
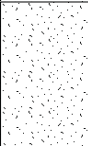






### **APPENDIX 3**

- Exploratory Hole Logs
- BGS Borehole Logs

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<b>offices</b> London   Kent   Derby   Cardiff   Manchester   Stirling						Sheet 1 of 1				
Project Name:                      Machine Store				Project No. 19579G		Co-ords:    - Level:		Date 11/04/2016		
Location:                              The Old Vinyl Factory, Hayes						Dimensions (m):                      2.00 <div> <div>1.00</div> <div></div> </div>		Scale 1:25		
Equipment:                              Hand dig						Depth 1.00		Logged MSG		
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
	Depth	Type	Results							
	0.50 - 0.70	D,J		0.50			CONCRETE.			
				0.70			MADE GROUND: Brown reddish sandy silty clay with gravels. Gravels comprised subangular to angular, coarse to fine bricks, concrete and flints.			
							Orangish brown sandy GRAVELS.			
				1.00			End of Pit at 1.000m			
							<div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div>			
D = small disturbed sample (tub) J = organic sample (amber glass jar) V = volatile sample (amber glass vial) B = bulk bag sample HSV = hand shear vane (kPa) PP = pocket penetrometer (kg.cm2) PID = photoionisation detector (ppm)				<b>Stability</b>			<b>Remarks</b>			



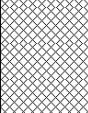

[illegible]

[illegible]







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<div><div>offices</div><div>London</div><div>Kent</div><div>Derby</div><div>Cardiff</div><div>Manchester</div><div>Stirling</div></div>											
<div>Project Name: Machine Store</div>				<div>Project No. 19579G</div>		<div>Co-ords: -</div> <div>Level:</div>		<div>Date 13/05/2016</div>			
<div>Location: The Old Vinyl Factory, Hayes</div>						<div>Dimensions (m): 2.00</div> <div>Depth 1.20</div>			<div>Scale 1:25</div> <div>Logged MSG</div>		
<div>Equipment: Hand dig</div>											
<div>Water Strike</div>	<div>Samples &amp; In Situ Testing</div>			<div>Depth (m)</div>	<div>Level (m)</div>	<div>Legend</div>	<div>Stratum Description</div>				
	<div>Depth</div>	<div>Type</div>	<div>Results</div>								
				0.20		<div></div>	<div>CONCRETE</div>			1 -	
				0.50		<div></div>	<div>MADE GROUND: Orangish brown gravelly sand. Gravels comprised subangular to angular, coarse to fine bricks and flints.</div>				
				1.20		<div></div>	<div>Orangish brown gravelly SAND.</div>				
						<div>End of Pit at 1.200m</div>					
										2 -	
										3 -	
										4 -	
										5 -	
<div>D = small disturbed sample (tub) J = organic sample (amber glass jar) V = volatile sample (amber glass vial) B = bulk bag sample HSV = hand shear vane (kPa) PP = pocket penetrometer (kg.cm2) PID = photoionisation detector (ppm)</div>				<div>Stability</div>			<div>Remarks</div>				

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offices London Kent Derby Cardiff Manchester Stirling										
Project Name: Machine Store				Project No. 19579G		Co-ords: - Level:			Date 13/05/2016	
Location: The Old Vinyl Factory, Hayes						Dimensions (m): Depth 1.20			Scale 1:25 Logged MSG	
Equipment: Hand dig										
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
	Depth	Type	Results							
				0.20		[Pattern]	CONCRETE			
				0.40		[Pattern]	MADE GROUND: Orangish brown gravelly sand. Gravels comprised subangular to angular, coarse to fine bricks and flints.			
						[Pattern]	Orangish brown gravelly SAND.			
				1.20			End of Pit at 1.200m			
				Stability			Remarks			
D = small disturbed sample (tub) J = organic sample (amber glass jar) V = volatile sample (amber glass vial) B = bulk bag sample HSV = hand shear vane (kPa) PP = pocket penetrometer (kg.cm2) PID = photoionisation detector (ppm)										



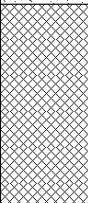

 <div>             idom Merebrook Ltd, East Mill, Bridgefoot, Belper, Derbyshire, DE56 2UA              t +44 (0) 1773 829 988 e consulting@merebrook.co.uk              merebrook.co.uk idom.com              AN idom GROUP COMPANY           </div>						<h1>TRIAL PIT LOG</h1>			TrialPit No <b>HDP7</b>	
<div> <b>offices</b>   London   Kent   Derby   Cardiff   Manchester   Stirling         </div>									Sheet 1 of 1	
Project Name:                      Machine Store				Project No. 19579G		Co-ords:    - Level:		Date 13/05/2016		
Location:                              The Old Vinyl Factory, Hayes						Dimensions (m):                      2.00 <div> <div>1.00</div> <div></div> </div>		Scale 1:25		
Equipment:                              Hand dig						Depth 0.70		Logged MSG		
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
	Depth	Type	Results							
	0.40	D,J		0.20			CONCRETE.			
				0.60			MADE GROUND: Orangish brown silty gravelly sand. Gravels comprised subangular to angular, coarse to fine bricks and flints.			
				0.70			Orangish brown clayey SAND with occasional subangular flint.			
							End of Pit at 0.700m			
							<div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div>			
D = small disturbed sample (tub) J = organic sample (amber glass jar) V = volatile sample (amber glass vial) B = bulk bag sample HSV = hand shear vane (kPa) PP = pocket penetrometer (kg.cm2) PID = photoionisation detector (ppm)				<b>Stability</b>			<b>Remarks</b>			



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<b>offices</b> London   Kent   Derby   Cardiff   Manchester   Stirling						Sheet 1 of 1				
Project Name:                      Machine Store				Project No. 19579G		Co-ords:   - Level:		Date 13/05/2016		
Location:                              The Old Vinyl Factory, Hayes						Dimensions (m):                      2.00 <div> <div>1.00</div> <div></div> </div>			Scale 1:25	
Equipment:						Depth 0.60			Logged MSG	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
	Depth	Type	Results							
	0.40	D,J		0.20			CONCRETE.			
				0.50			MADE GROUND: Orangish brown gravelly sand. Gravels comprised subangular to angular, coarse to fine bricks and flints.			
				0.60			Orangish brown clayey SAND.			
							End of Pit at 0.600m			
							<div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div>			
D = small disturbed sample (tub) J = organic sample (amber glass jar) V = volatile sample (amber glass vial) B = bulk bag sample HSV = hand shear vane (kPa) PP = pocket penetrometer (kg.cm2) PID = photoionisation detector (ppm)				<b>Stability</b>			<b>Remarks</b>			



