


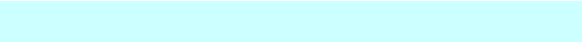

Simplified lithological log of SOUTH WALES region, SWANSEA (west)

| | COAL | MUD | SAND |
|--------------------------|--------------|---------------|--------------|
| AEGIRANUM MB | | 0.33 | |
| Upper cockshot rock | | | 15.00 |
| HAUGHTON MB | | 2.50 | |
| mudstone | | 12.00 | |
| THREE COALS | 0.30 | | |
| mudstone | | 30.00 | |
| TWO FEET NINE | 2.40 | | |
| mudstone | 9.60 | | |
| sandstone | | | 17.50 |
| FOUR FEET | 1.65 | | |
| mudstone | | 12.00 | |
| UPPER SIX FEET | 0.70 | | |
| mudstone | | 1.50 | |
| LOWER SIX FEET | 0.95 | | |
| mudstone | | 15.00 | |
| CORNISH FOUR FEET | 0.95 | | |
| mudstone | | 8.50 | |
| HARNLO MB | 0.20 | | |
| mudstone | | 18.50 | |
| NINE FEET | 1.94 | | |
| mudstone | | 0.65 | |
| COAL | 0.35 | | |
| mudstone | | 18.00 | |
| BUTE | 0.90 | | |
| mudstone | | 10.50 | |
| VANDERBECKEI MB | | 0.10 | |
| AMMAN RIDER | 0.30 | | |
| mudstone | | 15.00 | |
| YARD | 0.60 | | |
| mudstone | | 25.00 | |
| SEVEN FEET | 1.05 | | |
| mudstone | | 6.00 | |
| UPPER FIVE FEET | 0.85 | | |
| mudstone | | 5.00 | |
| RHYD | 0.50 | | |
| ironstone | | | 1.25 |
| UPPER GELLIDEG | 0.50 | | |
| mudstone | | 7.80 | |
| LOWER GELLIDEG | 0.50 | | |
| mudstone | | 40.00 | |
| GARW | 0.50 | | |
| marine bands | | 60.00 | |
| Farewell sandstone | | | 30.00 |
| SUBCRENATUM MB | | 14.00 | |
| <i>TOTAL Langsettian</i> | <i>4.80</i> | <i>172.80</i> | <i>31.25</i> |
| <i>TOTAL Duckmantian</i> | <i>19.94</i> | <i>129.25</i> | <i>32.50</i> |

All thicknesses given in metres

Based on data from excavations at Cefyn Coed and Dulais (Barclay et al., 1988)

Key to logs compiled from original BGS memoirs

| | |
|---|---|
| sandstone | sandstone, ironstone, conglomerate |
| mudstone | mudstone, shale, seat-earth, dirt partings |
| COAL | named coal band |
| ...MB | named marine band (for correlation purposes) |
|  | Langsettian strata |
|  | Duckmantian strata |
|  | Westphalian C strata |
| incomplete | Marine Band marking upper/lower limit is absent |
| grey text | Overlap between borehole logs, or between data on split pages. These values were not used in calculations |

All measurements in metres, measured from printed stratigraphic logs or taken directly from borehole logs where available

Simplified lithological log of SOUTH WALES region, NEATH area(mid-west)

| | COAL | MUD | SAND |
|--------------------------|-------|--------|-------|
| AEGIRANUM MB | | 0.45 | |
| upper cockshot rock | | | 10.00 |
| HAUGHTON MB | | 2.00 | |
| COAL | 0.20 | | |
| mudstone | | 21.00 | |
| TWO FEET NINE | 0.75 | | |
| mudstone | | 6.00 | |
| FOUR FEET | 1.20 | | |
| mudstone | | 0.10 | |
| SIX FEET | 2.70 | | |
| mudstone | | 12.00 | |
| CORNISH | 0.95 | | |
| mudstone | | 8.50 | |
| HARNLO | 0.20 | | |
| mudstone | | 18.50 | |
| NINE FEET | 21.00 | | |
| mudstone | | 11.30 | |
| BUTE | 1.00 | | |
| mudstone | | 10.50 | |
| VANDERBECKEI MB | | 0.30 | |
| AMMAN RIDER | 0.30 | | |
| mudstone | | 15.00 | |
| YARD | 0.75 | | |
| mudstone | | 25.00 | |
| SEVEN FEET | 1.80 | | |
| mudstone | | 9.00 | |
| UPPER FIVE FEET | 0.80 | | |
| mudstone | | 5.50 | |
| RHYD | 0.90 | | |
| ironstone | | 1.25 | |
| UPPER GELLIDEG | 0.50 | | |
| mudstone | | 7.80 | |
| LOWER GELLIDEG | 0.50 | | |
| mudstone | | | |
| GARW | 0.40 | | |
| marine bands | | 70.00 | |
| Farewell sandstone | | | 45.00 |
| SUBCRENATUM MB | | 16.00 | |
| <i>TOTAL Langsettian</i> | 5.95 | 149.55 | 45.00 |
| <i>TOTAL Duckmantian</i> | 28.00 | 90.20 | 10.00 |

All thicknesses given in metres

Based on data from excavations at Maesgwyn, Rhigos and Aberdare (Barclay et al., 1988)

**Simplified lithological log of SOUTH WALES region, CYNON area
(mid-east)**

| | COAL | MUD | SAND |
|--------------------------|-------|--------|-------|
| AEGIRANUM MB | | 0.40 | |
| sandstone | | | 4.00 |
| THREE COALS | 1.00 | | |
| sandstone | | | 12.00 |
| TWO FEET NINE | 1.20 | | |
| mudstone | | 8.50 | |
| UPPER FOUR FEET | 0.60 | | |
| LOWER FOUR FEET | 1.00 | | |
| mudstone | | 12.00 | |
| UPPER SIX FEET | 0.80 | | |
| mudstone | | 10.00 | |
| LOWER SIX FEET | 1.60 | | |
| mudstone | | 20.00 | |
| RED VEIN | 1.61 | | |
| mudstone | | 15.50 | |
| UPPER NINE FEET | 1.07 | | |
| mudstone | | 0.25 | |
| LOWER NINE FEET | 1.52 | | |
| mudstone | | 9.00 | |
| UPPER BUTE | 0.55 | | |
| mudstone | | 0.50 | |
| LOWER BUTE | 0.55 | | |
| mudstone | | 10.00 | |
| VANDERBACKEI MB | | 1.00 | |
| AMMAN RIDER | 0.30 | | |
| mudstone | | 24.00 | |
| YARD | 0.75 | | |
| mudstone | | 17.50 | |
| TOP SEVEN FEET | 0.60 | | |
| 2 LOWER SEVEN FEET | 2.70 | | |
| mudstone | | 10.00 | |
| UPPER FIVE FEET | 0.91 | | |
| mudstone | | 0.20 | |
| LOWER FIVE FEET | 0.91 | | |
| mudstone | | 0.10 | |
| ENGINE | 0.18 | | |
| mudstone | | 0.80 | |
| GARW | 0.45 | | |
| five MB | | 70.00 | |
| farewell sandstone | | | 45.00 |
| SUBCRENATUM MB | | 14.00 | |
| <i>TOTAL Langsettian</i> | 6.80 | 136.60 | 45.00 |
| <i>TOTAL Duckmantian</i> | 11.50 | 86.75 | 16.00 |

All thicknesses given in metres

Based on data from excavations at Gelli Isaf, Blaengarw, and Aberdare (Barclay et al., 1988)

**Simplified lithological log of SOUTH WALES region, TAFF area
(east)**

| | COAL | MUD | SAND |
|-----------------------------|------|--------|-------|
| AEGIRANUM MB sandstone | | 0.40 | |
| TWO FEET NINE mudstone | 0.60 | 12.00 | |
| FOUR FEET mudstone | 1.92 | 9.00 | |
| SIX FEET mudstone | 2.70 | 35.00 | |
| NINE FEET mudstone | 2.50 | 0.25 | |
| UPPER BUTE mudstone | 0.30 | 5.00 | |
| LOWER BUTE mudstone | 0.30 | 10.00 | |
| VANDERBECKEI MB | | 1.00 | |
| AMMAN RIDER mudstone | 0.50 | 5.00 | |
| YARD mudstone | 0.90 | 12.00 | |
| SEVEN FEET mudstone | 2.00 | 12.00 | |
| UPPER FIVE FEET mudstone | 0.91 | 0.20 | |
| LOWER FIVE FEET mudstone | 0.91 | 0.10 | |
| ENGINE mudstone | 0.18 | 0.80 | |
| GARW five MB | 0.45 | 70.00 | |
| farewell sandstone | | | 30.00 |
| SUBCRENATUM MB | | 14.00 | |
| <i>TOTAL Langsettian</i> | 5.85 | 114.10 | 30.00 |
| <i>TOTAL Duckmantian</i> | 8.32 | 72.25 | 0.00 |

All thicknesses given in metres

Based on data from excavations around Merthyr Tydfil (Barclay et al., 1988)

Simplified lithological log of WEST CUMBRIA region, South

| | COAL | MUD | SAND |
|-------------------------------|------|---------------|-------|
| AEGIRANUM MB | | | |
| BRASSY sandstone | 0.75 | | 5.00 |
| COAL mudstone | 0.50 | 6.00 | |
| BLACK METAL mudstone | 0.30 | 6.25 | |
| sandstone | | | 20.00 |
| mudstone | | 3.25 | |
| WHITE METAL mudstone | 1.50 | 20.75 | |
| SLATY mudstone | 0.60 | 5.00 | |
| sandstone | | | 18.75 |
| mudstone | | 3.75 | |
| 10-QUARTERS mudstone | 0.90 | 3.75 | |
| sandstone | | | 47.50 |
| mudstone | | 18.25 | |
| YARD mudstone | 0.50 | 16.25 | |
| VANDERBECKEI MB mudstone | | 6.25 15.00 | |
| LITTLE MAIN mudstone | 0.60 | 1.50 | |
| EIGHTEEN-INCH sandstone | 0.50 | | 5.75 |
| LICKBANK sandstone | 0.75 | | 22.50 |
| 6-QUARTERS mudstone | 0.90 | 6.25 | |
| sandstone | | | 18.75 |
| WYTHEMOOR PARROT mudstone | 0.10 | 3.75 | |
| UPPER 3/4 mudstone | 0.20 | 8.75 | |
| LOWER 3/4 mudstone | 0.20 | 13.75 | |
| sandstone | | | 30.00 |
| HARRINGTON 4-FOOT mudstone | 0.30 | 5.75 | |
| SUBCRENATUM MB | | | |
| <i>TOTAL Langsettian</i> | 3.55 | 54.75 | 77.00 |
| <i>TOTAL Duckmantian</i> | 5.05 | 89.50 | 91.25 |

All thicknesses given in metres

Based on data from Gosforth/Drigg area [~0050 0200] (Akhurst et al., 1997)

Key to logs compiled from original BGS memoirs

sandstone

sandstone, ironstone, conglomerate

mudstone

mudstone, shale, seat-earth, dirt partings

COAL

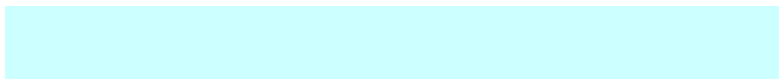
named coal band

...MB

named marine band (for correlation purposes)



Langsettian strata



Duckmantian
strata



Westphalian C
strata

incomplete

Marine Band marking upper/lower limit is absent

grey text

Overlap between borehole logs, or between data pages. These values were not used in calculation

All measurements in metres, measured from printed stratigraphic logs or taken directly from borehole logs where available

**Simplified lithological log of WEST CUMBRIA region, North
i - Duckmantian**

| | COAL | MUD | SAND |
|-----------------------------|-------------|------------|-------------|
| AEGIRANUM MB | | | |
| BRASSY mudstone | 1.50 | 4.00 | |
| COAL mudstone | 0.50 | 5.75 | |
| BLACK METAL mudstone | 0.25 | 11.25 | |
| sandstone | | | 13.75 |
| mudstone | | 3.25 | |
| FIRECLAY mudstone | 0.1 | 3.75 | |
| WHITE METAL mudstone | 1.7 | 20.00 | |
| SLATY mudstone | 0.70 | 28.75 | |
| 10-QUARTERS mudstone | 1.00 | 13.75 | |
| sandstone | | | 3.75 |
| mudstone | | 6.25 | |
| RATTLER mudstone | 0.5 | 5 | |
| BANNOCK BAND mudstone | 2.3 | 12.50 | |
| sandstone | | | 3.75 |
| mudstone | | 2.50 | |
| (mud partings) | | 0.20 | |
| MAIN COAL BAND sandstone | 3.70 | | 2.50 |
| mudstone | | 16.00 | |
| YARD mudstone | 0.90 | 16.50 | |
| VANDERBECKEI MB mudstone | | 6.25 | |
| LITTLE MAIN | 0.60 | 15.00 | |
| <i>TOTAL Duckmantian</i> | 13.15 | 155.70 | 23.75 |

All thicknesses given in metres

Based on data from Whitehaven area [~9700 1750] (Eastwood et al., 1931; Akhurst et al., 1997)

Simplified lithological log of WEST CUMBRIA region, North
ii - Langsettian

| | COAL | MUD | SAND |
|--------------------------|------|--------|-------|
| mudstone | | 16.50 | |
| VANDERBECKEI MB | | 6.25 | |
| mudstone | | 15.00 | |
| LITTLE MAIN | 0.60 | | |
| mudstone | | 1.80 | |
| EIGHTEEN-INCH | 1.25 | | |
| mudstone | | 5.75 | |
| LICKBANK | 0.60 | | |
| mudstone | | 7.50 | |
| sandstone | | | 8.75 |
| mudstone | | 6.25 | |
| 6-QUARTERS | 2.00 | | |
| mudstone | | 12.50 | |
| sandstone | | | 4.00 |
| mudstone | | 7.50 | |
| WYTHEMOOR PARROT | 0.10 | | |
| mudstone | | 3.75 | |
| UPPER 3/4 | 0.20 | | |
| mudstone | | 8.75 | |
| LOWER 3/4 | 0.20 | | |
| mudstone | | 32.50 | |
| ALBRIGHTON COAL | 0.20 | | |
| shales | | 10.00 | |
| HARRINGTON 4-FOOT | 0.30 | | |
| sandstone | | | 0.36 |
| HARRINGTON 4-FOOT | 0.40 | | |
| mudstone | | 5.75 | |
| SUBCRENATUM MB | | | |
| <i>TOTAL Langsettian</i> | 5.85 | 117.05 | 13.11 |

