

Borehole 2 Test No 1
 Test section from 5.85 m to 6.85 m
 Length of test section (L) 1.00 m
 Diameter of test section (D) 110 mm
 Depth to water level before test 1.50 m Date of test 0.0241187
 Depth to water level after test m Time of start
 Gauge height above ground level (Hg) 0.40 m Time of finish
 Depth of borehole at time of test 17.00 m
 Depth of casing at time of test 4.00 m Rock type SANDSTONE
 Groundwater level for analysis (Hw) m
 Centre of test section 6.35 m

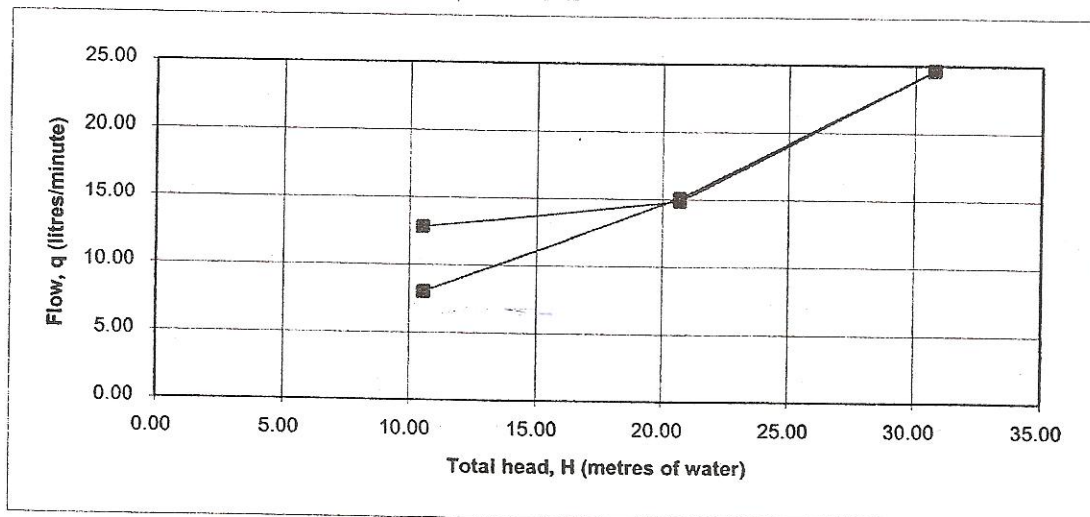
Pressure gauge type Bourdon Drill rod type HWY
 Range Water source Bowser (1100 gal)
 Number Pump type Triplex 40

Flowmeter type KENT Test type Double packer
 Size Packer type Pneumatic
 Number Packer pressures (kPa) 1100

Stage	Gauge pressure (kPa)	TIME (minutes) AND WATER QUANTITIES (litres)						Average flow, q (l/min)
		Time	0	5	10	15		
1	100	Flowmeter reading	30620.5	30714.0	30770.0	30812.5		12.80
		Water take		93.5	56.0	42.5		
		Time	0	5	10	15		
2	200	Flowmeter reading	30831.5	30893.0	30982.5	31054.0		14.83
		Water take		61.5	89.5	71.5		
		Time	0	5	10	15		
3	300	Flowmeter reading	31065.0	31193.0	31307.0	31434.5		24.63
		Water take		128.0	114.0	127.5		
		Time	0	5	10	15		
4	200	Flowmeter reading	31438.5	31512.0	31598.0	31664.5		15.07
		Water take		73.5	86.0	66.5		
		Time	0	5	10	15		
5	100	Flowmeter reading	31672.0	31710.5	31755.0	31792.0		8.00
		Water take		38.5	44.5	37.0		
		Time	0	5	10	15		

Stage	Average flow q (l/min)	Gauge pressure Gp (metres head of water)	Friction head loss FHL (metres head of water)	Total head H=Gp+Hw+Hg-FHL (metres head of water)	Stage* coefficient of permeability k (m/s)	Stage* Lugeon value Lu (lugeon units)
1	12.80	10.19	0.06	10.53	9.3E-06	122
2	14.83	20.39	0.08	20.70	5.5E-06	72
3	24.63	30.58	0.21	30.77	6.2E-06	80
4	15.07	20.39	0.09	20.70	5.6E-06	73
5	8.00	10.19	0.03	10.57	5.8E-06	76

* Computed in accordance with BS 5930, Section 21.5



IN SITU PERMEABILITY (PACKER) TEST



C Associates

Location BRANTON HILL QUARRY LANDFILL, ALDRIDGE, WALSALL

Loc No.