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<div><div>offices</div><div>London</div><div>Kent</div><div>Derby</div><div>Cardiff</div><div>Manchester</div><div>Stirling</div></div>						<div>Project Name:</div> <div>Machine Store</div>			<div>Project No.</div> <div>19579G</div>		<div>Co-ords:</div> <div>-</div>		<div>Date</div> <div>12/04/2016</div>	
<div>Location:</div> <div>The Old Vinyl Factory, Hayes</div>						<div>Dimensions (m):</div> <div>3.00</div>			<div>Scale</div> <div>1:25</div>		<div>Logged</div> <div>MSG</div>			
<div>Equipment:</div> <div>Bobcat E50</div>						<div>Depth</div> <div>1.50</div>								
<div><div><div>Water Strike</div><div>Depth</div><div>Type</div><div>Results</div></div><div>Depth (m)</div><div>Level (m)</div><div>Legend</div><div>Stratum Description</div></div>														
<div><div><div>0.70 - 0.90</div><div>D,J</div><div></div><div>0.70</div><div></div><div><div></div></div><div>Concrete with reinforcement.</div></div><div><div>1.20 - 1.40</div><div>D,J</div><div></div><div>1.20</div><div></div><div><div></div></div><div>MADE GROUND: Brown reddish sandy silty clay with gravels. Gravels comprised subangular to angular, coarse to fine bricks and flints.</div></div><div><div></div><div></div><div></div><div>1.50</div><div></div><div><div></div></div><div>Dense organish brown sandy GRAVEL. Gravels comprised subangular to rounded, coarse to fine flints.</div></div><div><div></div><div></div><div></div><div></div><div></div><div></div><div>End of Pit at 1.500m</div></div></div>												1		
												2		
												3		
												4		
												5		
<div><div>D = small disturbed sample (tub)</div><div>J = organic sample (amber glass jar)</div><div>V = volatile sample (amber glass vial)</div><div>B = bulk bag sample</div><div>HSV = hand shear vane (kPa)</div><div>PP = pocket penetrometer (kg.cm2)</div><div>PID = photoionisation detector (ppm)</div></div>						<div>Stability</div>			<div>Remarks</div>					

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offices    London    Kent    Derby    Cardiff    Manchester    Stirling						Sheet 1 of 1				
Project Name:                      Machine Store				Project No. 19579G		Co-ords:    - Level:		Date 12/04/2016		
Location:                              The Old Vinyl Factory, Hayes						Dimensions (m):                      3.00 <div> <div>0.60</div> <div></div> </div>			Scale 1:25	
Equipment:                              Bobcat E50						Depth 1.50			Logged MSG	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
	Depth	Type	Results							
	0.60 - 0.90	D,J		0.60			Concrete with reinforcement.			<div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div>
							MADE GROUND: Brown reddish sandy silty clay with gravels. Gravels comprised subangular to angular, coarse to fine bricks and flints.			
	1.30 - 1.50	D,J		1.30			Firm orangish brown silty CLAY with rare gravels. Gravels comprised subangular to angular, coarse to fine flints.			
				1.50			End of Pit at 1.500m			
<div>             D = small disturbed sample (tub)              J = organic sample (amber glass jar)              V = volatile sample (amber glass vial)              B = bulk bag sample              HSV = hand shear vane (kPa)              PP = pocket penetrometer (kg.cm2)              PID = photoionisation detector (ppm)           </div>				Stability			Remarks			


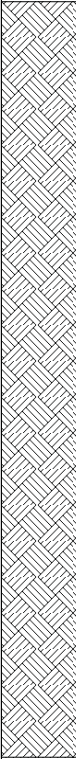

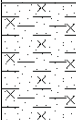

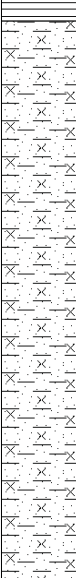
<div><div><div></div><div><div>Idom Merebrook Ltd, East Mill, Bridgefoot, Belper, Derbyshire, DE56 2UA</div><div>t +44 (0) 1773 829 988 e consulting@merebrook.co.uk</div><div>merebrook.co.uk idom.com</div><div>AN idom GROUP COMPANY</div></div></div><div><div>offices</div><div>London</div><div>Kent</div><div>Derby</div><div>Cardiff</div><div>Manchester</div><div>Moray</div></div></div>										<div>Borehole Log</div>				<div>Borehole No.</div> <div>MBH01/16</div> <div>Sheet 1 of 2</div>					
<div>Project Name: The Machine Store</div>						<div>Project No. 19579G</div>		<div>Co-ords:</div>		<div>Hole Type CP</div>									
<div>Location: The Old Vinyl Factory, Hayes</div>						<div>Level:</div>		<div>Scale 1:50</div>		<div>Logged By MSG</div>									
<div>Equipment:</div>						<div>Dates: 13/05/2016</div>													
Well	Wtr Strk	Sample and In Situ Testing			Coring				Depth (m)	Level (m)	Legend	Stratum Description							
		Depth (m)	Type	Results	FI	TCR	SCR	RQD											
<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>																			
												CONCRETE with reinforcement.							
<div>D = small disturbed sample (tub) J = organic sample (amber glass jar) V = volatile sample (amber glass vial) B = bulk bag sample SPT(C) = Standard Penetration Test (Cone) SPT(S) = Standard Penetration Test (Split Spoon)</div>										<div>HSV = hand shear vane (kPa) PP = pocket penetrometer (kg.cm2) PID = photoionisation detector (ppm) FI = fracture index TCR = total core recovery SCR = solid core recovery RQD = rock quality designation</div>									
										Remarks									