All thicknesses given in metres

Based on data from Whitehaven area [~9700 1750] (Eastwood et al., 1931; Akhurst et al., 1997)

Simplified lithological log of SOUTH DURHAM region, West

In order to create a full sequence, data from several borholed/collieries was combined
 Sections of overlap not used in subsequent calculations are shown in grey text.

i - Duckmantian

| <i>GH No.1 section</i> | COAL | MUD | SAND |
|---------------------------------|-------------|--------------|--------------|
| topsoil | | | |
| mudstone | | 1.83 | |
| MAIN | 1.98 | | |
| mudstone | | 7.52 | |
| MAUDLIN | 1.96 | | |
| mudstone | | 2.06 | |
| sandstone | | | 29.9 |
| mudstone | | 1.52 | |
| sandstone | | | 6.63 |
| DURHAM LOW MAIN | 1.57 | | |
| sandstone | | | 0.86 |
| mudstone | | 11.18 | |
| BRASS THILL | 0.91 | | |
| sandstone | | | 7.17 |
| mudstone | | 21.33 | |
| HUTTON | 1.24 | | |
| <i>QWP section</i> | COAL | MUD | SAND |
| mudstone | | 0.15 | |
| TOP BRASS THILL | 1.12 | | |
| mudstone | | 1.75 | |
| BOTTOM BRASS THILL | 0.38 | | |
| sandstone | | | 5.72 |
| mudstone | | 3.35 | |
| TOP HUTTON | 0.23 | | |
| mudstone | | 2.49 | |
| sandstone | | | 3.68 |
| mudstone | | 8.86 | |
| HUTTON | 1.17 | | |
| mudstone | | 0.76 | |
| sandstone | | | 4.27 |
| mudstone | | 2.59 | |
| RULER | 0.81 | | |
| mudstone | | 1.45 | |
| sandstone | | | 7.57 |
| mudstone | | 1.52 | |
| COAL | 0.08 | | |
| sandstone | | | 0.84 |
| mudstone | | 15.44 | |
| HARVEY MB | | | |
| COAL | 0.08 | | |
| mudstone | | 0.91 | |
| sandstone | | | 6.4 |
| mudstone | | 2.74 | |
| HARVEY | 0.66 | | |
| <i>TOTAL Duckmantian</i> | 8.71 | 60.57 | 59.47 |

Key to logs compiled from original BGS memoirs

sandstone

sandstone, ironstone, conglomerate

mudstone

mudstone, shale, seat-earth, dirt partings

COAL

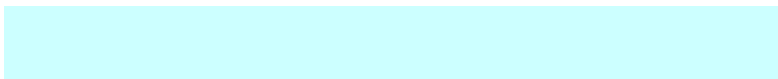
named coal band

...MB

named marine band (for correlation purposes)



Langsettian strata



Duckmantian strata



Westphalian C strata

incomplete

Marine Band marking upper/lower limit is absent

grey text

Overlap between borehole logs, or between data pages. These values were not used in calculation

All measurements in metres, measured from printed stratigraphic logs or taken directly from borehole logs where available

Simplified lithological log of SOUTH DURHAM region, West
ii - upper Langsettian

| <i>DP section</i> | COAL | MUD | SAND |
|--------------------------------|-------------|------------|-------------|
| mudstone | | 2.83 | |
| sandstone | | | 2.66 |
| mudstone | | 13.25 | |
| HARVEY MB | | | |
| COAL | 0.3 | | |
| sandstone | | | 3.49 |
| mudstone | | 1.21 | |
| sandstone | | | 2.88 |
| mudstone | | 4.71 | |
| HARVEY | 1.07 | | |
| sandstone | | | 2.91 |
| mudstone | | 3.18 | |
| sandstone | | | 0.76 |
| mudstone | | 10.97 | |
| TOP TILLEY | 0.25 | | |
| mudstone | | 0.81 | |
| sandstone | | | 1.04 |
| mudstone | | 14.12 | |
| BOTTOM TILLEY | 0.05 | | |
| mudstone | | 5.26 | |
| sandstone | | | 9.22 |
| mudstone | | 1.36 | |
| sandstone | | | 0.33 |
| BUSTY | 0.41 | | |
| mudstone | | 12.93 | |
| <i>GH No.98 section</i> | | | |
| COAL | | | |
| topsoil | | | |
| sandstone | | | 16.46 |
| BUSTY | 1.52 | | |
| mudstone | | 5.49 | |
| sandstone | | | 2.13 |
| 3-QUARTER | 0.46 | | |
| mudstone | | 2.90 | |
| sandstone | | | 2.74 |
| mudstone | | 7.32 | |
| BROCKWELL | 2.44 | | |
| mudstone | | 1.47 | |
| sandstone | | | 19.86 |
| mudstone | | 0.20 | |
| sandstone | | | 0.48 |
| VICTORIA MB | | 2.16 | |
| mudstone | | 0.76 | |
| VICTORIA RIDER | 0.18 | | |
| mudstone | | 0.91 | |
| VICTORIA | 0.41 | | |
| mudstone | | 0.70 | |

**Simplified lithological log of SOUTH DURHAM region, West
iii - lower Langsettian**

| <i>MH No.1 section</i> | COAL | MUD | SAND |
|--------------------------|------|-------|-------|
| mudstone | | 0.48 | |
| VICTORIA | 0.30 | | |
| mudstone | | 6.71 | |
| sandstone | | | 11.40 |
| TOP MARSHALL G | 0.10 | | |
| mudstone | | 1.52 | |
| sandstone | | | 5.74 |
| BOTTOM MARSHAL G | 0.48 | | |
| sandstone | | | 4.27 |
| mudstone | | 4.90 | |
| sandstone | | | 4.27 |
| GANISTER CLAY | 0.20 | | |
| mudstone | | 0.74 | |
| sandstone | | | 5.61 |
| mudstone | | 13.31 | |
| COAL | 0.10 | | |
| mudstone | | 2.44 | |
| sandstone | | | 7.11 |
| mudstone | | 0.28 | |
| sandstone | | | 0.25 |
| mudstone | | 1.63 | |
| KAYS LEA MB | | 1.75 | |
| COAL | 0.08 | | |
| mudstone | | 1.24 | |
| sandstone | | | 13.28 |
| QUARTERBURN MB | | 0.86 | |
| NAMURIAN | | | |
| <i>TOTAL Langsettian</i> | 7.64 | 98.21 | 97.77 |

All thicknesses given in metres

GH1 - Based on data from Gordon House Colliery [1334 2403] (Mills & Hull, 1976)

QWP - Based on data from Quarry West Pit [0982 2566] (Mills & Hull, 1976)

DP - Based on data from Diamond Pit [1094 2556] (Mills & Hull, 1976)

GH98 - Based on data from borehole 98 at Gordon House [1190 2497] (Mills & Hull, 1976)

MH1 - Based on data from borehole 1 at Moorhill [10272801] (Mills & Hull, 1976)

Simplified lithological log of SOUTH DURHAM region, East

In order to create a full sequence, data from several borholed/collieries was combined
Sections of overlap not used in subsequent calculations are shown in grey text.

i - upper Duckmantian

| <i>SBH No.5 section</i> | COAL | MUD | SAND |
|-------------------------|------|-------|-------|
| topsoil | | | |
| mudstone | | 2.79 | |
| sandstone | | | 0.28 |
| mudstone | | 1.32 | |
| sandstone | | | 10.31 |
| RYHOPE LITTLE | 0.74 | | |
| mudstone | | 0.23 | |
| sandstone | | | 3.35 |
| mudstone | | 10.54 | |
| COAL | 0.15 | | |
| <i>JP</i> | COAL | MUD | SAND |
| mudstone | | 9.75 | |
| COAL | 0.05 | | |
| sandstone | | | 1.57 |
| mudstone | | 6.76 | |
| COAL | 0.2 | | |
| sandstone | | | 5.08 |
| mudstone | | 5.54 | |
| TOP HIGH MAIN | 0.71 | | |
| mudstone | | 5.49 | |
| BOTTOM HIGH MAIN | 0.71 | | |
| sandstone | | | 1.52 |
| mudstone | | 0.53 | |
| sandstone | | | 1.47 |
| mudstone | | 3.48 | |
| COAL | 0.66 | | |
| sandstone | | | 0.69 |
| mudstone | | 10.72 | |
| METAL | 1.68 | | |
| sandstone | | | 0.71 |
| mudstone | | 1.27 | |
| 5-QUARTER | 1.63 | | |
| sandstone | | | 11.02 |
| COAL | 0.84 | | |
| sandstone | | | 1.83 |
| COAL | 0.2 | | |
| sandstone | | | 6.38 |
| mudstone | | 12.84 | |
| MAIN | 1.65 | | |
| sandstone | | | 1.26 |
| MAIN (2) | 1.32 | | |
| sandstone | | | 12.21 |
| mudstone | | 1.83 | |
| sandstone | | | 1.22 |

Simplified lithological log of SOUTH DURHAM region, East
ii - Duckmantian and A

| <i>...JP section contd</i> | COAL | MUD | SAND |
|----------------------------|-------|--------|-------|
| mudstone | | 12.34 | |
| BRASS THILL | 1.04 | | |
| sandstone | | | 1.55 |
| mudstone | | 22.07 | |
| BOTTOM HUTTON | 0.61 | | |
| mudstone | | 1.07 | |
| sandstone | | | 4.72 |
| mudstone | | 13.72 | |
| COAL | 0.08 | | |
| mudstone | | 2.13 | |
| sandstone | | | 2.74 |
| mudstone | | 0.61 | |
| COAL | 0.23 | | |
| sandstone | | | 5.49 |
| mudstone | | 7.32 | |
| HARVEY MB | | | |
| sandstone | | | 5.49 |
| mudstone | | 0.36 | |
| sandstone | | | 0.51 |
| COAL | 0.05 | | |
| sandstone | | | 1.22 |
| mudstone | | 8.66 | |
| sandstone | | | 3.63 |
| HARVEY | 1.24 | | |
| sandstone | | | 21.34 |
| TOP TILLEY | 0.09 | | |
| sandstone | | | 0.61 |
| mudstone | | 3.26 | |
| sandstone | | | 1.83 |
| BOTTOM TILLEY | 0.81 | | |
| <i>TOTAL Duckmantian</i> | 12.45 | 122.60 | 73.40 |

**Simplified lithological log of SOUTH DURHAM region, East
iii - lower Langsettian**

| <i>CP MC section</i> | COAL | MUD | SAND |
|--------------------------|-------------|------------|-------------|
| BOTTOM TILLEY | 0.71 | | |
| mudstone | | 0.46 | |
| mudstone | | 10.97 | |
| BUSTY | 1.98 | | |
| sandstone | | 17.07 | |
| COAL | 0.08 | | |
| sandstone | | 3.66 | |
| 3-QUARTER | 0.17 | | |
| mudstone | | 2.24 | |
| COAL | 0.2 | | |
| mudstone | | 7.01 | |
| sandstone | | | 13.93 |
| mudstone | | 1.22 | |
| BROCKWELL | 1.68 | | |
| sandstone | | | 2.73 |
| mudstone | | 9.8 | |
| sandstone | | | 4.01 |
| mudstone | | 10.8 | |
| COAL | 0.08 | | |
| mudstone | | 8.08 | |
| sandstone | | | 4.32 |
| mudstone | | 1.85 | |
| sandstone | | | 7.34 |
| mudstone | | 3.56 | |
| GANISTER CLAY | 0.24 | | |
| <i>LEB</i> | COAL | MUD | SAND |
| sandstone | | | 5.64 |
| mudstone | | 4.01 | |
| GANISTER CLAY | 0.41 | | |
| mudstone | | 15.65 | |
| sandstone | | | 4.37 |
| mudstone | | 3.76 | |
| sandstone | | | 3.66 |
| mudstone | | 11.53 | |
| sandstone | | | 3.05 |
| QUARTERBURN MB | | 0.15 | |
| NAMURIAN | | | |
| <i>TOTAL Langsettian</i> | 6.79 | 120.09 | 78.04 |

All thicknesses given in metres

SBH5 - Based on data from borehole 5 at Shawbrow Hill [2143 2712] (Mills & Hull, 1976)

JP - Based on data from Jane Pit [2218 2744] (Mills & Hull, 1976)

CPMC - Based on data from Charles Pit, Middridge Colliery [2503 2634] (Mills & Hull, 1976)

LEB - Based on data from borehole on Lutterington Estate [1875 2447] (Mills & Hull, 1976)

Simplified lithological log of N.W. TELFORD region, Deepfield Pit

i - Duckmantian

| | COAL | MUD | SAND | |
|--------------------------|------|-------|------|------------|
| UNCONFORMITY | | | | incomplete |
| shales (sandy) | | 16.80 | | |
| Ballstone ironst | | | 3.50 | |
| TOP COAL | 1.50 | | | |
| mudstone | | 0.33 | | |
| FOOT COAL | 0.51 | | | |
| mudstone | | 2.44 | | |
| Double rock, mudstone | | 1.44 | | |
| DOUBLE | 0.79 | | | |
| mudstone | | 0.94 | | |
| COAL | 0.38 | | | |
| YELLOWSTONE mud/clay | | 1.52 | | |
| YARD | 0.69 | | | |
| mudstone | | 1.88 | | |
| THIN COALS | 1.72 | | | |
| mudstone | | 1.70 | | |
| BIG FLINT | 2.00 | | | |
| sandstone | | | 4.90 | |
| mudstone | | 5.00 | | |
| PENNYSTONE MB | | | | incomplete |
| NEW MINE | 0.70 | | | |
| <i>TOTAL Duckmantian</i> | 7.59 | 32.05 | 8.40 | |

All thicknesses given in metres

Based on data from Deepfield Pit [6828 0638] (Hamblin & Coppack, 1995)

Key to logs compiled from original BGS memoirs

sandstone

sandstone, ironstone, conglomerate

mudstone

mudstone, shale, seat-earth, dirt partings

COAL

named coal band

...MB

named marine band (for correlation purposes)



Langsettian strata



Duckmantian strata



Westphalian C strata

incomplete

Marine Band marking upper/lower limit is absent

grey text

Overlap between borehole logs, or between data pages. These values were not used in calculation

