

ROTARY TEST DRILLING Marshes Farm, Coach Road, off Wigan Road, Hart Common, West Houghton, Bolton BL5 2BT Tel: 01942 - 810348 Fax: 01942 - 840543					Site Maelor Gas Works, Wrexham.			Job No. 52/13	
					Client I&H Brown			Borehole BH1 Page 1 of 1	
					Date 25/11/13		O.D. Level		

Day	Water Level	Casing Depth	Strata Depth	Description of Strata	Leg-end	Inst.	Reduced Level	Sample Type	Sample Depth	'N' Value
			G.L.	CONCRETE. MADE GROUND (0.23)				ES	2.00	
		0.23	Ceramic tile. MADE GROUND (0.02)							
		0.25								
		0.27	Tile cement. MADE GROUND (0.02)							
		0.45	CONCRETE. MADE GROUND (0.18)							
			1.00	(Dense) grey/brown slightly clayey fine-coarse, subangular GRAVEL/ COBBLES of concrete and sandstone. MADE GROUND (0.55)						
		1.15	Soft grey very sandy (fine-medium) SILT. Deposit is wet. (0.15)							
		2.20	Dark grey/black very gravelly fine-medium SAND. Gravel is fine-coarse, subangular of granite and limestone. Deposit is wet/blowing. very strong oil/chemical odour with visible oil sheen to water. (1.05)							
			3.30	No recovery/possibly very loose dark grey/black very gravelly fine-medium SAND. Gravel is fine-coarse, subrounded of granite and limestone. Deposit is wet/blowing. Very strong oil/chemical odour with visible oil sheen to water. (1.10)						
		4.00	Firm brown very silty CLAY. (0.70)							
				Base of Borehole						

Symbols U - undisturbed sample J - jar sample B - bulk sample W - water sample N - Standard Penetration Test Δ - Water entry ▲ - Water level									
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Ground Water Entry	Estimated Rate of Entry	Observation Time (mins)	Water Level Rising to	Depth of Casing at Entry	Depth of Casing to Seal	Date	Standing Water Level	Condition of Borehole Cased / Open
1.15	very fast							

Remarks Water entry @ 1.15m bgl recorded as very fast.	
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ROTARY TEST DRILLING Marshes Farm, Coach Road, off Wigan Road, Hart Common, West Houghton, Bolton BL5 2BT Tel: 01942 - 810348 Fax: 01942 - 840543					Site Maelor Gas Works, Wrexham.			Job No. 52/13	
					Client I&H Brown			Borehole BH2 Page 1 of 1	
					Date 26/11/13		O.D. Level		

Day	Water Level	Casing Depth	Strata Depth	Description of Strata	Leg-end	Inst.	Reduced Level	Sample Type	Sample Depth	'N' Value
			G.L.	TARMAC. MADE GROUND (0.11)						
			0.11	white/grey fine-coarse, subangular GRAVEL of Limestone. MADE GROUND (0.08)						
			0.19	(Firm) yellow/brown/grey very sandy, gravelly CLAY. Gravel is fine-coarse, subangular of sandstone, brick and concrete. MADE GROUND (0.56)						
			0.75	Grey/brown clayey very silty, fine SAND. Black/dark grey staining, strong chemical/oil odour. Deposit disturbed? Deposit is damp from 0.8m bgl. (0.15)						
			0.90	Grey sandy, slightly peaty SILT. Rare fibrous roots, strong chemical odour. Deposit is wet. (0.70)						
			1.60	Grey very sandy (medium) fine-coarse, subrounded GRAVEL of Limestone, granite and quartzite. Deposit is wet/ blowing. Strong chemical/oil odour, oil sheen to water. (2.20)						
		2.00								
			3.80	Grey very sandy (medium) fine-coarse, subrounded GRAVEL of Limestone, granite and quartzite. Deposit is wet/ blowing. Deposit is black with oil staining, oil sheen to water. (0.05)				ES	3.80	
			3.85	Firm silty CLAY. (0.15)						
			4.00	Base of Borehole						