<div><div><div><div><div></div><div>idom</div></div><div>idom merebrook</div></div><div><div>Idom Merebrook Ltd, East Mill, Bridgefoot, Belper, Derbyshire, DE56 2UA</div><div>t +44 (0) 1773 829 988 e consulting@merebrook.co.uk</div><div>merebrook.co.uk idom.com</div><div>AN idom GROUP COMPANY</div></div></div><div><div>offices</div><div>London</div><div>Kent</div><div>Derby</div><div>Cardiff</div><div>Manchester</div><div>Moray</div></div></div>										<div>Borehole Log</div>				<div>Borehole No.</div> <div>MBH01/16</div> <div>Sheet 2 of 2</div>	
<div>Project Name: The Machine Store</div>						<div>Project No. 19579G</div>		<div>Co-ords:</div>		<div>Hole Type CP</div>					
<div>Location: The Old Vinyl Factory, Hayes</div>						<div>Level:</div>		<div>Scale 1:50</div>		<div>Logged By MSG</div>					
<div>Equipment:</div>						<div>Dates: 13/05/2016</div>									
Well	Wtr Strk	Sample and In Situ Testing			Coring				Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results	FI	TCR	SCR	RQD							
<div></div>		10.50	D												
		11.00 11.00 - 11.45	SPT(S) D	N=24 (3,4/5,6,6,7)									11		
		12.00	D												
		12.50 - 12.95	U	Ublow=30									12		
		13.50	D												
		14.00 14.00 - 14.45	SPT(S) D	N=26 (3,5/5,7,7,7)									14		
		15.00	D												
		15.50 - 15.95	U	Ublow=35									15		
		16.50	D												
		17.00 17.00 - 17.50	SPT(S) D	N=37 (5,7/8,8,10,11)									17		
		18.00	D												
		18.50 - 18.95	U	Ublow=40									18		
	19.50	D													
	20.00 20.00 - 20.45	SPT(S) D	N=39 (5,7/8,9,10,12)						20.00			20			
<div>End of Borehole at 20.00m</div>															
<div><div>D = small disturbed sample (tub)</div><div>J = organic sample (amber glass jar)</div><div>V = volatile sample (amber glass vial)</div><div>B = bulk bag sample</div><div>SPT(C) = Standard Penetration Test (Cone)</div><div>SPT(S) = Standard Penetration Test (Split Spoon)</div><div>HSV = hand shear vane (kPa)</div><div>PP = pocket penetrometer (kg.cm2)</div><div>PID = photoionisation detector (ppm)</div><div>FI = fracture index</div><div>TCR = total core recovery</div><div>SCR = solid core recovery</div><div>RQD = rock quality designation</div></div>										<div>Remarks</div>					

<div><div><div></div><div><div>Idom Merebrook Ltd, East Mill, Bridgefoot, Belper, Derbyshire, DE56 2UA</div><div>t +44 (0) 1773 829 988 e consulting@merebrook.co.uk</div><div>merebrook.co.uk idom.com</div><div>AN idom GROUP COMPANY</div></div></div><div><div>offices</div><div>London</div><div>Kent</div><div>Derby</div><div>Cardiff</div><div>Manchester</div><div>Moray</div></div></div>										<div>Borehole Log</div>				<div>Borehole No.</div> <div>MBH02/16</div> <div>Sheet 1 of 3</div>	
<div>Project Name: The Machine Store</div>						<div>Project No. 19579G</div>		<div>Co-ords:</div>		<div>Hole Type CP</div>					
<div>Location: The Old Vinyl Factory, Hayes</div>						<div>Level:</div>				<div>Scale 1:50</div>					
<div>Equipment: Dando 2000</div>						<div>Dates: 12/04/2016</div>				<div>Logged By MSG</div>					
Well	Wtr Strk	Sample and In Situ Testing			Coring				Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results	FI	TCR	SCR	RQD							
		0.50	B						0.40			CONCRETE with reinforcement.			
		0.90	D						0.90			MADE GROUND: Soft brown silty sand with gravels. Gravels comprised subangular to angular, coarse to fine, bricks concrete and flints.			
		1.20 1.20 - 1.65	SPT(C) B	50 (5,17/50 for 125mm)								Dense orange brown sandy GRAVEL. Gravels comprised subangular to rounded, coarse to fine flints.	1		
		2.00 2.00 2.00 - 2.45	D SPT(C) B	50 (6,13/50 for 195mm)									2		
		3.00 3.00 3.00 - 3.45	D SPT(C) B	N=49 (2,7/11,14,12,12)									3		
		4.00 4.00 4.00 - 4.45 4.50	D SPT(C) B D	N=30 (7,8/10,8,6,6)					4.50			Firm to stiff brown mottled grey silty weathered CLAY.	4		
		5.00 5.00 - 5.45	SPT(S) D	N=12 (1,1/2,3,3,4)					5.20			Stiff dark bluish grey slightly silty, slightly sandy fissured CLAY.	5		
		6.00	D										6		
		6.50 - 6.95	U	Ublow=51											
		7.00	D										7		
		8.00 8.00 8.00 - 8.45	D SPT(S) B	N=21 (1,3/5,5,5,6)									8		
		9.00	D										9		
		9.50 - 9.95	U	Ublow=57											
		10.00	D											10	
Continued on Next Sheet															
<div><div><div>D = small disturbed sample (tub)</div><div>J = organic sample (amber glass jar)</div><div>V = volatile sample (amber glass vial)</div><div>B = bulk bag sample</div><div>SPT(C) = Standard Penetration Test (Cone)</div><div>SPT(S) = Standard Penetration Test (Split Spoon)</div></div><div><div>HSV = hand shear vane (kPa)</div><div>PP = pocket penetrometer (kg.cm2)</div><div>PID = photoionisation detector (ppm)</div><div>FI = fracture index</div><div>TCR = total core recovery</div><div>SCR = solid core recovery</div><div>RQD = rock quality designation</div></div></div> <div>Remarks</div>															

