

APPENDIX B - EXPLORATORY HOLE LOGS



Borehole Log

Borehole No.

CP101

Sheet 1 of 2

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338769.57 - 350895.23

Hole Type
CP

Location: Wrexham

Level: 32.44

Scale
1:50

Client: Net World Sports

Dates: 12/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description						
		Depth (m)	Type	Results										
		0.10 - 0.40	B		0.40	32.04		Crops over, dark brown, slightly gravelly, sandy to very sandy CLAY. Gravel s fine to coarse, angular to subrounded of mudstone. Sand is fine to medium. Frequent rootlets throughout. TOPSOIL Stiff, dark brown, mottled grey, slightly gravelly CLAY. Gravel is fine to medium, angular to subrounded of mudstone, coal and rare igneous lithologies. TILL						
		0.50 - 0.80	B											
		1.20	SPTL S	N=23 (3,4/5,5,6,7)										
		1.20 - 1.65												
		2.20 - 2.65	U	Ublow=49										
		2.70	D											
		3.10	SPTL S	N=34 (3,4/5,9,10,10)										
		3.10 - 3.55												
		4.30 - 4.75	U	Ublow=47										
		4.80	D											
		5.20	SPTL S	N=26 (4,5/5,6,7,8)										
		5.20 - 5.65												
		5.70 - 6.00	B											
		6.50 - 6.80	U	Ublow=50										
		7.00	D											
		8.10	SPTL S	N=26 (4,6/6,6,7,7)										
		8.10 - 8.55												
		8.70 - 9.00	B											
		9.70 - 10.15	U	Ublow=48										
Continued on next sheet								10						

Continued on next sheet

Remarks

1) Hand dug pit to 1.20m bgl for service clearance 2) Terminated at 15.05m bgl 3) Groundwater ingress at 11.20m bgl rising to 10.90m bgl after 20 minutes.





Borehole Log

Borehole No.

CP101

Sheet 2 of 2

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338769.57 - 350895.23

Hole Type
CP

Location: Wrexham

Level: 32.44

Scale
1:50

Client: Net World Sports

Dates: 12/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		10.20	D						
		11.20		N=42 (5,8/10,11,10,11)	11.20	21.24			11
		11.20 - 11.65	SPTL					Very stiff, becoming stiff, slightly sandy, slightly gravelly, dark brown, mottled grey CLAY. Gravel is fine to medium, angular to subangular of mudstone and coal. Sand is fine to medium. TILL	
		11.70 - 12.00	S B						12
		12.90 - 13.35	U	Ublow=55					13
		14.60		N=30 (5,5/7,7,8,8)					14
		14.60 - 15.05	SPTL S		15.05	17.39			15
								End of borehole at 15.05 m	16
									17
									18
									19
									20

Remarks

1) Hand dug pit to 1.20m bgl for service clearance 2) Terminated at 15.05m bgl 3) Groundwater ingress at 11.20m bgl rising to 10.90m bgl after 20 minutes.





Borehole Log

Borehole No.

CP102

Sheet 1 of 2

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338862.35 - 350957.55

Hole Type
CP

Location: Wrexham

Level: 31.81

Scale
1:50

Client: Net World Sports

Dates: 13/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10 - 0.40	B		0.40	31.41		Crops over, soft, dark brown, slightly gravelly, sandy CLAY. Gravel is fine to medium, angular to subrounded of mudstone, limestone and clods of clay. Sand is fine to coarse. Frequent rootlets throughout. TOPSOIL	
		0.50 - 0.80	B						
		1.20 - 1.65	U	Ublow=42				Stiff, dark brown, mottled bluish grey, slightly gravelly CLAY. Gravel is fine to coarse, angular to rounded of mudstone, coal and occasional quartz and igneous lithologies. TILL	1
		1.70	D						
		2.20	SPTL S	N=23 (4,4/5,5,6,7)					2
		2.20 - 2.65							
		3.30 - 3.75	U	Ublow=51					3
		3.80	D						
		4.20	SPTL S	N=22 (3,4/5,5,6,6)					4
		4.20 - 4.65							
		5.30 - 5.75	U	Ublow=40					5
		5.80	D						
		6.60	SPTL S B	N=20 (3,4/5,5,5,5)					6
		6.60 - 7.05							
		7.00 - 7.73							7
		8.30 - 8.75	U	Ublow=48					8
		8.80	D						
		10.00		N=27 (4,5/6,6,7,8)					9
									10

Continued on next sheet

Remarks

1) Hand dug pit to 1.20m bgl for service clearance. 2) Terminated at 10.45m bgl 3) No groundwater ingress encountered.





Borehole Log

Borehole No.

CP102

Sheet 2 of 2

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338862.35 - 350957.55

Hole Type
CP

Location: Wrexham

Level: 31.81

Scale
1:50

Client: Net World Sports

Dates: 13/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		10.00 - 10.45	SPTL S		10.45	21.36		End of borehole at 10.45 m	
									11
									12
									13
									14
									15
									16
									17
									18
									19
									20

Remarks

1) Hand dug pit to 1.20m bgl for service clearance. 2) Terminated at 10.45m bgl 3) No groundwater ingress encountered.





Borehole Log

Borehole No.

CP103

Sheet 1 of 2

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338775.25 - 350978.58

Hole Type
CP

Location: Wrexham

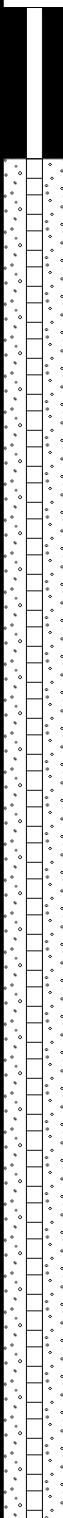
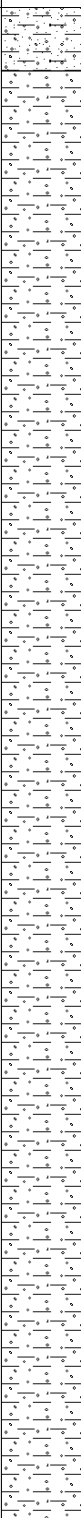
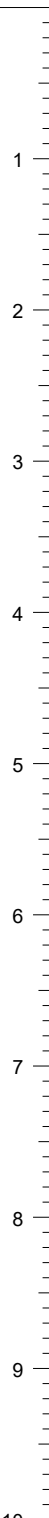
Level: 32.28

Scale
1:50

Client: Net World Sports

Dates: 13/06/2023 - 14/06/2023

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10 - 0.40	B		0.42	31.86		Crops over, soft, dark brown, slightly gravelly, sandy CLAY. Gravel is fine to medium, angular to subrounded of mudstone, limestone and clods of clay. Sand is fine to coarse. Frequent rootlets throughout. TOPSOIL Stiff, dark brown, mottled bluish grey, slightly gravelly CLAY. Gravel is fine to coarse, angular to rounded of mudstone, coal and occasional quartz and igneous lithologies. TILL	
		0.60 - 0.90	B						
		1.20	SPTL S	N=23 (4,4/5,5,6,7)					
		1.20 - 1.65							
		2.30 - 2.75	U	Ublow=45					
		2.80	D						
		3.30	SPTL S	N=26 (4,4/5,7,7,7)					
		3.30 - 3.75							
		4.20 - 4.65	U	Ublow=50					
		4.70	D						
		5.20	SPTL S	N=27 (4,5/6,6,7,8)					
		5.20 - 5.65							
		6.70 - 7.15	U	Ublow=0					
		6.80 - 7.10	B						
		8.30	SPTL S	N=29 (4,6/7,7,7,8)					
		8.30 - 8.75							
		10.00 - 10.45	U	Ublow=51					
							Continued on next sheet.		

Continued on next sheet

Remarks

1) Hand dug pit to 1.20m bgl for service clearance. 2) Terminated at 15.15m bgl 3) Groundwater ingress at 13.50m bgl rising to 13.30m bgl after 20mins.





Borehole Log

Borehole No.

CP103

Sheet 2 of 2

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338775.25 - 350978.58

Hole Type
CP

Location: Wrexham

Level: 32.28

Scale
1:50

Client: Net World Sports

Dates: 13/06/2023 - 14/06/2023

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		10.50	D						11
		11.60		N=26 (5,5/5,6,7,8)					
		11.60 - 12.05	SPTL						
		12.00 - 12.30	S						12
			B						
		13.10 - 13.53	U	Ublow=53					13
		13.60	D		13.40	18.88		Stiff, dark brown, mottled grey, slightly gravelly CLAY. Gravel is fine to coarse, angular to subrounded of mudstone. Occasional lenses of fine to medium sand.	14
		14.70		N=30 (4,5/7,7,7,9)					
		14.70 - 15.15	SPTL						
			S		15.15	17.13		End of borehole at 15.15 m	15
									16
									17
									18
									19
									20

Remarks

1) Hand dug pit to 1.20m bgl for service clearance. 2) Terminated at 15.15m bgl 3) Groundwater ingress at 13.50m bgl rising to 13.30m bgl after 20mins.





Borehole Log

Borehole No.

CP104

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338826.14 - 351101.11

Hole Type
CP

Location: Wrexham

Level: 31.07

Scale
1:50

Client: Net World Sports

Dates: 15/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10 - 0.40	B		0.40	30.67		Crops, over soft, dark brown, slightly sandy, slightly gravelly CLAY. Gravel is fine to coarse, angular to subangular of mudstone, sandstone and coal. Sand is fine to medium. Frequent rootlets throughout.	
		0.60 - 0.90	B					TOPSOIL	
		1.20						Stiff, dark brown, mottled bluish grey, slightly gravelly CLAY. Gravel is fine to coarse, angular to subrounded of mudstone, coal, sandstone and mixed igneous lithologies.	1
		1.20 - 1.65	SPTL S	N=22 (3,4/5,5,6,6)					
		2.20 - 2.65	U	Ublow=49					2
		2.70	D						
		3.30							3
		3.30 - 3.75	SPTL S	N=23 (3,4/5,5,6,7)					
		4.40 - 4.85	U	Ublow=52					4
		4.90	D						
		5.50							5
		5.50 - 5.95	SPTL S	N=27 (3,4/5,6,7,9)					
		6.00 - 6.30	B						6
		7.10 - 7.55	U	Ublow=48					7
		7.60	D						
		8.40							8
		8.40 - 8.85	SPTL S	N=27 (5,5/6,6,7,8)					
		9.50 - 9.95	U	Ublow=49					9
		10.00	D		10.00	21.07		End of borehole at 10.00 m	10

Remarks

1) Hand dug pit to 1.20m bgl for service clearance 2) Terminated at 10.00m bgl 3) No groundwater ingress encountered





Borehole Log

Borehole No.

CP105

Sheet 1 of 2

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338698.39 - 351078.41

Hole Type
CP

Location: Wrexham

Level: 32.42

Scale
1:50

Client: Net World Sports

Dates: 15/06/2023 - 16/06/2023

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description						
		Depth (m)	Type	Results										
		0.10 - 0.40	B		0.43	31.99		Crops, over soft, dark brown, slightly sandy, slightly gravelly CLAY. Gravel is fine to coarse, angular to subangular of mudstone, sandstone and coal. Sand is fine to medium. Frequent rootlets throughout. TOPSOIL Stiff, dark brown, mottled grey, slightly gravelly CLAY. Gravel is fine to coarse, angular to subrounded of mudstone, coal, quartz, sandstone and mixed igneous lithologies. TILL						
		0.50 - 0.80	B											
		1.20	SPTL S	N=23 (3,3/4,5,7,7)										
		1.20 - 1.65												
		2.10 - 2.55	U	Ublow=47										
		2.60	D											
		3.20	SPTL S	N=27 (4,5/5,6,7,9)										
		3.20 - 3.65												
		4.30 - 4.75	U	Ublow=45										
		4.80	D											
		5.20	SPTL S	N=26 (3,4/5,7,7,7)										
		5.20 - 5.65												
		6.60 - 7.05	U	Ublow=48										
		7.10	D											
		8.00	SPTL S B	N=24 (3,4/5,5,7,7)										
		8.00 - 8.45												
		8.10 - 8.40												
		9.60 - 10.05	U	Ublow=55										
		Continued on next sheet									10			

Remarks

1) Hand dug pit to 1.20m bgl for service clearance 2) Terminated at 10.10m bgl 3) No groundwater ingress encountered





Borehole Log

Borehole No.

CP105

Sheet 2 of 2

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338698.39 - 351078.41

Hole Type
CP

Location: Wrexham

Level: 32.42

Scale
1:50

Client: Net World Sports

Dates: 15/06/2023 - 16/06/2023

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		10.10	D		10.10	22.32		End of borehole at 10.10 m	
									11
									12
									13
									14
									15
									16
									17
									18
									19
									20

Remarks

1) Hand dug pit to 1.20m bgl for service clearance 2) Terminated at 10.10m bgl 3) No groundwater ingress encountered





Borehole Log

Borehole No.

CP106

Sheet 1 of 2

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338392.74 - 351211.33

Hole Type
CP

Location: Wrexham

Level: 33.01

Scale
1:50

Client: Net World Sports

Dates: 16/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description					
		Depth (m)	Type	Results									
		0.00 - 0.30	B		0.30	32.71		Crops, over soft, dark brown, slightly sandy, slightly gravelly CLAY. Gravel is fine to coarse, angular to subangular of mudstone, sandstone and coal. Sand is fine to medium. Frequent rootlets throughout. TOPSOIL	1				
		0.50 - 0.80	B										
		1.20 - 1.65	U	Ublow=42				Stiff, dark brown, mottled grey, slightly gravelly CLAY. Gravel is fine to coarse, angular to subrounded of mudstone, coal, quartz, sandstone and mixed igneous lithologies. TILL	2				
		1.70	D										
		2.20	SPTL S	N=19 (3,3/4,4,5,6)					3				
		2.20 - 2.65											
		3.30 - 3.75	U	Ublow=45					4				
		3.80	D										
		4.20	SPTL S	N=25 (4,4/5,5,7,8)					5				
		4.20 - 4.65											
		5.30 - 5.75	U	Ublow=47					6				
		5.80	D										
		6.80	SPTL S	N=29 (5,5/7,7,7,8)					7				
		6.80 - 7.25											
		7.30 - 7.60	B						8				
		8.10 - 8.55	U							Ublow=47			
		8.60	D						9				
		9.70	SPTL S							N=28 (4,5/7,7,7,7)			
		9.70 - 10.15											
		Continued on next sheet											

Continued on next sheet

Remarks

1) Hand dug pit to 1.20m bgl for service clearance 2) Terminated at 10.15m bgl 3) No groundwater ingress encountered





Borehole Log

Borehole No.