All measurements in metres, measured from printed stratigraphic logs or taken directly from borehole logs where available

Simplified lithological log of N.W. TELFORD region, Deepfield Pit
ii - upper Langsetian

| | COAL | MUD | SAND |
|-------------------------|------|-------|-------|
| PENNYSTONE MB | | | |
| NEW MINE | 0.70 | | |
| mudstone | | 2.10 | |
| COAL | 0.33 | | |
| mudstone | | 3.70 | |
| CLUNCH | 0.40 | | |
| mudstone | | 5.00 | |
| TWO FOOT UPPER | 0.74 | | |
| mudstone | | 0.46 | |
| TWO FOOT LOWER | 0.32 | | |
| mudstone | | 4.50 | |
| BEST/RANDLE | 1.10 | | |
| mudstone | | 1.00 | |
| CLOD | 0.36 | | |
| mudstone | | 2.00 | |
| COAL | 0.20 | | |
| sandstone | | | 1.24 |
| LITTLE FLINT | 1.12 | | |
| mudstone | | 6.65 | |
| CRAWSTONE UPPER | 0.12 | | |
| mudstone | | 1.24 | |
| CRAWSTONE LOWER | 0.12 | | |
| mudstone | | 0.50 | |
| sandstone | | | 2.38 |
| LANCASHIRE LADIES | 0.30 | | |
| mudstone | | 7.25 | |
| sandstone | | | 1.80 |
| mudstone | | 4.75 | |
| Farewell sandstone | | | 16.00 |
| mudstone | | 0.50 | |
| sandstone | | | 1.80 |
| mudstone | | 1.90 | |
| COAL | 0.20 | | |
| mudstone | | 0.95 | |
| sandstone | | | 2.85 |
| WENLOCK shale | | | |
| <i>TOTAL Langsetian</i> | 6.01 | 42.50 | 26.07 |

All thicknesses given in metres

Based on data from Deepfield Pit [6828 0638] (Hamblin & Coppack, 1995)

Simplified lithological log of N.W. TELFORD region, Pit at Wombridge

| | COAL | MUD | SAND | |
|--------------------------|------|-------|-------|------------|
| mudstone | | 1.40 | | |
| sandstone | | | 11.00 | incomplete |
| FUNGOUS | 1.05 | | | |
| mudstone | | 0.76 | | |
| BLACKSTONE | 0.50 | | | |
| mudstone | | 1.44 | | |
| DEEP | 1.10 | | | |
| mudstone | | 1.03 | | |
| GUR | 0.65 | | | |
| mudstone | | 1.44 | | |
| sandstone | | | 0.95 | |
| mudstone | | 6.67 | | |
| sandstone | | | 1.80 | |
| mudstone | | 4.50 | | |
| TOP | 1.45 | | | |
| mudstone | | 1.67 | | |
| THREE QUARTER | 0.55 | | | |
| sandstone | | | 1.67 | |
| DOUBLE | 1.70 | | | |
| mudstone | | 3.00 | | |
| YARD | 1.20 | | | |
| mudstone | | 3.96 | | |
| sandstone | | | 3.05 | |
| mudstone | | 5.03 | | |
| BIG FLINT | 1.30 | | | |
| sandstone | | | 6.50 | |
| mudstone | | 7.77 | | |
| PENNYSTONE MB | | | | |
| NEW MINE | 1.83 | | | |
| mudstone | | | | |
| CLUNCH | 1.20 | | | |
| mudstone | | | | |
| TWO FOOT | 0.70 | | | |
| mudstone | | 3.70 | | |
| BEST | 0.50 | | | |
| mudstone | | 0.50 | | |
| CLOD/RANDLE | 1.52 | | | |
| mudstone | | 1.67 | | |
| sandstone | | | 3.67 | |
| LITTLE FLINT | 0.70 | | | |
| sandstone | | | 13.70 | incomplete |
| DINANTIAN limestone | | | | |
| <i>TOTAL Wespalian A</i> | 6.45 | 5.87 | 17.37 | |
| <i>TOTAL Duckmantian</i> | 9.50 | 36.51 | 13.97 | |

All thicknesses given in metres

Based on data from Wombridge Water Engine Pit [69204 12127] (Hamblin & Coppack, 1995)

Simplified lithological log of N.W. TELFORD region, Granville Colliery

| | COAL | MUD | SAND | |
|--------------------------|-------|-------|-------|------------|
| FUNGOUS | 1.12 | | | ? |
| mudstone | | 2.22 | | |
| BLACKSTONE | 0.40 | | | |
| mudstone | | 0.60 | | |
| ironstone | | | 2.21 | |
| DEEP | 1.38 | | | |
| mudstone | | 1.35 | | |
| GUR | 0.66 | | | |
| mudstone | | 1.33 | | |
| sandstone | | | 4.44 | |
| mudstone | | 12.13 | | |
| TOP | 1.39 | | | |
| mudstone | | 0.55 | | |
| sandstone | | | 3.33 | |
| THREE-QUARTER | 0.20 | | | |
| mudstone | | 1.44 | | |
| sandstone | | | 1.44 | |
| DOUBLE | 2.31 | | | |
| mudstone | | 2.78 | | |
| YARD | 1.07 | | | |
| mudstone | | 8.00 | | |
| UPPER BIG FLINT | 0.55 | | | |
| mudstone | | 3.33 | | |
| LOWER BIG FLINT | 1.11 | | | |
| mudstone | | 1.47 | | |
| sandstone | | | 1.37 | |
| PENNYSTONE MB? | | 8.33 | | |
| NEW MINE | 3.14 | | | |
| mudstone | | 0.66 | | |
| COAL | 1.02 | | | |
| upper clunch fireclays | | 0.30 | | |
| COAL | 0.10 | | | |
| fireclay | | 2.85 | | |
| TWO FOOT | 0.70 | | | |
| sandstone | | | 3.25 | |
| BEST | 0.30 | | | |
| mudstone | | 1.90 | | |
| RANDLE | 0.70 | | | |
| mudstone | | 0.50 | | |
| CLOD | 0.30 | | | |
| mudstone | | 1.42 | | |
| sandstone | | | 12.00 | |
| mudstone | | 1.10 | | |
| sandstone | | | 6.20 | |
| conglomerate | | | 6.50 | |
| DINANTIAN limestone | | | | incomplete |
| <hr/> | | | | |
| <i>TOTAL Langsettian</i> | 6.26 | 8.73 | 27.95 | |
| <i>TOTAL Duckmantian</i> | 10.19 | 32.98 | 12.79 | |

All thicknesses given in metres

Based on data from No.2 shaft, Granville Colliery [72547 12057] (Hamblin & Coppack, 1995)

Simplified lithological log of S.E. TELFORD region, Madeley Meadow Pit

| | COAL | MUD | SAND | |
|--------------------------|------|-------|-------|------------|
| UNCONFORMITY | | | | |
| mudstone | | 1.38 | | incomplete |
| TOP | 1.60 | | | |
| mudstone | | 0.40 | | |
| DOUBLE | 1.09 | | | |
| mudstone | | 2.42 | | |
| mudstone | | 20.80 | | |
| YARD | 0.92 | | | |
| mudstone | | 2.07 | | |
| WHITE FLAT | 0.22 | | | |
| mudstone | | 1.04 | | |
| BIG FLINT | 1.01 | | | incomplete |
| sandstone | | 5.52 | | |
| ironstone | | | 2.10 | |
| PENNYSTONE MB | | | | |
| NEW MINE | 0.38 | | | |
| sandstone | | | 5.30 | |
| VIGER | 0.50 | | | |
| sandstone | | | 6.16 | |
| TWO FOOT | 0.48 | | | |
| sandstone | | | 3.15 | |
| LITTLE GANEY | 0.15 | | | |
| sandstone | | | 2.06 | |
| MAIN GANEY | 0.41 | | | |
| mudstone | | 0.20 | | |
| sandstone | | | 5.01 | |
| mudstone | | 0.30 | | |
| BEST | 0.80 | | | |
| mudstone | | 1.16 | | |
| RANDLE | 0.95 | | | |
| mudstone | | 0.20 | | |
| CLOD | 0.70 | | | |
| mudstone | | 1.61 | | |
| sandstone | | | 3.40 | |
| LITTLE FLINT | 0.75 | | | |
| sandstone | | | | |
| ironstone | | | 0.50 | |
| CRAWSTONE | 0.25 | | | |
| sandstone | | | 5.30 | |
| LANCASHIRE LADIES | 1.00 | | | incomplete |
| UPPER LUDLOW SHALES | | | | |
| <i>TOTAL Langsettian</i> | 6.37 | 3.47 | 30.88 | |
| <i>TOTAL Duckmantian</i> | 4.84 | 33.63 | 2.10 | |

All thicknesses given in metres

Based on data from Madeley Meadow Pit [690 040] (Hamblin & Coppack, 1995)

Simplified lithological log of S.E. TELFORD region, Kemberton Pit

| | COAL | MUD | SAND | |
|--------------------------|------|-------|------|------------|
| UNCONFORMITY | | | | |
| mudstone | | 6.21 | | incomplete |
| TOP | 1.04 | | | |
| mudstone | | 0.20 | | |
| THREE-QUARTER | 0.22 | | | |
| mudstone | | 0.15 | | |
| DOUBLE | 1.09 | | | |
| mudstone | | 19.32 | | |
| sandstone | | | 2.07 | |
| mudstone | | 14.49 | | |
| BIG FLINT | 1.42 | | | |
| sandstone | | 4.50 | | incomplete |
| ironstone | | | 1.38 | |
| PENNYSTONE MB | | | | |
| NEW MINE | 0.40 | | | |
| mudstone | | 6.93 | | |
| VIGER | 0.80 | | | |
| mudstone | | 1.52 | | |
| COAL | 0.25 | | | |
| mudstone | | 3.08 | | |
| TWO FOOT | 0.51 | | | |
| mudstone | | 0.77 | | incomplete |
| LITTLE GANEY | 0.25 | | | |
| mudstone | | 3.08 | | |
| sandstone | | | 0.20 | |
| MAIN GANEY | | | | |
| mudstone | | 1.70 | | |
| BEST | 0.70 | | | |
| mudstone | | 0.30 | | |
| RANDLE | 0.95 | | | |
| mudstone | | 0.40 | | |
| CLOD | 0.25 | | | |
| mudstone | | 1.75 | | incomplete |
| sandstone | | | 6.90 | |
| LITTLE FLINT | 1.00 | | | |
| mudstone | | 0.80 | | |
| sandstone | | | 3.08 | |
| <i>TOTAL Langsettian</i> | 5.11 | 20.33 | 7.10 | |
| <i>TOTAL Duckmantian</i> | 3.77 | 44.87 | 3.45 | |

All thicknesses given in metres

Based on data from Kemberton Pit [71292 05569] (Hamblin & Coppack, 1995)

**Simplified lithological log of S.E. TELFORD region, Madeley Wood
No.2
i - Duckmantian**

| | COAL | MUD | SAND | |
|--------------------------|------|-------|-------|------------|
| UNCONFORMITY | | | | incomplete |
| mudstone | | 1.38 | | |
| sandstone | | | 0.90 | |
| mudstone | | 0.69 | | |
| sandstone | | | 0.50 | |
| mudstone | | 3.11 | | |
| sandstone | | | 3.11 | |
| mudstone | | 1.04 | | |
| sandstone | | | 0.70 | |
| mudstone | | 1.04 | | |
| COAL | 0.25 | | | |
| mudstone | | 1.04 | | |
| BLACKSTONE MB | | | 1.38 | |
| BLACKSTONE | 0.40 | | | |
| mudstone | | 2.07 | | |
| DEEP/GUR | 2.29 | | | |
| mudstone | | 13.11 | | |
| sandstone | | | 3.28 | |
| mudstone | | 5.87 | | |
| TOP | 1.40 | | | |
| mudstone | | 0.30 | | |
| FOOT | 0.39 | | | |
| mudstone | | | 2.07 | |
| sandstone | | 0.37 | | |
| THREE-QUARTER | 0.58 | | | |
| sandstone | | | 2.46 | |
| mudstone | | 0.30 | | |
| DOUBLE | 2.32 | | | |
| mudstone | | 1.73 | | |
| YARD | 1.21 | | | |
| mudstone | | 6.90 | | |
| UPPER BIG FLINT | 0.66 | | | |
| mudstone | | 3.45 | | |
| LOWER BIG FLINT | 0.31 | | | |
| mudstone | | 2.72 | | |
| PENNYSTONE MB | | | 5.91 | |
| NEW MINE | 0.66 | | | |
| <i>TOTAL Duckmantian</i> | 9.81 | 45.12 | 20.31 | |

All thicknesses given in metres
Based on data from borehole 2 at Madeley Wood [7311 0878] (Hamblin & Coppack, 1995)

Simplified lithological log of S.E. TELFORD region, Madeley Wood

No.2

ii - Langsettian

| | COAL | MUD | SAND | |
|--------------------------|------|-------|------|------------|
| PENNYSTONE MB | | | 5.91 | |
| NEW MINE | 0.66 | | | |
| mudstone | | 4.52 | | |
| sandstone | | | 3.08 | |
| mudstone | | 3.08 | | |
| VIGER | 1.09 | | | |
| mudstone | | 4.24 | | |
| COAL | 0.77 | | | |
| mudstone | | 1.16 | | |
| COAL | 1.16 | | | |
| mudstone | | 1.93 | | |
| COAL | 0.77 | | | |
| mudstone | | 1.54 | | |
| BEST | 0.25 | | | |
| mudstone | | 6.35 | | |
| RANDLE & CLOD | 2.24 | | | |
| mudstone | | 5.78 | | |
| COAL | 0.36 | | | |
| sandstone | | | 2.31 | |
| LITTLE FLINT | 0.75 | | | |
| sandstone | | | 6.16 | incomplete |
| <i>TOTAL Langsettian</i> | 8.05 | 28.60 | 5.39 | |

All thicknesses given in metres

Based on data from borehole 2 at Madeley Wood [7311 0878] (Hamblin & Coppack, 1995)