<div><div><div><div><div><div></div><div>idom</div></div><div>idom merebrook</div></div><div><div>offices</div><div>London</div><div>Kent</div><div>Derby</div><div>Cardiff</div><div>Manchester</div><div>Moray</div></div></div><div><div>Idom Merebrook Ltd, East Mill, Bridgefoot, Belper, Derbyshire, DE56 2UA</div><div>t +44 (0) 1773 829 988 e consulting@merebrook.co.uk</div><div>merebrook.co.uk idom.com</div><div>AN idom GROUP COMPANY</div></div></div></div>										<div>Borehole Log</div>				<div>Borehole No.</div> <div>MBH02/16</div> <div>Sheet 2 of 3</div>																										
<div>Project Name: The Machine Store</div>						<div>Project No.</div> <div>19579G</div>		<div>Co-ords:</div>		<div>Hole Type</div> <div>CP</div>																														
<div>Location: The Old Vinyl Factory, Hayes</div>						<div>Level:</div>		<div>Scale</div> <div>1:50</div>		<div>Logged By</div> <div>MSG</div>																														
<div>Equipment: Dando 2000</div>						<div>Dates:</div> <div>12/04/2016</div>																																		
Well	Wtr Strk	Sample and In Situ Testing			Coring				Depth (m)	Level (m)	Legend	Stratum Description																												
		Depth (m)	Type	Results	FI	TCR	SCR	RQD																																
<div></div>		11.00	D	N=27 (1,3/5,7,7,8)							<div></div>		11																											
		11.00	SPT(S)																																					
		11.00 - 11.45	B																																					
		12.00	D	Ublow=62																<div></div>		12																		
		12.50 - 12.95	U																																					
		13.00	D																																					
		14.00	D	N=27 (13,5/6,6,7,8)																									<div></div>	<div>CLAYSTONE.</div> <div>Stiff dark bluish grey slightly silty, slightly sandy fissured CLAY.</div>	14									
		14.00	SPT(S)																																					
		14.00 - 14.45	B																																					
		15.00	D	Ublow=81																																		<div></div>	<div>CLAYSTONE.</div> <div>Stiff dark bluish grey slightly silty, slightly sandy fissured CLAY.</div>	15
		15.10	D																																					
		15.50 - 15.95	U																																					
16.00	D	Ublow=100							<div></div>		16																													
17.00	D																																							
17.00 - 17.45	SPT(S) B																																							
18.00	D	N=26 (4,4/5,6,7,8)																<div></div>		17																				
18.50 - 18.95	U																																							
19.00	D																																							
20.00	D																													20										
Continued on Next Sheet																																								
<div>D = small disturbed sample (tub) J = organic sample (amber glass jar) V = volatile sample (amber glass vial) B = bulk bag sample SPT(C) = Standard Penetration Test (Cone) SPT(S) = Standard Penetration Test (Split Spoon)</div> <div>HSV = hand shear vane (kPa) PP = pocket penetrometer (kg.cm2) PID = photoionisation detector (ppm) FI = fracture index TCR = total core recovery SCR = solid core recovery RQD = rock quality designation</div>																					<div>Remarks</div>																			



<div><div><div></div><div><div>Idom Merebrook Ltd, East Mill, Bridgefoot, Belper, Derbyshire, DE56 2UA</div><div>t +44 (0) 1773 829 988 e consulting@merebrook.co.uk</div><div>merebrook.co.uk idom.com</div><div>AN idom GROUP COMPANY</div></div></div><div><div>offices</div><div>London</div><div>Kent</div><div>Derby</div><div>Cardiff</div><div>Manchester</div><div>Moray</div></div></div>										<div>Borehole Log</div>				<div>Borehole No.</div> <div>MBH02/16</div> <div>Sheet 3 of 3</div>	
<div>Project Name: The Machine Store</div>						<div>Project No. 19579G</div>		<div>Co-ords:</div>		<div>Hole Type CP</div>					
<div>Location: The Old Vinyl Factory, Hayes</div>						<div>Level:</div>		<div>Scale 1:50</div>							
<div>Equipment: Dando 2000</div>						<div>Dates: 12/04/2016</div>		<div>Logged By MSG</div>							
Well	Wtr Strk	Sample and In Situ Testing			Coring				Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results	FI	TCR	SCR	RQD							
		20.00	SPT(S)	0 (75 for 115mm/0 for 0mm)					20.05			CLAYSTONE.			
		20.00 - 20.45	B						20.20			Stiff dark bluish grey slightly silty, slightly sandy fissured CLAY.			
		21.00	D						21.00			CLAYSTONE.	21		
		21.50 - 21.95	B						21.30			Stiff dark bluish grey slightly silty, slightly sandy fissured CLAY.			
		22.00	D										22		
		23.00	D										23		
		23.00	SPT(S)	N=40 (7,7/8,10,10,12)											
		23.00 - 23.45	B												
		24.00	D											24	
		24.50 - 24.95	U	Ublow=100											
	25.00	D							25.00			End of Borehole at 25.00m	25		
													26		
													27		
													28		
													29		
													30		

D = small disturbed sample (tub)

J = organic sample (amber glass jar)

V = volatile sample (amber glass vial)

B = bulk bag sample

SPT(C) = Standard Penetration Test (Cone)

SPT(S) = Standard Penetration Test (Split Spoon)

HSV = hand shear vane (kPa)

PP = pocket penetrometer (kg.cm2)

PID = photoionisation detector (ppm)