CP106

Sheet 2 of 2

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338392.74 - 351211.33

Hole Type
CP

Location: Wrexham

Level: 33.01

Scale
1:50

Client: Net World Sports

Dates: 16/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					10.15	22.86		End of borehole at 10.15 m	
									11
									12
									13
									14
									15
									16
									17
									18
									19
									20

Remarks

1) Hand dug pit to 1.20m bgl for service clearance 2) Terminated at 10.15m bgl 3) No groundwater ingress encountered





Borehole Log

Borehole No.

CP107

Sheet 1 of 2

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338475.73 - 351081.21

Hole Type
CP

Location: Wrexham

Level: 33.76

Scale
1:50

Client: Net World Sports

Dates: 19/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.00 - 0.30	B		0.35	33.41		Crops over, soft, dark brown, slightly gravelly to gravelly, slightly sandy, slightly silty CLAY. Gravel is fine to coarse, angular to rounded of mudstone, limestone and sandstone. Sand is fine to medium. Frequent rootlets throughout TOPSOIL	1
		0.40 - 0.70	B						
		1.20	SPTL S	N=19 (2,3/4,4,5,6)				Stiff, dark brown, mottled grey and bluish grey, slightly gravelly CLAY. Gravel is fine to coarse, angular to subrounded of mudstone, coal, quartz and mixed igneous lithologies. TILL	2
		1.20 - 1.65							
		2.20 - 2.65	U	Ublow=43					
		2.70	D						
		3.30	SPTL S	N=24 (4,5/5,6,6,7)					
		3.30 - 3.75							
		4.20 - 4.65	U	Ublow=44					
		4.70	D						
		5.10	SPTL S B	N=26 (4,4/5,7,7,7)					
		5.10 - 5.55							
		5.50 - 5.80							
		6.50 - 6.95	U	Ublow=50					
		7.00	D						
		8.20	SPTL S	N=24 (3,3/5,6,6,7)					
		8.20 - 8.65							
		9.70 - 10.15	U	Ublow=51					
Continued on next sheet									10

Continued on next sheet

Remarks

1) Hand dug pit to 1.20m for service clearance 2) Terminated at 15.15m bgl 3) Groundwater ingress at 14.70m bgl rising to 9.00m bgl after 20mins.





Borehole Log

Borehole No.

CP107

Sheet 2 of 2

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338475.73 - 351081.21

Hole Type
CP

Location: Wrexham

Level: 33.76

Scale
1:50

Client: Net World Sports

Dates: 19/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description							
		Depth (m)	Type	Results											
		10.20 10.30 - 10.60	D B	N=26 (4,5/6,6,7,7)					11 12 13 14 15 16 17 18 19 20						
		11.40 11.40 - 11.85	SPTL S												
		13.00 - 13.45	U							Ublow=56					
		13.50	D												
		14.70 14.70 - 15.15	SPTL S							N=21 (4,4/6,5,5,5)					

Remarks

1) Hand dug pit to 1.20m for service clearance 2) Terminated at 15.15m bgl 3) Groundwater ingress at 14.70m bgl rising to 9.00m bgl after 20mins.





Borehole Log

Borehole No.

CP108

Sheet 1 of 2

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338383.86 - 351094.25

Hole Type
CP

Location: Wrexham

Level: 34.36

Scale
1:50

Client: Net World Sports

Dates: 19/06/2023 - 20/06/2023

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.10 - 0.40 0.20	B ES		0.35	34.01		Grass over dark orangish brown, slightly gravelly, clayey, fine to medium SAND. Gravel is fine to medium, angular to subrounded of mudstone, limestone and clods of clay. Frequent rootlets throughout TOPSOIL Stiff, dark brown, mottled bluish grey, slightly gravelly CLAY. Gravel is fine to coarse, angular to rounded of mudstone, sandstone, coal, quartz and mixed igneous lithologies. TILL	
		0.50 - 0.80	B						
		1.20 1.20 - 1.65	SPTL S	N=21 (3,4/4,5,6,6)					
		2.20 - 2.65	U	Ublow=41					
		2.70	D						
		3.40 3.40 - 3.85	SPTL S	N=25 (3,5/5,6,7,7)					
		4.50 - 4.95 4.70	U ES	Ublow=44					
		5.00	D						
		5.50 5.50 - 5.95	SPTL S	N=26 (5,5/6,6,7,7)					
		6.00 - 6.30	B						
		6.90 - 7.35	U	Ublow=51					
		7.40 7.50 - 7.80	D B						
		8.30 8.30 - 8.75	SPTL S	N=27 (4,5/6,6,7,8)					
		9.50 - 9.95	U	Ublow=56					
		10.00		N=27 (3,5/6,7,7,7)					

Continued on next sheet

Remarks

1) Hand dug pit to 1.20m bgl for service clearance 2) Terminated at 10.10m bgl 3) No groundwater ingress encountered





Borehole Log

Borehole No.

CP108

Sheet 2 of 2

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338383.86 - 351094.25

Hole Type
CP

Location: Wrexham

Level: 34.36

Scale
1:50

Client: Net World Sports

Dates: 19/06/2023 - 20/06/2023

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		10.00 - 10.45	SPTL S		10.45	23.91		End of borehole at 10.45 m	11
									12
									13
									14
									15
									16
									17
									18
									19
									20

Remarks

1) Hand dug pit to 1.20m bgl for service clearance 2) Terminated at 10.10m bgl 3) No groundwater ingress encountered





Borehole Log

Borehole No.

CP109

Sheet 1 of 2

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338352.50 - 351018.42

Hole Type
CP

Location: Wrexham

Level: 34.51

Scale
1:50

Client: Net World Sports

Dates: 20/06/2023 - 21/06/2023

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description						
		Depth (m)	Type	Results										
		0.10 - 0.40	B		0.40	34.11		Grass over dark orangish brown, slightly gravelly, clayey, fine to medium SAND. Gravel is fine to medium, angular to subrounded of mudstone, limestone and clods of clay. Frequent rootlets throughout	1					
		0.50 - 0.80	B					TOPSOIL						
		1.20	SPTL S	N=23 (3,4/5,5,6,7)				Stiff, dark brown, locally dark orangish brown, mottled grey, slightly sandy, slightly gravelly CLAY. Sand is fine to medium, gravel is fine to medium, angular to rounded of mudstone, coal, sandstone and quartz.						
		1.20 - 1.65												
		2.20 - 2.65	U	Ublow=41										
		2.70	D											
		3.00	ES											
		3.30	SPTL S	N=24 (3,3/4,6,7,7)										
		3.30 - 3.70												
		4.20 - 4.65	U	Ublow=43										
		4.70	D											
		5.30	SPTL S	N=26 (4,5/5,6,7,8)										
		5.30 - 5.75												
		6.50 - 6.95	U	Ublow=52										
		7.00	D											
		7.00 - 7.30	B											
		8.30	SPTL S	N=25 (3,4/5,5,7,8)										
		8.30 - 8.75												
		8.50	ES											
9.60 - 10.05	U	Ublow=42												
			Continued on next sheet						10					

Remarks

1) Hand dug pit to 1.20m bgl for service clearance 2) Terminated at 10.45m bgl 3) No groundwater ingress encountered





Borehole Log

Borehole No.

CP109

Sheet 2 of 2

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338352.50 - 351018.42

Hole Type
CP

Location: Wrexham

Level: 34.51

Scale
1:50

Client: Net World Sports

Dates: 20/06/2023 - 21/06/2023

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		10.10	D		10.10	24.41		End of borehole at 10.10 m	
									11
									12
									13
									14
									15
									16
									17
									18
									19
									20

Remarks

1) Hand dug pit to 1.20m bgl for service clearance 2) Terminated at 10.45m bgl 3) No groundwater ingress encountered





Borehole Log

Borehole No.

CP110

Sheet 1 of 2

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338240.56 - 351128.32

Hole Type
CP

Location: Wrexham

Level: 35.42

Scale
1:50

Client: Net World Sports

Dates: 21/06/2023 - 22/06/2023

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		0.10 - 0.40	B		0.41	35.01		Grass over, soft, dark brown, slightly gravelly, sandy to very sandy CLAY. Sand is fine to coarse, gravel is fine to coarse, angular to subangular of mudstone, sandstone and limestone. Frequent rootlets throughout. TOPSOIL		
		0.60 - 0.90	B							
		1.20 - 1.65	U	Ublow=38				Stiff, dark brown, occasionally mottled grey, slightly gravelly, slightly sandy CLAY. Gravel is fine to medium, angular to rounded of mudstone, sandstone, coal, quartz and mixed igneous lithologies. Sand is fine to medium	1 -	
		1.70	D							
		2.30	SPTL S	N=22 (1,2/5,5,6,6)						2 -
		2.30 - 2.75								
		3.40 - 3.85	U	Ublow=42				3 -		
		3.90	D							
		4.50	SPTL S	N=22 (3,4/5,5,6,6)						4 -
		4.50 - 4.95								
		5.60 - 6.05	U	Ublow=43				5 -		
		6.10	D							
		6.50 - 6.80	B					6 -		
		7.00	SPTL S	N=24 (5,5/5,6,6,7)						7 -
		7.00 - 7.45								
		8.60 - 9.05	U	Ublow=48				8 -		
		9.10	D							
		10.00		N=27 (4,5/6,6,7,8)						9 -
								10 -		
Continued on next sheet										

Remarks

1) Hand dug pit to 1.20m bgl for service clearance 2) Terminated at 15.00m bgl 3) Groundwater ingress at 13.20m bgl rising to 12.00m bgl after 20mins.





Borehole Log

Borehole No.

CP110

Sheet 2 of 2

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338240.56 - 351128.32

Hole Type
CP

Location: Wrexham

Level: 35.42

Scale
1:50

Client: Net World Sports

Dates: 21/06/2023 - 22/06/2023

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		10.00 - 10.45	SPTL S						
		10.50 - 10.80	B						
		11.60 - 12.05	U	Ublow=52					11
		12.10	D		12.00	23.42		Stiff, dark brown, mottled grey, slightly gravelly CLAY with occasional lenses of fine to medium sand. Gravel is fine to coarse, angular to subrounded of mudstone, sandstone, quartz and coal TILL	12
		12.50 - 12.80	B						
		13.20		N=25 (3,4/5,5,7,8)					13
		13.20 - 13.65	SPTL S						14
		14.50 - 14.95	U	Ublow=56					
		15.00	D		15.00	20.42		End of borehole at 15.00 m	15
									16
									17
									18
									19
									20

Remarks

1) Hand dug pit to 1.20m bgl for service clearance 2) Terminated at 15.00m bgl 3) Groundwater ingress at 13.20m bgl rising to 12.00m bgl after 20mins.





Borehole Log

Borehole No.

CP111

Sheet 1 of 2

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338278.66 - 351168.85

Hole Type
CP

Location: Wrexham

Level: 34.30

Scale
1:50

Client: Net World Sports

Dates: 22/06/2023 - 23/06/2023

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.00 - 0.30	B		0.30	34.00		Grass over, dark brown, slightly gravelly, clayey, fine to coarse SAND. Gravel is fine to medium, angular to subrounded of mudstone, limestone and clods of clay. Frequent rootlets throughout TOPSOIL	
		0.40 - 0.70	B						
		1.20 - 1.65	U	Ublow=39				Stiff, drak brown, mottled grey, slightly sandy, slightly gravelly CLAY. Sand is fine to medium, gravel is fine to coarse, angular to subrounded of mudstone, sandstone, coal and quartz. TILL	1
		1.70	D						
		2.20	SPTL S	N=23 (1,3/4,5,6,8)					2
		2.20 - 2.65							
		3.40 - 3.85	U	Ublow=42					3
		3.90	D						
		4.40	SPTL S	N=27 (4,5/5,5,8,9)					4
		4.40 - 4.85							
		5.40 - 5.85	U	Ublow=41					5
		5.90	D						
		7.00		N=27 (4,5/6,6,7,8)					7
		7.50 - 7.80							
		7.70	B SPTL S						8
		8.50 - 8.95	U	Ublow=38					
		9.00	D SD						9
		9.00							
		10.00		N=27 (4,5/6,7,7,7)					10

Continued on next sheet

Remarks

1) Hand dug pit to 1.20m bgl for service clearance 2) Terminated at 10.45m bgl 3) No groundwater ingress encountered





Borehole Log

Borehole No.

