2006 | | Client Highways Agency Engineer Arup | | Job Number WAL060099A Sheet 2/5 | |
| Depth (m) | TCR | SCR | RQD | FI | Field Records | Level (mOD) | Depth (m) (Thickness) | Description | Legend | Water | |
| | | | | | | | | OPEN HOLE (as previous sheet) | | | |
| | 100 | 72 | 56 | 0 | | | (28.60) | | | | |
| Remarks | | | | | | | | | Scale (approx) 1:50 Logged By TL Figure No. | | |





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|--|-----|-----|--|----|--------------------------------|-------------|---|---|-----------------|----------------------------------|--|
|  British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL | | | | | | | Site M1 WIDENING JUNCTION 21 TO 30 PRELIMINARY GI-CONTRACT 2 | | | Borehole Number RC1260 | |
| Machine: Flush : Core Dia: mm Method : | | | Casing Diameter 140mm cased to 28.60m | | Ground Level (mOD) 103.95 | | Client Highways Agency | | | Job Number WAL060099A | |
| | | | Location 445334 E 364980 N | | Dates 01/11/2006-02/11/2006 | | Engineer Arup | | | Sheet 3/5 | |
| Depth (m) | TCR | SCR | RQD | FI | Field Records | Level (mOD) | Depth (m) (Thickness) | Description | Legend | Water | |
| | | | | | | | | OPEN HOLE (as previous sheet) | | | |
| 28.60 | | | 0 | 0 | | 75.35 | 28.60 (0.30) | Recovered non intact as soft to firm grey CLAY with gravel sized fragments of mudstone. | | | |
| 28.90 | | | | | | 75.05 | 28.90 | Moderately weak to moderately strong light and dark grey thinly colour laminated SILTSTONE. Fractures; horizontal, closely spaced (160/170/230), smooth and planar. | | | |
| 29.20 | | | 0 | 0 | P1 | | (0.90) | | | | |
| 29.80 | 96 | 73 | 32 | 0 | | 74.15 | 29.80 | Weak to moderately weak thinly laminated dark grey | | | |
| Remarks | | | | | | | | Scale (approx) 1:50 | Logged By TL | | |
| | | | | | | | | Figure No. | | | |



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|--|-----|-----|--|----|--|---|--------------------------|--|---|--------------------------|------------|
|  British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL | | | | | | Site M1 WIDENING JUNCTION 21 TO 30 PRELIMINARY GI - CONTRACT 2 | | Borehole Number RC1260 | | | |
| Machine: | | | Casing Diameter 140mm cased to 28.60m | | | Ground Level (mOD) 103.95 | | Client Highways Agency | | Job Number WAL060099A | |
| Flush : | | | Location 445334 E 364980 N | | | Dates 01/11/2006-02/11/2006 | | Engineer Arup | | Sheet 4/5 | |
| Core Dia: mm | | | | | | | | | | | |
| Method : | | | | | | | | | | | |
| Depth (m) | TCR | SCR | RQD | FI | Field Records | Level (mOD) | Depth (m) (Thickness) | Description | Legend | Water | |
| 30.00 30.10 30.10-30.20 30.10 | 100 | 73 | 22 | 0 | P2 25/50 SPT 25'/75 50/28 D9 | | | MUDSTONE with rare very thin beds of moderately strong to strong, light brown ironstone (locally grading to siltstone). Fractures; horizontal (0-10 degrees), very closely to closely spaced (generally becoming closely spaced), smooth, planar tight to open. Other fractures irregular, apparently random strike. |  | | |
| 31.60 | | | | | | | | | | | |
| 32.50 | | | 0 | 0 | P3 | | (4.80) | | | | |
| 33.00 33.10 33.10-33.22 33.30 | 90 | 74 | 15 | 0 | 25/50 SPT 25'/75 50/47 | | | Between 33.00 and 33.30m fractures are subhorizontal (35 deg), very closely spaced, smooth and planar | | | |
| 34.10 | 51 | 27 | 0 | 0 | P4 | | | | | | |
| 34.60 34.60-34.71 34.60 | 100 | 77 | 63 | 0 | 25/50 SPT 25'/75 50/33 D10 | 69.35 69.05 | 34.60 (0.30) 34.90 | At 34.55m very thin bed of strong ironstone Approximate boundary. Weak brittle black COAL with occasional flecks of pyrite. At top; approximate boundary. Strong dark brown black ironstone with frequent fossil shell fragments recovered as angular cobble sized fragments. |  | | |
| | | | | | | | | Approximate boundary. Generally very weak (variably stiff to very stiff) dark grey MUDSTONE with occasional carbonised plant remains and very thin laminations of black brittle coal. | | | |
| 36.10 36.10-36.26 36.10 36.30-36.79 | | | 0 | 0 | 25/40,10 SPT 25'/75 50/83 D11 U5 | 67.85 | 36.10 (0.90) | Moderately strong light and dark grey thinly cross colour laminated SILTSTONE. Fractures are horizontal, closely to medium spaced, smooth, planar and open. |  | | |
| 37.00 | 100 | 75 | 33 | 0 | | 66.95 | 37.00 | Generally moderately weak (variably weak to moderately strong) dark grey MUDSTONE thinly interbedded with moderately weak to moderately strong light and dark grey colour laminated SILTSTONE. Rare very thin beds of strong light brown ironstone. Fractures are horizontal, very closely to medium spaced, smooth, planar, occasionally with soft grey clay infill (up to 8mm). Subhorizontal fractures (50 degrees), apparently widely spaced, smooth, planar and undulating. Other fractures generally subvertical to vertical and irregular |  | | |
| 37.60 | | | | | 01/11/2006:22.90m 01/11/2006: DRY | | | | | | |
| 38.10-38.32 | 97 | 69 | 26 | 0 | 02/11/2006: U6 | | | Between 38.90 and 39.10m moderately weak siltstone | | | |
| 39.10 | | | | | | | (3.60) | At 39.60 very thin bed of strong ironstone | | | |
| Remarks | | | | | | | | | Scale (approx) 1:50 | Logged By TL | Figure No. |



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|--|-----------------------|---|--------------------------------|---|------------------------|--|--|---|-------------------|
|  British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL | | | | | | Site M1 WIDENING JUNCTION 21 TO 30 PRELIMINARY GI- CONTRACT 2 | | Borehole Number RC1260 | |
| Boring Method Cable Percussion | | Casing Diameter 140mm cased to 28.60m | | Ground Level (mOD) 103.95 | | Client Highways Agency | | Job Number WAL060099A | |
| | | Location 445334 E 364980 N | | Dates 01/11/2006- 02/11/2006 | | Engineer Arup | | Sheet 5/5 | |
| Depth (m) | Sample / Tests | Casing Depth (m) | Water Depth (m) | Field Records | Level (mOD) | Depth (m) (Thickness) | Description | Legend | Water |
| 39.30 39.85-40.05 | P7 U8 | | | 02/11/2006: 02/11/2006: 02/11/2006:21.00m | 63.35 | 40.60 | MUDSTONE (as previous sheet) Complete at 40.60m |  | |
| Remarks | | | | | | | Scale (approx) 1:50 | Logged By TL | Figure No. |