**Simplified lithological log of S. DERBYSHIRE region, Coalpit Lane
i - upper Duckmantian**

| | COAL | MUD | SAND |
|---------------|------|-------|------|
| AEGIRANUM MB | | | |
| P31 | 0.20 | | |
| mudstone | | 7.59 | |
| P33 | 0.30 | | |
| mudstone | | 1.04 | |
| P34 | 0.50 | | |
| mudstone | | 9.88 | |
| P37 | 0.70 | | |
| mudstone | | 3.12 | |
| P39 | 0.70 | | |
| mudstone | | 3.12 | |
| P40 | 0.20 | | |
| mudstone | | 1.04 | |
| COAL | 0.20 | | |
| sandstone | | | 1.04 |
| mudstone | | 6.76 | |
| P41 | 0.40 | | |
| mudstone | | 9.36 | |
| P42 | 0.20 | | |
| mudstone | | 5.72 | |
| P43 | 0.30 | | |
| mudstone | | 7.28 | |
| P44 | 0.10 | | |
| mudstone | | 6.24 | |
| UPPER KILBURN | | | |
| mudstone | 0.30 | 16.95 | |
| COAL | 0.50 | | |
| mudstone | | 6.24 | |
| sandstone | | | 1.08 |
| mudstone | | 8.32 | |
| sandstone | | | 1.04 |
| mudstone | | 8.84 | |
| COAL | 0.10 | | |
| mudstone | | 1.04 | |
| BLOCK | | | |
| mudstone | 0.20 | 1.04 | |
| sandstone | | | 1.56 |
| mudstone | | 4.68 | |
| YARD | | | |
| mudstone | 0.70 | 4.16 | |
| sandstone | | | 4.78 |
| mudstone | | 5.20 | |
| COAL | 0.30 | | |
| mudstone | | 6.24 | |
| FAULT | | | |
| COAL | 0.10 | | |

All thicknesses given in metres

Based on data from borehole at Coalpit Lane [2525 1494] (Worssam & Old, 1988)

Key to logs compiled from original BGS memoirs

sandstone

sandstone, ironstone, conglomerate

mudstone

mudstone, shale, seat-earth, dirt partings

COAL

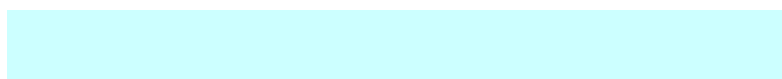
named coal band

...MB

named marine band (for correlation purposes)



Langsettian strata



Duckmantian
strata



Westphalian C
strata

incomplete

Marine Band marking upper/lower limit is absent

grey text

Overlap between borehole logs, or between data pages. These values were not used in calculation

All measurements in metres, measured from printed stratigraphic logs or taken directly from borehole logs where available

**Simplified lithological log of S. DERBYSHIRE region, Coalpit Lane
ii - upper Langsetian**

| | COAL | MUD | SAND |
|--------------------------|------|--------|-------|
| FAULT | | | |
| COAL | 0.10 | | |
| mudstone | | 3.12 | |
| LITTLE | 0.20 | | |
| mudstone | | 1.04 | |
| sandstone | | | 2.08 |
| mudstone | | 2.60 | |
| sandstone | | | 8.32 |
| mudstone | | 3.12 | |
| sandstone | | | 3.33 |
| mudstone | | 3.12 | |
| LITTLE KILBURN | 0.90 | | |
| mudstone | | 11.96 | |
| COAL | 0.50 | | |
| mudstone | | 2.08 | |
| COAL | 0.10 | | |
| mudstone | | 17.68 | |
| VANDERBECKEI MB | | | |
| MAIN RIDER | 0.60 | | |
| mudstone | | 25.18 | |
| MAIN | 2.60 | | |
| mudstone | | 1.43 | |
| UNDER | 0.20 | | |
| mudstone | | 0.95 | |
| COAL | 0.10 | | |
| mudstone | | 2.85 | |
| sandstone | | | 5.70 |
| mudstone | | 3.80 | |
| LITTLE WOODFIELD | 0.50 | | |
| mudstone | | 1.90 | |
| sandstone | | | 0.95 |
| mudstone | | 2.85 | |
| sandstone | | | 3.33 |
| mudstone | | 9.03 | |
| FAULT | | | |
| mudstone | | 6.65 | |
| WOODFIELD | 1.20 | | |
| <i>TOTAL Duckmantian</i> | 7.70 | 168.58 | 23.23 |

All thicknesses given in metres

Based on data from borehole at Coalpit Lane [2525 1494] (Worssam & Old, 1988)

**Simplified lithological log of S. DERBYSHIRE region, Coalpit Lane
iii - lower Langsettian**

| | COAL | MUD | SAND |
|--------------------------------------|------|--------|-------|
| FAULT | | | |
| mudstone | | 6.65 | |
| WOODFIELD | 1.20 | | |
| mudstone | | 1.43 | |
| sandstone | | | 0.95 |
| mudstone | | 5.70 | |
| STOCKINGS | 1.10 | | |
| mudstone | | 15.68 | |
| sandstone | | | 0.95 |
| EUREKA | 0.30 | | |
| mudstone | | 3.80 | |
| sandstone | | | 0.95 |
| FAULT | | | |
| mudstone | | 2.85 | |
| LOWER STANHOPE | 0.30 | | |
| mudstone | | 3.80 | |
| sandstone | | | 1.14 |
| mudstone | | 3.80 | |
| WELL | 0.60 | | |
| mudstone | | 6.18 | |
| TWELVE INCH | 0.20 | | |
| mudstone | | 1.43 | |
| sandstone | | | 1.14 |
| mudstone | | 1.90 | |
| sandstone | | | 1.14 |
| mudstone | | 8.55 | |
| CLOD | 0.40 | | |
| mudstone | | 2.85 | |
| sandstone | | | 23.51 |
| mudstone | | 5.70 | |
| KILBURN | 1.20 | | |
| Grange Wood below [2652 1547] | | | |
| mudstone | | 5.23 | |
| WINGFIELD FLAGS sst | | | 29.45 |
| mudstone | | 48.93 | |
| sandstone | | | 1.66 |
| mudstone | | 0.95 | |
| sandstone | | | 0.95 |
| mudstone | | 1.14 | |
| sandstone | | | 1.14 |
| mudstone | | 12.35 | |
| SUBCRENATUM MB | | | |
| <i>TOTAL Langsettian</i> | 9.30 | 186.91 | 72.96 |

All thicknesses given in metres

Based on data from borehole at Coalpit Lane [2525 1494] (Worssam & Old, 1988)

Simplified lithological log of S. DERBYSHIRE region, Hastings & Grey
i - upper Duckmantian

| | COAL | MUD | SAND |
|---------------|------|-------|------|
| AEGIRANUM MB | | | |
| P31 | 0.50 | | |
| mudstone | | 4.28 | |
| P32 | 0.20 | | |
| mudstone | | 0.71 | |
| P33 | 0.70 | | |
| mudstone | | 0.95 | |
| P34 | 0.40 | | |
| mudstone | | 4.28 | |
| P35-6 | 0.80 | | |
| mudstone | | 6.65 | |
| sandstone | | | 3.33 |
| mudstone | | 0.76 | |
| sandstone | | | 1.90 |
| mudstone | | 1.43 | |
| P39 | 0.80 | | |
| mudstone | | 1.90 | |
| P40 | 0.60 | | |
| mudstone | | 0.95 | |
| sandstone | | | 1.43 |
| mudstone | | 9.98 | |
| P41 | 0.40 | | |
| mudstone | | 10.45 | |
| ironstone | | | 0.71 |
| mudstone | | 1.52 | |
| P42 | 0.30 | | |
| mudstone | | 3.80 | |
| P43 | 0.20 | | |
| mudstone | | 9.50 | |
| P44 | 0.20 | | |
| mudstone | | 7.60 | |
| UPPER KILBURN | 1.00 | | |
| mudstone | | 4.75 | |
| sandstone | | | 3.33 |
| mudstone | | 7.60 | |
| COAL | 0.90 | | |
| mudstone | | 3.80 | |
| COAL | 0.50 | | |
| sandstone | | | 3.09 |
| mudstone | | 2.85 | |
| sandstone | | | 3.09 |
| mudstone | | 5.70 | |
| BLOCK | 1.20 | | |
| sandstone | | | 1.43 |
| mudstone | | 13.78 | |
| YARD | 0.50 | | |

All thicknesses given in metres

Based on data from Hastings & Grey Colliery [3199 1555] (Worssam & Old, 1988)

Simplified lithological log of S. DERBYSHIRE region, Hastings & Grey
ii - lower Duckmantian

| | COAL | MUD | SAND | |
|--------------------------|-------|--------|-------|------------|
| mudstone | | 13.78 | | |
| YARD | 0.50 | | | |
| mudstone | | 10.74 | | |
| TWO FOOT | 0.40 | | | |
| mudstone | | 9.50 | | |
| UPPER CANNEL | 0.40 | | | |
| mudstone | | 11.88 | | |
| sandstone | | | 4.51 | |
| mudstone | | 0.95 | | |
| sandstone | | | 3.33 | |
| mudstone | | 0.71 | | |
| LITTLE | 1.50 | | | |
| mudstone | | 3.80 | | |
| COAL | 0.20 | | | |
| mudstone | | 7.60 | | |
| LITTLE KILBURN | 0.80 | | | |
| mudstone | | 33.25 | | |
| RIDER | 0.90 | | | |
| mudstone | | 0.60 | | |
| COAL | 0.20 | | | |
| mudstone | | 0.60 | | |
| MAIN | 3.40 | | | incomplete |
| COAL | 0.20 | | | |
| <i>TOTAL Duckmantian</i> | 13.60 | 182.27 | 26.15 | |

All thicknesses given in metres

Based on data from Hastings & Grey Colliery [3199 1555] (Worssam & Old, 1988)

**Simplified lithological log of S. DERBYSHIRE region, Church Flats
i - Duckmantian**

| | COAL | MUD | SAND |
|--------------------------|------|-------|-------|
| AEGIRANUM MB | | | |
| P31 | 0.30 | | |
| ? | | | |
| UPPER KILBURN | 1.00 | | |
| sandstone | | | 0.95 |
| mudstone | | 9.98 | |
| COAL | 0.40 | | |
| mudstone | | 17.58 | |
| sandstone | | | 1.43 |
| mudstone | | 17.10 | |
| sandstone | | | 0.95 |
| mudstone | | 3.80 | |
| YARD | 0.20 | | |
| mudstone | | 7.60 | |
| COAL | 0.10 | | |
| mudstone | | 1.90 | |
| COAL | 0.20 | | |
| mudstone | | 0.95 | |
| sandstone | | | 3.80 |
| mudstone | | 0.50 | |
| COAL | 0.30 | | |
| mudstone | | 1.43 | |
| sandstone | | | 3.33 |
| mudstone | | 9.50 | |
| LITTLE | 0.50 | | |
| mudstone | | 7.60 | |
| sandstone | | | 2.38 |
| mudstone | | 2.85 | |
| LITTLE KILBURN | 0.20 | | |
| mudstone | | 4.28 | |
| sandstone | | | 0.95 |
| mudstone | | 2.85 | |
| sandstone | | | 1.00 |
| mudstone | | 0.95 | |
| ? | | | |
| fault | | | |
| <i>TOTAL Duckmantian</i> | 3.20 | 88.87 | 14.79 |

All thicknesses given in metres

Based on data from borehole at Church Flats [2605 1542] (Worssam & Old, 1988)

Simplified lithological log of S. DERBYSHIRE region, Church Flats
ii - Langsettian

| | COAL | MUD | SAND | |
|--------------------------|-------------|------------|-------------|------------|
| mudstone | | 0.95 | | |
| ? | | | | |
| fault | | | | |
| LOWER MAIN | 1.10 | | | |
| mudstone | | 21.85 | | |
| WOODFIELD | 1.20 | | | |
| mudstone | | 5.70 | | |
| STOCKINGS | 1.80 | | | |
| mudstone | | 4.28 | | |
| sandstone | | | 1.90 | |
| mudstone | | 2.85 | | |
| sandstone | | | 2.85 | |
| EUREKA | 0.90 | | | |
| mudstone | | 10.45 | | |
| JOYCES | 0.10 | | | |
| mudstone | | 4.75 | | |
| sandstone | | | 1.43 | |
| mudstone | | 0.50 | | |
| UPPER STANHOPE | 0.30 | | | |
| mudstone | | 10.45 | | |
| LOWER STANHOPE | 0.30 | | | |
| mudstone | | 9.50 | | |
| WELL | 0.90 | | | |
| mudstone | | 8.08 | | |
| sandstone | | | 0.48 | |
| mudstone | | 13.78 | | |
| sandstone | | | 1.90 | |
| mudstone | | 0.86 | | |
| sandstone | | | 1.90 | |
| mudstone | | 7.60 | | |
| KILBURN | 0.70 | | | incomplete |
| <i>TOTAL Langsettian</i> | 7.30 | 100.65 | 10.46 | |

All thicknesses given in metres

Based on data from borehole at Church Flats [2605 1542] (Worssam & Old, 1988)

**Simplified lithological log of LEICESTERSHIRE region, Bagworth
No.1**

| | COAL | MUD | SAND | |
|--------------------------|-------|-------|-------|------------|
| mudstone | | | | incomplete |
| COAL | 0.40 | | | |
| mudstone | | 11.25 | | |
| sandstone | | | 3.15 | |
| EXCELSIOR | 1.90 | | | |
| mudstone | | 12.60 | | |
| MINGE | 2.10 | | | |
| mudstone | | 9.90 | | |
| FIVE FEET + SPLENT | 2.90 | | | |
| mudstone | | 13.95 | | |
| THREE QUARTERS | 0.50 | | | |
| mudstone | | 4.05 | | |
| NEW MAIN RIDER | 0.50 | | | |
| sandstone | | | 1.80 | |
| mudstone | | 2.70 | | |
| NEW MAIN | 1.20 | | | |
| mudstone | | 11.25 | | |
| SWANNINGTON YARD | 0.90 | | | |
| mudstone | | 4.50 | | |
| sandstone | | | 6.30 | |
| mudstone | | 0.90 | | |
| CANNEL= LITTLE KILBURN | 1.10 | | | |
| mudstone | | 11.70 | | |
| VANDERBECKEI MB ? | | | | |
| HIGH MAIN | 1.60 | | | |
| mudstone | | 9.90 | | |
| sandstone | | | 0.90 | |
| mudstone | | 2.25 | | |
| UPPER MAIN | 1.80 | | | |
| mudstone | | 14.40 | | |
| UPPER LOUNT | 0.60 | | | |
| mudstone | | 4.05 | | |
| sandstone | | | 1.57 | |
| mudstone | | 11.70 | | |
| MIDDLE LOUNT | 1.40 | | | |
| mudstone | | 0.90 | | |
| sandstone | | | 4.05 | |
| mudstone | | 1.80 | | |
| COAL | 1.00 | | | |
| mudstone | | 2.70 | | |
| NETHER LOUNT | 0.90 | | | |
| mudstone | | 6.30 | | |
| sandstone | | | 2.70 | |
| mudstone | | 8.10 | | |
| YARD | 1.10 | | | |
| mudstone | | 2.70 | | |
| LOWER MAIN | 2.50 | | | incomplete |
| <i>TOTAL Langsettian</i> | 10.90 | 64.80 | 9.22 | |
| <i>TOTAL Duckmantian</i> | 11.50 | 82.80 | 11.25 | |