CP111

Sheet 2 of 2

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338278.66 - 351168.85

Hole Type
CP

Location: Wrexham

Level: 34.30

Scale
1:50

Client: Net World Sports

Dates: 22/06/2023 - 23/06/2023

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		10.00 - 10.45	SPTL S		10.45	23.85		End of borehole at 10.45 m	11
									12
									13
									14
									15
									16
									17
									18
									19
									20

Remarks
1) Hand dug pit to 1.20m bgl for service clearance 2) Terminated at 10.45m bgl 3) No groundwater ingress encountered





Trial Pit Log

Trialpit No
HDP102
Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338640.69 - 351017.64
Level: 33.14

Date

Location: Wrexham

Dimensions (m):

0.2

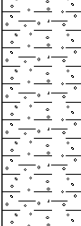
Depth
1.00

0.2

Scale
1:25

Logged
ER

Client: Net World Sports

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.10	ES		0.20	32.94		MADE GROUND: Soft, dark brown, slightly sandy, gravelly CLAY. Gravel is fine to coarse, angular gravel of concrete, brick, limestone and mudstone. Sand is fine to medium. MADE GROUND Stiff, dark brown, slightly gravelly CLAY. Gravel is fine to coarse, angular to subrounded of mudstone and coal. TILL
				1.00	32.14		
							End of pit at 1.00 m
							1
							2
							3
							4
							5

Remarks: 1) Hand dug pit for geoenvironmental purposes 2) No groundwater ingress encountered 3) Terminated at 1.00m bgl

Stability: Stable





Trial Pit Log

Trialpit No
HDP103
Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338760.95 - 351082.28
Level: 31.69

Date

Location: Wrexham

Dimensions (m):

0.2

Client: Net World Sports

Depth
1.20

0.2

Scale
1:25
Logged
ER

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
▼	0.30	ES					MADE GROUND: Soft, dark orangish brown, sandy, gravelly CLAY. Gravel is fine to coarse, angular to subangular of mudstone, limestone, concrete and brick. Sand is fine to coarse. MADE GROUND	
				0.70	30.99		MADE GROUND: Very soft, dark grey, very silty, peaty CLAY. MADE GROUND <u>Organic odour from 0.70m</u>	1
	1.20	ES		1.20	30.49		----- End of pit at 1.20 m	2 3 4 5

Remarks: 1) Hand dug pit for geoenvironmental purposes 2) Groundwater ingress at 0.70m bgl 3) Terminated at 1.20m bgl

Stability: Stable





Trial Pit Log

Trialpit No
HDP104
Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

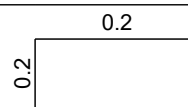
Project No.
TE1750

Co-ords: 338886.53 - 351128.55
Level: 30.43

Date
20/06/2023

Location: Wrexham

Dimensions (m):
Depth 1.10



Scale
1:25
Logged
ER

Client: Net World Sports

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.60	ES		0.23	30.20		Crops over, soft, dark brown, slightly sandy, slightly gravelly, silty CLAY. Sand is fine to medium, gravel is fine to coarse, angular to subangular of mudstone, coal and limestone. Frequent rootlets throughout. TOPSOIL
				1.10	29.33		Firm to stiff, dark brown, slightly sandy, slightly gravelly CLAY. Garvel is fine to coarse, angular to subrounded of mudstone, coal and sandstone. Sand is fine to medium. TILL
							End of pit at 1.10 m

1

2

3

4

5

Remarks: 1) Hand dug pit for geoenvironmental purposes 2) No groundwater ingress encountered 3) Terminated at 1.10m bgl

Stability: Stable





Trial Pit Log

Trialpit No
HDP105
Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

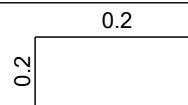
Project No.
TE1750

Co-ords: 338877.27 - 351204.31
Level: 30.28

Date
20/06/2023

Location: Wrexham

Dimensions (m):
Depth 1.00



Scale
1:25
Logged
ER

Client: Net World Sports

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.20	ES		0.30	29.98		Crops over, soft, dark to yellowish brown, slightly gravelly, slightly silty, sandy CLAY. Gravel is fine to medium, angular to subrounded of mudstone, limestone and quartz. Sand is fine to coarse. Frequent rootlets throughout. TOPSOIL
				1.00	29.28		Firm to stiff, dark brown, slightly sandy, slightly gravelly CLAY. Garvel is fine to coarse, angular to subrounded of mudstone, coal and sandstone. Sand is fine to medium.
							End of pit at 1.00 m

1

2

3

4

5

Remarks: 1) Hand dug pit for geoenvironmental purposes 2) No groundwater ingress encountered 3) Terminated at 1.00m bgl

Stability: Stable





Trial Pit Log

Trialpit No
HDP106
Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338608.39 - 351097.31
Level: 32.54

Date
20/06/2023

Location: Wrexham

Dimensions (m):

0.2

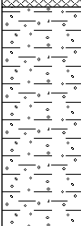
Client: Net World Sports

Depth
1.00

0.2

Scale
1:25

Logged
ER

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.15	ES		0.25	32.29		MADE GROUND: Soft to firm, dark brown, slightly sandy to sandy, gravelly CLAY. Sand is fine to coarse, gravel is fine to coarse, angular to subangular of mudstone, coal, brick, concrete and rare ceramic.
							MADE GROUND Firm to stiff, dark brown, mottled grey, slightly gravelly CLAY. Gravel is fine to coarse, angular to subangular of mudstone, coal, quartz and sandstone
				1.00	31.54		TILL
							End of pit at 1.00 m
							1
							2
							3
							4
							5

Remarks: 1) Hand dug pit for geoenvironmental purposes 2) No groundwater ingress encountered 3) Terminated at 1.00m bgl

Stability: Stable





Trial Pit Log

Trialpit No
HDP107
Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338486.39 - 351017.94
Level: 33.88

Date
20/06/2023

Location: Wrexham

Dimensions (m):

0.2

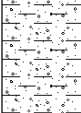
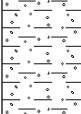
Depth
1.00

0.2

Scale
1:25

Logged
ER

Client: Net World Sports

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.10	ES					Soft, dark brown to yellowish brown, slightly sandy, slightly gravelly CLAY. Sand is fine to coarse, gravel is fine to medium, angular to subangular of mudstone, sandstone and coal. TOPSOIL	
				0.40	33.48		Stiff, dark brown, slightly gravelly CLAY. Gravel is fine to coarse, angular to subrounded of mudstone, sandstone, quartz and coal. TILL	
				1.00	32.88		End of pit at 1.00 m	1
								2
								3
								4
								5

Remarks: 1) Hand dug pit for geoenvironmental purposes 2) No groundwater ingress encountered 3) Terminated at 1.00m bgl

Stability: Stable





Trial Pit Log

Trialpit No

TP101

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338679.83 - 350888.06

Level: 33.08

Date

05/06/2023

Location: Wrexham

Dimensions
(m):

3

Depth
3.10

1.2

Scale

1:25

Logged
ER

Client: Net World Sports

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.10	ES	HVR=93	0.30	32.78		Crops over, firm to stiff, orangish brown, sandy, gravelly CLAY. Sand is fine to medium, gravel is fine to medium, angular to subrounded of mudstone and sandstone. Frequent rootlets throughout. TOPSOIL	1
	0.20 - 0.30	B	HVR=120				Stiff to very stiff, dark brown, mottled grey, slightly gravelly CLAY. Gravel is fine to coarse, angular to rounded of coal, mudstone and sandstone. TILL	
	1.00	ES	HVR=130				Friable from 1.30m	2
			HVR=130					
	1.90 - 2.20	B	HVR=128					3
			HVR=130					
	2.50	ES	HVR=130	3.10	29.98		End of pit at 3.10 m	4
			HVR=130					
								5

Remarks: 1) Trial pit for geoenvironmental purposes 2) Terminated on hard digging 3) No groundwater ingress encountered.

Stability: Stable





Trial Pit Log

Trialpit No

TP102

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338666.11 - 350982.06

Level: 32.98

Date

05/06/2023

Location: Wrexham

Dimensions
(m):

2

Depth
3.55

0.6

Scale

1:25

Logged
ER

Client: Net World Sports

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
▼	0.20	ES	HVR=118	0.27	32.71		Crops over, firm to stiff, orangish brown, sandy, gravelly CLAY. Sand is fine to medium, gravel is fine to medium, angular to subrounded of mudstone and limestone. Frequent rootlets throughout. TOPSOIL. Stiff to very stiff, dark brown, mottled grey, slightly gravelly CLAY. Gravel is fine to coarse, angular to rounded of coal, mudstone and sandstone. TILL
	0.80	ES	HVR=124				
	1.30 - 1.60	B	HVR=130				
	1.85	ES	HVR=130				
			HVR=120				
	3.10	ES	HVR=130				End of pit at 3.55 m
			HVR=130	3.55	29.43		

Remarks: 1) Trial pit for geoenvironmental purposes 2) Terminated due to hard digging 3) Groundwater seepage in western pit wall at 2.30m bgl.

Stability: Stable





Trial Pit Log

Trialpit No

TP103

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338642.85 - 351082.10

Level: 32.69

Date

05/06/2023

Location: Wrexham

Dimensions
(m):

2

Client: Net World Sports

Depth
3.85

0.6

Scale

1:25

Logged
ER

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.40 - 0.60 0.45	B ES	HVR=73	0.20	32.49		Crops over, firm to stiff, orangish brown, sandy, gravelly CLAY. Sand is fine to medium, gravel is fine to medium, angular to subrounded of mudstone and limestone. Frequent rootlets throughout. TOPSOIL	
			HVR=71	0.65	32.04		Firm, light orangish brown, slightly gravelly, sandy, silty CLAY. Gravel is fine to medium, angular to rounded of mudstone and quartz. Sand is fine to medium. TILL	
	1.30	ES	HVR=119				Stiff to very stiff, dark brown, slightly gravelly CLAY. Gravel is fine to coarse, angular to rounded of coal, mudstone and sandstone. TILL	1
			HVR=126					
			HVR=130					2
	2.70	ES	HVR=130					
	3.00 - 3.30	B	HVR=130					3
			HVR=130					
			HVR=130	3.85	28.84			
							End of pit at 3.85 m	4
								5

Remarks: 1) Trial pit for geoenvironmental purposes 2) Terminated on hard digging 3) No groundwater ingress encountered. 4) Terracotta land drain at 0.40m (dry/broken) running east to west.

Stability: Stable





Trial Pit Log

Trialpit No

TP104

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338492.24 - 351056.27

Level: 33.81

Date

06/06/2023

Location: Wrexham

Dimensions
(m):

2.2

Client: Net World Sports

Depth
3.00

0.6

Scale
1:25Logged
ER

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.10	ES		0.20	33.61		Crops over, soft, dark brown, slightly gravelly, sandy, silty CLAY. Gravel is fine to medium, angular to subrounded of mudstone and siltstone. Sand is fine to medium. Frequent rootlets throughout TOPSOIL	
	0.70	ES	HVR=92	0.80	33.01		Firm to stiff, orangish brown to dark brown, slightly gravelly, sandy CLAY. Gravel is fine to coarse, angular to rounded of coal, mudstone, siltstone and sandstone. Sand is fine to medium. TILL	
	1.60	ES	HVR=126				Stiff becoming very stiff, dark brown, mottled bluish grey, slightly gravelly CLAY. Gravel is fine to medium, angular to rounded of mudstone, siltstone and coal. TILL	1
	1.90	B	HVR=130					2
	2.50	ES	HVR=130					
			HVR=130	3.00	30.81		End of pit at 3.00 m	3
								4
								5

Remarks: 1) Trial pit for geoenvironmental purposes 2) Terminated at 3.00m bgl 3) No groundwater ingress encountered.

Stability: Stable





Trial Pit Log

Trialpit No

TP105

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338450.99 - 351116.67

Level: 33.53

Date

06/06/2023

Location: Wrexham

Dimensions
(m):

2.1

Client: Net World Sports

Depth
3.30

0.6

Scale
1:25Logged
ER

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.30	ES	HVR=67	0.35	33.18		Crops over, soft, dark brown, slightly gravelly, sandy, silty CLAY. Gravel is fine to medium, angular to subrounded of mudstone and siltstone. Sand is fine to medium. Frequent rootlets throughout TOPSOIL Firm, orangish brown to dark brown, slightly gravelly, sandy CLAY. Gravel is fine to coarse, angular to rounded of coal, mudstone, siltstone and sandstone. Sand is fine to medium. TILL	1
	1.00	B	HVR=71					
	1.20	ES		1.27	32.26			
			HVR=114				Stiff becoming very stiff, dark brown, mottled bluish grey, slightly gravelly CLAY. Gravel is fine to medium, angular to rounded of mudstone, siltstone and coal. Occasionally friable. TILL	2
			HVR=123					
			HVR=130					
	3.00	ES	HVR=127					3
			HVR=130	3.30	30.23			
							End of pit at 3.30 m	4
								5

Remarks: 1) Trial pit for geoenvironmental purposes 2) Terminated at 3.30m 3) No groundwater ingress encountered.

Stability: Stable





Trial Pit Log

Trialpit No

TP106

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750Co-ords: 338405.98 - 351188.26
Level: 33.13Date
06/06/2023

Location: Wrexham

Dimensions
(m):

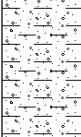
2.2

Client: Net World Sports

Depth
3.00

0.6

Scale
1:25Logged
ER

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.15	ES	HVR=63	0.28	32.85		Dark brown, slightly gravelly, clayey, silty, fine to coarse SAND. Gravel is fine to medium, angular to rounded of mixed natural lithologies. Frequent rootlets throughout	
			HVR=67				TOPSOIL Firm, orangish brown to dark brown, slightly gravelly, sandy CLAY. Gravel is fine to coarse, angular to rounded of coal, mudstone, siltstone and sandstone. Sand is fine to medium. TILL	1
	0.90	ES	HVR=119	1.13	32.00		Stiff becoming very stiff, dark brown, mottled bluish grey, slightly gravelly CLAY. Gravel is fine to medium, angular to rounded of mudstone, siltstone and coal. TILL	
	1.60	ES	HVR=130					2
	2.40	ES	HVR=130					
	2.90	B	HVR=130	3.00	30.13			3
							End of pit at 3.00 m	4
								5

Remarks: 1) Trial pit for geoenvironmental purposes 2) Terminated at 3.00m bgl 3) No groundwater ingress encountered.

Stability: Stable





Trial Pit Log

Trialpit No

TP107

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338368.15 - 351249.80

Level: 32.08

Date

06/06/2023

Location: Wrexham

Dimensions
(m):

2.5

Depth
3.00

0.6

Scale

1:25

Logged
ER

Client: Net World Sports

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.10	ES		0.25	31.83		Dark brown, slightly gravelly, clayey, silty, fine to coarse SAND. Gravel is fine to medium, angular to rounded of mixed natural lithologies. Frequent rootlets throughout TOPSOIL	
	0.90 - 1.10 1.00	B ES	HVR=62 HVR=75	1.18	30.90		Firm, orangish brown to dark brown, sandy CLAY. Gravel is fine to coarse, angular to rounded of coal, mudstone, siltstone and sandstone. Sand is fine to medium. TILL	1
	2.00	ES	HVR=123 HVR=130 HVR=130	3.00	29.08		Stiff becoming very stiff, dark brown, mottled bluish grey, slightly gravelly CLAY. Gravel is fine to medium, angular to rounded of mudstone, siltstone and coal. TILL	2
			HVR=130				End of pit at 3.00 m	3
								4
								5

Remarks: 1) Trial pit for geoenvironmental purposes 2) Terminated at 3.00m bgl 3) No groundwater ingress encountered.