6892

Fig

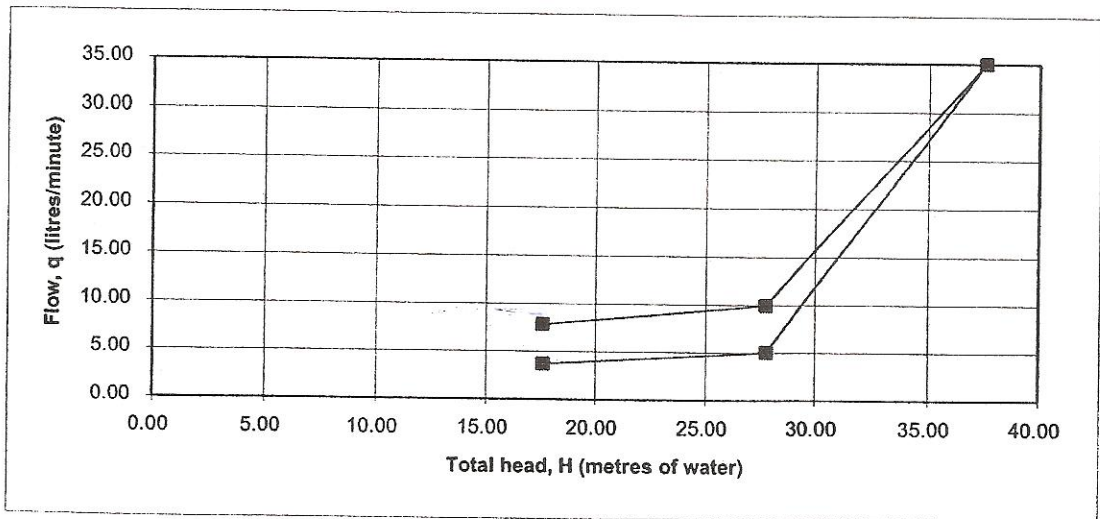
B3

Borehole 1 Test No 1
 Test section from 7.50 m to 8.50 m
 Length of test section (L) 1.00 m
 Diameter of test section (D) 110 mm
 Depth to water level before test 7.00 m
 Depth to water level after test m
 Gauge height above ground level (Hg) 0.40 m
 Date of test 03/12/98
 Time of start
 Time of finish
 Depth of borehole at time of test 17.00 m
 Depth of casing at time of test 7.00 m
 Rock type SANDSTONE
 Groundwater level for analysis (Hw) 7.00 m
 Centre of test section 8 m
 Pressure gauge type Bourdon
 Drill rod type HWY
 Range Water source Bowser (1100 gal)
 Number Pump type Triplex 40
 Flowmeter type KENT
 Test type Double packer
 Size Packer type Pneumatic
 Number Packer pressures (kPa) 1200

Stage	Gauge pressure (kPa)	TIME (minutes) AND WATER QUANTITIES (litres)						Average flow, q (l/min)
		Time	0	5	10	15		
1	100	Flowmeter reading	38620.0	38636.0	38654.0	38675.0		3.67
		Water take		16.0	18.0	21.0		
		Time	0	5	10	15		
2	200	Flowmeter reading	39165.0	39192.0	39215.0	39240.0		5.00
		Water take		27.0	23.0	25.0		
		Time	0	5	10	15		
3	300	Flowmeter reading	39255.0	39420.0	39597.0	39780.0		35.00
		Water take		165.0	177.0	183.0		
		Time	0	5	10	15		
4	200	Flowmeter reading	39820.0	39889.0	39930.0	39969.0		9.93
		Water take		69.0	41.0	39.0		
		Time	0	5	10	15		
5	100	Flowmeter reading	39979.0	39998.0	40017.0	40096.0		7.80
		Water take		19.0	19.0	79.0		
		Time	0	5	10	15		

Stage	Average flow q (l/min)	Gauge pressure Gp (metres head of water)	Friction head loss FHL (metres head of water)	Total head H=Gp+FHL+Hg-FHL (metres head of water)	Stage* coefficient of permeability k (m/s)	Stage* Lugeon value Lu (lugeon units)
1	3.67	10.19	0.01	17.59	1.6E-06	21
2	5.00	20.39	0.01	27.78	1.4E-06	18
3	35.00	30.58	0.41	37.58	7.2E-06	93
4	9.93	20.39	0.04	27.75	2.8E-06	36
5	7.80	10.19	0.03	17.57	3.4E-06	44

* Computed in accordance with BS 5930, Section 21.5



IN SITU PERMEABILITY (PACKER) TEST



C Associates

Location BRANTON HILL QUARRY LANDFILL, ALDRIDGE, WALSALL

Loc No.

6892

Fig

B7