All thicknesses given in metres

Based on data from Bagworth Colliery [4440 0864] (Worssam & Old, 1988)

Key to logs compiled from original BGS memoirs

sandstone

sandstone, ironstone, conglomerate

mudstone

mudstone, shale, seat-earth, dirt partings

COAL

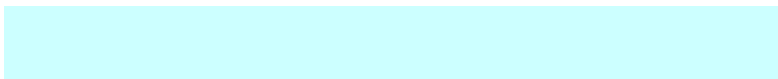
named coal band

...MB

named marine band (for correlation purposes)



Langsettian strata



Duckmantian strata



Westphalian C strata

incomplete

Marine Band marking upper/lower limit is absent

grey text

Overlap between borehole logs, or between data pages. These values were not used in calculation

All measurements in metres, measured from printed stratigraphic logs or taken directly from borehole logs where available

Simplified lithological log of LEICESTERSHIRE region, S.Leicester
No.2
i - Duckmantian

| | COAL | MUD | SAND | |
|--------------------------|--------------|--------------|--------------|------------|
| dolerite | | | | |
| sandstone | | | 0.90 | |
| mudstone | | 3.15 | | |
| COAL | 0.20 | | | incomplete |
| mudstone | | 3.15 | | |
| sandstone | | | 1.35 | |
| mudstone | | 6.30 | | |
| COAL | 1.80 | | | |
| mudstone | | 0.45 | | |
| EXCELSIOR | 0.50 | | | |
| mudstone | | 9.90 | | |
| MINGE | 2.30 | | | |
| mudstone | | 10.80 | | |
| FIVE FEET | 1.70 | | | |
| mudstone | | 1.35 | | |
| SPLENT | 1.20 | | | |
| mudstone | | 1.35 | | |
| sandstone | | | 0.90 | |
| mudstone | | 4.50 | | |
| sandstone | | | 1.08 | |
| mudstone | | 4.50 | | |
| THREE QUARTERS | 0.30 | | | |
| mudstone | | 13.05 | | |
| NEW MAIN | 1.60 | | | |
| mudstone | | 6.30 | | |
| sandstone | | | 4.05 | |
| mudstone | | 5.40 | | |
| sandstone | | | 7.65 | |
| mudstone | | 5.85 | | |
| sandstone | | | 0.90 | |
| mudstone | | 3.15 | | |
| CANNEL = LITTLE KILBURN | 1.20 | | | |
| mudstone | | 2.34 | | |
| sandstone | | | 0.54 | |
| mudstone | | 1.35 | | |
| sandstone | | | 0.54 | |
| mudstone | | 5.94 | | |
| VANDERBECKEI MB ? | | | | |
| COAL | 0.20 | | | |
| TOTAL Duckmantian | 10.80 | 85.68 | 17.01 | |

All thicknesses given in metres

Based on data from South Leicester Colliery [4312 1181] (Worssam & Old, 1988)

Simplified lithological log of LEICESTERSHIRE region, S.Leicester

No.2

ii - Langsettian

| | COAL | MUD | SAND | |
|--------------------------|-------|-------|------|------------|
| mudstone | | 5.94 | | |
| VANDERBECKEI MB ? | | | | |
| COAL | 0.20 | | | |
| mudstone | | 1.80 | | |
| HIGH MAIN | 1.00 | | | |
| mudstone | | 3.15 | | |
| sandstone | | | 0.90 | |
| mudstone | | 3.60 | | |
| sandstone | | | 2.25 | |
| mudstone | | 1.80 | | |
| UPPER MAIN | 1.80 | | | |
| mudstone | | 0.25 | | |
| SMOILE | 0.90 | | | |
| mudstone | | 2.70 | | |
| COAL | 0.30 | | | |
| mudstone | | 5.40 | | |
| sandstone | | | 1.08 | |
| mudstone | | 5.40 | | |
| UPPER LOUNT | 1.10 | | | |
| mudstone | | 7.20 | | |
| MIDDLE LOUNT | 1.50 | | | |
| mudstone | | 2.07 | | |
| NETHER LOUNT | 1.90 | | | |
| mudstone | | 6.30 | | |
| YARD | 1.00 | | | |
| mudstone | | 0.70 | | |
| COAL | 0.13 | | | |
| mudstone | | 11.45 | | |
| LOWER MAIN | 2.20 | | | |
| mudstone | | 4.95 | | |
| COAL | 0.40 | | | |
| mudstone | | 1.80 | | |
| sandstone | | | 2.25 | |
| mudstone | | 4.95 | | |
| CLOD | 0.50 | | | |
| mudstone | | | | incomplete |
| <i>TOTAL Langsettian</i> | 12.43 | 63.52 | 6.48 | |

All thicknesses given in metres

Based on data from South Leicester Colliery [4312 1181] (Worssam & Old, 1988)

Simplified lithological log of LEICESTERSHIRE region, Ellistown shaft

i - Duckmantian

| | COAL | MUD | SAND | |
|--------------------------|-------|-------|-------|------------|
| mudstone | | 5.40 | | |
| dolerite | | | 7.74 | |
| mudstone | | 6.30 | | incomplete |
| COAL | 0.50 | | | |
| mudstone | | 0.45 | | |
| sandstone | | | 3.60 | |
| mudstone | | 0.90 | | |
| sandstone | | | 1.13 | |
| mudstone | | 6.75 | | |
| COAL | 1.50 | | | |
| mudstone | | 0.90 | | |
| EXCELSIOR | 0.80 | | | |
| mudstone | | 2.70 | | |
| sandstone | | | 1.80 | |
| mudstone | | 4.05 | | |
| MINGE | 2.00 | | | |
| mudstone | | 14.40 | | |
| FIVE FEET | 1.50 | | | |
| SPLINT | 1.60 | | | |
| mudstone | | 12.60 | | |
| THREE QUARTERS | 0.50 | | | |
| mudstone | | 7.20 | | |
| NEW MAIN RIDER | 0.30 | | | |
| mudstone | | 6.30 | | |
| NEW MAIN | 1.50 | | | |
| mudstone | | 6.30 | | |
| sandstone | | | 1.17 | |
| mudstone | | 4.05 | | |
| SWANNINGTON YARD | 1.00 | | | |
| mudstone | | 2.70 | | |
| sandstone | | | 3.15 | |
| mudstone | | 3.60 | | |
| CANNEL = LITTLE KILBURN | 1.10 | | | |
| mudstone | | 8.55 | | |
| VANDERBECKEI MB ? | | | | |
| HIGH MAIN | 1.70 | | | |
| <i>TOTAL Duckmantian</i> | 12.30 | 87.75 | 10.85 | |

All thicknesses given in metres

Based on data from Ellistown Colliery [4385 1033] (Worssam & Old, 1988)

Simplified lithological log of LEICESTERSHIRE region, Ellistown shaft

ii - Langsettian

| | COAL | MUD | SAND |
|--------------------------|-------|--------|-------|
| mudstone | | 8.55 | |
| VANDERBECKEI MB ? | | | |
| HIGH MAIN | 1.70 | | |
| mudstone | | 2.70 | |
| sandstone | | | 2.97 |
| mudstone | | 4.05 | |
| UPPER MAIN | 1.70 | | |
| mudstone | | 2.70 | |
| SMOILE | 0.40 | | |
| mudstone | | 17.10 | |
| COAL | 1.10 | | |
| mudstone | | 0.90 | |
| UPPER LOUNT | 0.70 | | |
| mudstone | | 5.85 | |
| MIDDLE LOUNT | 0.90 | | |
| mudstone | | 3.60 | |
| NETHER LOUNT | 1.40 | | |
| mudstone | | 17.10 | |
| YARD | 1.10 | | |
| mudstone | | 1.80 | |
| LOWER MAIN | 2.80 | | |
| mudstone | | 7.20 | |
| sandstone | | | 2.07 |
| mudstone | | 5.40 | |
| CLOD | 0.30 | | |
| mudstone | | 18.02 | |
| WINGFIELD FLAGS sandst | | | 36.00 |
| mudstone | | 9.10 | |
| sandstone | | | 4.10 |
| mudstone | | 8.19 | |
| sandstone | | | 2.70 |
| mudstone | | 1.35 | |
| sandstone | | | 1.35 |
| mudstone | | 3.60 | |
| sandstone | | | 5.40 |
| mudstone | | 24.30 | |
| sandstone | | | 1.08 |
| mudstone | | 3.60 | |
| SUBCRENATUM MB | | | |
| <i>TOTAL Langsettian</i> | 12.10 | 136.56 | 55.67 |

All thicknesses given in metres

Based on data from Ellistown Colliery [4385 1033] (Worssam & Old, 1988)

**Simplified lithological log of WARWICKSHIRE region, Pooley Hall
No.1**

i - Duckmantian

| | COAL | MUD | SAND | |
|--------------------------|-------|-------|-------|------------|
| mudstone | | | | incomplete |
| FOUR FEET | 1.40 | | | |
| mudstone | | 8.10 | | |
| sandstone | | | 6.75 | |
| THIN RIDER | 0.50 | | | |
| mudstone | | 1.35 | | |
| sandstone | | | 1.80 | |
| mudstone | | 7.65 | | |
| COAL | 0.20 | | | |
| mudstone | | 15.75 | | |
| TWO YARD | 1.20 | | | |
| mudstone | | 1.35 | | |
| TWO YARD rptd | 0.90 | | | |
| mudstone | | 2.70 | | |
| sandstone | | | 2.25 | |
| mudstone | | 1.80 | | |
| COAL | 0.20 | | | |
| mudstone | | 0.50 | | |
| BARE | 0.30 | | | |
| mudstone | | 8.10 | | |
| COAL | 0.50 | | | |
| mudstone | | 1.35 | | |
| RYDER | 0.80 | | | |
| mudstone | | 1.35 | | |
| sandstone | | | 4.50 | |
| mudstone | | 2.70 | | |
| COAL | 0.30 | | | |
| mudstone | | 0.90 | | |
| ELL | 0.20 | | | |
| mudstone | | 8.10 | | |
| THREE QUARTER | 0.30 | | | |
| mudstone | | 4.50 | | |
| NINE FEET | 1.10 | | | |
| mudstone | | 4.95 | | |
| sandstone | | | 5.40 | |
| HIGH MAIN | 0.60 | | | |
| mudstone | | 6.30 | | |
| SMITHY | 0.70 | | | |
| mudstone | | 1.71 | | |
| VANDERBECKEI MB | 2.70 | | | |
| THIN | 0.80 | | | |
| <i>TOTAL Duckmantian</i> | 11.90 | 79.16 | 20.70 | |

All thicknesses given in metres

Based on data from shaft No.1 at Pooley Hall Colliery[2582 0331] (Worssam & Old, 1988)

Key to logs compiled from original BGS memoirs

sandstone

sandstone, ironstone, conglomerate

mudstone

mudstone, shale, seat-earth, dirt partings

COAL

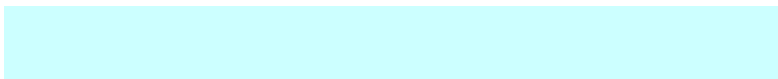
named coal band

...MB

named marine band (for correlation purposes)



Langsettian strata



Duckmantian strata



Westphalian C strata

incomplete

Marine Band marking upper/lower limit is absent

grey text

Overlap between borehole logs, or between data pages. These values were not used in calculation

All measurements in metres, measured from printed stratigraphic logs or taken directly from borehole logs where available

**Simplified lithological log of WARWICKSHIRE region, Birch Coppice
No.4**

| | COAL | MUD | SAND | |
|--------------------------|------|-------|-------|------------|
| COAL/AEGIRANUM MB | 0.13 | | | |
| mudstone | | 8.55 | | |
| HALF YARD | 0.60 | | | |
| mudstone | | 1.35 | | |
| sandstone | | | 3.60 | |
| mudstone | | 8.10 | | |
| FOUR FEET | 1.30 | | | |
| mudstone | | 8.10 | | |
| THIN RIDER | 1.10 | | | |
| mudstone | | 2.70 | | |
| TWO YARD/BARE | 1.80 | | | |
| mudstone | | 7.20 | | |
| RYDER | 0.80 | | | |
| mudstone | | 1.80 | | |
| sandstone | | | 4.95 | |
| mudstone | | 1.35 | | |
| ELL | 0.40 | | | |
| mudstone | | 5.85 | | |
| THREE QUARTER | 0.10 | | | |
| mudstone | | 5.40 | | |
| NINE FEET | 0.40 | | | |
| mudstone | | 8.55 | | |
| sandstone | | | 3.60 | |
| mudstone | | 0.90 | | |
| HIGH MAIN | 0.60 | | | |
| mudstone | | 4.95 | | |
| SMITHY | 0.50 | | | |
| mudstone | | 14.40 | | |
| VANDERBECKEI MB | | | | |
| THIN | 0.70 | | | |
| mudstone | | 0.90 | | |
| SEVEN FEET | 1.80 | | | |
| mudstone | | 12.60 | | |
| TRENCHER | 0.50 | | | |
| mudstone | | 9.00 | | |
| DEEP RIDER | 1.40 | | | |
| mudstone | | 1.10 | | |
| DOUBLE | 0.90 | | | |
| mudstone | | 6.30 | | |
| TOP BENCH | 0.90 | | | |
| mudstone | | 15.30 | | |
| BENCH THIN | 0.40 | | | |
| mudstone | | 0.90 | | |
| BENCH | 1.20 | | | |
| mudstone | | 5.40 | | |
| sandstone | | | 2.25 | |
| mudstone | | 4.00 | | |
| STUMPY | 0.30 | | | |
| mudstone | | 10.80 | | |
| STANHOPE | 0.30 | | | |
| mudstone | | | | incomplete |
| <i>TOTAL Langsettian</i> | 8.40 | 66.30 | 2.25 | |
| <i>TOTAL Duckmantian</i> | 7.60 | 79.20 | 12.15 | |