Stability: Stable





Trial Pit Log

Trialpit No

TP108

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338458.91 - 351032.31

Level: 34.20

Date

06/06/2023

Location: Wrexham

Dimensions
(m):

2

Depth
3.00

0.6

Scale

1:25

Logged
ER

Client: Net World Sports

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.30	ES		0.45	33.75		Grass over, dark brown, slightly gravelly, slightly sandy to sandy, clayey SILT. Sand is fine, gravel is fine to medium, angular to subrounded of mudstone and sandstone. Frequent rootlets throughout TOPSOIL	
			HVR=83				Firm becoming very stiff, dark brown, mottled grey, slightly gravelly, slightly silty CLAY. Gravel is fine to coarse, angular to rounded of coal, mudstone, siltstone and quartz. TILL	
	1.20	ES						1
			HVR=130					
			HVR=130					
			HVR=130					2
	2.20	B						
			HVR=128					
			HVR=130	3.00	31.20			3
							End of pit at 3.00 m	
								4
								5

Remarks: 1) Trial pit for geoenvironmental purposes 2) Terminated at 3.00m bgl 3) No groundwater ingress encountered.

Stability: Stable





Trial Pit Log

Trialpit No

TP109

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338336.76 - 350965.69

Level: 34.13

Date

07/06/2023

Location: Wrexham

Dimensions
(m):

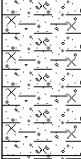
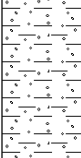
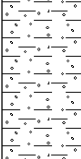
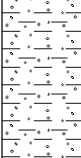
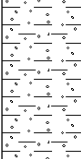
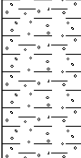
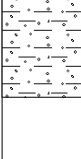
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Client: Net World Sports

Depth
4.00

0.6

Scale
1:25Logged
ER

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.15	ES	HVR=87	0.23	33.90		Grass over, dark brown, slightly clayey to clayey, silty gravelly, fine to medium SAND. Gravel is fine to coarse, angular to rounded of mixed natural lithologies. Frequent rootlets throughout. TOPSOIL Firm to stiff, orangish brown to brown, slightly silty, slightly gravelly, sandy CLAY. Gravel is fine to medium, angular to rounded of mudstone, coal and quartz. Sand is fine to medium. TILL	
	0.80	ES	HVR=123	0.85	33.28		Stiff becoming very stiff, dark brown, mottled bluish grey, slightly gravelly CLAY. Gravel is fine to medium, angular to rounded of mudstone, siltstone and coal. TILL	1
	1.55	ES	HVR=130					
	2.10	B	HVR=130					2
			HVR=130					
			HVR=128					3
			HVR=130					
			HVR=130	4.00	30.13		End of pit at 4.00 m	4
								5

Remarks: 1) Trial pit for geoenvironmental purposes 2) Terminated at 4.00m bgl 3) No groundwater ingress encountered.

Stability: Stable





Trial Pit Log

Trialpit No

TP110

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338284.49 - 351114.47

Level: 35.34

Date

08/06/2023

Location: Wrexham

Dimensions
(m):

2.8

Client: Net World Sports

Depth
4.00

0.6

Scale

1:25

Logged
ER

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.15	ES		0.22	35.12		Grass over, firm, dark brown, slightly gravelly, sandy to very sandy CLAY. Gravel is fine to coarse, angular to subangular of mudstone, coal and sandstone. Sand is fine to coarse. Frequent rootlets throughout. TOPSOIL
	0.50	ES	HVR=110	0.55	34.79		Stiff, brown, slightly gravelly, sandy CLAY. Gravel is fine to coarse, angular to subangular of mudstone, coal, sandstone and quartz. Sand is fine to coarse. TILL
			HVR=109				Stiff, becoming very stiff, dark brown, mottled grey, slightly gravelly, slightly silty to silty CLAY. Gravel is fine to coarse, angular to rounded of mudstone, siltstone, coal and rare quartz. TILL
	1.30	ES	HVR=114				
			HVR=128				
			HVR=130				
	2.50	B	HVR=130				
			HVR=130				
	3.20	ES	HVR=130				
			HVR=130				
			HVR=130	4.00	31.34		End of pit at 4.00 m

Remarks: 1) Trial pit for geoenvironmental purposes 2) Terminated at 4.00m bgl 3) No groundwater ingress encountered.

Stability: Stable





Trial Pit Log

Trialpit No

TP112

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338246.92 - 351212.50

Level: 34.10

Date

08/06/2023

Location: Wrexham

Dimensions
(m):

2

Client: Net World Sports

Depth
3.00

0.6

Scale

1:25

Logged
ER

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.20	ES		0.27	33.83		Grass over, firm, dark brown, slightly gravelly, sandy to very sandy CLAY. Gravel is fine to coarse, angular to subangular of mudstone, coal and sandstone. Sand is fine to coarse. Frequent rootlets throughout
	0.50	B					TOPSOIL
	0.60	ES	HVR=120	0.63	33.47		Light yellowish brown, clayey, silty, gravelly, fine to coarse SAND. Gravel is fine to coarse, angular to subrounded of mudstone, sandstone, coal and occasional igneous lithologies.
							TILL
			HVR=130				Stiff, becoming very stiff, dark brown, mottled grey, slightly gravelly, slightly silty to silty CLAY. Gravel is fine to coarse, angular to rounded of mudstone, siltstone, coal and rare quartz.
							TILL
	1.50	ES	HVR=130				
			HVR=128				
			HVR=130				
	3.00	B	HVR=130	3.00	31.10		End of pit at 3.00 m

Remarks: 1) Trial pit for geoenvironmental purposes 2) Terminated at 3.00m bgl 3) No groundwater ingress encountered.

Stability: Stable





Trial Pit Log

Trialpit No

TP113

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338796.49 - 350880.88

Level: 32.26

Date

08/06/2023

Location: Wrexham

Dimensions
(m):

2

Depth
3.10

0.6

Scale

1:25

Logged
ER

Client: Net World Sports

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.10	ES	HVR=61	0.18	32.08		Grass over dark brown, slightly clayey, slightly silty, gravelly, fine to coarse SAND. Gravel is fine to coarse, angular to subrounded of mudstone, coal and clods of clay. Frequent rootlets throughout TOPSOIL	
	0.45	B	HVR=60				Firm, yellowish brown, slightly sandy, slightly gravelly, silty CLAY. Sand is fine to medium, gravel is fine to coarse, angular to subrounded of mudstone, coal and sandstone.	
	0.65	ES	HVR=110	0.70	31.56		TILL Stiff to very stiff, dark reddish brown, mottled bluish grey, slightly gravelly, slightly silty CLAY. Gravel is fine to coarse, angular to rounded of mudstone and coal.	1
	1.15	ES	HVR=130					
			HVR=130					2
			HVR=130					
			HVR=130					
			HVR=130	3.10	29.16			3
							End of pit at 3.10 m	
								4
								5

Remarks: 1) Trial pit for geoenvironmental purposes 2) Terminated at 3.10m bgl 3) No groundwater ingress encountered.

Stability: Stable





Trial Pit Log

Trialpit No

TP114

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338788.88 - 350958.99

Level: 32.49

Date

08/06/2023

Location: Wrexham

Dimensions
(m):

2

Client: Net World Sports

Depth
3.20

0.6

Scale

1:25

Logged
ER

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.05	ES		0.21	32.28		Grass over dark brown, slightly clayey, slightly silty, gravelly, fine to coarse SAND. Gravel is fine to coarse, angular to subrounded of mudstone, coal and clods of clay. Frequent rootlets throughout TOPSOIL
	0.50	ES	HVR=63 HVR=71	0.55	31.94		Firm, yellowish brown, slightly sandy, slightly gravelly, silty CLAY. Sand is fine to medium, gravel is fine to coarse, angular to subrounded of mudstone, coal and sandstone. TILL
			HVR=88				Firm, becoming very stiff, dark reddish brown, mottled grey, slightly gravelly, slightly sandy, slightly silty CLAY. Sand is fine to medium, gravel is fine to coarse, angular to rounded of mudstone, sandstone and coal. TILL
	1.50	B	HVR=109				
	2.10	ES	HVR=130 HVR=130				
			HVR=130	3.20	29.29		End of pit at 3.20 m

Remarks: 1) Trial pit for geoenvironmental purposes 2) Terminated at 3.20m bgl 3) No groundwater ingress encountered.

Stability: Stable





Trial Pit Log

Trialpit No

TP115

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338845.77 - 351025.52

Level: 31.67

Date

08/06/2023

Location: Wrexham

Dimensions
(m):

2

Depth
3.00

0.6

Scale

1:25

Logged
ER

Client: Net World Sports

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.15	ES	HVR=78	0.20	31.47		Grass over dark brown, slightly clayey, slightly silty, gravelly, fine to coarse SAND. Gravel is fine to coarse, angular to subrounded of mudstone, coal and clods of clay. Frequent rootlets throughout TOPSOIL	
	0.60	ES	HVR=69				Firm, locally stiff, yellowish brown, slightly sandy, slightly gravelly, silty CLAY. Sand is fine to medium, gravel is fine to coarse, angular to subrounded of mudstone, coal and sandstone.	
	0.70	B	HVR=112	0.75	30.92		TILL Stiff to very stiff, dark reddish brown, mottled bluish grey, slightly gravelly, slightly silty CLAY. Gravel is fine to coarse, angular to rounded of mudstone and coal.	1
			HVR=118					
	1.75	ES	HVR=130					
			HVR=130					2
			HVR=130					
			HVR=130					
			HVR=130	3.00	28.67			3
							End of pit at 3.00 m	
								4
								5

Remarks: 1) Trial pit for geoenvironmental purposes 2) Terminated at 3.00m bgl 3) No groundwater ingress encountered.

Stability: Stable





Trial Pit Log

Trialpit No

TP116

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338912.29 - 350879.70

Level: 31.16

Date

08/06/2023

Location: Wrexham

Dimensions
(m):

2.2

Depth
3.10

0.6

Scale

1:25

Logged

ER

Client: Net World Sports

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.10	ES					Crops over soft, dark brown, slightly gravelly, silty, sandy CLAY. Gravel is fine to coarse, angular to subrounded of mudstone, siltstone and coal. Sand is fine to medium. Frequent rootlets throughout
			HVR=61	0.26	30.90		TOPSOIL
	0.40	ES					Grass over dark brown, slightly clayey, slightly silty, gravelly, fine to coarse SAND. Gravel is fine to coarse, angular to subrounded of mudstone, coal and clods of clay.
			HVR=101	0.50	30.66		TILL
							Stiff to very stiff, dark reddish brown, mottled bluish grey, slightly gravelly, slightly silty CLAY. Gravel is fine to coarse, angular to rounded of mudstone and coal.
							TILL
	1.20	ES					
			HVR=123				
	1.60	B					
			HVR=126				
			HVR=130				
	2.70	ES					
			HVR=130				
			HVR=130	3.10	28.06		
							End of pit at 3.10 m

Remarks: 1) Trial pit for geoenvironmental purposes 2) Terminated at 3.10m bgl 3) No groundwater ingress encountered.

Stability: Stable





Trial Pit Log

Trialpit No

TP117

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338743.00 - 351076.89

Level: 31.94

Date

08/06/2023

Location: Wrexham

Dimensions
(m):

2.5

Client: Net World Sports

Depth
4.20

0.6

Scale
1:25Logged
ER

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20	ES		0.22	31.72		Crops over soft, dark brown, slightly gravelly, silty, sandy CLAY. Gravel is fine to coarse, angular to subrounded of mudstone, siltstone and coal. Sand is fine to medium. Frequent rootlets throughout	
	0.40	ES					TOPSOIL	
			HVR=21	0.60	31.34		MADE GROUND: Black clayey, gravelly, spongy, pseudofibrous to fibrous PEAT. Gravel is fine to coarse, angular to subangular of brick, concrete and mixed natural lithologies. Frequent tree roots and whole brick.	
	0.70	B					MADE GROUND	
							Strong organic odour 0.30m bgl to 1.35m bgl	
	0.90	ES					Knife at 0.43m bgl	
			HVR=19				MADE GROUND: Very soft, grey, very silty CLAY.	1
							MADE GROUND	
			HVR=79	1.35	30.59		Stiff to very stiff, dark reddish brown, mottled bluish grey, slightly gravelly, slightly silty CLAY. Gravel is fine to coarse, angular to rounded of mudstone and coal.	
	1.60	ES					TILL	2
			HVR=110					
			HVR=130					3
			HVR=130					
			HVR=130					4
			HVR=130					
				4.20	27.74		End of pit at 4.20 m	5

Remarks: 1) Trial pit for geoenvironmental purposes 2) Terminated at 4.20m bgl 3) Groundwater ingress at 0.30m bgl moderate influx.

Stability: Stable





Trial Pit Log

Trialpit No

TP118

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338766.61 - 351079.04

Level: 31.79

Date

08/06/2023

Location: Wrexham

Dimensions
(m):

2

Depth
3.20

0.6

Scale

1:25

Logged
ER

Client: Net World Sports

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.33			0.33	31.46		Crops over soft, dark brown, slightly gravelly, silty, sandy CLAY. Gravel is fine to coarse, angular to subrounded of mudstone, siltstone and coal. Sand is fine to medium. Frequent rootlets throughout TOPSOIL	
	0.50	D					MADE GROUND: Black clayey, gravelly, spongy, pseudofibrous to fibrous PEAT. Gravel is fine to coarse, angular to subangular of brick, concrete and mixed natural lithologies. Frequent tree roots and whole brick. MADE GROUND <i>Strong organic odour 0.33m to 1.80m</i>	
	1.00	ES						1
	1.25		HVR=17	1.25	30.54		MADE GROUND: Very soft, grey, very silty CLAY. MADE GROUND	
	1.40	D						
	1.70	ES						
			HVR=23	1.80	29.99		Firm, becoming very stiff, dark reddish brown, mottled grey, slightly gravelly, slightly sandy, slightly silty CLAY. Sand is fine to medium, gravel is fine to coarse, angular to rounded of mudstone, sandstone and coal. TILL	2
			HVR=59					
			HVR=123					
			HVR=130					3
	3.20			3.20	28.59		End of pit at 3.20 m	4
								5

Remarks: 1) Trial pit for geoenvironmental purposes 2) Terminated at 3.20m bgl 3) Groundwater ingress at 0.40m bgl moderate influx.

