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Project Name: BLACKBURN MEADOWS WwTW, SLUDGE STRATEGY Project No: A1017-11

Borehole ID: BH5R

Location: Blackburn Meadows Sludge Co-ords (British National Grid): 440011.57 - 391661.89 Level: 30.8

Hole Type: CP+RC Logged By: Dates: 2011-03-23 - 2011-03-25

Client: Black & Veatch Limited Contractor: SOIL MECHANICS Project Engineer:

Plant	t Used:	SPT Hammer	Serial No	):					
		Samples	5						Depth
Well	Water	Depth (m)	Туре	Result	Depth (m)	Level (m)	Legend	Stratum Description	m
		1.0 1.2 - 1.65 1.2 - 1.7	B ES DB	N=40 (3,5/12,10,9,9)				Firm locally stiff dark grey sandy gravelly CLAY with medium cobble content Gravel is angular to rounded fine to coarse of brick concrete coke slag macadam and occasional siltstone and metal Cobbles are subangular to subrounded of concrete and brick MADE GROUND	0.5 — 1.0 — 1.5 —
		2.0 2.0 - 2.45 2.0 - 2.5 2.5 - 3.0	ES D B	(4,21 for 70mm)	2.50	28.30		Soft thickly laminated to very thinly bedded light brown orange mottled light grey CLAY with occasional black staining	2.0 —
	<b>Y</b>	3.0 3.2 - 3.65 3.2 - 3.7 3.8 - 4.5	ES D B	N=4 (1,1/1,0,1,2)	3.80	27.00		Medium dense brown grey locally clayey sandy rounded to subrounded fine to coarse GRAVEL of sandstone and siltstone with medium cobble content Cobbles are rounded to subrounded of sandstone and siltstone	3.0 —
	>	3.9 - 4.35 4.0 4.5 - 4.95 4.5 - 5.0	U W DB	N=12 (2,3/3,1,3,5)					4.0 — - 4.5 —

## **Borehole Log**

BH5R

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Project Name: BLACKBURN MEADOWS WwTW, SLUDGE STRATEGY Project No: A1017-11

Borehole ID: BH5R

Location: Blackburn Meadows Sludge Co-ords (British National Grid): 440011.57 - 391661.89 Level: 30.8

Hole Type: CP+RC Logged By: Dates: 2011-03-23 - 2011-03-25

Client: Black & Veatch Limited Contractor: SOIL MECHANICS Project Engineer:

Plan	t Used:	SPT Hammer	Serial N	0:					
		Samples	3						Depth
Well	Water	Depth (m)	Туре	Result	Depth (m)	Level (m)	Legend	Stratum Description	m
	X	5.7 6.2 - 6.65 6.2 - 6.7	W DB	50 (4,11/15,14,16,5 for 10mm) N=22 (3,5/5,5,5,7)	7.50	23.30		Medium dense brown grey locally clayey sandy rounded to subrounded fine to coarse GRAVEL of sandstone and siltstone with medium cobble content Cobbles are rounded to subrounded of sandstone and siltstone	5.5 — 6.0 — 7.0 — 7.5 — 8.0 —
		9.2 - 9.65 9.2 - 9.7	D B	50 (5,11/10,13,15,12 for 30mm)				Very weak to weak light bluish grey MUDSTONE Recovered as clayey angular to subangular fine to coarse gravel	9.0 —

## **Borehole Log**

BH5R

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Project Name: BLACKBURN MEADOWS WwTW, SLUDGE STRATEGY Project No: A1017-11

Borehole ID: BH5R

Location: Blackburn Meadows Sludge Co-ords (British National Grid): 440011.57 - 391661.89 Level: 30.8

Hole Type: CP+RC Logged By: Dates: 2011-03-23 - 2011-03-25

Client: Black & Veatch Limited Contractor: SOIL MECHANICS Project Engineer:

Plant	Used:	SPT Hammer	Serial N	0:					
		Samples	3						Depth
Well	Water	Depth (m)	Туре	Result	Depth (m)	Level (m)	Legend	Stratum Description	m
								Very weak to weak light bluish grey MUDSTONE Recovered as clayey angular to subangular fine to coarse gravel	-
		10.7	D 50	(15,10 for 30mm/36,14 for 10m	m) <sup>10.70</sup>	20.10			10.5 —
					11.10	19.70	* * * *		11.0 — -
								Strong orange and brown fine grained SANDSTONE	11.5 —
		11.83 - 11.88	CS						12.0—
		12.25 - 12.35	CS					Extremely weak to very weak grey thinly laminated MUDSTONE Fractures are	12.5—
								Extremely weak to very weak grey thinly laminated MUDSTONE Fractures are subhorizontal to subvertical very closely to closely spaced tight planar smooth with occasional soft grey clay and fine gravel infill	13.0 —
		13.65 - 13.7	cs						13.5—
									14.0—
									14.5 —
		14.9 - 15.0	cs						

## **Borehole Log**

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Project Name: BLACKBURN MEADOWS WwTW, SLUDGE STRATEGY Project No: A1017-11

Borehole ID: BH5R

Location: Blackburn Meadows Sludge Co-ords (British National Grid): 440011.57 - 391661.89 Level: 30.8

Hole Type: CP+RC Logged By: Dates: 2011-03-23 - 2011-03-25

Client: Black & Veatch Limited Contractor: SOIL MECHANICS Project Engineer:

Plant Used: SPT Hammer Serial No:									
	Water	Samples							Depth
Well		Depth (m)	Туре	Result	Depth (m)	Level (m)	Legend	Stratum Description	m
		18.25 - 18.35	CS		19.70	11.10		Extremely weak to very weak grey thinly laminated MUDSTONE Fractures are subhorizontal to subvertical very closely to closely spaced tight planar smooth with occasional soft grey clay and fine gravel infill	15.5 —  16.0 —  16.5 —  17.5 —  18.0 —  19.5 —  19.5 —

## GENERAL REMARKS

Hammer ID: SM15. Rod type: B.