All thicknesses given in metres

Based on data from shaft No.4 at Birch Coppice Colliery[2500 0180] (Worsam & Old, 1988)

**Simplified lithological log of WARWICKSHIRE region, Pooley Hall
No.1**

ii - Langsettian

| | COAL | MUD | SAND | |
|--------------------------|------|-------|------|------------|
| VANDERBECKEI MB | 2.70 | | | |
| THIN | 0.80 | | | |
| mudstone | | 0.90 | | |
| SEVEN FEET | 1.10 | | | |
| mudstone | | 14.85 | | |
| TRENCHER | 0.60 | | | |
| mudstone | | 2.70 | | |
| sandstone | | | 3.15 | |
| mudstone | | 2.70 | | |
| DEEP RIDER | 1.10 | | | |
| mudstone | | 10.00 | | |
| COAL | 0.70 | | | |
| mudstone | | 1.00 | | |
| DOUBLE | 1.40 | | | |
| mudstone | | 1.80 | | |
| sandstone | | | 1.40 | |
| mudstone | | 9.00 | | |
| TOP BENCH | 1.50 | | | |
| mudstone | | 2.70 | | |
| BENCH | 1.40 | | | |
| mudstone | | 12.00 | | |
| STUMPY | 0.30 | | | |
| mudstone | | | | incomplete |
| <i>TOTAL Langsettian</i> | 8.90 | 57.65 | 4.55 | |

All thicknesses given in metres

Based on data from shaft No.1 at Pooley Hall Colliery[2582 0331] (Worssam & Old, 1988)

**Simplified lithological log of WARWICKSHIRE region, Birch Coppice
No.2**

| | COAL | MUD | SAND | |
|--------------------------|-------|-------|-------|------------|
| COAL/AEGIRANUM MB | 0.20 | | | |
| mudstone | | 4.95 | | |
| HALF YARD | 1.30 | | | |
| mudstone | | 6.75 | | |
| sandstone | | | 6.75 | |
| FOUR FEET | 1.30 | | | |
| mudstone | | 8.10 | | |
| THIN RIDER | 0.80 | | | |
| mudstone | | 8.10 | | |
| TWO YARD/BARE | 2.30 | | | |
| mudstone | | 2.70 | | |
| RYDER | 2.10 | | | |
| mudstone | | 6.30 | | |
| ELL | 0.60 | | | |
| sandstone | | | 0.90 | |
| mudstone | | 4.50 | | |
| THREE QUARTER | 0.40 | | | |
| mudstone | | 3.60 | | |
| NINE FEET | 1.30 | | | |
| mudstone | | 4.95 | | |
| sandstone | | | 1.80 | |
| mudstone | | 4.50 | | |
| HIGH MAIN | 0.70 | | | |
| mudstone | | 4.50 | | |
| SMITHY | 0.60 | | | |
| mudstone | | 9.00 | | |
| sandstone | | | 1.80 | |
| VANDERBECKEI MB | | | | |
| THIN | 0.70 | | | |
| mudstone | | 0.90 | | |
| SEVEN FEET | 1.80 | | | |
| mudstone | | 9.00 | | |
| TRENCHER | 0.50 | | | |
| mudstone | | 10.35 | | |
| sandstone | | | 9.90 | |
| DEEP RIDER | 1.00 | | | |
| mudstone | | 0.90 | | |
| DOUBLE | 1.40 | | | |
| mudstone | | 8.10 | | |
| TOP BENCH | 1.70 | | | |
| mudstone | | 3.60 | | |
| BENCH THIN | 0.90 | | | |
| mudstone | | 0.90 | | |
| BENCH | 1.40 | | | |
| mudstone | | 8.55 | | |
| STUMPY | 0.50 | | | |
| mudstone | | 10.35 | | |
| STANHOPE | 0.60 | | | |
| mudstone | | 5.85 | | |
| sandstone | | | 2.70 | incomplete |
| mudstone | | | | |
| <i>TOTAL Langsettian</i> | 10.50 | 58.50 | 12.60 | |
| <i>TOTAL Duckmantian</i> | 11.40 | 67.95 | 11.25 | |

All thicknesses given in metres

Based on data from shaft No.2 at Birch Coppice Colliery[2526 0007] (Worsam & Old, 1988)

**Simplified lithological log of WARWICKSHIRE region, Baddesley
No.3**

i - Duckmantian

| | COAL | MUD | SAND |
|--------------------------|------|-------|-------|
| AEGIRANUM MB | | | |
| mudstone | | 0.90 | |
| COAL | | | |
| mudstone | | 0.75 | |
| COAL | | | |
| mudstone | | 1.80 | |
| sandstone | | | 1.80 |
| mudstone | | 8.55 | |
| sandstone | | | 1.80 |
| mudstone | | 1.35 | |
| sandstone | | | 1.35 |
| mudstone | | 1.80 | |
| sandstone | | | 1.80 |
| mudstone | | 0.90 | |
| sandstone | | | 6.30 |
| mudstone | | 6.30 | |
| FOUR FEET | 1.30 | | |
| mudstone | | 14.40 | |
| THIN RIDER/TWO YARD | 2.60 | | |
| mudstone | | 0.20 | |
| BARE | 1.70 | | |
| mudstone | | 5.40 | |
| RYDER | 0.40 | | |
| mudstone | | 3.60 | |
| ELL | 0.30 | | |
| mudstone | | 3.15 | |
| COAL | 0.40 | | |
| mudstone | | 1.35 | |
| NINE FEET | 1.40 | | |
| mudstone | | 5.85 | |
| HIGH MAIN | 0.60 | | |
| mudstone | | 0.60 | |
| sandstone | | | 1.10 |
| mudstone | | 3.00 | |
| SMITHY | 0.80 | | |
| mudstone | | 1.80 | |
| sandstone | | | 3.00 |
| mudstone | | 8.55 | |
| VANDERBECKEI MB | | | |
| THIN | 0.70 | | |
| <i>TOTAL Duckmantian</i> | 9.50 | 70.25 | 17.15 |

All thicknesses given in metres

Based on data from shaft No.3 at BaddesleyColliery [2790 9709] (Worssam & Old, 1988)

**Simplified lithological log of WARWICKSHIRE region, Baddesley
No.3**

ii - Langsettian

| | COAL | MUD | SAND | |
|--------------------------|-------|--------|------|------------|
| VANDERBECKEI MB | | | | |
| THIN | 0.70 | | | |
| mudstone | | 4.50 | | |
| SEVEN FEET | 1.80 | | | |
| mudstone | | 4.50 | | |
| TRENCHER | 0.90 | | | |
| mudstone | | 10.80 | | |
| DEEP RIDER | 1.10 | | | |
| mudstone | | 3.15 | | |
| DOUBLE | 0.90 | | | |
| mudstone | | 11.70 | | |
| TOP BENCH | 1.80 | | | |
| mudstone | | 0.60 | | |
| BENCH | 3.80 | | | |
| mudstone (faulted zone) | | 30.60 | | |
| STUMPY | 0.50 | | | |
| mudstone | | 15.30 | | |
| STANHOPE | 0.70 | | | |
| mudstone | | 4.05 | | |
| sandstone | | | 1.80 | |
| mudstone (faulted zone) | | 23.40 | | |
| mudstone | | 15.30 | | |
| COAL | | | | |
| mudstone | | 6.30 | | incomplete |
| sandstone | | | 1.80 | |
| mudstone | | 11.70 | | |
| CAMBRIAN | | | | |
| <i>TOTAL Langsettian</i> | 12.20 | 130.20 | 1.80 | |

All thicknesses given in metres

Based on data from shaft No.3 at Baddesley Colliery [2790 9709] (Worssam & Old, 1988)

**Simplified lithological log of WARWICKSHIRE region, Wood End
i - Duckmantian**

| | COAL | MUD | SAND | |
|--------------------------|------|-------|-------|------------|
| COAL/AEGIRANUM MB | 0.30 | | | |
| mudstone | | 5.40 | | |
| HALF YARD | 1.10 | | | |
| mudstone | | 5.40 | | |
| COAL | 0.30 | | | |
| mudstone | | 7.20 | | |
| FOUR FEET | 0.60 | | | |
| mudstone | | 1.80 | | |
| sandstone | | | 1.80 | |
| mudstone | | 7.20 | | |
| THIN RIDER | 0.80 | | | |
| mudstone | | 7.20 | | |
| TWO YARD | 1.80 | | | |
| mudstone | | 0.45 | | |
| BARE | 0.70 | | | |
| mudstone | | 0.45 | | |
| RYDER | 0.70 | | | |
| mudstone | | 4.95 | | |
| ELL | 0.70 | | | |
| mudstone | | 2.70 | | |
| THREE QUARTER | 0.40 | | | |
| mudstone | | 3.00 | | |
| NINE FEET | 0.70 | | | |
| mudstone | | 11.70 | | |
| sandstone | | | 1.80 | |
| mudstone | | 3.60 | | |
| sandstone | | | 2.25 | |
| mudstone | | 5.40 | | |
| sandstone | | | 2.70 | |
| SMITHY | 0.70 | | | |
| mudstone | | 2.70 | | |
| sandstone | | | 2.25 | |
| mudstone | | 9.90 | | |
| VANDERBECKEI MB | | | | |
| THIN | 0.50 | | | |
| mudstone | | 0.45 | | |
| SEVEN FEET | 1.80 | | | |
| mudstone | | 5.85 | | |
| DEEP RIDER | 0.20 | | | |
| mudstone | | 4.50 | | |
| DOUBLE | 0.90 | | | |
| mudstone | | 10.80 | | |
| TOP BENCH | 1.40 | | | |
| BENCH | 2.00 | | | |
| mudstone | | 8.10 | | |
| STUMPY | 0.50 | | | |
| mudstone | | 9.00 | | |
| STANHOPE | 0.40 | | | |
| mudstone | | 1.80 | | incomplete |
| sandstone | | | 0.90 | |
| mudstone | | | | |
| <i>TOTAL Langsettian</i> | 7.70 | 40.50 | 0.00 | |
| <i>TOTAL Duckmantian</i> | 8.50 | 79.05 | 10.80 | |

All thicknesses given in metres

Based on data from shaft at Wood End Colliery[2510 9829] (Worssam & Old, 1988)

Sand de-compaction & accumulation, SOUTH WALES region

i - de-compaction of sand

| | RATIO | Swansea | Neath | Cynon | Taff | AVERAGE |
|--------------------|---------|---------|-------|-------|-------|---------|
| Langsettian | | | | | | |
| <i>sandstone</i> | | | | | | |
| | | 31.25 | 45.00 | 45.00 | 30.00 | 37.81 |
| Model-SR (20m) | 1:1 | 31.25 | 45.00 | 45.00 | 30.00 | 37.81 |
| Model-SR (2km) | 1.09:1 | 34.06 | 49.05 | 49.05 | 32.70 | 41.22 |
| Model-CG (2km) | 1.429:1 | 44.66 | 64.31 | 64.31 | 42.87 | 54.03 |
| Duckmantian | | | | | | |
| <i>sandstone</i> | | | | | | |
| | | 32.50 | 10.00 | 16.00 | 0.00 | 14.63 |
| Model-SR (20m) | 1:1 | 32.50 | 10.00 | 16.00 | 0.00 | 14.63 |
| Model-SR (2km) | 1.09:1 | 35.43 | 10.90 | 17.44 | 0.00 | 15.94 |
| Model-CG (2km) | 1.429:1 | 46.44 | 14.29 | 22.86 | 0.00 | 20.90 |

Thickness given in metres, correct to nearest cm.

Model-SR based on Sheldon & Retallack (2001); Model-CG based on Gluyas et al. (1997)

ii - accumulation time for sand

| | RATE | Swansea | Neath | Cynon | Taff | AVERAGE |
|--------------------|------|---------|-------|-------|-------|---------|
| Langsettian | | | | | | |
| slow | 0.5 | 68125 | 98100 | 98100 | 65400 | 82431 |
| fast | 1 | 34063 | 49050 | 49050 | 32700 | 41216 |
| Duckmantian | | | | | | |
| slow | 0.5 | 70850 | 21800 | 34880 | 0 | 31883 |
| fast | 1 | 35425 | 10900 | 17440 | 0 | 15941 |

Accumulation rate given in mm/yr. Time in years, correct to nearest whole year.

Base on thickness values obtained from Model-SR (2km burial)

Sand de-compaction & accumulation, WARWICKSHIRE region

i - de-compaction of sand

| | RATIO | Pooley Hall 1 | BirchCoppice 4 | BirchCoppice 2 | Wood End | Baddesley 3 | AVERAGE |
|------------------------------|--------------|----------------------|-----------------------|-----------------------|-----------------|--------------------|----------------|
| Langsettian sandstone | | 4.55 | 2.25 | 12.60 | 0.00 | 1.80 | 4.24 |
| Model-SR (20m) | 1:1 | 4.55 | 2.25 | 12.60 | 0.00 | 1.80 | 4.24 |
| Model-SR (2km) | 1.09:1 | 4.96 | 2.45 | 13.73 | 0.00 | 1.96 | 4.62 |
| Model-CG (2km) | 1.429:1 | 6.50 | 3.22 | 18.01 | 0.00 | 2.57 | 6.06 |
| Duckmantian sandstone | | 20.70 | 12.15 | 11.25 | 10.80 | 17.15 | 14.41 |
| Model-SR (20m) | 1:1 | 20.70 | 12.15 | 11.25 | 10.80 | 17.15 | 14.41 |
| Model-SR (2km) | 1.09:1 | 22.56 | 13.24 | 12.26 | 11.77 | 18.69 | 15.71 |
| Model-CG (2km) | 1.429:1 | 29.58 | 17.36 | 16.08 | 15.43 | 24.51 | 20.59 |

Thickness given in metres, correct to nearest cm.