Stability: Stable





Trial Pit Log

Trialpit No

TP119

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338742.03 - 351094.92

Level: 31.97

Date

08/06/2023

Location: Wrexham

Dimensions
(m):

2

Depth
3.00

0.6

Scale

1:25

Logged
ER

Client: Net World Sports

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.20	ES	HVR=78	0.30	31.67		Crops over soft, dark brown, slightly gravelly, silty, sandy CLAY. Gravel is fine to coarse, angular to subrounded of mudstone, siltstone and coal. Sand is fine to medium. Frequent rootlets throughout TOPSOIL
			HVR=106				Firm becoming very stiff, dark reddish brown, mottled bluish grey, slightly sandy, slightly gravelly, slightly silty to silty CLAY. Sand is fine to coarse, gravel is fine to coarse, angular to subangular of mudstone, coal and quartz. TILL
			HVR=130				
	2.00	B	HVR=130				
			HVR=130				
			HVR=130	3.00	28.97		
							End of pit at 3.00 m

Remarks: 1) Trial pit for geoenvironmental purposes 2) Terminated at 3.00m bgl 3) No groundwater ingress encountered.

Stability: Stable





Trial Pit Log

Trialpit No

TP120

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338280.57 - 351015.79

Level: 34.87

Date

09/06/2023

Location: Wrexham

Dimensions
(m):

2

Depth
3.20

0.6

Scale

1:25

Logged
ER

Client: Net World Sports

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.30	ES	HVR=106	0.43	34.44		Grass over dark brown, slightly gravelly, clayey to very clayey, fine to medium SAND. Gravel is fine to medium, angular to rounded of mudstone and sandstone. Frequent rootlets throughout TOPSOIL	
	0.70	ES	HVR=130				Stiff, becoming very stiff, dark brown, mottled grey, slightly gravelly, slightly silty CLAY. Gravel is fine to medium, angular to rounded of mudstone, siltstone, coal, sandstone and occasional quartz. TILL	1
	1.30	B	HVR=130					2
			HVR=130					3
			HVR=130	3.20	31.67		End of pit at 3.20 m	4
								5

Remarks: 1) Trial pit for geoenvironmental purposes 2) Terminated at 3.20m bgl 3) No groundwater ingress encountered.

Stability: Stable





Trial Pit Log

Trialpit No

TP121

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338346.09 - 351117.47

Level: 34.50

Date

09/06/2023

Location: Wrexham

Dimensions
(m):

2.1

Depth
3.15

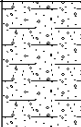
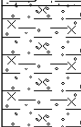
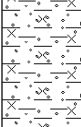
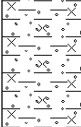
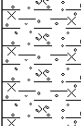
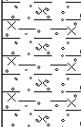
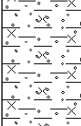
0.6

Scale

1:25

Logged
ER

Client: Net World Sports

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.40	ES	HVR=124	0.46	34.04		Grass over dark brown, slightly gravelly to gravelly, very clayey, fine to coarse SAND. Gravel is fine to coarse, angular to subangular of mudstone and sandstone with clods of clay. Frequent rootlets throughout. TOPSOIL	
	1.00	ES	HVR=130				Stiff to very stiff, dark reddish brown, mottled bluish grey, slightly gravelly, slightly silty CLAY. Gravel is fine to coarse, angular to rounded of mudstone and coal. TILL	1
			HVR=130					
	1.80	B	HVR=130					2
			HVR=130					
			HVR=130					
			HVR=130	3.15	31.35			3
							End of pit at 3.15 m	
								4
								5

Remarks: 1) Trial pit for geoenvironmental purposes 2) Terminated at 3.15m bgl 3) No groundwater ingress encountered.

Stability: Stable





Borehole Log

Borehole No.

WS101

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338891.85 - 350883.76

Hole Type
WS

Location: Wrexham

Level: 31.41

Scale
1:50

Client: Net World Sports

Dates: 12/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.32	31.09		Crops over, dark brown, slightly gravelly, clayey, fine to coarse SAND. Gravel is fine to medium, angular to subrounded of mudstone, sandstone and limestone. Frequent rootlets throughout. TOPSOIL	
		1.20 1.20	SPTL S	N=18 (2,3/4,4,5,5)				Stiff, brown, mottled grey, slightly gravelly CLAY. Gravel is fine to coarse, angular to subrounded of mudstone, coal and quartz.	1
		2.00 2.00	SPTL S	N=19 (2,4/4,4,5,6)					2
		3.00 3.00	SPTL S	N=21 (3,3/3,6,6,6)					3
		4.00 4.00	SPTL S	N=22 (4,4/4,5,6,7)					4
		5.00 5.00	SPTL S	N=23 (4,4/4,6,6,7)					5
					5.45	25.96		End of borehole at 5.45 m	6
									7
									8
									9
									10

Remarks

1) Hand dug pit to 1.20m bgl for service clearance. 2) Terminated at 5.45m bgl 3) No groundwater ingress encountered





Borehole Log

Borehole No.

WS102

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338739.30 - 350956.77

Hole Type
WS

Location: Wrexham

Level: 32.45

Scale
1:50

Client: Net World Sports

Dates: 12/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.28 0.28	SPTL S	N=18 (2,3/4,4,5,5)	0.28	32.17		Crops over, dark brown, slightly gravelly, clayey, fine to coarse SAND. Gravel is fine to medium, angular to subrounded of mudstone and limestone. Frequent rootlets throughout. TOPSOIL Stiff, brown, mottled grey, slightly gravelly CLAY. Gravel is fine to coarse, angular to subrounded of mudstone, coal and quartz. TILL	1
		1.20 1.20							
		2.00 2.00							
		3.00 3.00	SPTL S	N=50 (7,8/50 for 295mm)	3.38	29.07		End of borehole at 3.38 m	3
									4
									5
									6
									7
									8
									9
									10

Remarks

1) Hand dug pit to 1.20m bgl for service clearance. 2) Terminated at refusal 3) No groundwater ingress encountered





Borehole Log

Borehole No.

WS103

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338663.52 - 351051.31

Hole Type
WS

Location: Wrexham

Level: 32.69

Scale
1:50

Client: Net World Sports

Dates: 12/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.30 0.30	SPTL S	N=19 (2,3/3,5,5,6)	0.30	32.39		Crops over, dark brown, slightly gravelly, clayey to very clayey, fine to medium SAND. Gravel is fine to medium, angular to subangular of mudstone, sandstone and limestone. Frequent rootlets throughout TOPSOIL	
		1.20 1.20						Firm becoming stiff, brown, mottled grey, slightly gravelly CLAY. Gravel is fine to coarse, angular to subrounded of mudstone, coal and quartz with rare pockets of fine to medium sand. TILL	
		2.00 2.00							
		3.00 3.00						<i>Slightly sandy from 3.10m</i>	
		4.00 4.00							
		5.00 5.00							
					5.45	27.24		End of borehole at 5.45 m	

Remarks

1) Hand dug pit to 1.20m bgl for service clearance 2) Terminated at 5.45m bgl 3) No groundwater ingress encountered





Borehole Log

Borehole No.

WS104

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338878.59 - 351101.99

Hole Type
WS

Location: Wrexham

Level: 30.79

Scale
1:50

Client: Net World Sports

Dates: 12/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.25 0.25	SPTL S	N=20 (2,3/4,5,5,6)	0.25	30.54		Crops over, dark brown, slightly gravelly, clayey to very clayey, fine to medium SAND. Gravel is fine to medium, angular to subangular of mudstone and sandstone. Frequent rootlets throughout. TOPSOIL	
		1.20 1.20						Stiff, dark brown, occasionally mottled grey, slightly gravelly, slightly sandy CLAY. Gravel is fine to medium, angular to subangular of mudstone. Sand is fine. TILL	
		2.00 2.00							
		3.00 3.00							
		4.00 4.00							
		5.00 5.00							
					5.45	25.34		End of borehole at 5.45 m	

Remarks

1) Hand dug pit to 1.20m for service clearance 2) Terminated at 5.45m 3) No groundwater ingress encountered





Borehole Log

Borehole No.

WS105

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338762.72 - 351078.54

Hole Type
WS

Location: Wrexham

Level: 31.67

Scale
1:50

Client: Net World Sports

Dates: 12/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.40			0.40	31.27		MADE GROUND: Dark brown, clayey, sandy, fine to coarse, angular to subangular GRAVEL of mudstone, brick, limestone, terracotta, coal and frequent clods of clay.	1
		1.20 1.20	SPTL S	N=3 (1,0/0,1,1,1)				MADE GROUND: Soft, brown, slightly sandy, gravelly CLAY. Sand is fine to medium. Gravel is fine to coarse, angular to subangular of brick, tile, mudstone, limestone and coal.	
		2.00 2.00	SPTL S	N=0 (1,0/0,0,0,0)	1.90	29.77		MADE GROUND: Black, spongy, fibrous PEAT	2
					2.20	29.47		MADE GROUND: Very soft, grey, very silty CLAY	
		3.00 3.00	SPTL S	N=26 (4,4/4,7,7,8)	2.80	28.87		Stiff, dark brown, silty CLAY TILL	3
		4.00 4.00	SPTL S	N=17 (3,3/3,4,4,6)					
		5.00 5.00	SPTL S	N=25 (4,4/4,6,7,8)					4
					5.45	26.22			
								End of borehole at 5.45 m	5
									6
									7
									8
									9
									10

Remarks

1) Hand dug pit to 1.20m for service clearance 2) Terminated at 5.45m bgl 3) Groundwater strike at 1.90m bgl





Borehole Log

Borehole No.

WS106

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338427.28 - 351157.41

Hole Type
WS

Location: Wrexham

Level: 33.08

Scale
1:50

Client: Net World Sports

Dates: 13/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.33			0.33	32.75		Crops over dark brown, slightly gravelly, very clayey, fine to medium SAND. Gravel is fine to medium, angular to subangular of mudstone and limestone. Frequent rootlets throughout. TOPSOIL	
		1.20 1.20	SPTL S	N=15 (3,3/3,4,4,4)				Firm to very stiff, dark brown. mottled grey, slightly gravelly CLAY. Gravel is fine to medium, angular to rounded of mudstone and coal. TILL	1
		2.00 2.00	SPTL S	N=50 (9,9/50 for 295mm)	2.38	30.70			2
								End of borehole at 2.38 m	3
									4
									5
									6
									7
									8
									9
									10

Remarks

1) Hand dug pit to 1.20m bgl for service clearance. 2) Terminated at refusal 3) No groundwater ingress encountered





Borehole Log

Borehole No.

WS107

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338402.72 - 351058.74

Hole Type
WS

Location: Wrexham

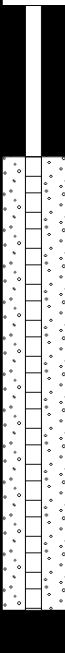
Level: 34.34

Scale
1:50

Client: Net World Sports

Dates: 13/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.30 0.45				34.04 33.89	          	Grass over dark brown, slightly gravelly, clayey, fine to coarse SAND. Gravel is fine to coarse, angular to rounded of mudstone, limestone and clods of clay. Frequent rootlets throughout TOPSOIL Yellowish brown, clayey, fine to medium SAND TILL	1
		1.20 1.20	SPTL S	N=14 (3,3/3,3,3,5)			          	Firm to very stiff, dark brown, mottled bluish grey, slightly gravelly, slightly silty CLAY. Gravel is fine to medium, angular to subrounded of mudstone. TILL	2
		2.00 2.00	SPTL S	N=22 (3,4/4,6,6,6)			          		3
		3.00 3.00	SPTL S	N=25 (5,5/5,6,7,7)			          		4
		4.00 4.00	SPTL S	N=50 (7,10/50 for 285mm)	4.39	29.95	          	End of borehole at 4.39 m	5
									6
									7
									8
									9
									10

Remarks

1) Hand dug pit to 1.20m bgl for service clearance. 2) Terminated on refusal 3) No groundwater ingress encountered





Borehole Log

Borehole No.

WS108

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338345.05 - 351158.96

Hole Type
WS

Location: Wrexham

Level: 34.05

Scale
1:50

Client: Net World Sports

Dates: 15/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.35			0.35	33.70		Grass over dark brown, slightly gravelly, clayey, silty, fine to coarse SAND. Gravel is fine to coarse, angular to subrounded of mudstone and limestone. Frequent rootlets throughout. TOPSOIL	
		1.20 1.20	SPTL S	N=14 (3,3/3,3,4,4)				Firm, becoming stiff, dark brown, slightly gravelly, slightly silty CLAY. Gravel is fine to coarse, angular to rounded of mudstone, coal and occasional igneous lithologies and sandstone. TILL <i>Rare pockets of orange medium to coarse SAND.</i>	1
		2.00 2.00	SPTL S	N=23 (3,3/4,6,6,7)					2
		3.00 3.00	SPTL S	N=22 (3,4/4,6,6,6)					3
		4.00 4.00	SPTL S	N=22 (4,4/4,6,6,6)					4
		5.00 5.00	SPTL S	N=21 (4,4/4,5,6,6)					5
		5.45			5.45	28.60		End of borehole at 5.45 m	6
									7
									8
									9
									10

Remarks

1) Hand dug pit to 1.20m bgl for service clearance. 2) Terminated at 5.45m bgl 3) No groundwater ingress encountered





Borehole Log

Borehole No.

WS109

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338345.01 - 351158.97

Hole Type
WS

Location: Wrexham

Level: 34.09

Scale
1:50

Client: Net World Sports

Dates: 15/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.40 0.40	SPTL S	N=22 (2,3/4,5,6,7)	0.40	33.69		Grass over dark brown, slightly gravelly, clayey, silty, fine to coarse SAND. Gravel is fine to coarse, angular to subrounded of mudstone and limestone. Frequent rootlets throughout. TOPSOIL	1
		1.20 1.20						Stiff, dark brown, occasionally mottled grey, slightly gravelly CLAY. Gravel is fine to coarse, angular to subrounded of mudstone, coal and mixed igneous and metamorphic lithologies. TILL	
		2.00 2.00							
		3.00 3.00							
		4.00 4.00							
		5.00 5.00	SPTL S	N=24 (4,4/4,6,7,7)	5.45	28.64			5
								End of borehole at 5.45 m	6
									7
									8
									9
									10

Remarks

1) Hand dug pit to 1.20m bgl for service clearance. 2) Terminated at 5.45m bgl 3) No groundwater ingress encountered





Borehole Log

Borehole No.