Symbols U - undisturbed sample J - jar sample B - bulk sample W - water sample N - Standard Penetration Test Δ - Water entry ▲ - Water level									
Ground Water Entry	Estimated Rate of Entry	Observation Time (mins)	Water Level Rising to	Depth of Casing at Entry	Depth of Casing to Seal	Date	Standing Water Level	Condition of Borehole Cased / Open	
0.90 1.60	slow/med very fast				0.90 2.00	26/11	0.90	CASED	

Remarks Break out location, clear services dig GL-1.2m bgl. Note sampling by Engineer. Water entry @ 0.9m recorded as slow/medium, water entry 1.6m recorded as very fast. Standing water level = 0.9m bgl. Borehole cased to 2.0m	
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					Client I&H Brown			Borehole BH23		
					Date 09/12/13		O.D. Level		Page 1 of 1	
Day	Water Level	Casing Depth	Strata Depth	Description of Strata	Leg-end	Inst.	Reduced Level	Sample Type	Sample Depth	'N' Value
			G.L.	Reinforced CONCRETE with 6mm re-bar/mesh at 0.065 and 0.155m bgl. MADE GROUND (0.20)						
			0.20	(Dense) white/grey fine-coarse, subangular GRAVEL of limestone. MADE GROUND (0.52)						
			0.72	OBSTRUCTION, possible CONCRETE relic floor/foundation. Cored at 100mm/6mm reinforced CONCRETE re-bar/mesh @ 1.13m bgl. MADE GROUND (0.46)						
			1.18	Dark grey very sandy (fine-medium) fine-coarse, subrounded GRAVEL of limestone and granite. (0.83)						
			2.00	Dark grey/black very gravelly fine-coarse SAND. Gravel is fine-medium subrounded of limestone, granite and quartzite. Oil staining/strong chemical/oil odour. Deposit is wet/running. (0.70)				ES	2.00	
			2.70	Firm brown silty CLAY. (0.30)				ES	2.60	
			3.00	Base of Borehole						
Symbols U - undisturbed sample J - jar sample B - bulk sample W - water sample N - Standard Penetration Test Δ - Water entry ▲ - Water level										
Ground Water Entry	Estimated Rate of Entry	Observation Time (mins)	Water Level Rising to	Depth of Casing at Entry	Depth of Casing to Seal	Date	Standing Water Level	Condition of Borehole Cased / Open		
0.72 2.00	slow very fast					09/12	1.20	OPEN		
Remarks Concrete cored location. NOTE. Chain core out for hand dig tools 4x142 mm holes Clear services. Very slow progress. Water entry @ 0.72m recorded as slow, @ 2.0m recorded as very fast. Standing water level 1.2m bgl.										

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					Client I&H Brown			Borehole BH24		
					Date 09/12/13		O.D. Level		Page 1 of 1	
Day	Water Level	Casing Depth	Strata Depth	Description of Strata	Leg-end	Inst.	Reduced Level	Sample Type	Sample Depth	'N' Value
			G.L.	Brown/grey very sandy fine-coarse, subangular GRAVEL of limestone, TOPSOIL with roots. MADE GROUND (0.20)						
			0.20	(Dense) red/black fine-medium, subangular GRAVEL of burnt shale and ashes. Subangular BOULDERS of sandstone. MADE GROUND (0.30)						
	Δ		0.50	CONCRETE (cored). MADE GROUND (0.11)						
			0.61	(Dense) red fine-medium, subangular GRAVEL of burnt shale. MADE GROUND (0.19)						
			0.80	Firm yellow/grey sandy (fine) SILT. Deposit is wet. (0.75)						
	Δ		1.55	Green/grey fine-medium SAND. Deposit is wet/running. (1.05)						
			2.60	Grey very gravelly medium SAND. Gravel is fine-medium, subrounded of granite, limestone and quartzite. Deposit is wet/running. (0.40)						
			3.00	Base of Borehole				ES	3.00	
Symbols U - undisturbed sample J - jar sample B - bulk sample W - water sample N - Standard Penetration Test Δ - Water entry ▲ - Water level										
Ground Water Entry	Estimated Rate of Entry	Observation Time (mins)	Water Level Rising to	Depth of Casing at Entry	Depth of Casing to Seal	Date	Standing Water Level	Condition of Borehole Cased / Open		
0.80 1.55	slow fast					09/12	1.10	OPEN		
Remarks Concrete cored 0.5-0.61m bgl. Clear services. Water entry @ 0.8m recorded as slow, @ 1.55m recorded as fast. Standing water level 1.1m										

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ROTARY TEST DRILLING Marshes Farm, Coach Road, off Wigan Road, Hart Common, West Houghton, Bolton BL5 2BT Tel: 01942 - 810348 Fax: 01942 - 840543					Site Maelor Gas Works, Wrexham.			Job No. 52/13	
					Client I&H Brown			Borehole BH3 Page 1 of 1	
					Date 05/12/13		O.D. Level		

Day	Water Level	Casing Depth	Strata Depth	Description of Strata	Leg-end	Inst.	Reduced Level	Sample Type	Sample Depth	'N' Value
			G.L.	Brown/grey very sandy (fine-medium) fine-coarse subangular GRAVEL/COBBLES of concrete, brick and tarmac. Very clayey from 0.95m bgl. MADE GROUND (1.10)						
			1.10	Firm dark grey/black very gravelly, very sandy (fine-medium) very silty CLAY. Gravel is fine-coarse, subangular of limestone, brick and ashes. Slight chemical/oil odour. MADE GROUND (1.20)						
			2.30	Firm brown/grey very sandy (fine) very gravelly CLAY. Gravel is fine-medium, subrounded of limestone and sandstone. Deposit is damp. (1.10)						
			3.40	(Dense) brown/grey very sandy (fine-medium) fine-coarse, subrounded GAVEL of limestone, granite and quartzite. Deposit is wet/running/blowing. Occasional subrounded COBBLES of granite. (2.20)						
			5.60	Firm brown very silty CLAY. (1.40)						
			7.00	Base of Borehole						

Symbols U - undisturbed sample J - jar sample B - bulk sample W - water sample N - Standard Penetration Test Δ - Water entry ▲ - Water level									
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Ground Water Entry	Estimated Rate of Entry	Observation Time (mins)	Water Level Rising to	Depth of Casing at Entry	Depth of Casing to Seal	Date	Standing Water Level	Condition of Borehole Cased / Open
3.10	fast					05/12	4.00	OPEN

Remarks Reinforced concrete broken out by excavator. Clear services. Chiselling/very slow boring 3.4-5.6m 1 hour 9.30-10.30 am. Water entry @ 3.1m recorded as fast. standing water level 4.0m bgl.	
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					Client I&H Brown			Borehole BH3A	
					Date 25/11/13		O.D. Level		Page 1 of 1

Day	Water Level	Casing Depth	Strata Depth	Description of Strata	Leg-end	Inst.	Reduced Level	Sample Type	Sample Depth	'N' Value
			G.L.	Reinforced CONCRETE, 6mm rebar at 0.16m bgl. MADE GROUND (0.21)						
			0.21	Black/grey fine, subangular GRAVEL of ashes and brick. MADE GROUND (0.19)						
			0.40	Firm brown very sandy (fine-medium) gravelly CLAY. Gravel is fine-coarse, subangular of Limestone. MADE GROUND (1.00)						
			1.40	Brown/grey clayey fine SAND. Deposit is damp. MADE GROUND (0.10)						
			1.50	Stiff sandy (fine-medium) light brown CLAY. MADE GROUND (0.30)						
			1.80	Firm dark grey/black very silty, gravelly CLAY. Slight oil/chemical odour. MADE GROUND (0.20)						
			2.00	Stiff brown very sandy (fine-medium) gravelly CLAY. Gravel is fine-medfium, subrounded of Limestone. (1.10)						
		3.00	3.10	Grey gravelly, silty fine-medium SAND. Deposit is wet/blowing. Slight chemical/oil odour. (0.90)						
			4.00	Grey gravelly, silty fine-medium SAND. Deposit is wet/blowing. Slight chemical/oil odour. Very poor recovery. (1.00)						
			5.00	Grey very gravelly fine-medium SAND. Gravel is fine-coarse, subrounded of granite, limestone and quartzite. Deposit is wet/blowing with strong chemical/oil odour. (0.65)						
			5.65	Firm brown silty CLAY. (0.35)						
			6.00	Base of Borehole						

Symbols U - undisturbed sample J - jar sample B - bulk sample W - water sample N - Standard Penetration Test Δ - Water entry ▲ - Water level									
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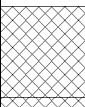
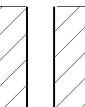
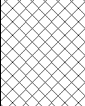
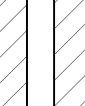
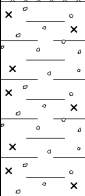
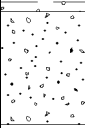
Ground Water Entry	Estimated Rate of Entry	Observation Time (mins)	Water Level Rising to	Depth of Casing at Entry	Depth of Casing to Seal	Date	Standing Water Level	Condition of Borehole Cased / Open
3.10	very fast		1.50		3.00	26/11 26/11	1.50 1.80	OPEN CASED

Remarks Concrete cored location. Cased to 3.0m bgl. NOTE: No samples taken, sampling dictated by Engineer. Water entry @ 3.0m recorded as very fast, standing water level 1.8m borehole cased to 3.0m, standing water level 1.5m open hole.								
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Day	Water Level	Casing Depth	Strata Depth	Description of Strata	Leg-end	Inst.	Reduced Level	Sample Type	Depth	'N' Value
			G.L.	(Loose) dark brown/grey very clayey fine-coarse, subangular GRAVEL/COBBLES of brick and concrete. Frequent BOULDERS of concrete. Frequent voiding. MADE GROUND (1.40)						
			1.40	Very dense dark grey/brown very clayey, sandy (fine-medium) medium-coarse, subangular GRAVEL/COBBLES of brick, concrete with metallic/cast iron fragments upto 100mm in diameter. Poor recovery, very slow progress. Deposit is wet from 1.8m				ES	2.20	
			2.20	MADE GROUND. (0.80)						
			2.21	Obstruction, chiselling for 1 hour zero progress. (0.01)						
				Base of Borehole						
Symbols U - undisturbed sample J - jar sample B - bulk sample W - water sample N - Standard Penetration Test Δ - Water entry ▲ - Water level										
Ground Water Entry	Estimated Rate of Entry	Observation Time (mins)	Water Level Rising to	Depth of Casing at Entry	Depth of Casing to Seal	Date	Standing Water Level	Condition of Borehole Cased / Open		
1.80	medium					29/11	1.70	OPEN		
Remarks										
Load & mobilise cable tool rig & tooling arrive on site 10.15am. Clear services. Chiselling 1.4-2.2m from 11.45am till 12.30pm, Chiselling 2.2-2.21m from 12.30 till 1.30pm. Informed Engineer. Water added to assist chiselling 1.4-2.2m NOTE large concrete and sandstone slabs/boulders present in adjacent trial pit ID=TP23 (See photographs) Water entry @ 1.8m recorded as medium, standing water level 1.7m. Water added to assist boring from 1.4m to 2.2m										

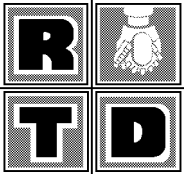
ROTARY TEST DRILLING Marshes Farm, Coach Road, off Wigan Road, Hart Common, West Houghton, Bolton BL5 2BT Tel: 01942 - 810348 Fax: 01942 - 840543					Site Maelor Gas Works, Wrexham.				Job No. 52/13	
					Client I&H Brown				Borehole BH4A Page 1 of 1	
					Date 04/12/13		O.D. Level			
Day	Water Level	Casing Depth	Strata Depth	Description of Strata	Leg-end	Inst.	Reduced Level	Sample Type	Depth	'N' Value
			G.L.	Brown very sandy, very gravelly TOPSOIL with roots. Gravel is fine-coarse, subangular of brick, limestone and ashes. MADE GROUND (0.40)						
			0.40	(Dense) grey/red/brown very sandy, clayey fine-coarse subangular GRAVEL/ COBBLES of brick, sandstone and ashes with timber fragments. MADE GROUND (0.90)						
			1.30							
			1.45	Sandstone OBSTRUCTION/BOULDER. MADE GROUND (0.15)						
				(Dense) grey/red/brown very sandy, clayey fine-coarse, subangular GRAVEL/ COBBLES of brick, sandstone and ashes with timber fragments. MADE GROUND (0.75)						
			2.20							
			2.21	OBSTRUCTION, chiselling 1 hour. No progress. (0.01)						
				Base of Borehole						
Symbols U - undisturbed sample J - jar sample B - bulk sample W - water sample N - Standard Penetration Test Δ - Water entry ▲ - Water level										
Ground Water Entry	Estimated Rate of Entry	Observation Time (mins)	Water Level Rising to	Depth of Casing at Entry	Depth of Casing to Seal	Date	Standing Water Level	Condition of Borehole Cased / Open		
Remarks Area cleared/reworked by excavator to 0.4m bgl. Clear services. Chiselling/very slow boring 1.2-2.2m 1 hour. Chiselling 2.2m no progress 1 hour. Water added to assist boring 1.2-2.21m Cased to 2.2m bgl. Water added to assist boring from 1.2m to 2.21m										
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					Client I&H Brown			Borehole BH4B Page 1 of 1	
					Date 05/12/13 - 06/12/13		O.D. Level		

Day	Water Level	Casing Depth	Strata Depth	Description of Strata	Leg-end	Inst.	Reduced Level	Sample Type	Sample Depth	'N' Value
			G.L.	Brown/grey very sandy, very gravelly CLAY. Gravel is fine-coarse, subangular of brick and concrete with metal and timber fragments. MADE GROUND (0.60)						
			0.60	Firm grey/brown very sandy, silty, very gravelly CLAY. Gravel is fine-coarse, subrounded of limestone and granite. Possibly disturbed. MADE GROUND (2.00)				ES	1.00	
			2.60	Firm brown silty, very gravelly CLAY. Gravel is fine-medium, subrounded, elliptical of granite, limestone and quartzite. Deposit is damp. (1.35)				ES	2.50	
			3.95	Grey/brown very sandy (fine-medium) fine-coarse, subrounded, elliptical GRAVEL of limestone, quartzite and granite. Deposit is wet/blowing/running. (0.75)						
			4.70	Firm and stiff brown very silty CLAY. (2.30)						
			7.00	Base of Borehole						

Symbols U - undisturbed sample J - jar sample B - bulk sample W - water sample N - Standard Penetration Test Δ - Water entry ▲ - Water level									
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Ground Water Entry	Estimated Rate of Entry	Observation Time (mins)	Water Level Rising to	Depth of Casing at Entry	Depth of Casing to Seal	Date	Standing Water Level	Condition of Borehole Cased / Open
3.95	very fast					06/12	2.40	OPEN

Remarks Reinforced concrete broken out by excavator. Clear services. Chiselling/slow boring in gravel(s) 3.95-4.7m 1 hour 7.50-8.50am. Water entry @ 3.95 recorded as very fast, standing water level 2.4m b.l.g.	
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					Client I&H Brown			Borehole BH5 Page 1 of 1	
					Date 27/11/13		O.D. Level		

Day	Water Level	Casing Depth	Strata Depth	Description of Strata	Leg-end	Inst.	Reduced Level	Sample Type	Sample Depth	'N' Value
			G.L.	Brown very sandy (fine-medium), clayey fine-coarse, subangular GRAVEL of Limestone and concrete. MADE GROUND (1.10)						
			1.10	Firm brown/grey very sandy, very gravelly CLAY. Gravel is fine-coarse, subangular of brick, ashes and limestone. MADE GROUND (0.45)						
	Δ		1.55	Soft black very clayey, very gravelly, sandy (fine-medium) SILT/very silty CLAY. Gravel is fine-coarse, subangular of limestone, ashes, brick with timber fragments. Strong chemical/oil odour. MADE GROUND (1.55)						
			3.10	Soft brown/grey very sandy, very silty CLAY. Fine-medium subrounded gravel of limestone and granite. (0.30)						
	Δ		3.40	(Loose) grey/brown very sandy, silty fine-medium, subrounded GRAVEL of granite/limestone. Deposit is wet/running. Strong chemical/oil odour. (1.10)						
			4.50	Firm brown very silty CLAY. Occasional lenses of laminated silt upto 10mm in thickness. (2.50)						
			7.00	Base of Borehole						

Symbols U - undisturbed sample J - jar sample B - bulk sample W - water sample N - Standard Penetration Test Δ - Water entry ▲ - Water level									
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Ground Water Entry	Estimated Rate of Entry	Observation Time (mins)	Water Level Rising to	Depth of Casing at Entry	Depth of Casing to Seal	Date	Standing Water Level	Condition of Borehole Cased / Open
2.20 3.60	slow fast							

Remarks Reinforced concrete broken out by excavator. Clear services. Water entry @ 2.2m recorded as slow, @ 3.6m recorded as fast.	
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					Client IH Brown			Borehole BH6 Page 1 of 1	
					Date 02/12/13		O.D. Level		

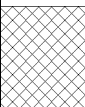
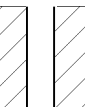
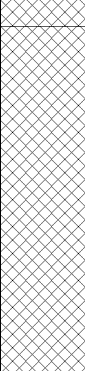
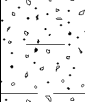
Day	Water Level	Casing Depth	Strata Depth	Description of Strata	Leg-end	Inst.	Reduced Level	Sample Type	Sample Depth	'N' Value
			G.L.	Brown very sandy, clayey fine-coarse, subangular GRAVEL/COBBLES of concrete, brick and tarmac. Sand is of brick fines/topsoil. MADE GROUND (0.80)						
	Δ		0.80	Black clayey, very silty, sandy (fine-medium) fine-coarse, subrounded-subangular GRAVEL. Rare plastic/timber fragments. Deposit is wet from 1.5m, strong chemical/oil odour. Oil sheen to water. Poor recovery 2.0-3.0m, disturbed. MADE GROUND (2.20)				ES	2.00	
	Δ		3.00	Soft brown/grey very silty, sandy (fine), gravelly CLAY. Gravel is fine-medium, subrounded of limestone and granite. Bands of brown/grey sandy fine-medium, subrounded GRAVEL upto 0.3m in thickness. Gravel bands are wet/running. (2.10)						
			5.10	Firm brown very silty CLAY. (1.90)						
			7.00	Base of Borehole						

Symbols U - undisturbed sample J - jar sample B - bulk sample W - water sample N - Standard Penetration Test Δ - Water entry ▲ - Water level									
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Ground Water Entry	Estimated Rate of Entry	Observation Time (mins)	Water Level Rising to	Depth of Casing at Entry	Depth of Casing to Seal	Date	Standing Water Level	Condition of Borehole Cased / Open
1.50 4.00	medium medium					02/12	3.80	OPEN

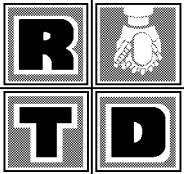
Remarks Reinforced concrete/location broken out by excavator. Clear services. Borehole cased to 5.5m. water entry @ 1.5m recorded as medium, @ 4.0m recorded as medium, standing water level 3.8m bgl.	
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ROTARY TEST DRILLING Marshes Farm, Coach Road, off Wigan Road, Hart Common, West Houghton, Bolton BL5 2BT Tel: 01942 - 810348 Fax: 01942 - 840543					Site Maelor Gas Works, Wrexham.			Job No. 52/13	
					Client IH Brown			Borehole BH7 Page 1 of 1	
					Date 02/12/13 - 03/12/13		O.D. Level		

Day	Water Level	Casing Depth	Strata Depth	Description of Strata	Leg-end	Inst.	Reduced Level	Sample Type	Sample Depth	'N' Value
			G.L.	Brown/grey very gravelly, clayey, fine-medium SAND. Gravel is medium-coarse, subangular of concrete, tarmac and timber fragments. MADE GROUND (0.90)						
			0.90	Soft black very sandy, very gravelly SILT/very silty GRAVEL. Gravel is fine-coarse, subangular of brick and ashes. Strong chemical odour. Deposit is wet from 1.5m bgl. Very poor recovery. MADE GROUND (2.30)						
			3.20	Soft brown/grey sandy (fine-medium) very silty CLAY/clayey SILT. Chemical/oil odour. Deposit is wet. (0.60)						
			3.80	Grey/brown clayey, very sandy (fine-medium) fine-medium, subrounded GRAVEL of limestone and granite. Deposit is wet/running. Strong chemical/oil odour. (0.75)						
			4.55	Firm brown very silty CLAY. (2.45)						
			7.00	Base of Borehole						

Symbols U - undisturbed sample J - jar sample B - bulk sample W - water sample N - Standard Penetration Test Δ - Water entry ▲ - Water level									
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Ground Water Entry	Estimated Rate of Entry	Observation Time (mins)	Water Level Rising to	Depth of Casing at Entry	Depth of Casing to Seal	Date	Standing Water Level	Condition of Borehole Cased / Open
1.50 4.00	slow fast					03/12	4.50	OPEN

Remarks Reinforced concrete, broken out by excavator. Clear services. Water entry @ 1.5m recorded as slow, @ 4.0m recorded fast, standing water level 4.5m bgl.	
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ROTARY TEST DRILLING Marshes Farm, Coach Road, off Wigan Road, Hart Common, West Houghton, Bolton BL5 2BT Tel: 01942 - 810348 Fax: 01942 - 840543					Site Maelor Gas Works, Wrexham.			Job No. 52/13	
					Client I&H Brown			Borehole BH8A Page 1 of 1	
					Date 03/11/13		O.D. Level		

Day	Water Level	Casing Depth	Strata Depth	Description of Strata	Leg-end	Inst.	Reduced Level	Sample Type	Sample Depth	'N' Value
			G.L.	Dark grey/grey/black very sandy (fine-medium) fine-coarse, subangular GRAVEL of limestone, ashes and cinders. MADE GROUND (0.60)						
			0.60	Dense black/dark grey very sandy, very silty, clayey fine-medium subangular GRAVEL of limestone, granite with timber fragments and ashes. Deposit is wet from 1.4m. Strong oil/chemical odour, oil sheen to water. MADE GROUND (1.00)						
			1.60	Driving timber fragment (sleeper). No recovery. MADE GROUND (0.20)						
			1.80	Timber/sleeper fragment recovered. MADE GROUND (0.10)						
			1.90	Soft black very gravelly, clayey SILT. Gravel is fine-medium, subangular-subrounded of brick and timber. Deposit is wet. Strong chemical/oil odour. MADE GROUND (1.20)						
			3.10	Firm brown silty CLAY. (3.90)				ES	3.00	
			7.00	Base of Borehole						

Symbols U - undisturbed sample J - jar sample B - bulk sample W - water sample N - Standard Penetration Test Δ - Water entry ▲ - Water level									
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Ground Water Entry	Estimated Rate of Entry	Observation Time (mins)	Water Level Rising to	Depth of Casing at Entry	Depth of Casing to Seal	Date	Standing Water Level	Condition of Borehole Cased / Open
1.40 2.50	slow/med medium							

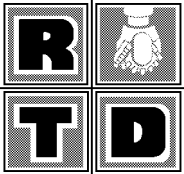
Remarks Reinforced concrete broken out by others. Clear services. Chiselling/slow boring 1.6-1.9m 1 hour 11.10-12.10pm. Water entry @ 1.4m recorded as slow/medium, @ 2.5m recorded as medium.	
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ROTARY TEST DRILLING Marshes Farm, Coach Road, off Wigan Road, Hart Common, West Houghton, Bolton BL5 2BT Tel: 01942 - 810348 Fax: 01942 - 840543					Site Maelor Gas Works, Wrexham.			Job No. 52/13	
					Client I&H Brown			Borehole BH9 Page 1 of 1	
					Date 27/11/13		O.D. Level		

Day	Water Level	Casing Depth	Strata Depth	Description of Strata	Leg-end	Inst.	Reduced Level	Sample Type	Sample Depth	'N' Value
			G.L.	Grass over brown sandy (medium) very clayey TOPSOIL with roots. MADE GROUND (0.20)						
			0.20	Brown very clayey, very sandy (fine-medium) fine-medium subrounded-subangular GRAVEL of Limestone/very gravelly fine-medium SAND. Deposit is damp from 0.6m bgl. MADE GROUND (0.60)				ES	1.00	
			0.80	Black fine-medium, subangular-subrounded GRAVEL of ashes and cinders. Deposit is wet. MADE GROUND (0.25)						
			1.05	Soft grey clayey, sandy (fine-medium) SILT, slightly organic/peaty/fibrous roots. (0.35)				ES	2.00	
			1.40	Stiff brown silty CLAY. (1.10)						
			2.50	Base of Borehole						

Symbols U - undisturbed sample J - jar sample B - bulk sample W - water sample N - Standard Penetration Test Δ - Water entry ▲ - Water level									
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Ground Water Entry	Estimated Rate of Entry	Observation Time (mins)	Water Level Rising to	Depth of Casing at Entry	Depth of Casing to Seal	Date	Standing Water Level	Condition of Borehole Cased / Open
0.80	slow/med					27/11	0.80	OPEN

Remarks Clear services water entry @ 0.8m recorded as slow/medium, standing water level 0.8m bgl.	
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Wrexham Gas Works
Boreholes & Trialpits 12/12/2013

<u>Code</u>	<u>Easting</u>	<u>Northing</u>	<u>Height</u>
BH2	338037.721	348096.252	30.371
BH3	338000.858	348184.194	30.187
BH4	338012.244	348212.040	30.549
BH5	338018.725	348232.438	30.069
BH6	338022.147	348240.949	30.156
BH7	338026.351	348239.900	30.153
BH22	338067.840	348036.290	30.382
BH23	338031.968	348073.744	30.566
BH24	337989.460	348037.140	31.496
BH3A	338000.765	348186.608	30.223
BH4A	338011.461	348217.108	30.627
BH4B	338005.530	348196.377	30.213
BH8A	338039.481	348235.510	30.212
TRP1	338031.455	348045.201	30.290
TRP2	338022.080	348046.362	30.431
TRP3	338006.796	348048.200	30.475
TRP4	337994.410	348077.175	30.516
TRP5	337989.212	348089.521	30.528
TRP6	337997.902	348070.405	30.547
TRP7	338008.617	348098.599	30.344
TRP8	337980.678	348104.304	30.517
TRP9	337994.661	348123.216	30.167
TRP10	338009.401	348120.384	30.487
TRP11	338000.957	348181.600	30.244
TRP12	338011.687	348178.005	30.144
TRP13	338009.958	348185.753	30.260
TRP15	338118.832	348210.439	29.850
TRP16	338109.600	348198.928	29.979
TRP17	338142.523	348213.998	29.930
TRP18	338141.490	348190.538	30.004
TRP19	338133.682	348203.914	30.062
TRP20	338082.990	348237.662	29.974
TRP21	338086.365	348243.473	30.073
TRP22	338052.466	348227.419	30.162
TRP23	338047.063	348196.125	30.561
TRP24	338038.528	348208.446	30.689
TRP25	338019.617	348203.417	30.683
TRP26	338052.621	348210.956	30.553
TRP27	338064.918	348234.005	30.092
TRP28	338057.103	348242.923	30.160
TRP29	338097.152	348237.951	29.395
TRP30	338299.614	348046.069	27.514
TRP30	338269.471	348042.372	28.185
TRP31	338263.526	348027.008	28.811
TRP32	338267.902	347999.050	29.130
TRP33	338243.158	347981.671	29.894
TRP34	338284.369	348000.306	28.524
TRP35	338289.823	348007.479	28.009
TRP36	338288.249	348021.942	27.975
TRP37	338309.788	348023.291	27.009
TRP38	338301.100	348035.514	27.455

TRP39	338298.916	348046.051	27.562
TRP48	337588.891	348123.653	29.986
TRP49	338112.507	348229.805	29.654
TRP50	338116.759	348231.365	29.578
TRP51	338115.936	348234.487	29.322
TRP8A	337993.689	348102.204	30.422
BH99 104	338034.916	348236.813	30.196
WATERPIPE	338093.098	348207.899	29.892

Description