Model-SR based on Sheldon & Retallack (2001); Model-CG based on Gluyas et al. (1997)

ii - accumulation time for sand

| | RATE | Pooley Hall 1 | BirchCoppice 4 | BirchCoppice 2 | Wood End | Baddesley 3 | AVERAGE |
|--------------------|-------------|----------------------|-----------------------|-----------------------|-----------------|--------------------|----------------|
| Langsettian | | | | | | | |
| slow | 0.5 | 9919 | 4905 | 27468 | 0 | 3924 | 9243 |
| fast | 1 | 4960 | 2453 | 13734 | 0 | 1962 | 4622 |
| Duckmantian | | | | | | | |
| slow | 0.5 | 45126 | 26487 | 24525 | 23544 | 37387 | 31414 |
| fast | 1 | 22563 | 13244 | 12263 | 11772 | 18694 | 15707 |

Accumulation rate given in mm/yr. Time in years, correct to nearest whole year.

Base on thickness values obtained from Model-SR (2km burial)

Sand de-compaction & accumulation, LEICESTERSHIRE region

i - de-compaction of sand

| | RATIO | Whitwick 6 | S Leicester 2 | Ellistown | Bagworth 1 | AVERAGE |
|--------------------|--------------|-------------------|----------------------|------------------|-------------------|----------------|
| Langsettian | | | | | | |
| <i>sandstone</i> | | | | | | |
| Model-SR (20m) | 1:1 | 19.17 | 6.48 | 55.67 | 9.22 | 22.64 |
| Model-SR (2km) | 1.09:1 | 20.90 | 7.06 | 60.68 | 10.05 | 24.67 |
| Model-CG (2km) | 1.429:1 | 27.39 | 9.26 | 79.55 | 13.18 | 32.35 |
| Duckmantian | | | | | | |
| <i>sandstone</i> | | | | | | |
| Model-SR (20m) | 1:1 | 19.17 | 6.48 | 55.67 | 9.22 | 22.64 |
| Model-SR (2km) | 1.09:1 | 20.90 | 7.06 | 60.68 | 10.05 | 24.67 |
| Model-CG (2km) | 1.429:1 | 27.39 | 9.26 | 79.55 | 13.18 | 32.35 |

Thickness given in metres, correct to nearest cm.

Model-SR based on Sheldon & Retallack (2001); Model-CG based on Gluyas et al. (1997)

ii - accumulation time for sand

| | RATE | Whitwick 6 | S Leicester 2 | Ellistown | Bagworth 1 | AVERAGE |
|--------------------|-------------|-------------------|----------------------|------------------|-------------------|----------------|
| Langsettian | | | | | | |
| slow | 0.5 | 41791 | 14126 | 121361 | 20100 | 49344 |
| fast | 1 | 20895 | 7063 | 60680 | 10050 | 24672 |
| Duckmantian | | | | | | |
| slow | 0.5 | 41791 | 14126 | 121361 | 20100 | 49344 |
| fast | 1 | 20895 | 7063 | 60680 | 10050 | 24672 |

Accumulation rate given in mm/yr. Time in years, correct to nearest whole year.

Base on thickness values obtained from Model-SR (2km burial)

Sand de-compaction & accumulation, SOUTH DERBYSHIRE region

i - de-compaction of sand

| | RATIO | Coalpit Lane | Hasting&Grey | Church Flats | AVERAGE |
|--------------------|---------|--------------|--------------|--------------|---------|
| Langsettian | | | | | |
| <i>sandstone</i> | | | | | |
| | | 72.96 | | 10.46 | 41.71 |
| Model-SR (20m) | 1:1 | 72.96 | | 10.46 | 41.71 |
| Model-SR (2km) | 1.09:1 | 79.53 | | 11.40 | 45.46 |
| Model-CG (2km) | 1.429:1 | 104.26 | | 14.95 | 59.60 |
| Duckmantian | | | | | |
| <i>sandstone</i> | | | | | |
| | | 23.23 | 26.15 | 14.79 | 21.39 |
| Model-SR (20m) | 1:1 | 23.23 | 26.15 | 14.79 | 21.39 |
| Model-SR (2km) | 1.09:1 | 25.32 | 28.50 | 16.12 | 23.32 |
| Model-CG (2km) | 1.429:1 | 33.20 | 37.37 | 21.13 | 30.57 |

Thickness given in metres, correct to nearest cm.

Model-SR based on Sheldon & Retallack (2001); Model-CG based on Gluyas et al. (1997)

ii - accumulation time for sand

| | RATE | Coalpit Lane | Hasting&Grey | Church Flats | AVERAGE |
|--------------------|------|--------------|--------------|--------------|---------|
| Langsettian | | | | | |
| slow | 0.5 | 159053 | | 22803 | 90928 |
| fast | 1 | 79526 | | 11401 | 45464 |
| Duckmantian | | | | | |
| slow | 0.5 | 50641 | 57007 | 32242 | 46630 |
| fast | 1 | 25321 | 28504 | 16121 | 23315 |

Accumulation rate given in mm/yr. Time in years, correct to nearest whole year.

Base on thickness values obtained from Model-SR (2km burial)

Sand de-compaction & accumulation, TELFORD SE region

i - de-compaction of sand

| | RATIO | MadleyMeadow | Kemberton Pits | Madley Wood 2 | Lilleshall 5 | AVERAGE |
|--------------------|--------------|---------------------|-----------------------|----------------------|---------------------|----------------|
| Langsettian | | | | | | |
| <i>sandstone</i> | | | | | | |
| Model-SR (20m) | 1:1 | 30.88 | 7.10 | 5.39 | 23.70 | 16.77 |
| Model-SR (2km) | 1.09:1 | 33.66 | 7.74 | 5.88 | 25.83 | 18.28 |
| Model-CG (2km) | 1.429:1 | 44.13 | 10.15 | 7.70 | 33.87 | 23.96 |
| Duckmantian | | | | | | |
| <i>sandstone</i> | | | | | | |
| Model-SR (20m) | 1:1 | 2.10 | 3.45 | 20.31 | 22.89 | 12.19 |
| Model-SR (2km) | 1.09:1 | 2.29 | 3.76 | 22.14 | 24.95 | 13.28 |
| Model-CG (2km) | 1.429:1 | 3.00 | 4.93 | 29.02 | 32.71 | 17.42 |

Thickness given in metres, correct to nearest cm.

Model-SR based on Sheldon & Retallack (2001); Model-CG based on Gluyas et al. (1997)

ii - accumulation time for sand

| | RATE | MadleyMeadow | Kemberton Pits | Madley Wood 2 | Lilleshall 5 | AVERAGE |
|--------------------|-------------|---------------------|-----------------------|----------------------|---------------------|----------------|
| Langsettian | | | | | | |
| slow | 0.5 | 67318 | 15478 | 11750 | 51666 | 36553 |
| fast | 1 | 33659 | 7739 | 5875 | 25833 | 18277 |
| Duckmantian | | | | | | |
| slow | 0.5 | 4578 | 7521 | 44276 | 49900 | 26569 |
| fast | 1 | 2289 | 3761 | 22138 | 24950 | 13284 |

Accumulation rate given in mm/yr. Time in years, correct to nearest whole year.

Base on thickness values obtained from Model-SR (2km burial)

Sand de-compaction & accumulation, TELFORD NW region

i - de-compaction of sand

| | RATIO | Deepfield | WmbgeW | Granville2 | AVERAGE |
|------------------------------|--------------|------------------|---------------|-------------------|----------------|
| Langsettian sandstone | | | | | |
| | | 26.07 | 17.37 | 27.95 | 23.80 |
| Model-SR (20m) | 1:1 | 26.07 | 17.37 | 27.95 | 23.80 |
| Model-SR (2km) | 1.09:1 | 28.42 | 18.93 | 30.47 | 25.94 |
| Model-CG (2km) | 1.429:1 | 37.25 | 24.82 | 39.94 | 34.01 |
| Duckmantian sandstone | | | | | |
| | | 8.40 | 13.97 | 12.79 | 11.72 |
| Model-SR (20m) | 1:1 | 8.40 | 13.97 | 12.79 | 11.72 |
| Model-SR (2km) | 1.09:1 | 9.16 | 15.23 | 13.94 | 12.77 |
| Model-CG (2km) | 1.429:1 | 12.00 | 19.96 | 18.28 | 16.75 |

Thickness given in metres, correct to nearest cm.

Model-SR based on Sheldon & Retallack (2001); Model-CG based on Gluyas et al. (1997)

ii - accumulation time for sand

| | RATE | Deepfield | WmbgeW | Granville2 | AVERAGE |
|--------------------|-------------|------------------|---------------|-------------------|----------------|
| Langsettian | | | | | |
| slow | 0.5 | 56833 | 37867 | 60931 | 51877 |
| fast | 1 | 28416 | 18933 | 30466 | 25938 |
| Duckmantian | | | | | |
| slow | 0.5 | 18312 | 30455 | 27882 | 25550 |
| fast | 1 | 9156 | 15227 | 13941 | 12775 |

Accumulation rate given in mm/yr. Time in years, correct to nearest whole year.

Base on thickness values obtained from Model-SR (2km burial)

Sand de-compaction & accumulation, SOUTH DURHAM region

i - de-compaction of sand

| | RATIO | west | east | AVERAGE |
|--------------------|--------------|-------------|-------------|----------------|
| Langsettian | | | | |
| <i>sandstone</i> | | | | |
| | | 97.77 | 78.04 | 87.91 |
| Model-SR (20m) | 1:1 | 97.77 | 78.04 | 87.91 |
| Model-SR (2km) | 1.09:1 | 106.57 | 85.06 | 95.82 |
| Model-CG (2km) | 1.429:1 | 139.71 | 111.52 | 125.62 |
| Duckmantian | | | | |
| <i>sandstone</i> | | | | |
| | | 59.47 | 73.40 | 66.44 |
| Model-SR (20m) | 1:1 | 59.47 | 73.40 | 66.44 |
| Model-SR (2km) | 1.09:1 | 64.82 | 80.01 | 72.41 |
| Model-CG (2km) | 1.429:1 | 84.98 | 104.89 | 94.94 |

Thickness given in metres, correct to nearest cm.

Model-SR based on Sheldon & Retallack (2001); Model-CG based on Gluyas et al. (1997)

ii - accumulation time for sand

| | RATE | west | east | AVERAGE |
|--------------------|-------------|-------------|-------------|----------------|
| Langsettian | | | | |
| slow | 0.5 | 213139 | 170127 | 191633 |
| fast | 1 | 106569 | 85064 | 95816 |
| Duckmantian | | | | |
| slow | 0.5 | 129645 | 160012 | 144828 |
| fast | 1 | 64822 | 80006 | 72414 |

Accumulation rate given in mm/yr. Time in years, correct to nearest whole year.

Base on thickness values obtained from Model-SR (2km burial)

Sand de-compaction & accumulation, WEST CUMBRIA region

i - de-compaction of sand

| | RATIO | south | north | AVERAGE |
|--------------------|--------------|--------------|--------------|----------------|
| Langsettian | | | | |
| <i>sandstone</i> | | | | |
| | | 77.00 | 13.11 | 45.06 |
| Model-SR (20m) | 1:1 | 77.00 | 13.11 | 45.06 |
| Model-SR (2km) | 1.09:1 | 83.93 | 14.29 | 49.11 |
| Model-CG (2km) | 1.429:1 | 110.03 | 18.73 | 64.38 |
| Duckmantian | | | | |
| <i>sandstone</i> | | | | |
| | | 91.25 | 23.75 | 57.50 |
| Model-SR (20m) | 1:1 | 91.25 | 23.75 | 57.50 |
| Model-SR (2km) | 1.09:1 | 99.46 | 25.89 | 62.68 |
| Model-CG (2km) | 1.429:1 | 130.40 | 33.94 | 82.17 |

Thickness given in metres, correct to nearest cm.

Model-SR based on Sheldon & Retallack (2001); Model-CG based on Gluyas et al. (1997)

ii - accumulation time for sand

| | RATE | south | north | AVERAGE |
|--------------------|-------------|--------------|--------------|----------------|
| Langsettian | | | | |
| slow | 0.5 | 167860 | 28580 | 98220 |
| fast | 1 | 83930 | 14290 | 49110 |
| Duckmantian | | | | |
| slow | 0.5 | 198925 | 51775 | 125350 |
| fast | 1 | 99463 | 25888 | 62675 |

Accumulation rate given in mm/yr. Time in years, correct to nearest whole year.

Base on thickness values obtained from Model-SR (2km burial)

Mud de-compaction & accumulation, SOUTH WALES region

i - de-compaction of mud

| | RATIO | Swansea | Neath | Cynon | Taff | AVERAGE |
|--------------------|--------------|----------------|---------------|---------------|---------------|----------------|
| Langsettian | | | | | | |
| <i>mudstone</i> | | <i>172.80</i> | <i>149.55</i> | <i>136.60</i> | <i>114.10</i> | <i>143.26</i> |
| Model-SR (20m) | 1.002:1 | 173.15 | 149.85 | 136.87 | 114.33 | 143.55 |
| Model-SR (2km) | 1.16:1 | 200.45 | 173.48 | 158.46 | 132.36 | 166.18 |
| Model-CG (2km) | 3.226:1 | 557.45 | 482.45 | 440.67 | 368.09 | 462.16 |
| Duckmantian | | | | | | |
| <i>mudstone</i> | | <i>129.25</i> | <i>90.20</i> | <i>86.75</i> | <i>72.25</i> | <i>94.61</i> |
| Model-SR (20m) | 1.002:1 | 129.51 | 90.38 | 86.92 | 72.39 | 94.80 |
| Model-SR (2km) | 1.16:1 | 149.93 | 104.63 | 100.63 | 83.81 | 109.75 |
| Model-CG (2km) | 3.226:1 | 416.96 | 290.99 | 279.86 | 233.08 | 305.22 |

Thickness given in metres, correct to nearest cm.

Model-SR based on Sheldon & Retallack (2001); Model-CG based on Gluyas et al. (1997)

ii - accumulation time for mud

| | RATE | Swansea | Neath | Cynon | Taff | AVERAGE |
|--------------------|-------------|----------------|--------------|--------------|-------------|----------------|
| Langsettian | | | | | | |
| slow | 0.5 | 400896 | 346956 | 316912 | 264712 | 332369 |
| fast | 1 | 200448 | 173478 | 158456 | 132356 | 166185 |
| Duckmantian | | | | | | |
| slow | 0.5 | 299860 | 209264 | 201260 | 167620 | 219501 |
| fast | 1 | 149930 | 104632 | 100630 | 83810 | 109751 |

Accumulation rate given in mm/yr. Time in years, correct to nearest whole year.