WS110

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338304.40 - 351137.91

Hole Type
WS

Location: Wrexham

Level: 34.69

Scale
1:50

Client: Net World Sports

Dates: 16/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.38 1.20	SPTL S	N=19 (2,3/3,5,5,6)	0.38	34.31		Grass over dark brown, slightly gravelly, clayey, silty, fine to coarse SAND. Gravel is fine to coarse, angular to subrounded of mudstone and limestone. Frequent rootlets throughout. TOPSOIL Stiff, dark brown, mottled grey, slightly gravelly, slightly sandy CLAY. Gravel is fine to coarse, angular to subrounded of mudstone, coal, sandstone and mixed igneous lithologies. Sand is fine to medium. TILL	1
		2.00 2.00							
		3.00 3.00							
		4.00 4.00							
		5.00 5.00							
		5.45			5.45	29.24		End of borehole at 5.45 m	6
									7
									8
									9
									10

Remarks

1) Hand dug pit to 1.20m bgl for service clearance 2) Terminated at 5.45m bgl 3) No groundwater ingress encountered





Borehole Log

Borehole No.

WS111

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338458.07 - 350892.47

Hole Type
WS

Location: Wrexham

Level: 33.19

Scale
1:50

Client: Net World Sports

Dates: 16/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.55	ES		0.26 0.60	32.93 32.59		Grass over dark brown, sandy, gravelly, fine to coarse SAND. Gravel is fine to coarse, angular to subrounded of mudstone, sandstone, coal and clods of clay. POSSIBLE MADE GROUND: Firm, dark orangish brown, slightly sandy, slightly gravelly CLAY. Gravel is fine to coarse, angular to subangular of mudstone. Sand is fine to medium POSSIBLE MADE GROUND Firm, becoming stiff, dark brown, mottled grey, slightly gravelly CLAY. Gravel is fine to medium, angular to subrounded of mudstone and coal TILL	1 2 3 4 5 6 7 8 9 10
		1.20 1.20	SPTL S	N=12 (2,2/2,3,3,4)					
		2.00 2.00	SPTL S	N=15 (3,3/3,4,4,4)					
		3.00 3.00	SPTL S	N=17 (4,4/4,3,5,5)					
		4.00 4.00	SPTL S	N=24 (4,4/5,6,6,7)					
		5.00 5.00	SPTL S	N=22 (4,4/4,6,6,6)					
					5.45	27.74			

End of borehole at 5.45 m

Remarks

1) Hand dug pit to 1.20m bgl for service clearance 2) Terminated at 5.45m bgl 3) No groundwater ingress encountered





Borehole Log

Borehole No.

WS112

Sheet 1 of 1

Project Name: Bryn Lane, Detailed Planning

Project No.
TE1750

Co-ords: 338389.35 - 350914.41

Hole Type
WS

Location: Wrexham

Level: 33.40

Scale
1:50

Client: Net World Sports

Dates: 16/06/2023 -

Logged By
ER

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.33			0.33	33.07		Grass over dark brown, sandy, gravelly, fine to coarse SAND. Gravel is fine to coarse, angular to subrounded of mudstone, sandstone, coal and clods of clay.	
		1.20	SPTL					Firm to stiff, dark orangish brown, slightly sandy, slightly gravelly CLAY. Gravel is fine to coarse, angular to subangular of mudstone. Sand is fine to medium TILL	1
		1.20	S	N=13 (2,2/2,3,4,4)					
		2.00	SPTL						2
		2.00	S	N=21 (3,3/4,5,6,6)					
		3.00	SPTL						3
		3.00	S	N=24 (3,4/6,6,6,6)					
		4.00	SPTL						4
		4.00	S	N=19 (4,4/4,4,5,6)				Rare lenses of grey, silty, fine sand from 4.20m bgl (in mottled areas)	
		5.00	SPTL						5
		5.00	S	N=24 (4,5/5,6,6,7)					
					5.45	27.95		End of borehole at 5.45 m	6
									7
									8
									9
									10

Remarks

1) Hand dug pit to 1.20m bgl for service clearance 2) Terminated at 5.45m bgl 3) No groundwater ingress encountered



APPENDIX C - GEOENVIRONMENTAL SOIL LABORATORY RESULTS

Tier Environmental
Suite 414, Chadwick House
Warrington Rd
Birchwood
Warrington
United Kingdom
WA3 6AE



4225



Attention : Adrian Read
Date : 26th June, 2023
Your reference : TE1750
Our reference : Test Report 23/9034 Batch 1
Location : Bryn Lane Detail
Date samples received : 5th June, 2023
Status : Final Report
Issue : 1

Ten samples were received for analysis on 5th June, 2023 of which three were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:



Bruce Leslie
Project Manager

Please include all sections of this report if it is reproduced

Client Name: Tier Environmental
Reference: TE1750
Location: Bryn Lane Detail
Contact: Adrian Read
EMT Job No: 23/9034

Solids: V=60g VOC jar. J=250g glass jar. T=plastic tub

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Tier Environmental
Reference: TE1750
Location: Bryn Lane Detail
Contact: Adrian Read
EMT Job No: 23/9034

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-4	13-16	37-40								Please see attached notes for all abbreviations and acronyms		
Sample ID	TP101	TP102	TP103										
Depth	0.10	0.20	2.70										
COC No / misc													
Containers	V J T	V J T	V J T										
Sample Date	05/06/2023	05/06/2023	05/06/2023										
Sample Type	Soil	Soil	Soil										
Batch Number	1	1	1										
Date of Receipt	05/06/2023	05/06/2023	05/06/2023								LOD/LOR	Units	Method No.
Pesticides													
Organophosphorus Pesticides													
Azinphos ethyl	<10	-	-								<10	ug/kg	TM42/PM8
Azinphos methyl	<10	-	-								<10	ug/kg	TM42/PM8
Carbophenothion	<10	-	-								<10	ug/kg	TM42/PM8
Chlorfenvinphos	<10	-	-								<10	ug/kg	TM42/PM8
Chlorpyrifos	<10	-	-								<10	ug/kg	TM42/PM8
Chlorpyrifos-methyl	<10	-	-								<10	ug/kg	TM42/PM8
Diazinon	<10	-	-								<10	ug/kg	TM42/PM8
Dichlorvos	<10	-	-								<10	ug/kg	TM42/PM8
Disulfoton	<10	-	-								<10	ug/kg	TM42/PM8
Dimethoate	<10	-	-								<10	ug/kg	TM42/PM8
Ethion	<10	-	-								<10	ug/kg	TM42/PM8
Ethyl Parathion (Parathion)	<10	-	-								<10	ug/kg	TM42/PM8
Etrimphos	<10	-	-								<10	ug/kg	TM42/PM8
Fenitrothion	<10	-	-								<10	ug/kg	TM42/PM8
Fenthion	<10	-	-								<10	ug/kg	TM42/PM8
Malathion	<10	-	-								<10	ug/kg	TM42/PM8
Methyl Parathion	<10	-	-								<10	ug/kg	TM42/PM8
Mevinphos	<10	-	-								<10	ug/kg	TM42/PM8
Phosalone	<10	-	-								<10	ug/kg	TM42/PM8
Pirimiphos Methyl	<10	-	-								<10	ug/kg	TM42/PM8
Propetamphos	<10	-	-								<10	ug/kg	TM42/PM8
Triazophos	<10	-	-								<10	ug/kg	TM42/PM8
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1	<0.1	-								<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	<0.1	<0.1	-								<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1	-								<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	<0.2 ^{SV}	-								<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	<4	<4 ^{SV}	-								<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	<7	<7 ^{SV}	-								<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	<7	<7 ^{SV}	-								<7	mg/kg	TM5/PM8/PM16
>C35-C40 (EH_CU_1D_AL)	<7	<7 ^{SV}	-								<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-40 (EH+HS_CU_1D_AL)	<26	<26	-								<26	mg/kg	TM5/PM8/PM16/PM12/PM9

Element Materials Technology

Client Name: Tier Environmental
Reference: TE1750
Location: Bryn Lane Detail
Contact: Adrian Read
EMT Job No: 23/9034

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-4	13-16	37-40								Please see attached notes for all abbreviations and acronyms		
Sample ID	TP101	TP102	TP103										
Depth	0.10	0.20	2.70										
COC No / misc													
Containers	V J T	V J T	V J T										
Sample Date	05/06/2023	05/06/2023	05/06/2023										
Sample Type	Soil	Soil	Soil										
Batch Number	1	1	1										
Date of Receipt	05/06/2023	05/06/2023	05/06/2023								LOD/LOR	Units	Method No.
TPH CWG													
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1	<0.1	-								<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	<0.1	<0.1	-								<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	<0.1	<0.1	-								<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	<0.2	-								<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	<4	<4	-								<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	<7	-								<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	<7	-								<7	mg/kg	TM5/PM8/PM16
>EC35-EC40 (EH_CU_1D_AR)	<7	<7	-								<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-40 (EH+HS_CU_1D_AR)	<26	<26	-								<26	mg/kg	TM5/PM8/PM16/PM12/PM10
Total aliphatics and aromatics(C5-40) (EH+HS_CU_1D_Total)	<52	<52	-								<52	mg/kg	TM5/PM8/PM16/PM12/PM10
MTBE #	<5	<5	-								<5	ug/kg	TM36/PM12
Benzene #	<5	<5	-								<5	ug/kg	TM36/PM12
Toluene #	<5	<5	-								<5	ug/kg	TM36/PM12
Ethylbenzene #	<5	<5	-								<5	ug/kg	TM36/PM12
m/p-Xylene #	<5	<5	-								<5	ug/kg	TM36/PM12
o-Xylene #	<5	<5	-								<5	ug/kg	TM36/PM12
Total Phenols HPLC	<0.15	0.15	<0.15								<0.15	mg/kg	TM26/PM21B
Natural Moisture Content	16.2	6.9	18.8								<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3								<0.3	mg/kg	TM38/PM20
Ortho Phosphate as PO4	<0.3	-	<0.3								<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #	0.0629	0.0296	0.1313								<0.0015	g/l	TM38/PM20
Total Organic Carbon #	0.37	2.05	0.43								<0.02	%	TM21/PM24
pH #	8.00	6.71	8.56								<0.01	pH units	TM73/PM11
Asbestos Type*	NAD	NAD	-									None	Subcontracted

Client Name: Tier Environmental

Reference: TE1750

Location: Bryn Lane Detail

Contact: Adrian Read

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/9034

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

HWOL ACRONYMS AND OPERATORS USED

HS	Headspace Analysis.
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent.
CU	Clean-up - e.g. by florisil, silica gel.
1D	GC - Single coil gas chromatography.
Total	Aliphatics & Aromatics.
AL	Aliphatics only.
AR	Aromatics only.
2D	GC-GC - Double coil gas chromatography.
#1	EH_Total but with humics mathematically subtracted
#2	EU_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +).
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry.

EMT Job No: 23/9034

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GC/FID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GC/FID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details			AR	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO ₂ generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.	Yes		AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21B	As Received samples are extracted in Methanol: Water (60:40) by reciprocal shaker.			AR	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GC/FID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

EMT Job No: 23/9034

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.			AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM42	Modified US EPA method 8270D v5:2014. Pesticides and herbicides by GC-MS	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM50	Acid soluble sulphate (Total Sulphate) analysed by ICP-OES	PM29	A hot hydrochloric acid digest is performed on a dried and ground sample, and the resulting liquor is analysed.	Yes		AD	Yes
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No
Subcontracted	See attached subcontractor report for accreditation status and provider.					AR	

Tier Environmental
Suite 414, Chadwick House
Warrington Rd
Birchwood
Warrington
United Kingdom
WA3 6AE



4225



Attention : Adrian Read
Date : 22nd June, 2023
Your reference : TE1750
Our reference : Test Report 23/9034 Batch 2
Location : Bryn Lane Detail
Date samples received : 8th June, 2023
Status : Final Report
Issue : 1

Fifty one samples were received for analysis on 8th June, 2023 of which nineteen were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:



Bruce Leslie
Project Manager

Please include all sections of this report if it is reproduced

Client Name: Tier Environmental
Reference: TE1750
Location: Bryn Lane Detail
Contact: Adrian Read
EMT Job No: 23/9034

Solids: V=60g VOC jar. J=250g glass jar. T=plastic tub

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Tier Environmental
Reference: TE1750
Location: Bryn Lane Detail
Contact: Adrian Read
EMT Job No: 23/9034

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	41-44	57-60	69-72	85-88	97-100	101-103	104-107	116-119	120-123	132-135	Please see attached notes for all abbreviations and acronyms		
Sample ID	TP104	TP105	TP106	TP107	TP108	TP108	TP109	TP110	TP110	TP111			
Depth	0.10	0.30	0.15	0.10	0.30	1.20	0.15	0.15	0.50	0.10			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J	V J T	V J T	V J T	V J T			
Sample Date	06/06/2023	06/06/2023	06/06/2023	06/06/2023	06/06/2023	06/06/2023	07/06/2023	08/06/2023	08/06/2023	08/06/2023			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	2	2	2	2	2	2	2	2	2	2			
Date of Receipt	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	LOD/LOR	Units	Method No.
Pesticides													
Organophosphorus Pesticides													
Azinphos ethyl	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Azinphos methyl	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Carbophenothion	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Chlorfenvinphos	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Chlorpyrifos	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Chlorpyrifos-methyl	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Diazinon	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Dichlorvos	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Disulfoton	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Dimethoate	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Ethion	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Ethyl Parathion (Parathion)	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Etrimpfos	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Fenitrothion	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Fenthion	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Malathion	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Methyl Parathion	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Mevinphos	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Phosalone	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Pirimiphos Methyl	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Propetamphos	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
Triazophos	<10	<10	-	<10	<10	-	-	-	<10	-	<10	ug/kg	TM42/PM8
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	<0.2	11.1	<0.2	7.6	-	<0.2	-	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	<4	<4	31	<4	18	-	<4	-	<4	<4	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	<7	<7	69	<7	29	-	<7	-	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	<7	<7	154	<7	110	-	<7	-	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C35-C40 (EH_CU_1D_AL)	<7	<7	12	<7	<7	-	<7	-	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-40 (EH+HS_CU_1D_AL)	<26	<26	277	<26	165	-	<26	-	<26	<26	<26	mg/kg	TM5/PM8/PM16/PM12/PM15