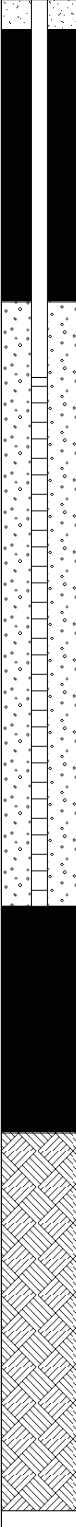


FI = fracture index

TCR = total core recovery



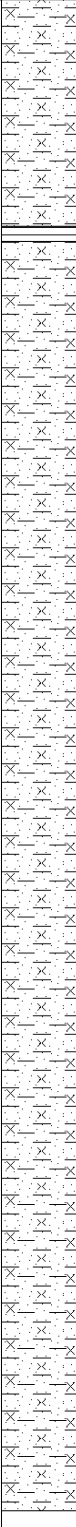
SCR = solid core recovery

RQD = rock quality designation

Remarks

<div><div><div><div><div><div></div><div>idom</div></div><div>idom merebrook</div></div><div><div>Idom Merebrook Ltd, East Mill, Bridgefoot, Belper, Derbyshire, DE56 2UA</div><div>t +44 (0) 1773 829 988 e consulting@merebrook.co.uk</div><div>merebrook.co.uk idom.com</div><div>AN idom GROUP COMPANY</div></div></div><div><div>offices</div><div>London</div><div>Kent</div><div>Derby</div><div>Cardiff</div><div>Manchester</div><div>Moray</div></div></div></div>										<div>Borehole Log</div>				<div>Borehole No.</div> <div>MBH03/16</div> <div>Sheet 1 of 3</div>	
<div>Project Name: The Machine Store</div>						<div>Project No.</div> <div>19579G</div>		<div>Co-ords:</div>		<div>Hole Type</div> <div>CP</div>					
<div>Location: The Old Vinyl Factory, Hayes</div>						<div>Level:</div>				<div>Scale</div> <div>1:50</div>					
<div>Equipment: Dando 2000</div>						<div>Dates:</div> <div>14/04/2016</div>				<div>Logged By</div> <div>MSG</div>					
Well	Wtr Strk	Sample and In Situ Testing			Coring				Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results	FI	TCR	SCR	RQD							
									0.50			CONCRETE with reinforcement.			
		1.00	B											1	
		1.20	SPT(C)	50 (6,19/50 for 115mm)											
		1.20 - 1.65	B												
		2.00	D											2	
		2.00	D												
		2.00	SPT(C)	50 (5,13/50 for 150mm)											
		2.00 - 2.45	B												
		3.00	D											3	
		3.00	SPT(C)	50 (4,9/50 for 225mm)											
		3.00 - 3.45	B												
		4.00	D											4	
		4.00	SPT(C)	38 (7,10/38 for 228mm)											
		4.00 - 4.45	B												
		5.00	D											5	
		5.00 - 5.45	B												
5.50	D							5.80							
6.20	D							6.20			Firm to stiff brown mottled grey silty weathered CLAY.	6			
6.50	SPT(S)	N=20 (3,4/4,5,5,6)													
7.00	D											7			
8.00	D											8			
8.00 - 8.50	U	Ublow=53													
8.50	D														
9.00	D											9			
9.50	SPT(S)	N=22 (3,3/4,5,6,7)													
10.00	D											10			
Continued on Next Sheet															
<div><div><div>D = small disturbed sample (tub)</div><div>J = organic sample (amber glass jar)</div><div>V = volatile sample (amber glass vial)</div><div>B = bulk bag sample</div><div>SPT(C) = Standard Penetration Test (Cone)</div><div>SPT(S) = Standard Penetration Test (Split Spoon)</div></div><div><div>HSV = hand shear vane (kPa)</div><div>PP = pocket penetrometer (kg.cm2)</div><div>PID = photoionisation detector (ppm)</div><div>FI = fracture index</div><div>TCR = total core recovery</div><div>SCR = solid core recovery</div><div>RQD = rock quality designation</div></div></div> <div>Remarks</div>															

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<div>Project Name: The Machine Store</div>						<div>Project No. 19579G</div>		<div>Co-ords:</div>		<div>Hole Type CP</div>					
<div>Location: The Old Vinyl Factory, Hayes</div>						<div>Level:</div>		<div>Scale 1:50</div>		<div>Logged By MSG</div>					
<div>Equipment: Dando 2000</div>						<div>Dates: 14/04/2016</div>									
Well	Wtr Strk	Sample and In Situ Testing			Coring				Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results	FI	TCR	SCR	RQD							
<div></div>		11.00	D	Ublow=65							<div></div>		11		
	11.00	U													
	11.50	D													
			12.00	D	N=25 (3,4/5,6,7,7)						<div></div>		12		
	12.00	SPT(S)													
	13.00	D													
			14.00	D	Ublow=68						<div></div>		14		
	14.00 - 14.45	U													
	14.50	D													
			15.00	D	N=27 (3,4/6,7,7,7)						<div></div>		15		
	15.50	SPT(S)													
	16.00	D													
			17.00	D	Ublow=66						<div></div>		17		
	17.00 - 17.45	U													
	17.50	D													
			18.00	D	N=28 (3,4/6,7,7,8)						<div></div>		18		
	18.50	SPT(S)													
	19.00	D													
			20.00	D	Ublow=81						<div></div>		20		
	20.00 - 20.45	U													
<div><div><div>D = small disturbed sample (tub)</div><div>J = organic sample (amber glass jar)</div><div>V = volatile sample (amber glass vial)</div><div>B = bulk bag sample</div><div>SPT(C) = Standard Penetration Test (Cone)</div><div>SPT(S) = Standard Penetration Test (Split Spoon)</div></div><div><div>HSV = hand shear vane (kPa)</div><div>PP = pocket penetrometer (kg.cm2)</div><div>PID = photoionisation detector (ppm)</div><div>FI = fracture index</div><div>TCR = total core recovery</div><div>SCR = solid core recovery</div><div>RQD = rock quality designation</div></div></div>														<div>Remarks</div>	

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<div>Project Name: The Machine Store</div>						<div>Project No. 19579G</div>		<div>Co-ords:</div>		<div>Hole Type CP</div>					
<div>Location: The Old Vinyl Factory, Hayes</div>						<div>Level:</div>				<div>Scale 1:50</div>					
<div>Equipment: Dando 2000</div>						<div>Dates: 14/04/2016</div>				<div>Logged By MSG</div>					
Well	Wtr Strk	Sample and In Situ Testing			Coring				Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results	FI	TCR	SCR	RQD							
		20.50	D									<div>CLAYSTONE. Stiff dark bluish grey slightly silty, slightly sandy fissured CLAY.</div>			
		21.00	D										21		
		21.50	SPT(S)	N=31 (3,5/7,7,8,9)					21.50						
		21.50 - 21.95	B						21.60						
		22.00	D										22		
		23.00 - 23.45	D	Ublow=100									23		
		23.50	D												
		24.00	D										24		
		24.50	SPT(S)	N=35 (10,10/8,8,9,10)											
		24.50 - 24.95	B												
		25.00	D										25		
		26.00	D										26		
		26.00 - 26.45	U												
		26.50	D												
		27.00	D										27		
	27.50	SPT(I)	N=36 (4,6/8,9,9,10)												
	28.00	D								28					
	29.00	D								29					
	29.00 - 29.45	U	Ublow=100												
	29.50	D													
	30.00	D						30.00		End of Borehole at 30.00m	30				
<div>D = small disturbed sample (tub) J = organic sample (amber glass jar) V = volatile sample (amber glass vial) B = bulk bag sample SPT(C) = Standard Penetration Test (Cone) SPT(S) = Standard Penetration Test (Split Spoon)</div> <div>HSV = hand shear vane (kPa) PP = pocket penetrometer (kg.cm2) PID = photoionisation detector (ppm) FI = fracture index TCR = total core recovery SCR = solid core recovery RQD = rock quality designation</div>										<div>Remarks</div>					



#### **APPENDIX 4**

- Soil Chemistry
- Laboratory Analysis Certificates



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## **Analytical Report Number : 16-18374**

<b>Project / Site name:</b>	TOVF (The Old Vinyl Factory), Hayes	<b>Samples received on:</b>	24/05/2016
<b>Your job number:</b>	19579	<b>Samples instructed on:</b>	24/05/2016
<b>Your order number:</b>	16-S2-FDO-LABS	<b>Analysis completed by:</b>	31/05/2016
<b>Report Issue Number:</b>	1	<b>Report issued on:</b>	31/05/2016
<b>Samples Analysed:</b>	2 soil samples		

**Signed:**

Rexona Rahman  
 Reporting Manager  
**For & on behalf of i2 Analytical Ltd.**

**Signed:**

Emma Winter  
 Assistant Reporting Manager  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :	soils	- 4 weeks from reporting
	leachates	- 2 weeks from reporting
	waters	- 2 weeks from reporting
	asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.



Analytical Report Number: 16-18374

Project / Site name: TOVF (The Old Vinyl Factory), Hayes  
Your Order No: 16-S2-FDO-LABS

Lab Sample Number				577822	577823			
Sample Reference				HP7 D	HP8 C			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.40	0.40			
Date Sampled				16/05/2016	16/05/2016			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1			
Moisture Content	%	N/A	NONE	12	11			
Total mass of sample received	kg	0.001	NONE	1.3	0.47			

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected			
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#### General Inorganics

pH	pH Units	N/A	MCERTS	8.7	9.0			
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1			
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.088	0.10			
Sulphide	mg/kg	1	MCERTS	< 1.0	< 1.0			
Organic Matter	%	0.1	MCERTS	0.1	0.6			

#### Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0			
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#### Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	0.40			
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	0.59			
Pyrene	mg/kg	0.1	MCERTS	< 0.10	0.54			
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	0.27			
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.47			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	0.28			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	0.22			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	0.32			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			

#### Total PAH

Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	< 1.60	3.09			
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#### Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	21	24			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	20	22			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	53	120			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	270	350			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	3.9	2.2			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	23	25			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	74	69			



Analytical Report Number: 16-18374

Project / Site name: TOVF (The Old Vinyl Factory), Hayes

Your Order No: 16-S2-FDO-LABS

Lab Sample Number				577822	577823			
Sample Reference				HP7 D	HP8 C			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.40	0.40			
Date Sampled				16/05/2016	16/05/2016			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

#### Monoaromatics

Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0			
Toluene	ug/kg	1	MCERTS	< 1.0	< 1.0			
Ethylbenzene	ug/kg	1	MCERTS	< 1.0	< 1.0			
p & m-xylene	ug/kg	1	MCERTS	< 1.0	< 1.0			
o-xylene	ug/kg	1	MCERTS	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	ug/kg	1	MCERTS	< 1.0	< 1.0			

#### Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0			
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0			
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	12			
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	39			
<b>TPH-CWG - Aliphatic (EC5 - EC35)</b>	mg/kg	10	MCERTS	< 10	52			

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0			
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0			
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10			
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	13			
<b>TPH-CWG - Aromatic (EC5 - EC35)</b>	mg/kg	10	MCERTS	< 10	21			





**Analytical Report Number : 16-18374**

**Project / Site name: TOVF (The Old Vinyl Factory), Hayes**

\* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
577822	HP7 D	None Supplied	0.40	Brown clay and sand with gravel.
577823	HP8 C	None Supplied	0.40	Brown clay and sand with gravel.



Analytical Report Number : 16-18374

Project / Site name: TOVF (The Old Vinyl Factory), Hayes

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

# Sample Deviation Report



Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
HP7 D		S	16-18374	577822	bc	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
HP7 D		S	16-18374	577822	bc	Monohydric phenols in soil	L080-PL	b
HP7 D		S	16-18374	577822	bc	Speciated EPA-16 PAHs in soil	L064-PL	b
HP7 D		S	16-18374	577822	bc	Sulphide in soil	L010-PL	c
HP7 D		S	16-18374	577822	bc	TPHCWG (Soil)	L076-PL	b
HP8 C		S	16-18374	577823	bc	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
HP8 C		S	16-18374	577823	bc	Sulphide in soil	L010-PL	c
HP8 C		S	16-18374	577823	bc	TPHCWG (Soil)	L076-PL	b

Key: a - No sampling date  
b - Incorrect container  
c - Holding time  
d - Headspace  
e - Temperature



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## **Analytical Report Number : 16-18303**

Replaces Analytical Report Number : 16-18303, issue no. 1

<b>Project / Site name:</b>	TOVF (The Old Vinyl Factory), Hayes	<b>Samples received on:</b>	16/05/2016
<b>Your job number:</b>	19579	<b>Samples instructed on:</b>	20/05/2016
<b>Your order number:</b>	16-S2-FDO-LABS	<b>Analysis completed by:</b>	27/05/2016
<b>Report Issue Number:</b>	2	<b>Report issued on:</b>	09/06/2016
<b>Samples Analysed:</b>	1 soil sample		

**Signed:**

Rexona Rahman  
Reporting Manager  
**For & on behalf of i2 Analytical Ltd.**

**Signed:**

Emma Winter  
Assistant Reporting Manager  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :	soils	- 4 weeks from reporting
	leachates	- 2 weeks from reporting
	waters	- 2 weeks from reporting
	asbestos	- 6 months from reporting

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Analytical Report Number: 16-18303

Project / Site name: TOVF (The Old Vinyl Factory), Hayes

Your Order No: 16-S2-FDO-LABS

Lab Sample Number				577449				
Sample Reference				BH01/16				
Sample Number				ES1				
Depth (m)				0.60				
Date Sampled				13/05/2016				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	15				
Total mass of sample received	kg	0.001	NONE	1.1				

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected				
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#### General Inorganics

pH	pH Units	N/A	MCERTS	10.1				
Total Cyanide	mg/kg	1	MCERTS	< 1				
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.025				
Sulphide	mg/kg	1	MCERTS	< 1.0				
Organic Matter	%	0.1	MCERTS	1.3				

#### Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0				
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#### Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10				
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10				
Fluorene	mg/kg	0.1	MCERTS	< 0.10				
Phenanthrene	mg/kg	0.1	MCERTS	0.65				
Anthracene	mg/kg	0.1	MCERTS	< 0.10				
Fluoranthene	mg/kg	0.1	MCERTS	0.83				
Pyrene	mg/kg	0.1	MCERTS	0.70				
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.44				
Chrysene	mg/kg	0.05	MCERTS	0.49				
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	0.39				
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	0.34				
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.40				
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10				
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10				
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05				

#### Total PAH

Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	4.24				
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#### Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	16				
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2				
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0				
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	20				
Copper (aqua regia extractable)	mg/kg	1	MCERTS	60				
Lead (aqua regia extractable)	mg/kg	1	MCERTS	390				
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	2.3				
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	20				
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0				
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	99				



Analytical Report Number: 16-18303

Project / Site name: TOVF (The Old Vinyl Factory), Hayes

Your Order No: 16-S2-FDO-LABS

Lab Sample Number				577449				
Sample Reference				BH01/16				
Sample Number				ES1				
Depth (m)				0.60				
Date Sampled				13/05/2016				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

#### Monoaromatics

Benzene	µg/kg	1	MCERTS	< 1.0				
Toluene	µg/kg	1	MCERTS	< 1.0				
Ethylbenzene	µg/kg	1	MCERTS	< 1.0				
p & m-xylene	µg/kg	1	MCERTS	< 1.0				
o-xylene	µg/kg	1	MCERTS	< 1.0				
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0				

#### Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1				
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1				
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1				
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0				
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0				
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0				
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	28				
<b>TPH-CWG - Aliphatic (EC5 - EC35)</b>	mg/kg	10	MCERTS	28				

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1				
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1				
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1				
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0				
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0				
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10				
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	17				
<b>TPH-CWG - Aromatic (EC5 - EC35)</b>	mg/kg	10	MCERTS	20				



**Analytical Report Number : 16-18303**

**Project / Site name: TOVF (The Old Vinyl Factory), Hayes**

\* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
577449	BH01/16	ES1	0.60	Brown clay and sand.



Analytical Report Number : 16-18303

Project / Site name: TOVF (The Old Vinyl Factory), Hayes

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



# Sample Deviation Report



Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
BH01/16	ES1	S	16-18303	577449	bc	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
BH01/16	ES1	S	16-18303	577449	bc	Sulphide in soil	L010-PL	c
BH01/16	ES1	S	16-18303	577449	bc	TPHCWG (Soil)	L076-PL	b

Key: a - No sampling date  
b - Incorrect container  
c - Holding time  
d - Headspace  
e - Temperature



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## **Analytical Report Number : 16-15810**

<b>Project / Site name:</b>	Machine Store, TOVF	<b>Samples received on:</b>	20/04/2016
<b>Your job number:</b>	19579G	<b>Samples instructed on:</b>	20/04/2016
<b>Your order number:</b>	16-S2-FDO-LABS	<b>Analysis completed by:</b>	27/04/2016
<b>Report Issue Number:</b>	1	<b>Report issued on:</b>	27/04/2016
<b>Samples Analysed:</b>	7 soil samples		

**Signed:**

Rexona Rahman  
Reporting Manager  
**For & on behalf of i2 Analytical Ltd.**

**Signed:**

Emma Winter  
Assistant Reporting Manager  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :	soils	- 4 weeks from reporting
	leachates	- 2 weeks from reporting
	waters	- 2 weeks from reporting
	asbestos	- 6 months from reporting

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Analytical Report Number: 16-15810

Project / Site name: Machine Store, TOVF

Your Order No: 16-S2-FDO-LABS

Lab Sample Number				563407	563408	563409	563410	563411
Sample Reference				HDP01/1	MBH02/16-1	MTP1601/1	MTP1602/1	MTP1603/1
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50-0.70	0.30-0.90	0.60-1.00	0.70-0.90	0.60-0.90
Date Sampled				11/04/2016	11/04/2016	14/04/2016	14/04/2016	14/04/2016
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	14	12	14	9.0	12
Total mass of sample received	kg	0.001	NONE	1.1	0.91	0.49	1.1	0.87

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	-	Not-detected
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#### General Inorganics

pH	pH Units	N/A	MCERTS	9.5	9.5	8.4	10.2	9.9
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	< 1
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.068	0.11	0.13	0.11	0.080
Sulphide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Organic Matter	%	0.1	MCERTS	0.9	1.2	0.6	0.3	1.2

#### Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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#### Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.17	< 0.05	< 0.05	0.56	0.20
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	0.54	< 0.10	< 0.10	0.19	< 0.10
Fluorene	mg/kg	0.1	MCERTS	0.51	< 0.10	< 0.10	0.22	< 0.10
Phenanthrene	mg/kg	0.1	MCERTS	6.6	0.32	< 0.10	9.7	4.8
Anthracene	mg/kg	0.1	MCERTS	0.37	< 0.10	< 0.10	9.4	< 0.10
Fluoranthene	mg/kg	0.1	MCERTS	3.8	0.50	< 0.10	3.9	2.5
Pyrene	mg/kg	0.1	MCERTS	3.2	0.42	< 0.10	2.5	1.9
Benzo(a)anthracene	mg/kg	0.1	MCERTS	0.96	0.22	< 0.10	0.44	0.52
Chrysene	mg/kg	0.05	MCERTS	1.0	0.35	< 0.05	0.95	1.1
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	0.53	< 0.10	< 0.10	0.37	0.54
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	0.35	< 0.10	< 0.10	0.39	0.47
Benzo(a)pyrene	mg/kg	0.1	MCERTS	0.42	0.23	< 0.10	0.28	0.57
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	0.27
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.34

#### Total PAH

Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	18.5	2.04	< 1.60	29.0	13.2
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#### Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	44	22	21	16	13
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	27	22	21	24	28
Copper (aqua regia extractable)	mg/kg	1	MCERTS	210	71	190	81	52
Lead (aqua regia extractable)	mg/kg	1	MCERTS	510	480	200	170	110
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.6	2.4	1.0	1.7	0.7
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	33	23	21	20	24
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	120	98	110	84	70



Analytical Report Number: 16-15810

Project / Site name: Machine Store, TOVF

Your Order No: 16-S2-FDO-LABS

Lab Sample Number				563407	563408	563409	563410	563411
Sample Reference				HDP01/1	MBH02/16-1	MTP1601/1	MTP1602/1	MTP1603/1
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50-0.70	0.30-0.90	0.60-1.00	0.70-0.90	0.60-0.90
Date Sampled				11/04/2016	11/04/2016	14/04/2016	14/04/2016	14/04/2016
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

#### Monoaromatics

Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

#### Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	1.4	< 1.0	< 1.0	1.1	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	5.1	< 2.0	3.4	25	100
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	54	< 8.0	190	560
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	21	440	19	580	1300
<b>TPH-CWG - Aliphatic (EC5 - EC35)</b>	mg/kg	10	MCERTS	34	500	29	790	2000

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	3.6	3.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	5.5	9.8	< 2.0	31	74
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	22	44	< 10	130	300
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	15	97	< 10	230	560
<b>TPH-CWG - Aromatic (EC5 - EC35)</b>	mg/kg	10	MCERTS	43	150	< 10	390	930



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Lab Sample Number				563412	563413			
Sample Reference				MTP1603/2	HDP03/1			
Sample Number				None Supplied	None Supplied			
Depth (m)				1.30-1.50	0.50-0.70			
Date Sampled				14/04/2016	14/04/2016			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)								
	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1			
Moisture Content	%	N/A	NONE	15	11			
Total mass of sample received	kg	0.001	NONE	0.94	1.6			

Asbestos in Soil	Type	N/A	ISO 17025	-	Not-detected			
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#### General Inorganics

pH	pH Units	N/A	MCERTS	8.0	8.1			
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1			
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.15	0.13			
Sulphide	mg/kg	1	MCERTS	< 1.0	< 1.0			
Organic Matter	%	0.1	MCERTS	0.7	0.9			

#### Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0			
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#### Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Phenanthrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			

#### Total PAH

Speciated Total EPA-16 PAHs	mg/kg	1.6	MCERTS	< 1.60	< 1.60			
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#### Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	13	10			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	31	20			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	14	28			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	17	89			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	0.4			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	28	19			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	49	44			



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Project / Site name: Machine Store, TOVF

Your Order No: 16-S2-FDO-LABS

Lab Sample Number				563412	563413			
Sample Reference				MTP1603/2	HDP03/1			
Sample Number				None Supplied	None Supplied			
Depth (m)				1.30-1.50	0.50-0.70			
Date Sampled				14/04/2016	14/04/2016			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		
Monoaromatics								
Benzene				ug/kg	1	MCERTS	< 1.0	< 1.0
Toluene				ug/kg	1	MCERTS	< 1.0	< 1.0
Ethylbenzene				ug/kg	1	MCERTS	< 1.0	< 1.0
p & m-xylene				ug/kg	1	MCERTS	< 1.0	< 1.0
o-xylene				ug/kg	1	MCERTS	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)				ug/kg	1	MCERTS	< 1.0	< 1.0

#### Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0			
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0			
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0			
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0			
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10			
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1			
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0			
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0			
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10			
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10			
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10			



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**Project / Site name: Machine Store, TOVF**

\* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
563407	HDP01/1	None Supplied	0.50-0.70	Light brown loam and sand with gravel and brick.
563408	MBH02/16-1	None Supplied	0.30-0.90	Light brown loam and sand with gravel and rubble.
563409	MTP1601/1	None Supplied	0.60-1.00	Light brown loam and clay with gravel.
563410	MTP1602/1	None Supplied	0.70-0.90	Light brown loam and sand with gravel and rubble.
563411	MTP1603/1	None Supplied	0.60-0.90	Light brown loam and sand with gravel and rubble.
563412	MTP1603/2	None Supplied	1.30-1.50	Light brown loam and clay with gravel.
563413	HDP03/1	None Supplied	0.50-0.70	Brown loam and clay with gravel.



Analytical Report Number : 16-15810

Project / Site name: Machine Store, TOVF

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests, 2:1 water:soil extraction, analysis by ICP-OES.	L038-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 300°C.



Sample Deviation Report



Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
HDP01/1		S	16-15810	563407	bc	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
HDP01/1		S	16-15810	563407	bc	Sulphide in soil	L010-PL	c
HDP01/1		S	16-15810	563407	bc	TPHCWG (Soil)	L076-PL	b
HDP03/1		S	16-15810	563413	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
HDP03/1		S	16-15810	563413	b	TPHCWG (Soil)	L076-PL	b
MBH02/16-1		S	16-15810	563408	bc	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
MBH02/16-1		S	16-15810	563408	bc	Sulphide in soil	L010-PL	c
MBH02/16-1		S	16-15810	563408	bc	TPHCWG (Soil)	L076-PL	b
MTP1601/1		S	16-15810	563409	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
MTP1601/1		S	16-15810	563409	b	TPHCWG (Soil)	L076-PL	b
MTP1602/1		S	16-15810	563410	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
MTP1602/1		S	16-15810	563410	b	TPHCWG (Soil)	L076-PL	b
MTP1603/1		S	16-15810	563411	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
MTP1603/1		S	16-15810	563411	b	TPHCWG (Soil)	L076-PL	b
MTP1603/2		S	16-15810	563412	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
MTP1603/2		S	16-15810	563412	b	TPHCWG (Soil)	L076-PL	b

Key: a - No sampling date b - Incorrect container  
c - Holding time d - Headspace e - Temperature