Base on thickness values obtained from Model-SR (2km burial)

Mud de-compaction & accumulation, WARWICKSHIRE region

i - de-compaction of mud

| | RATIO | Pooley Hall 1 | BirchCoppice 4 | BirchCoppice 2 | Wood End | Baddesley 3 | AVERAGE |
|--------------------|--------------|----------------------|-----------------------|-----------------------|-----------------|--------------------|----------------|
| Langsettian | | | | | | | |
| <i>mudstone</i> | | 57.65 | 66.30 | 58.50 | 40.50 | 130.20 | 70.63 |
| Model-SR (20m) | 1.002:1 | 57.77 | 66.43 | 58.62 | 40.58 | 130.46 | 70.77 |
| Model-SR (2km) | 1.16:1 | 66.87 | 76.91 | 67.86 | 46.98 | 151.03 | 81.93 |
| Model-CG (2km) | 3.226:1 | 185.98 | 213.88 | 188.72 | 130.65 | 420.03 | 227.85 |
| Duckmantian | | | | | | | |
| <i>mudstone</i> | | 79.16 | 79.20 | 67.95 | 79.05 | 70.25 | 75.12 |
| Model-SR (20m) | 1.002:1 | 79.32 | 79.36 | 68.09 | 79.21 | 70.39 | 75.27 |
| Model-SR (2km) | 1.16:1 | 91.83 | 91.87 | 78.82 | 91.70 | 81.49 | 87.14 |
| Model-CG (2km) | 3.226:1 | 255.37 | 255.50 | 219.21 | 255.02 | 226.63 | 242.34 |

Thickness given in metres, correct to nearest cm.

Model-SR based on Sheldon & Retallack (2001); Model-CG based on Gluyas et al. (1997)

ii - accumulation time for mud

| | RATE | Pooley Hall 1 | BirchCoppice 4 | BirchCoppice 2 | Wood End | Baddesley 3 | AVERAGE |
|--------------------|-------------|----------------------|-----------------------|-----------------------|-----------------|--------------------|----------------|
| Langsettian | | | | | | | |
| slow | 0.5 | 133748 | 153816 | 135720 | 93960 | 302064 | 163862 |
| fast | 1 | 66874 | 76908 | 67860 | 46980 | 151032 | 81931 |
| Duckmantian | | | | | | | |
| slow | 0.5 | 183651 | 183744 | 157644 | 183396 | 162980 | 174283 |
| fast | 1 | 91826 | 91872 | 78822 | 91698 | 81490 | 87142 |

Accumulation rate given in mm/yr. Time in years, correct to nearest whole year.

Base on thickness values obtained from Model-SR (2km burial)

Mud de-compaction & accumulation, LEICESTERSHIRE region

i - de-compaction of mud

| | RATIO | Whitwick 6 | S Leicester 2 | Ellistown | Bagworth 1 | AVERAGE |
|--------------------|--------------|-------------------|----------------------|------------------|-------------------|----------------|
| Langsettian | | | | | | |
| <i>mudstone</i> | | 57.61 | 63.52 | 136.56 | 64.80 | 80.62 |
| Model-SR (20m) | 1.002:1 | 57.73 | 63.65 | 136.83 | 64.93 | 80.78 |
| Model-SR (2km) | 1.16:1 | 66.83 | 73.68 | 158.41 | 75.17 | 93.52 |
| Model-CG (2km) | 3.226:1 | 185.85 | 204.92 | 440.54 | 209.04 | 260.09 |
| Duckmantian | | | | | | |
| <i>mudstone</i> | | 86.13 | 85.68 | 87.75 | 82.80 | 85.59 |
| Model-SR (20m) | 1.002:1 | 86.30 | 85.85 | 87.93 | 82.97 | 85.76 |
| Model-SR (2km) | 1.16:1 | 99.91 | 99.39 | 101.79 | 96.05 | 99.28 |
| Model-CG (2km) | 3.226:1 | 277.86 | 276.40 | 283.08 | 267.11 | 276.11 |

Thickness given in metres, correct to nearest cm.

Model-SR based on Sheldon & Retallack (2001); Model-CG based on Gluyas et al. (1997)

ii - accumulation time for mud

| | RATE | Whitwick 6 | S Leicester 2 | Ellistown | Bagworth 1 | AVERAGE |
|--------------------|-------------|-------------------|----------------------|------------------|-------------------|----------------|
| Langsettian | | | | | | |
| slow | 0.5 | 133655 | 147366 | 316819 | 150336 | 187044 |
| fast | 1 | 66828 | 73683 | 158410 | 75168 | 93522 |
| Duckmantian | | | | | | |
| slow | 0.5 | 199822 | 198778 | 203580 | 192096 | 198569 |
| fast | 1 | 99911 | 99389 | 101790 | 96048 | 99284 |

Accumulation rate given in mm/yr. Time in years, correct to nearest whole year.

Base on thickness values obtained from Model-SR (2km burial)

Mud de-compaction & accumulation, SOUTH DERBYSHIRE region

i - de-compaction of mud

| | RATIO | Coalpit Lane | Hasting&Grey | Church Flats | AVERAGE |
|--------------------|--------------|---------------------|-------------------------|---------------------|----------------|
| Langsettian | | | | | |
| <i>mudstone</i> | | <i>186.91</i> | | <i>100.65</i> | <i>143.78</i> |
| Model-SR (20m) | 1.002:1 | 187.28 | | 100.85 | 144.07 |
| Model-SR (2km) | 1.16:1 | 216.82 | | 116.75 | 166.78 |
| Model-CG (2km) | 3.226:1 | 602.97 | | 324.70 | 463.83 |
| Duckmantian | | | | | |
| <i>mudstone</i> | | <i>168.58</i> | <i>182.27</i> | <i>88.87</i> | <i>146.57</i> |
| Model-SR (20m) | 1.002:1 | 168.92 | 182.63 | 89.05 | 146.87 |
| Model-SR (2km) | 1.16:1 | 195.55 | 211.43 | 103.09 | 170.03 |
| Model-CG (2km) | 3.226:1 | 543.84 | 588.00 | 286.69 | 472.85 |

Thickness given in metres, correct to nearest cm.

Model-SR based on Sheldon & Retallack (2001); Model-CG based on Gluyas et al. (1997)

ii - accumulation time for mud

| | RATE | Coalpit Lane | Hasting&Grey | Church Flats | AVERAGE |
|--------------------|-------------|---------------------|-------------------------|---------------------|----------------|
| Langsettian | | | | | |
| slow | 0.5 | 433631 | | 233508 | 333570 |
| fast | 1 | 216816 | | 116754 | 166785 |
| Duckmantian | | | | | |
| slow | 0.5 | 391106 | 422866 | 206178 | 340050 |
| fast | 1 | 195553 | 211433 | 103089 | 170025 |

Accumulation rate given in mm/yr. Time in years, correct to nearest whole year.

Base on thickness values obtained from Model-SR (2km burial)

Mud de-compaction & accumulation, TELFORD SE region

i - de-compaction of mud

| | RATIO | MadleyMeadow | Kemberton Pits | Madley Wood 2 | Lilleshall 5 | AVERAGE |
|--------------------|--------------|---------------------|-----------------------|----------------------|---------------------|----------------|
| Langsettian | | | | | | |
| <i>mudstone</i> | | | | | | |
| Model-SR (20m) | 1.002:1 | 3.48 | 20.37 | 28.66 | 50.03 | 25.63 |
| Model-SR (2km) | 1.16:1 | 4.03 | 23.58 | 33.18 | 57.92 | 29.68 |
| Model-CG (2km) | 3.226:1 | 11.19 | 65.58 | 92.26 | 161.07 | 82.53 |
| Duckmantian | | | | | | |
| <i>mudstone</i> | | | | | | |
| Model-SR (20m) | 1.002:1 | 33.70 | 44.96 | 45.21 | 58.31 | 45.54 |
| Model-SR (2km) | 1.16:1 | 39.01 | 52.05 | 52.34 | 67.50 | 52.72 |
| Model-CG (2km) | 3.226:1 | 108.49 | 144.75 | 145.56 | 187.72 | 146.63 |

Thickness given in metres, correct to nearest cm.

Model-SR based on Sheldon & Retallack (2001); Model-CG based on Gluyas et al. (1997)

ii - accumulation time for mud

| | RATE | MadleyMeadow | Kemberton Pits | Madley Wood 2 | Lilleshall 5 | AVERAGE |
|--------------------|-------------|---------------------|-----------------------|----------------------|---------------------|----------------|
| Langsettian | | | | | | |
| slow | 0.5 | 8050 | 47166 | 66352 | 115838 | 59351 |
| fast | 1 | 4025 | 23583 | 33176 | 57919 | 29676 |
| Duckmantian | | | | | | |
| slow | 0.5 | 78022 | 104098 | 104678 | 135001 | 105450 |
| fast | 1 | 39011 | 52049 | 52339 | 67500 | 52725 |

Accumulation rate given in mm/yr. Time in years, correct to nearest whole year.

Base on thickness values obtained from Model-SR (2km burial)

Mud de-compaction & accumulation, TELFORD NW region

i - de-compaction of mud

| | RATIO | Deepfield | WmbgeW | Granville2 | AVERAGE |
|--------------------|--------------|------------------|---------------|-------------------|----------------|
| Langsettian | | | | | |
| <i>mudstone</i> | | | | | |
| | | 42.50 | 5.87 | 8.73 | 19.03 |
| Model-SR (20m) | 1.002:1 | 42.59 | 5.88 | 8.75 | 19.07 |
| Model-SR (2km) | 1.16:1 | 49.30 | 6.81 | 10.13 | 22.08 |
| Model-CG (2km) | 3.226:1 | 137.11 | 18.94 | 28.16 | 61.40 |
| Duckmantian | | | | | |
| <i>mudstone</i> | | | | | |
| | | 32.05 | 36.51 | 41.31 | 36.62 |
| Model-SR (20m) | 1.002:1 | 32.11 | 36.58 | 41.39 | 36.70 |
| Model-SR (2km) | 1.16:1 | 37.18 | 42.35 | 47.92 | 42.48 |
| Model-CG (2km) | 3.226:1 | 103.39 | 117.78 | 133.27 | 118.15 |

Thickness given in metres, correct to nearest cm.

Model-SR based on Sheldon & Retallack (2001); Model-CG based on Gluyas et al. (1997)

ii - accumulation time for mud

| | RATE | Deepfield | WmbgeW | Granville2 | AVERAGE |
|--------------------|-------------|------------------|---------------|-------------------|----------------|
| Langsettian | | | | | |
| slow | 0.5 | 98600 | 13618 | 20254 | 44157 |
| fast | 1 | 49300 | 6809 | 10127 | 22079 |
| Duckmantian | | | | | |
| slow | 0.5 | 74356 | 84703 | 95839 | 84966 |
| fast | 1 | 37178 | 42352 | 47920 | 42483 |

Accumulation rate given in mm/yr. Time in years, correct to nearest whole year.

Base on thickness values obtained from Model-SR (2km burial)

Mud de-compaction & accumulation, SOUTH DURHAM region

i - de-compaction of mud

| | RATIO | west | east | AVERAGE |
|--------------------|--------------|-------------|-------------|----------------|
| Langsettian | | | | |
| <i>mudstone</i> | | | | |
| | | 98.21 | 120.10 | 109.16 |
| Model-SR (20m) | 1.002:1 | 98.41 | 120.34 | 109.37 |
| Model-SR (2km) | 1.16:1 | 113.92 | 139.32 | 126.62 |
| Model-CG (2km) | 3.226:1 | 316.83 | 387.44 | 352.13 |
| Duckmantian | | | | |
| <i>mudstone</i> | | | | |
| | | 60.57 | 122.60 | 91.59 |
| Model-SR (20m) | 1.002:1 | 60.69 | 122.85 | 91.77 |
| Model-SR (2km) | 1.16:1 | 70.26 | 142.22 | 106.24 |
| Model-CG (2km) | 3.226:1 | 195.40 | 395.51 | 295.45 |

Thickness given in metres, correct to nearest cm.

Model-SR based on Sheldon & Retallack (2001); Model-CG based on Gluyas et al. (1997)

ii - accumulation time for mud

| | RATE | west | east | AVERAGE |
|--------------------|-------------|-------------|-------------|----------------|
| Langsettian | | | | |
| slow | 0.5 | 227847 | 278632 | 253240 |
| fast | 1 | 113924 | 139316 | 126620 |
| Duckmantian | | | | |
| slow | 0.5 | 140522 | 284432 | 212477 |
| fast | 1 | 70261 | 142216 | 106239 |

Accumulation rate given in mm/yr. Time in years, correct to nearest whole year.

Base on thickness values obtained from Model-SR (2km burial)

Mud de-compaction & accumulation, WEST CUMBRIA region

i - de-compaction of mud

| | RATIO | south | north | AVERAGE |
|--------------------|--------------|--------------|--------------|----------------|
| Langsettian | | | | |
| <i>mudstone</i> | | 54.75 | 117.05 | 85.90 |
| Model-SR (20m) | 1.002:1 | 54.86 | 117.28 | 86.07 |
| Model-SR (2km) | 1.16:1 | 63.51 | 135.78 | 99.64 |
| Model-CG (2km) | 3.226:1 | 176.62 | 377.60 | 277.11 |
| Duckmantian | | | | |
| <i>mudstone</i> | | 89.50 | 155.70 | 122.60 |
| Model-SR (20m) | 1.002:1 | 89.68 | 156.01 | 122.85 |
| Model-SR (2km) | 1.16:1 | 103.82 | 180.61 | 142.22 |
| Model-CG (2km) | 3.226:1 | 288.73 | 502.29 | 395.51 |

Thickness given in metres, correct to nearest cm.

Model-SR based on Sheldon & Retallack (2001); Model-CG based on Gluyas et al. (1997)

ii - accumulation time for mud

| | RATE | south | north | AVERAGE |
|--------------------|-------------|--------------|--------------|----------------|
| Langsettian | | | | |
| slow | 0.5 | 127020 | 271556 | 199288 |
| fast | 1 | 63510 | 135778 | 99644 |
| Duckmantian | | | | |
| slow | 0.5 | 207640 | 361224 | 284432 |
| fast | 1 | 103820 | 180612 | 142216 |

Accumulation rate given in mm/yr. Time in years, correct to nearest whole year.

Base on thickness values obtained from Model-SR (2km burial)