Element Materials Technology

Client Name: Tier Environmental
Reference: TE1750
Location: Bryn Lane Detail
Contact: Adrian Read
EMT Job No: 23/9034

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	41-44	57-60	69-72	85-88	97-100	101-103	104-107	116-119	120-123	132-135	Please see attached notes for all abbreviations and acronyms		
Sample ID	TP104	TP105	TP106	TP107	TP108	TP108	TP109	TP110	TP110	TP111			
Depth	0.10	0.30	0.15	0.10	0.30	1.20	0.15	0.15	0.50	0.10			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J	V J T	V J T	V J T	V J T			
Sample Date	06/06/2023	06/06/2023	06/06/2023	06/06/2023	06/06/2023	06/06/2023	07/06/2023	08/06/2023	08/06/2023	08/06/2023			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	2	2	2	2	2	2	2	2	2	2			
Date of Receipt	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	LOD/LOR	Units	Method No.
TPH CWG													
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	-	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	<4	<4	<4	<4	<4	-	<4	-	<4	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	<7	<7	<7	<7	-	<7	-	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	<7	21	71	69	-	<7	-	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC35-EC40 (EH_CU_1D_AR)	<7	<7	<7	<7	8	-	<7	-	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-40 (EH+HS_CU_1D_AR)	<26	<26	<26	71	77	-	<26	-	<26	<26	<26	mg/kg	TM5/PM8/PM16
Total aliphatics and aromatics(C5-40) (EH+HS_CU_1D_Total)	<52	<52	277	71	242	-	<52	-	<52	<52	<52	mg/kg	TM5/PM8/PM16
MTBE #	<5	<5	<5	<5	<5	-	<5	-	<5	<5	<5	ug/kg	TM36/PM12
Benzene #	<5	<5	<5	<5	<5	-	<5	-	<5	<5	<5	ug/kg	TM36/PM12
Toluene #	<5	<5	<5	<5	<5	-	<5	-	<5	<5	<5	ug/kg	TM36/PM12
Ethylbenzene #	<5	<5	<5	<5	<5	-	<5	-	<5	<5	<5	ug/kg	TM36/PM12
m/p-Xylene #	<5	<5	<5	<5	<5	-	<5	-	<5	<5	<5	ug/kg	TM36/PM12
o-Xylene #	<5	<5	<5	<5	<5	-	<5	-	<5	<5	<5	ug/kg	TM36/PM12
Total Phenols HPLC	0.18	0.15	<0.15	<0.15	<0.15	-	<0.15	-	<0.15	<0.15	<0.15	mg/kg	TM26/PM21B
Natural Moisture Content	27.0	19.1	18.5	21.8	15.3	-	12.2	-	15.1	11.8	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	-	<0.3	-	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Ortho Phosphate as PO4	-	0.8	-	<0.3	-	<0.3	-	-	<0.3	-	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #	0.0184	0.0228	0.0153	0.0156	0.0347	-	0.0031	-	0.3598	0.0021	<0.0015	g/l	TM38/PM20
Total Organic Carbon #	2.12	3.13	3.17	2.76	2.38	-	2.27	-	0.26	2.06	<0.02	%	TM21/PM24
pH #	6.86	6.67	6.55	6.71	7.56	-	7.38	-	8.39	6.82	<0.01	pH units	TM73/PM11
Asbestos Type*	NAD	NAD	NAD	NAD	NAD	-	NAD	NAD	-	NAD		None	Subcontracted

Element Materials Technology

Client Name: Tier Environmental
Reference: TE1750
Location: Bryn Lane Detail
Contact: Adrian Read
EMT Job No: 23/9034

Report : Solid

Solids: V=60g VOC jar. J=250g glass jar. T=plastic tub

EMT Sample No.	144-147	168-171	172-175	191-194	203-206	207-209	210-213	222-225	226-229		Please see attached notes for all abbreviations and acronyms		
Sample ID	TP112	TP114	TP114	TP116	TP116	TP117	TP117	TP118	TP118				
Depth	0.20	0.05	0.50	0.10	2.70	0.20	0.40	1.00	1.70				
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	J T	V J T	V J T	V J T				
Sample Date	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	2	2	2	2	2	2	2	2	2				
Date of Receipt	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023		LOD/LOR	Units	Method No.
Arsenic #	9.5	10.9	-	9.3	-	9.7	15.1	-	16.1		<0.5	mg/kg	TM30/PM15
Cadmium #	<0.1	<0.1	-	<0.1	-	0.3	0.6	-	0.5		<0.1	mg/kg	TM30/PM15
Chromium #	50.9	45.7	-	48.2	-	47.5	23.6	-	48.8		<0.5	mg/kg	TM30/PM15
Copper #	21	18	-	23	-	25	21	-	21		<1	mg/kg	TM30/PM15
Lead #	54	47	-	48	-	104	53	-	52		<5	mg/kg	TM30/PM15
Mercury #	0.1	0.2	-	0.1	-	0.2	<0.1	-	<0.1		<0.1	mg/kg	TM30/PM15
Nickel #	24.8	24.9	-	27.2	-	26.7	18.6	-	35.0		<0.7	mg/kg	TM30/PM15
Selenium #	1	<1	-	<1	-	<1	2	-	1		<1	mg/kg	TM30/PM15
Total Sulphate as SO4 #	445	458	-	1082	-	388	1837	-	3057		<50	mg/kg	TM50/PM29
Zinc #	87	94	-	107	-	242	110	-	163		<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	<0.04	<0.04	-	<0.04	-	<0.04	<0.04	-	<0.04		<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	-	<0.03	-	0.11	<0.03	-	<0.03		<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	-	<0.05	-	0.21	<0.05	-	<0.05		<0.05	mg/kg	TM4/PM8
Fluorene #	<0.04	<0.04	-	<0.04	-	0.14	<0.04	-	<0.04		<0.04	mg/kg	TM4/PM8
Phenanthrene #	<0.03	<0.03	-	<0.03	-	2.18	0.08	-	<0.03		<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04	-	<0.04	-	0.78	<0.04	-	<0.04		<0.04	mg/kg	TM4/PM8
Fluoranthene #	0.06	0.06	-	0.11	-	5.04	0.23	-	<0.03		<0.03	mg/kg	TM4/PM8
Pyrene #	0.05	0.05	-	0.09	-	4.30	0.19	-	<0.03		<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06	<0.06	-	<0.06	-	2.51	0.17	-	<0.06		<0.06	mg/kg	TM4/PM8
Chrysene #	0.05	0.03	-	0.08	-	2.17	0.13	-	<0.02		<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	<0.07	<0.07	-	0.13	-	3.63	0.23	-	<0.07		<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.04	<0.04	-	0.08	-	2.28	0.13	-	<0.04		<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	<0.04	<0.04	-	<0.04	-	1.51	0.08	-	<0.04		<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	-	<0.04	-	0.27	<0.04	-	<0.04		<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	<0.04	-	<0.04	-	1.43	0.08	-	<0.04		<0.04	mg/kg	TM4/PM8
PAH 16 Total	<0.6	<0.6	-	<0.6	-	26.6	1.3	-	<0.6		<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	<0.05	-	0.09	-	2.61	0.17	-	<0.05		<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	<0.02	-	0.04	-	1.02	0.06	-	<0.02		<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	91	96	-	92	-	90	98	-	93		<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #	-	-	-	-	-	-	<2	-	-		<2	ug/kg	TM15/PM10
Benzene #	-	-	-	-	-	-	<3	-	-		<3	ug/kg	TM15/PM10
Toluene #	-	-	-	-	-	-	<3	-	-		<3	ug/kg	TM15/PM10
Ethylbenzene #	-	-	-	-	-	-	<3	-	-		<3	ug/kg	TM15/PM10
m/p-Xylene #	-	-	-	-	-	-	<5	-	-		<5	ug/kg	TM15/PM10
o-Xylene #	-	-	-	-	-	-	<3	-	-		<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	-	-	-	-	-	72	-	-		<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	-	-	-	-	-	66	-	-		<0	%	TM15/PM10

Element Materials Technology

Client Name: Tier Environmental
Reference: TE1750
Location: Bryn Lane Detail
Contact: Adrian Read
EMT Job No: 23/9034

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	144-147	168-171	172-175	191-194	203-206	207-209	210-213	222-225	226-229		Please see attached notes for all abbreviations and acronyms		
Sample ID	TP112	TP114	TP114	TP116	TP116	TP117	TP117	TP118	TP118				
Depth	0.20	0.05	0.50	0.10	2.70	0.20	0.40	1.00	1.70				
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	J T	V J T	V J T	V J T				
Sample Date	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	2	2	2	2	2	2	2	2	2				
Date of Receipt	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023		LOD/LOR	Units	Method No.
Pesticides													
Organophosphorus Pesticides													
Azinphos ethyl	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Azinphos methyl	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Carbophenothion	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Chlorfenvinphos	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Chlorpyrifos	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Chlorpyrifos-methyl	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Diazinon	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Dichlorvos	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Disulfoton	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Dimethoate	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Ethion	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Ethyl Parathion (Parathion)	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Etrimphos	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Fenitrothion	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Fenthion	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Malathion	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Methyl Parathion	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Mevinphos	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Phosalone	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Pirimiphos Methyl	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Propetamphos	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
Triazophos	<10	<10	-	<10	-	-	<10	<10	-		<10	ug/kg	TM42/PM8
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1 ^{SV}		<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1 ^{SV}		<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1 ^{SV}		<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	<0.2	-	<0.2	-	<0.2	<0.2	<0.2	<0.2		<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	<4	<4	-	<4	-	<4	<4	<4	<4		<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	27	<7	-	<7	-	14	<7	50	<7		<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	181	<7	-	<7	-	50	113	118	166		<7	mg/kg	TM5/PM8/PM16
>C35-C40 (EH_CU_1D_AL)	15	<7	-	<7	-	<7	<7	<7	<7		<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-40 (EH+HS_CU_1D_AL)	223	<26	-	<26	-	64	113	168	166		<26	mg/kg	TM5/PM8/PM16/PM12/PM15

Element Materials Technology

Client Name: Tier Environmental
Reference: TE1750
Location: Bryn Lane Detail
Contact: Adrian Read
EMT Job No: 23/9034

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	144-147	168-171	172-175	191-194	203-206	207-209	210-213	222-225	226-229		Please see attached notes for all abbreviations and acronyms		
Sample ID	TP112	TP114	TP114	TP116	TP116	TP117	TP117	TP118	TP118				
Depth	0.20	0.05	0.50	0.10	2.70	0.20	0.40	1.00	1.70				
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	J T	V J T	V J T	V J T				
Sample Date	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	2	2	2	2	2	2	2	2	2				
Date of Receipt	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023	08/06/2023		LOD/LOR	Units	Method No.
TPH CWG													
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	mg/kg	TM36/PM12	
>EC7-EC8 (HS_1D_AR) #	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	mg/kg	TM36/PM12	
>EC8-EC10 (HS_1D_AR) #	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1	mg/kg	TM36/PM12	
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	<0.2	-	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16	
>EC12-EC16 (EH_CU_1D_AR) #	<4	<4	-	<4	-	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16	
>EC16-EC21 (EH_CU_1D_AR) #	<7	<7	-	<7	-	53	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16	
>EC21-EC35 (EH_CU_1D_AR) #	44	<7	-	139	-	241	361	255	402	<7	mg/kg	TM5/PM8/PM16	
>EC35-EC40 (EH_CU_1D_AR)	10	<7	-	<7	-	34	17	25	21	<7	mg/kg	TM5/PM8/PM16	
Total aromatics C5-40 (EH+HS_CU_1D_AR)	54	<26	-	139	-	328	378	280	423	<26	mg/kg	TM5/ TM36/ PM8/ PM12/ PM16	
Total aliphatics and aromatics(C5-40) (EH+HS_CU_1D_Total)	277	<52	-	139	-	392	491	448	589	<52	mg/kg	TM5/ TM36/ PM8/ PM12/ PM16	
MTBE #	<5	<5	-	<5	-	<5	-	<5	<5 ^{SV}	<5	ug/kg	TM36/PM12	
Benzene #	<5	<5	-	<5	-	<5	-	<5	<5 ^{SV}	<5	ug/kg	TM36/PM12	
Toluene #	<5	<5	-	<5	-	<5	-	<5	<5 ^{SV}	<5	ug/kg	TM36/PM12	
Ethylbenzene #	<5	<5	-	<5	-	<5	-	<5	<5 ^{SV}	<5	ug/kg	TM36/PM12	
m/p-Xylene #	<5	<5	-	<5	-	<5	-	<5	<5 ^{SV}	<5	ug/kg	TM36/PM12	
o-Xylene #	<5	<5	-	<5	-	<5	-	<5	<5 ^{SV}	<5	ug/kg	TM36/PM12	
Total Phenols HPLC	<0.15	<0.15	-	0.21	-	<0.15	<0.15	-	<0.15	<0.15	mg/kg	TM26/PM21B	
Natural Moisture Content	12.7	15.4	-	58.1	-	9.7	109.6	150.0	159.3	<0.1	%	PM4/PM0	
Hexavalent Chromium #	<0.3	<0.3	-	NDP	-	<0.3	<0.3	-	<0.3	<0.3	mg/kg	TM38/PM20	
Ortho Phosphate as PO4	0.5	-	<0.3	-	<0.3	-	<0.3	<0.3	-	<0.3	mg/kg	TM38/PM20	
Sulphate as SO4 (2:1 Ext) #	<0.0015	0.0233	-	0.0356	-	0.0290	0.3705	-	0.6053	<0.0015	g/l	TM38/PM20	
Total Organic Carbon #	2.32	1.91	-	5.13	-	1.44	10.42	-	12.15	<0.02	%	TM21/PM24	
pH #	6.86	6.55	-	5.96	-	8.08	6.34	-	7.19	<0.01	pH units	TM73/PM11	
Asbestos Type*	NAD	NAD	-	NAD	-	NAD	NAD	NAD	NAD		None	Subcontracted	

Client Name: Tier Environmental
Reference: TE1750
Location: Bryn Lane Detail
Contact: Adrian Read
EMT Job No: 23/9034

Please see attached notes for all abbreviations and acronyms

QF-PM 3.1.3 v11

Element Materials Technology

Client Name: Tier Environmental
Reference: TE1750
Location: Bryn Lane Detail
Contact: Adrian Read
EMT Job No: 23/9034

VOC Report : Solid

EMT Sample No.	210-213	226-229										
Sample ID	TP117	TP118										
Depth	0.40	1.70										
COC No / misc												
Containers	V J T	V J T										
Sample Date	08/06/2023	08/06/2023										
Sample Type	Soil	Soil										
Batch Number	2	2										
Date of Receipt	08/06/2023	08/06/2023										
	LOD/LOR	Units	Method No.									
VOC MS												
Dichlorodifluoromethane	<2	<2								<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2								<2	ug/kg	TM15/PM10
Chloromethane #	17	13								<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2								<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1								<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2								<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2								<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6								<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7	<7								<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3								<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3	<3								<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3								<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4								<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3								<3	ug/kg	TM15/PM10
Chloroform #	<3	<3								<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3								<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3								<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4								<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4								<4	ug/kg	TM15/PM10
Benzene #	<3	<3								<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	<3	<3								<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6								<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3								<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3								<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4								<4	ug/kg	TM15/PM10
Toluene #	<3	10								<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3								<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3								<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3								<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3								<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3								<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3								<3	ug/kg	TM15/PM10
Chlorobenzene #	<3	<3								<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3	<3								<3	ug/kg	TM15/PM10
Ethylbenzene #	<3	<3								<3	ug/kg	TM15/PM10
m/p-Xylene #	<5	<5								<5	ug/kg	TM15/PM10
o-Xylene #	<3	<3								<3	ug/kg	TM15/PM10
Styrene	<3	<3								<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3								<3	ug/kg	TM15/PM10
Isopropylbenzene #	<3	<3								<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3								<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2								<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4								<4	ug/kg	TM15/PM10
Propylbenzene #	<4	<4								<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3								<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3								<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3								<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5								<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6	<6								<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	<4								<4	ug/kg	TM15/PM10
4-Isopropyltoluene	<4	<4								<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4								<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4								<4	ug/kg	TM15/PM10
n-Butylbenzene	<4	<4								<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4								<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4	<4								<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7	<7								<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4								<4	ug/kg	TM15/PM10
Naphthalene	<27	<27								<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7	<7								<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	72	84								<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	66	77								<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Matrix : Solid

[illegible]

Client Name: Tier Environmental

Reference: TE1750

Location: Bryn Lane Detail

Contact: Adrian Read

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/9034

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

HWOL ACRONYMS AND OPERATORS USED

HS	Headspace Analysis.
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent.
CU	Clean-up - e.g. by florisil, silica gel.
1D	GC - Single coil gas chromatography.
Total	Aliphatics & Aromatics.
AL	Aliphatics only.
AR	Aromatics only.
2D	GC-GC - Double coil gas chromatography.
#1	EH_Total but with humics mathematically subtracted
#2	EU_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +).
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry.

EMT Job No: 23/9034

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details			AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes

EMT Job No: 23/9034

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO ₂ generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.	Yes		AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21B	As Received samples are extracted in Methanol: Water (60:40) by reciprocal shaker.			AR	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GC/FID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GC/FID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH ₄ + 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.			AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH ₄ + 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH ₄ + 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM42	Modified US EPA method 8270D v5:2014. Pesticides and herbicides by GC-MS	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM50	Acid soluble sulphate (Total Sulphate) analysed by ICP-OES	PM29	A hot hydrochloric acid digest is performed on a dried and ground sample, and the resulting liquor is analysed.	Yes		AD	Yes

EMT Job No: 23/9034

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No
Subcontracted	See attached subcontractor report for accreditation status and provider.					AR	
TM15_A	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

Tier Environmental
Suite 414, Chadwick House
Warrington Rd
Birchwood
Warrington
United Kingdom
WA3 6AE



4225



Attention : Adrian Read

Date : 20th June, 2023

Your reference : TE1750

Our reference : Test Report 23/9034 Batch 3

Location : Detailed Planning, Bryn Lane

Date samples received : 9th June, 2023

Status : Final Report

Issue : 1

Four samples were received for analysis on 9th June, 2023 of which three were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:



Phil Sommerton BSc

Senior Project Manager

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Tier Environmental
Reference: TE1750
Location: Detailed Planning, Bryn Lane
Contact: Adrian Read
EMT Job No: 23/9034

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	236-239	244-247	248-251										
Sample ID	TP120	TP121	TP121										
Depth	0.30	0.40	1.00										
COC No / misc													
Containers	V J T	V J T	V J T										
Sample Date	09/06/2023	09/06/2023	09/06/2023										
Sample Type	Soil	Soil	Soil										
Batch Number	3	3	3										
Date of Receipt	09/06/2023	09/06/2023	09/06/2023										
											LOD/LOR	Units	Method No.
Arsenic #	10.8	-	11.4								<0.5	mg/kg	TM30/PM15
Cadmium #	<0.1	-	<0.1								<0.1	mg/kg	TM30/PM15
Chromium #	48.9	-	49.2								<0.5	mg/kg	TM30/PM15
Copper #	20	-	25								<1	mg/kg	TM30/PM15
Lead #	49	-	14								<5	mg/kg	TM30/PM15
Mercury #	0.1	-	<0.1								<0.1	mg/kg	TM30/PM15
Nickel #	31.2	-	44.4								<0.7	mg/kg	TM30/PM15
Selenium #	2	-	<1								<1	mg/kg	TM30/PM15
Total Sulphate as SO4 #	535	-	798								<50	mg/kg	TM50/PM29
Zinc #	98	-	76								<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	<0.04	-	<0.04								<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	-	<0.03								<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	-	<0.05								<0.05	mg/kg	TM4/PM8
Fluorene #	<0.04	-	<0.04								<0.04	mg/kg	TM4/PM8
Phenanthrene #	<0.03	-	<0.03								<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	-	<0.04								<0.04	mg/kg	TM4/PM8
Fluoranthene #	<0.03	-	<0.03								<0.03	mg/kg	TM4/PM8
Pyrene #	<0.03	-	<0.03								<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06	-	<0.06								<0.06	mg/kg	TM4/PM8
Chrysene #	<0.02	-	<0.02								<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	<0.07	-	<0.07								<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.04	-	<0.04								<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	<0.04	-	<0.04								<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	-	<0.04								<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	-	<0.04								<0.04	mg/kg	TM4/PM8
PAH 16 Total	<0.6	-	<0.6								<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	-	<0.05								<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	-	<0.02								<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	81	-	87								<0	%	TM4/PM8

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Tier Environmental
Reference: TE1750
Location: Detailed Planning, Bryn Lane
Contact: Adrian Read
EMT Job No: 23/9034

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	236-239	244-247	248-251								Please see attached notes for all abbreviations and acronyms		
Sample ID	TP120	TP121	TP121										
Depth	0.30	0.40	1.00										
COC No / misc													
Containers	V J T	V J T	V J T										
Sample Date	09/06/2023	09/06/2023	09/06/2023										
Sample Type	Soil	Soil	Soil										
Batch Number	3	3	3										
Date of Receipt	09/06/2023	09/06/2023	09/06/2023										
Pesticides													
Organophosphorus Pesticides													
Azinphos ethyl	-	<10	-								<10	ug/kg	TM42/PM8
Azinphos methyl	-	<10	-								<10	ug/kg	TM42/PM8
Carbophenothion	-	<10	-								<10	ug/kg	TM42/PM8
Chlorfenvinphos	-	<10	-								<10	ug/kg	TM42/PM8
Chlorpyrifos	-	<10	-								<10	ug/kg	TM42/PM8
Chlorpyrifos-methyl	-	<10	-								<10	ug/kg	TM42/PM8
Diazinon	-	<10	-								<10	ug/kg	TM42/PM8
Dichlorvos	-	<10	-								<10	ug/kg	TM42/PM8
Disulfoton	-	<10	-								<10	ug/kg	TM42/PM8
Dimethoate	-	<10	-								<10	ug/kg	TM42/PM8
Ethion	-	<10	-								<10	ug/kg	TM42/PM8
Ethyl Parathion (Parathion)	-	<10	-								<10	ug/kg	TM42/PM8
Etrimphos	-	<10	-								<10	ug/kg	TM42/PM8
Fenitrothion	-	<10	-								<10	ug/kg	TM42/PM8
Fenthion	-	<10	-								<10	ug/kg	TM42/PM8
Malathion	-	<10	-								<10	ug/kg	TM42/PM8
Methyl Parathion	-	<10	-								<10	ug/kg	TM42/PM8
Mevinphos	-	<10	-								<10	ug/kg	TM42/PM8
Phosalone	-	<10	-								<10	ug/kg	TM42/PM8
Pirimiphos Methyl	-	<10	-								<10	ug/kg	TM42/PM8
Propetamphos	-	<10	-								<10	ug/kg	TM42/PM8
Triazophos	-	<10	-								<10	ug/kg	TM42/PM8
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1	-	-								<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	<0.1	-	-								<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	-	-								<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	-	-								<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	<4	-	-								<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	<7	-	-								<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	31	-	-								<7	mg/kg	TM5/PM8/PM16
>C35-C40 (EH_CU_1D_AL)	<7	-	-								<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-40 (EH+HS_CU_1D_AL)	31	-	-								<26	mg/kg	TM5/PM8/PM16/PM12/PM10

Element Materials Technology

Client Name: Tier Environmental
Reference: TE1750
Location: Detailed Planning, Bryn Lane
Contact: Adrian Read
EMT Job No: 23/9034

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

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Sample Type	Soil	Soil	Soil										
Batch Number	3	3	3										
Date of Receipt	09/06/2023	09/06/2023	09/06/2023									LOD/LOR	Units
TPH CWG													
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1	-	-								<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	<0.1	-	-								<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	<0.1	-	-								<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	-	-								<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	<4	-	-								<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	<7	-	-								<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	<7	-	-								<7	mg/kg	TM5/PM8/PM16
>EC35-EC40 (EH_CU_1D_AR)	<7	-	-								<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-40 (EH+HS_CU_1D_AR)	<26	-	-								<26	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-40) (EH+HS_CU_1D_Total)	<52	-	-								<52	mg/kg	TM5/TM36/PM8/PM12/PM16
MTBE #													
	<5	-	-								<5	ug/kg	TM36/PM12
Benzene #													
	<5	-	-								<5	ug/kg	TM36/PM12
Toluene #													
	<5	-	-								<5	ug/kg	TM36/PM12
Ethylbenzene #													
	<5	-	-								<5	ug/kg	TM36/PM12
m/p-Xylene #													
	<5	-	-								<5	ug/kg	TM36/PM12
o-Xylene #													
	<5	-	-								<5	ug/kg	TM36/PM12
Total Phenols HPLC													
	<0.15	-	<0.15								<0.15	mg/kg	TM26/PM21B
Natural Moisture Content													
	13.5	13.8	13.8								<0.1	%	PM4/PM0
Hexavalent Chromium #													
	<0.3	-	<0.3								<0.3	mg/kg	TM38/PM20
Ortho Phosphate as PO4													
	-	<0.3	-								<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #													
	0.0122	-	0.2802								<0.0015	g/l	TM38/PM20
Total Organic Carbon #													
	1.96	-	0.28								<0.02	%	TM21/PM24
pH #													
	8.02	-	8.54								<0.01	pH units	TM73/PM11
Asbestos Type*													
	NAD	-	-									None	Subcontracted

Client Name: Tier Environmental
Reference: TE1750
Location: Detailed Planning, Bryn Lane
Contact: Adrian Read

[illegible]

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NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/9034

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All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

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Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

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WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

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Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

HWOL ACRONYMS AND OPERATORS USED

HS	Headspace Analysis.
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent.
CU	Clean-up - e.g. by florisil, silica gel.
1D	GC - Single coil gas chromatography.
Total	Aliphatics & Aromatics.
AL	Aliphatics only.
AR	Aromatics only.
2D	GC-GC - Double coil gas chromatography.
#1	EH_Total but with humics mathematically subtracted
#2	EU_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +).
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry.

EMT Job No: 23/9034

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details			AR	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.	Yes		AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21B	As Received samples are extracted in Methanol: Water (60:40) by reciprocal shaker.			AR	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

EMT Job No: 23/9034

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.			AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM42	Modified US EPA method 8270D v5:2014. Pesticides and herbicides by GC-MS	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM50	Acid soluble sulphate (Total Sulphate) analysed by ICP-OES	PM29	A hot hydrochloric acid digest is performed on a dried and ground sample, and the resulting liquor is analysed.	Yes		AD	Yes
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No
Subcontracted	See attached subcontractor report for accreditation status and provider.					AR	

Tier Environmental
Suite 414, Chadwick House
Warrington Rd
Birchwood
Warrington
United Kingdom
WA3 6AE



4225



Attention : Adrian Read

Date : 3rd July, 2023

Your reference : TE1750

Our reference : Test Report 23/9034 Batch 4 Schedule A 23/9034 Batch 4 Schedule C

Location : Bryn Lane Detail

Date samples received : 19th June, 2023

Status : Final Report

Issue : 1

Eighteen samples were received for analysis on 19th June, 2023 of which seventeen were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:



Bruce Leslie
Project Manager

Please include all sections of this report if it is reproduced

Matrix : Solid

[illegible]

Client Name: Tier Environmental

Reference: TE1750

Location: Bryn Lane Detail

Contact: Adrian Read

[illegible]

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EMT Job No.: 23/9034

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Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution

HWOL ACRONYMS AND OPERATORS USED

HS	Headspace Analysis.
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent.
CU	Clean-up - e.g. by florisil, silica gel.
1D	GC - Single coil gas chromatography.
Total	Aliphatics & Aromatics.
AL	Aliphatics only.
AR	Aromatics only.
2D	GC-GC - Double coil gas chromatography.
#1	EH_Total but with humics mathematically subtracted
#2	EU_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +).
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry.