

BOREHOLE CONSTRUCTION	SAMPLE		SOIL VAPOUR (ppm)	GROUNDWATER	DEPTH (m)	GEOLOGY	BOREHOLE NUMBER: RFSW035		PAGE 1 of 1	
	NUMBER	TYPE					DRILLING DATES: 26/10/2000		DRILLING METHODS : Window Sampling	
							DRILLER : Geotechnical		BOREHOLE DIAMETER : 78mm	
							LOGGED BY : JG		SCREEN TYPE & DIAM: 50mm HDPE	
							CHECKED BY :		SCREEN SLOT SIZE: 1mm	
					0.0	CLAY Soft to firm, grey CLAY with some fine sand.	NVO	0.0		
			*88.3		0.5		Moist. Hydrocarbon odour	0.5		
					1.0			1.0		
			*73.2		1.5	SILTY SAND Dense, greyy fine silty SAND with some gravel.	Wet. NVO	1.5		
					2.0	End of Borehole		2.0		
					2.5			2.5		
					3.0			3.0		
					3.5			3.5		
					4.0			4.0		
					4.5			4.5		
					5.0			5.0		

LOCATION / NOTES: NVO = No visual or olfactory evidence	LEGEND Disturbed Sample Undisturbed Sample Headspace Analysis Down Borehole Analysis Groundwater Table Perched Water Table	BOREHOLE LOG	
		Job Title: Sentinel Wells Location: BP Llandarcy Refinery Client: BP Oil UK	
			App'd: _____ Date: 17/09/2002 Drawn : SS Ref: _____ Scale: As scale Job No: 39991-016 Drg. Size: A4 BOREHOLE LOG

Borehole Number: NSR1

Project No: C1357

Date: 22 Sep 2009

Easting: 71749.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96613.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily SILTS with dead vegetation. H/C odour. Poor recovery.		X X X X X X	
			D	NSR1 / 0.45m	Soft black grey sandy clayey SILT with H/C odour becoming less odourous with depth.	0.45	X X X X X X	
					Soft brown grey clayey SILT	0.55	X X X X X X	
1					Dense grey sandy gravelly SILT	0.95	X X X X X X	
					SANDSTONE	1.10	X X X X X X	
					End of Borehole	1.15		
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 1.35 m bwl. Depth to refusal, 2.45 m bwl. Sample taken from 0.35 m - 0.45 m

Project No: C1357

Date: 22 Sep 2009

Easting: 71745.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96681.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily SILT with H/C odour. Poor recovery		X X X X X X	
			D	NSR2 / 0.60m	Soft brown homogenous TOPSOIL. Very slight H/C odour.	0.60	X X X X X X	
1					Soft brown grey sandy clayey SILT.	0.70	X X X X X X	
					Dense grey sandy SILT with coarse sandstone gravels.	1.15	X X X X X X	
					End of Borehole	1.40	X X X X X X	
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 1.5 m bwl. Refusal, 2.9 m bwl. Sample taken from 0.5 m - 0.6 m

Project No: C1357

Date: 22 Sep 2009

Easting: 71724.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96628.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily SILT with H/C odour. Poor recovery.		X X X X X	
			D	NSR3 / 0.55m	Soft brown grey sandy clayey SILT.	0.55	X X X X X	
1					Dense grey brown silty SANDS and gravels.	0.90	X X X X X	
					End of Borehole	1.15		
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 2.35 m bwl. Refusal, 3.4 m bwl. Sample taken from 0.45 m - 0.55 m

Project No: C1357

Date: 22 Sep 2009

Easting: 71690.000

Engineer: GR

Northing: 96590.000

Site Location: Coed Darcy

Method: WS

Datum: -

Client: St Modwen

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)	
0			D	NSR4 / 0.25m	Very soft black oily SILT with H/C odour. Poor recovery. Poor recovery.	0.25	X X X X X X		
					Soft mid brown homogeneous TOPSOIL with slight occ. H/C odours.	0.60	X X X X X X		
1					Soft to firm grey sandy clayey SILT.	0.80			
					End of Borehole				
2									
3									
4									
5									
6									
7									
8									
9									

Comments: Depth to bed, 1.7 m bwl. Refusal, 2.5 m bwl. Samples taken from 0.15 m - 0.25 m

Project No: C1357

Date: 22 Sep 2009

Easting: 71688.000

Engineer: GR

Northing: 96654.000

Site Location: Coed Darcy

Method: WS

Datum: -

Client: St Modwen

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily SILT with strong H/C odour. Poor recovery.	0.30	X X X X X	
			D	NSR5 / 0.55m	Soft dark to mid brown homogeneous TOPSOIL with a slight H/C odour.	0.55	X X X X X	
1					Soft to firm grey brown sandy silty CLAY with occ. orange mottling.	1.20	X X X X X	
					End of Borehole			
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 2.5 m bwl. Refusal, 3.7 m bwl. Sample taken from 0.45 m - 0.55 m.

Project No: C1357

Date: 22 Sep 2009

Easting: 71610.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96601.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black organic oily SILT with strong H/C odour. Poor recovery.			
1			D	NSR6 / 0.85m	Soft mid brown homogeneous TOPSOIL.	0.85		
			D	NSR6 / 1.10m	Soft to firm grey green clayey sandy SILT.	1.10		
					End of Borehole	1.50		
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 3.5 m bwl. Refusal, 5.0 m bwl. Samples taken from 0.75 m - 0.85 m and 1.00 m - 1.10 m.

Borehole Number: NSR7

Project No: C1357

Date: 22 Sep 2009

Easting: 71635.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96575.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily SILT with H/C odour. Poor recovery.			
			D	NSR7 / 0.45m	Soft mid brown homogeneous TOPSOIL.	0.45		
					Soft to very firm grey green sandy slightly clayey SILT with gravels.	0.70		
1					End of Borehole	1.50		
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 2.5 m bwl. Refusal, 3.6 m bwl. Sample taken from 0.35 m - 0.45 m.

Project No: C1357

Date: 23 Sep 2009

Easting: 71586.000

Engineer: GR

Northing: 96629.000

Site Location: Coed Darcy

Method: WS

Datum: -

Client: St Modwen

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily SILT with strong H/C odour. Poor recovery.	0.31	X X X X X	
			D	NSR8 / 0.56m	Soft to medium grey organic SILT with medium H/C odour.	0.56	X X X X X	
1					Soft grey clayey SILT becoming sandy with depth.	1.05	X X X X X	
					End of Borehole			
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 3.1 m bwl. Refusal, 4.15 m bwl. Samples taken from 0.455 m - 0.555 m

Borehole Number: NSR9

Project No: C1357

Date: 23 Sep 2009

Easting: 71574.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96590.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)	
0					Very soft black oily SILT with strong H/C odour. Poor recovery.		X X X X X X X X X X		
1			D	NSR9 / 1.05m	Soft brown silty fibrous PEAT with slight H/C odours in upper echelons.	0.80	X X X X X X X X X X		
					End of Borehole	1.20	X X X X X X X X X X		
2									
3									
4									
5									
6									
7									
8									
9									

Comments: Depth to bed, 4.3 m bwl. Refusal, 5.5 m bwl. Sample taken from 0.95 m - 1.05 m

Project No: C1357

Date: 23 Sep 2009

Easting: 71548.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96553.000

Method: WS

Datum: -

Client: St Modwen

Hole Diameter:

Screen Position:

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily SILT with strong H/C odour. Poor recovery.		XXXXXX XXXXXX XXXXXX	
1			D	NSR10 / 0.85m	Soft brown silty PEAT with very slight H/C odours.	0.70	XXXXXX XXXXXX XXXXXX	
					End of Borehole	1.00	XXXXXX XXXXXX XXXXXX	
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 2.8 m bwl. Refusal, 3.8 m bwl. Sample taken from 0.75 m - 0.85 m

Project No: C1357

Date: 23 Sep 2009

Easting: 71503.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96612.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily SILT with strong H/C odour. Poor recovery.		XXXXXX	
			D	NSR11 / 0.60m		0.60	XXXXXX	
			D	NSR11 / 0.70m	Soft black grey organic sandy SILT with H/C odour.	0.70	XXXXXX	
1			D	NSR11 / 0.90m	Soft to firm grey brown sandy clayey SILT with gravels increasing in size with depth. Slight H/C odour in upper 100m.	1.20	XXXXXX	
					End of Borehole			
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 2.8 m bwl. Refusal, 4.0m bwl. Samples taken from 0.5 m - 0.6 m, 0.6 m - 0.7 m, and 0.8 m - 0.9 m.

Project No: C1357

Date: 23 Sep 2009

Easting: 71490.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96574.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily organic SILT with strong H/C odour. Poor recovery.		X X X X X X	
							X X X X X X	
							X X X X X X	
						0.60	X X X X X X	
					Soft mid brown fibrous PEAT.		X X X X X X	
1			D	NSR12 / 0.75m	Soft grey brown sandy clayey SILT.	0.95	X X X X X X	
						1.10	X X X X X X	
					End of Borehole			
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 5.5 m bwl. Refusal, 7.1 m bwl. Sample taken from 0.65 m - 0.75 m.

Project No: C1357

Date: 23 Sep 2009

Easting: 71462.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96502.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily organic SILT with strong H/C odour. Poor recovery.		X X X X X X X X X X	
			D	NSR13 / 0.60m	Soft to firm green grey sandy gravelly SILT with slight H/C odour.	0.65 0.80	X X X X X X X X X X	
1					End of Borehole			
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 1.8 m bwl. Refusal, 2.6 m bwl. Sample taken from 0.5 m - 0.6 m.

Project No: C1357

Date: 23 Sep 2009

Easting: 71417.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96598.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0			D	NSR14 / 0.25m	Very soft black brown oily organic SILT with strong H/C odour. Poor recovery.	0.25	X s/s X X X	
					Soft grey brown SILT with organic odour.	0.45	X s/s X X X	
					Soft brown green sandy SILT with some large weathered sandstone gravels.	0.75	X X X X X	
1					End of Borehole			
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 3.4 m bwl. Refusal, 4.15 m bwl. Sample from 0.15 m - 0.25 m.

Date: 23 Sep 2009

Easting: 71392.000

Project No: C1357

Engineer: GR

Northing: 96542.000

Site Location: Coed Darcy

Method: WS

Datum: -

Client: St Modwen

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)	
0					Very soft black oily SILT with strong H/C odour. Poor recovery.		X silt X X X		
1			D	NSR15 / 1.30m			X X X X silt		
					Soft brown fibrous PEAT with some gravels.	1.30	X X X X		
					Soft brown clayey SILT.	1.50	X X X X		
2					Grey sandy gravelly SILT.	1.80	X X X X		
					End of Borehole	1.90	X X X X		
3									
4									
5									
6									
7									
8									
9									

Comments: Depth to bed, 5.9 m bwl. Refusal, 7.8 m bwl. Sample was taken from 1.2 m - 1.3 m

Project No: C1357

Date: 23 Sep 2009

Easting: 71350.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96573.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Refusal at 0.0 m. End of Borehole	0.00		
1								
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 4.2 m bwl. Refusal, 4.2 m bwl.

Borehole Number: NSR16A

Project No: C1357

Date: 23 Sep 2009

Easting: 71353.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96574.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0			D	NSR16A / 0.25m	Very soft black oily SILT with H/C odour. Poor Recovery.	0.10		
					Soft brown homogenous TOPSOIL with occasional rootlets.	0.25		
1					Soft to firm light grey brown clayey SILT with occasional orange mottling.	0.75		
					End of Borehole			
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 4.3m bwl. Refusal, 5.0 m bwl. Sample taken from 0.15m - 0.25m

Date: 23 Sep 2009

Easting: 71393.000

Project No: C1357

Engineer: GR

Northing: 96474.000

Site Location: Coed Darcy

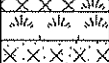
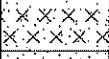
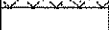
Method: WS

Datum: 0.000m

Client: St Modwen

Hole Diameter:

Screen Position:

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily SILT with H/C odour. Poor recovery.			
1			D	NSR17 / 0.90m	Soft dark brown fibrous PEAT with slight H/C odour.	0.90 1.10		-0.900 -1.100
			D	NSR17 / 1.70m	Firm to stiff grey brown becoming grey sandy SILT with occasional gravels.	1.60 1.70		-1.600 -1.700
2					Very dense silty SAND with occasional gravels.			
					End of Borehole			
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 5 m bwl. Refusal, 6.7 m bwl. Sample was taken from 0.8 m - 0.9 m and 1.6 m - 1.7 m

Project No: C1357

Date: 24 Sep 2009

Easting: 71278.000

Engineer: GR

Northing: 96561.000

Site Location: Coed Darcy

Method: WS

Datum: 0.000m

Client: St Modwen

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)	
0			D	NSR18 / 0.30m	Very soft black oily organic SILT with strong H/C odour.	0.15		-0.150	
					Medium to very firm slightly sandy clayey SILT with roots and orange mottling throughout.	0.70		-0.700	
1					Stiff grey sandy gravelly SILT with gravels.	0.90		-0.900	
					End of Borehole				
2									
3									
4									
5									
6									
7									
8									
9									

Comments: Depth to bed, 4.2 m bwl. Refusal, 5.1 m bwl. Sample taken from 0.20 m - 0.30 m.

Project No: C1357

Date: 24 Sep 2009

Easting: 71299.000

Engineer: GR

Northing: 96521.000

Site Location: Coed Darcy

Method: WS

Datum: 0.000m

Client: St Modwen

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily SILT with strong H/C odour. Poor recovery.		X X X X X X X X X X	
			D	NSR19 / 0.60m	Soft brown fibrous PEAT.	0.65	X X X X X X X X X X	-0.650
			D	NSR19 / 1.00m	Firm grey sandy SILT with rootlets.	0.85	X X X X X X X X X X	-0.850
1					Firm grey sandy gravelly SILT.	1.05	X X X X X X X X X X	-1.050
					End of Borehole	1.20	X X X X X X X X X X	-1.200
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 7.3 m bwl. Refusal, 8.5 m bwl. Samples taken from 0.5 m - 0.6 m and 0.9 m - 1.0 m.

Project No: C1357

Date: 24 Sep 2009

Easting: 71336.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96443.000

Client: St Modwen

Method: WS

Datum: 0.000m

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0			D	NSR20 / 0.20m	Very soft black oily SILT with strong H/C odour. Poor recovery.	0.20	X X X X X X X X	-0.200
					Soft grey sandy SILT with occ. rootlets in top 300 mm.	0.55	X X X X X X X X	-0.550
1					Firm to stiff brown sandy gravelly SILT.	0.80	X X X X X X X X	-0.800
					End of Borehole			
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 5.0 m bwl. Refusal, 5.8 m bwl. Sample taken from 0.1 m - 0.20 m.

Project No: C1357

Date: 24 Sep 2009

Easting: 71301.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96394.000

Client: St Modwen

Method: WS

Datum: 0.000m

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)	
0					Very soft black oily SILT with strong H/C odour. Poor recovery.		X X X X X X X X X X		
1			D	NSR21 / 0.85m	Soft mid brown sandy silty gravelly TOPSOIL with fine rootlets to 250 mm.	0.85	X X X X X X X X X X	-0.850	
					End of Borehole	1.10	X X X X X X X X X X	-1.100	
2									
3									
4									
5									
6									
7									
8									
9									

Comments: Depth to bed, 1.9 m bwl. Refusal, 3.0 m bwl. Sample from 0.75 m - 0.85 m

Project No: C1357

Date: 24 Sep 2009

Easting: 71265.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96452.000

Client: St Modwen

Method: WS

Datum: 0.000m

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily SILT with strong H/C odour. Poor recovery.		XXXXXX XXXXXX XXXXXX XXXXXX XXXXXX	
1			D	NSR22 / 1.00m	End of Borehole	1.00		-1.000
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 7.3 m bwl. Refusal, 8.3 m bwl. Sample taken from 0.9 m - 1.0 m

Project No: C1357

Date: 24 Sep 2009

Easting: 71362.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96465.000

Client: St Modwen

Method: WS

Datum: 0.000m

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily SILT with strong H/C odour. Poor recovery.		X X X X X X	
			D	NSR23 / 0.55m	Firm grey SILT.	0.55	X X X X X X	-0.550
					Soft to firm brown grey clayey SILT.	0.70	X X X X X X	-0.700
1					Firm grey clayey gravelly SILT.	1.00	X X X X X X	-1.000
					End of Borehole	1.20	X X X X X X	-1.200
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 3.5 m bwl. Refusal, 4.7 m bwl. Sample taken from 0.45 m - 0.55 m

Project No: C1357

Date: 24 Sep 2009

Easting: 71362.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96465.000

Client: St Modwen

Method: WS

Datum: 0.000m

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Rotted tree stump.	0.20		-0.200
			D	NSR24 / 0.30m	Soft black brown fibrous PEAT.	0.50		-0.500
					End of Borehole			
1								
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 5.1 m bwl. Depth to refusal, 6.4 m bgl. Sample taken from 0.2 m - 0.3 m

Project No: C1357

Date: 24 Sep 2009

Easting: 71362.000

Engineer: GR

Northing: 96465.000

Site Location: Coed Darcy

Method: WS

Datum: 0.000m

Client: St Modwen

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily SILT with strong H/C odours. Poor recovery.		X X X X X X X X X X	
					Soft brown fibrous PEAT.	0.61	X X X X X X X X X X	-0.605
1					Soft grey clayey SILT.	1.30	X X X X X X X X X X	-1.300
					Stiff brown grey sandy gravelly SILT.	1.55	X X X X X X X X X X	-1.550
2					End of Borehole	1.60		-1.600
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 4.9 m bwl. Depth to refusal, 6.5 m bgl.

Project No: C1357

Date: 24 Sep 2009

Easting: -

Site Location: Coed Darcy

Engineer: GR

Northing: -

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily SILT with strong H/C odours. Poor recovery.		X X X X X X X X X X	
			D	NSR26 / 0.60m	Soft black becoming brown fibrous PEAT.	0.60	X X X X X X X X X X	
1					End of Borehole	1.20	X X X X X X X X X X	
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 4.6 m bwl. Depth to refusal, 6.4 m bwl. Sample taken from 0.5 m - 0.6 m

Project No: C1357

Date: 25 Sep 2009

Easting: 71542.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96567.000

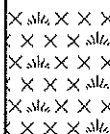
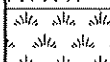
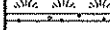
Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)	
0					Very soft black oily SILT with strong H/C odours. Poor recovery.				
1			D	NSR27 / 1.00m	Soft black becoming brown fibrous PEAT.	0.95			
					Grey angular sandstone GRAVEL.	1.40			
					End of Borehole	1.45			
2									
3									
4									
5									
6									
7									
8									
9									

Comments: Depth to bed, 4.5 m bwl. Depth to refusal, 5.9 m bwl. Sample taken from 0.9 m - 1.0 m.

Project No: C1357

Date: 25 Sep 2009

Easting: 71595.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96582.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily SILT with strong H/C odours. Poor recovery.	0.30	X X X X X X X X X X	
1			D	NSR28 / 1.10m	Stiff grey brown silt with occasional gravels at depth.	1.10	X X X X X X X X X X	
					Coarse weathered SANDSTONE.	1.15	X X X X X X X X X X	
					End of Borehole			
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 3.9 m bwl. Refusal, 5.1 m bwl. Sample taken from 1.0 m - 1.1 m.

Project No: C1357

Date: 25 Sep 2009

Easting: 71692.000

Engineer: GR

Northing: 96601.000

Site Location: Coed Darcy

Method: WS

Datum: -

Client: St Modwen

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily SILT with strong H/C odours. Poor recovery.	0.36	X X X X X	
			D	NSR29 / 0.51m	Soft black brown fibrous PEAT with slight H/C odour.	0.61	X X X X X	
1					Soft to firm grey brown and green sandy SILT with angular sandstone gravels.	1.01	X X X X X	
					Very stiff brown green sandy SILT with angular sandstone gravels.	1.21	X X X X X	
2					End of Borehole			
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 2.2 m bwl. Depth to refusal, 3.45 m bwl. Sample taken from 0.405 m - 0.505 m.

Project No: C1357

Date: 25 Sep 2009

Easting: 71755.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96640.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily SILT with strong H/C odours. Poor recovery.		X X X X X X X X X X	
1			D	NSR30 / 1.05m	Soft brown PEAT.	1.05	X X X X X X X X X X	
					Soft grey brown organic SILT.	1.10	X X X X X X X X X X	
					Stiff grey SILT with angular sandstone gravels.	1.25	X X X X X X X X X X	
2					End of Borehole	1.40		
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 1.6m bwl. Depth to refusal, 3.0 m bwl. Sample taken from 0.9 5m - 1.05 m.

Project No: C1357

Date: 25 Sep 2009

Easting: 71735.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96676.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily SILT with strong H/C odours. Poor recovery.		X X X X X X	
					Very soft brown orangy grey silty CLAY.	0.60	X X X X X X	
1					Very dense brown grey silty sandy sandstone GRAVEL.	0.90	X X X X X X	
					Soft to firm sandy SILT with gravels.	1.10	X X X X X X	
					Stiff grey SILT with angular sandstone gravels.	1.15	X X X X X X	
2					End of Borehole	1.20	X X X X X X	
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 1.5 m bwl. Depth to refusal, 2.9 m bwl.

Project No: C1357

Date: 25 Sep 2009

Easting: 71675.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96662.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)	
0					Very soft black brown oily SILT with strong H/C odours. Poor recovery.		X X X X X X X X X X		
			D	NSR32 / 0.75m	Soft brown PEAT.	0.60	X X X X X X X X X X		
					Soft grey clayey SILT.	0.75	X X X X X X X X X X		
1					Soft to firm sandy SILT with angular sandstone gravels.	1.00	X X X X X X X X X X		
					End of Borehole	1.15	X X X X X X X X X X		
2									
3									
4									
5									
6									
7									
8									
9									

Comments: Depth to bed, 2.2 m bwl. Depth to refusal, 3.45 m bwl. Sample taken from 0.65 m - 0.75 m

Project No: C1357

Date: 25 Sep 2009

Easting: 71616.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96608.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Soft black brown slightly oily silty PEAT with H/C odour.			
					End of Borehole	0.40		
1								
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 3.9 m bwl. Depth to refusal, 5.1 m bwl.

Project No: C1357

Date: 25 Sep 2009

Easting: 71561.000

Engineer: GR

Northing: 96627.000

Site Location: Coed Darcy

Method: WS

Datum: -

Client: St Modwen

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)	
0					Very soft black brown oily SILT with strong H/C odours. Poor recovery.				
			D	NSR34 / 0.75m	Soft grey brown clayey SILT.	0.75			
1			D	NSR34 / 1.10m	Firm brown grey sandy gravelly SILT with sand lenses. Slight H/C odour throughout.	1.10			
					End of Borehole	1.30			
2									
3									
4									
5									
6									
7									
8									
9									

Comments: Depth to bed, 2.4 m bwl. Depth to refusal, 3.7 m bwl. Samples taken from 0.65 m - 0.75 m and 1.0 m - 1.1 m.

Project No: C1357

Date: 28 Sep 2009

Easting: 71468.000

Engineer: GR

Northing: 96598.000

Site Location: Coed Darcy

Method: WS

Datum: -

Client: St Modwen

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black brown oily SILT with strong H/C odours. Poor recovery.		X X X X X X X X X X	
			D	NSR35 / 0.50m	Soft greeny brown clayey SILT with slight H/C odours.	0.50	X X X X X X X X X X	
1			D	NSR35 / 0.95m	End of Borehole	0.95	X X X X X X X X X X	
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 4.2 m bwl. Depth to refusal, 5.15m bwl. Samples taken from 0.4 m - 0.5 m and 0.85 m - 0.95 m.

Project No: C1357

Date: 28 Sep 2009

Easting: 71387.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96584.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black brown oily SILT with strong H/C odours. Poor recovery.		X X X X X X X X X X	
			D	NSR36 / 0.70m	Firm grey black sandy SILT with occ. large gravels. Slight H/C odour throughout.	0.70	X X X X X X X X X X	
1					Soft grey brown sandy SILT with some gravels of weathered sandstone. Orange mottling throughout.	0.90	X X X X X X X X X X	
					End of Borehole	1.40	X X X X X X X X X X	
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 4.6 m bwl. Depth to refusal, 5.5 m bwl. Sample taken from 0.6 m - 0.7 m.

Project No: C1357

Date: 28 Sep 2009

Easting: 71316.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96555.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black brown oily SILT with strong H/C odours. Poor recovery.	0.30	X X X X X	
			D	NSR37 / 0.45m	Soft black organic SILT.	0.55	X X X X X	
					Soft grey brown sandy SILT with occ. gravels.	0.75	X X X X X	
1					End of Borehole			
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 4.9 m bwl. Depth to refusal, 5.4 m bwl. Sample taken from 0.35 m - 0.45 m.

Project No: C1357

Date: 28 Sep 2009

Easting: 71340.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96502.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Soft brown fibrous PEAT with very slight H/C staining and odours in the top 200 mm.			
			D	NSR38 / 0.50m				
1					End of Borehole	0.80		
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 5.9 m bwl. Depth to refusal, 7.5 m bwl. Sample taken from 0.40 m - 0.50 m.

Project No: C1357

Date: 28 Sep 2009

Easting: 71274.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96519.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE		
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black SILT. No recovery.	0.15		
			D	NSR39 / 0.40m	Soft green grey brown slightly sandy organic SILT.	0.40		
					Soft dark green grey sandy SILT with angular sandstone gravels.	0.60		
1					Soft grey brown sandy SILT with occ. gravels.	0.65		
					End of Borehole			
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 7.9 m bwl. Depth to refusal, 8.5 m bwl. Sample taken from 0.30 m - 0.40 m

Project No: C1357

Date: 28 Sep 2009

Easting: 71311.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96444.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)	
0					Very soft black brown oily SILT with strong H/C odours. Poor recovery.		X X		
1					Soft green dark grey sandy SILT.	0.90	X X X X X		
					Soft green grey clayey SILT.	1.10	X X X X X		
					Firm green grey sandy clayey SILT with gravels.	1.30	X X X X X		
					End of Borehole	1.70	X X X X X		
2									
3									
4									
5									
6									
7									
8									
9									

Comments: Depth to bed, 5.2m bwl. Depth to refusal, 6.9 m bwl.

Project No: C1357

Date: 28 Sep 2009

Easting: 71387.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96452.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Sandstone cobble stuck in pipe. End of Borehole	0.00		
1								
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 2.5 m bwl. Depth to refusal, 3.2 m bwl.

Project No: C1357

Date: 28 Sep 2009

Easting: 71382.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96458.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)	
0					Very soft black brown oily SILT with strong H/C odours. Poor recovery.	0.20	X X X X X		
			D	NSR42 / 0.40m		0.40	X X X X X		
			D	NSR42 / 0.60m	Soft brown PEAT.	0.60	X X X X X		
1					Soft grey sandy SILT with gravels.				
					End of Borehole				
2									
3									
4									
5									
6									
7									
8									
9									

Comments: Depth to bed, 4.3 m bwl. Depth to refusal, 4.9 m bwl. Samples taken from 0.3 m - 0.4 m and 0.5 m - 0.6 m.

Project No: C1357	Date: 29 Sep 2009	Easting: 71508.000
Site Location: Coed Darcy	Engineer: GR	Northing: 96532.000
Client: St Modwen	Method: WS	Datum: -
	Hole Diameter:	Screen Position:

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black brown oily SILT with strong H/C odours. Poor recovery.		X X X X X X X X X X	
					Soft becoming hard grey black sandy SILT with sandstone gravels.	0.55 0.65	X X X X X X X X X X	
1					End of Borehole			
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 3.4 m bwl. Depth to refusal, 4.1 m bwl.

Project No: C1357

Date: 29 Sep 2009

Easting: 71577.000

Engineer: GR

Northing: 96552.000

Site Location: Coed Darcy

Method: WS

Datum: -

Client: St Modwen

Hole Diameter:

Screen Position:

WATER	WELL	SAMPLING/TESTING		SUBSURFACE PROFILE				
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black brown oily SILT with strong H/C odours. Poor recovery.		X silt X X X X X X silt X X X silt X silt X X X	
1			D	NSR44 / 1.00m	Firm green sandy SILT with weathered sandstone gravels.	1.00	silt silt silt	
			D	NSR44 / 1.20m	Soft brown sandy clayey SILT with weathered sandstone gravels.	1.15	silt silt silt	
					End of Borehole	1.30	silt silt silt	
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 2.3 m bwl. Depth to refusal, 3.6 m bwl. Samples taken from 0.9 m - 1.0 m and 1.1 m - 1.2 m.

Project No: C1357

Date: 29 Sep 2009

Easting: 71496.000

Engineer: GR

Northing: 96617.000

Site Location: Coed Darcy

Method: WS

Datum: -

Client: St Modwen

Hole Diameter:

Screen Position:

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Soft brown peaty SILT with strong H/C odours. Poor recovery.			
			D	NSR45 / 0.50m		0.35		
					Soft grey organic SILT with slight H/C odour. Gravels towards base.	0.48		
					Soft grey sandy SILT with rotted reeds.	0.70		
1					Soft to firm grey brown sandy gravelly SILT.	1.10		
					End of Borehole			
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 2.7 m bwl. Depth to refusal, 3.7 m bwl. Sample taken from 0.4 m - 0.5 m.

Project No: C1357

Date: 29 Sep 2009

Easting: 71744.000

Engineer: GR

Northing: 96697.000

Site Location: Coed Darcy

Method: WS

Datum: -

Client: St Modwen

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)	
0					Very soft black oily SILT with strong H/C odours. Poor recovery.		X X X X X X X X		
			D	NSR46 / 0.45m		0.50	X X X X X X X X		
			D	NSR46 / 0.70m	Soft brown PEAT with slight H/C odour.	0.60	X X X X X X X X		
					Weathered sandstone GRAVEL.	0.65	X X X X X X X X		
1					Soft to firm grey brown sandy gravelly SILT.	1.10	X X X X X X X X		
					Stiff green grey sandy gravelly SILT.	1.20	X X X X X X X X		
					End of Borehole				
2									
3									
4									
5									
6									
7									
8									
9									

Comments: Depth to bed, 0.5 m bwl. Depth to refusal, 1.5 m bwl. Sample taken from 0.35 m - 0.45 m and 0.6 m - 0.7 m.

Project No: C1357

Date: 29 Sep 2009

Easting: 71660.000

Engineer: GR

Northing: 96668.000

Site Location: Coed Darcy

Method: WS

Datum: -

Client: St Modwen

Hole Diameter:

Screen Position:

WATER	WELL	SAMPLING/TESTING			SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)
0					Very soft black oily SILT with strong H/C odours. Poor recovery.	0.25	X X X X X	
					Soft black brown fibrous PEAT.	0.35	X X X X X	
					Soft brown organic SILT with rootlets.	0.55	X X X X X	
1					Soft becoming stiff green grey sandy gravelly SILT.	0.90	X X X X X	
					End of Borehole			
2								
3								
4								
5								
6								
7								
8								
9								

Comments: Depth to bed, 0.4 m bwl. Depth to refusal, 1.2 m bwl.

Project No: C1357

Date: 29 Sep 2009

Easting: 71597.000

Site Location: Coed Darcy

Engineer: GR

Northing: 96443.000

Client: St Modwen

Method: WS

Datum: -

Hole Diameter:

Screen Position:

WATER		WELL		SAMPLING/TESTING		SUBSURFACE PROFILE			
Water Strike	Well Data	N Value	Sample Type	Sample Ref	DESCRIPTION OF STRATA	Depth (m bgl)	Legend	Level (m AOD)	
0					Very soft brown SILT with H/C odours. Poor recovery.		X X X X X X X X X X		
					Soft to firm green brown sandy SILT with occ. gravels.	0.55	X X X X X X X X X X		
1			D	NSR48 / 0.90m			X X X X X X X X X X		
					End of Borehole	1.20			
2									
3									
4									
5									
6									
7									
8									
9									

Comments: Depth to bed, 1.4 m bwl. Depth to refusal, 2.6 m bwl. Sample taken from 0.8 m - 0.9 m.

Appendix C Monitoring Data

Groundwater Monitoring North Site Reservoir

Installation ref	Total Depth (m)	Installed Strata	Free product recorded?		Depth to groundwater (m)
			Y/N	Product Thickness	
Jul-98					
MSMW072			N	N	2.09
MSMW081			N	N	15.04
Jan-99					
MSMW072			N	N	1.97
MSMW081			N	N	14.88
May-99					
MSMW072			N	N	2.11
MSMW081			N	N	14.5
MSTP247			N	N	1.19
Mar-00					
MSMW072			N	N	2.05
MSMW081			N	N	15.6
MSTP247			N	N	1.15
Sep-00					
MSMW081			N	N	15.33
MSTP247			N	N	1.28
Oct-00					
RFSW035			N	N	1.61
RFSW038			N	N	1.57
Nov-00					
RFSW035			N	N	1.71
RFSW038			N	N	1.57
Mar-01					
MSMW072			N	N	2.17
MSTP247			N	N	1.3
RFSW035			N	N	1.78
RFSW038			Y	0.001	1.72
Sep-01					
MSMW072			N	N	2.48
MSMW081			N	N	15.57
MSTP247			N	N	1.76
RFSW038			N	N	1.61
Mar-02					
MSMW072			N	N	2.11
MSMW081			N	N	15.49
MSTP247			Y	0.001	1.21
RFSW038			N	N	1.86
Sep-02					
MSMW072			N	N	2.54
MSMW081			N	N	15.49
MSTP247			N	N	1.65
RFSW038			N	N	1.74
Mar-03					
MSMW072			N	N	2.07
MSMW081			N	N	7.01
MSTP247			N	N	1.24

RFSW038			N	N	1.87
Sep-03					
MSMW072			N	N	2.34
MSMW081			N	N	5.92
MSTP247			N	N	1.73
Oct-03					
MSMW072			N	N	2
NSMW002			N	N	2.15
NSMW013			N	N	1.58
Mar-04					
MSMW072			N	N	2.02
RFSW035			N	N	1.78
RFSW038			N	N	1.85
Sep-04					
MSMW072			Y	0.001	2.14
RFSW035			N	N	1.66
RFSW038			Y	trace	1.63
May-08					
MSTP247			N	N	1.84
Oct-08					
MSTP247			N	N	1.55
May-09					
MSTP247			N	N	1.28
Aug-09					
NSMW002			N	N	2.39
NSMW013			N	N	2.63
RFSW035			N	N	1.09
Jan-10					
NSMW002			N	N	2.66
NSMW013			N	N	3.65
RFSW035			N	N	DRY
Feb-10					
NSMW002			N	N	2.7
NSMW013			N	N	3.7
RFSW035			N	N	DRY
Mar-10					
NSMW002			N	N	2.98
NSMW013			N	N	3.83
RFSW035			N	N	DRY
Apr-10					
NSMW002			N	N	2.25
NSMW013			N	N	3.01
RFSW035			N	N	DRY
May-10					
MSTP247			N	N	1.33
NSMW002			N	N	DRY
NSMW013			N	N	3.68
RFSW035			N	N	DRY

Jun-10					
NSMW002			N	N	DRY
NSMW013			N	N	4.21
RFSW035			N	N	DRY
Jul-10					
NSMW002			N	N	2.65
NSMW013			N	N	2.75
RFSW035			N	N	DRY
Sep-10					
NSMW002			N	N	1.65
NSMW013			N	N	3.06
RFSW035			N	N	DRY
Oct-10					
NSMW002			N	N	2.45
NSMW013			N	N	3.8
RFSW035			N	N	DRY
Nov-10					
MSTP247			N	N	1.03
Jan-11					
NSMW002			N	N	2.2
NSMW013			N	N	3.75
RFSW035			N	N	DRY
Mar-11					
NSMW002			N	N	2.88
NSMW013			N	N	3.5
RFSW035			N	N	DRY
May-11					
NSMW002			N	N	DRY
NSMW013			N	N	3.02
RFSW035			N	N	DRY
Jun-11					
NSMW002			N	N	DRY
NSMW013			N	N	2.87
RFSW035			N	N	DRY

Appendix D Chemical Laboratory Reports



Atkins Global Ltd
Project Jonah site office
Llan Coed House
Suite 24
Coed Darcy
Llandarcy
SA10 6HJ

Attention: Alex Mann

CERTIFICATE OF ANALYSIS

Date: 06 December 2011
Customer: H_ATKINS_LDC
Sample Delivery Group (SDG): 111125-34
Your Reference: NSR
Location: Coed Darcy Urban Village
Report No: 162695

We received 4 samples on Friday November 25, 2011 and 4 of these samples were scheduled for analysis which was completed on Tuesday December 06, 2011. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:

Sonia McWhan

Operations Manager





CERTIFICATE OF ANALYSIS

Validated

SDG:	111125-34	Location:	Coed Darcy Urban Village	Order Number:	CD190
Job:	H_ATKINS_LDC-75	Customer:	Atkins Global Ltd	Report Number:	162695
Client Reference:	NSR	Attention:	Alex Mann	Superseded Report:	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
4761792	NSR 3			24/11/2011
4761793	NSR 6			24/11/2011
4761797	NSR 8			24/11/2011
4761800	NSR 9			24/11/2011

Only received samples which have had analysis scheduled will be shown on the following pages.



SDG: 111125-34
Job: H_ATKINS_LDC-75
Client Reference: NSR

Location: Coed Darcy Urban Village
Customer: Atkins Global Ltd
Attention: Alex Mann

Order Number: CD190
Report Number: 162695
Superseded Report:

SOLID**Results Legend**

Test

No Determination
Possible**Lab Sample No(s)**4761800
4761797
4761793
4761792**Customer
Sample Reference**NSR 9
NSR 8
NSR 6
NSR 3**AGS Reference****Depth (m)****Container**250g Amber Jar (AL)
250g Amber Jar (AL)
250g Amber Jar (AL)
250g Amber Jar (AL)

EPH CWG (Aliphatic) GC (S)

All

NDPs: 0
Tests: 4

X X X X

EPH CWG (Aromatic) GC (S)

All

NDPs: 0
Tests: 4

X X X X

GRO by GC-FID (S)

All

NDPs: 0
Tests: 4

X X X X

Metals by iCap-OES (Soil)

Arsenic

NDPs: 0
Tests: 4

X X X X

Cadmium

NDPs: 0
Tests: 4

X X X X

Chromium

NDPs: 0
Tests: 4

X X X X

Copper

NDPs: 0
Tests: 4

X X X X

Lead

NDPs: 0
Tests: 4

X X X X

Mercury

NDPs: 0
Tests: 4

X X X X

Nickel

NDPs: 0
Tests: 4

X X X X

Selenium

NDPs: 0
Tests: 4

X X X X

Vanadium

NDPs: 0
Tests: 4

X X X X

Zinc

NDPs: 0
Tests: 4

X X X X

PAH by GCMS

All

NDPs: 0
Tests: 4

X X X X

pH

All

NDPs: 0
Tests: 4

X X X X



CERTIFICATE OF ANALYSIS

SDG:	111125-34	Location:	Coed Darcy Urban Village	Order Number:	CD190
Job:	H_ATKINS_LDC-75	Customer:	Atkins Global Ltd	Report Number:	162695
Client Reference:	NSR	Attention:	Alex Mann	Superseded Report:	

SOLID

Results Legend



Test



No Determination Possible

Lab Sample No(s)

4761800
4761797
4761793
4761792

Customer Sample Reference

NSR 9
NSR 8
NSR 6
NSR 3

AGS Reference

Depth (m)

Container

250g Amber Jar (AL)
250g Amber Jar (AL)
250g Amber Jar (AL)
250g Amber Jar (AL)

Sample description	All	NDPs: 0 Tests: 4	X	X	X	X
TPH CWG GC (S)	All	NDPs: 0 Tests: 4	X	X	X	X
VOC MS (S)	All	NDPs: 0 Tests: 4	X	X	X	X



SDG:	111125-34	Location:	Coed Darcy Urban Village	Order Number:	CD190
Job:	H_ATKINS_LDC-75	Customer:	Atkins Global Ltd	Report Number:	162695
Client Reference:	NSR	Attention:	Alex Mann	Superseded Report:	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
-----------	----------	------	-----------------	--------	-------------	--------	------------	-------------	-------

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions	Inclusions 2
4761792	NSR 3		Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Oil/Petroleum	None
4761793	NSR 6		Dark Brown	Silt Loam	0.063 - 0.1 mm	Oil/Petroleum	None
4761797	NSR 8		Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Oil/Petroleum	None
4761800	NSR 9		Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Oil/Petroleum	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Order Number: CD190
Report Number: 162695
Superseded Report:

Page 6 of 19

Order Number: CD190
Report Number: 162695
Superseded Report:

Page 7 of 19



CERTIFICATE OF ANALYSIS

SDG: 111125-34
Job: H_ATKINS_LDC-75
Client Reference: NSR

Location: Coed Darcy Urban Village
Customer: Atkins Global Ltd
Attention: Alex Mann

Order Number: CD190
Report Number: 162695
Superseded Report:

TPH CWG (S)

Results Legend			Customer Sample R		NSR 3	NSR 6	NSR 8	NSR 9		
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Date Received SDG Ref Lab Sample No.(s) AGS Reference		Soil/Solid 24/11/2011 25/11/2011 111125-34 4761792	Soil/Solid 24/11/2011 25/11/2011 111125-34 4761793	Soil/Solid 24/11/2011 25/11/2011 111125-34 4761797	Soil/Solid 24/11/2011 25/11/2011 111125-34 4761800		
M	mCERTS accredited.									
S	Deviating sample.									
aq	Aqueous / settled sample.									
diss.filt	Dissolved / filtered sample.									
tot.unfilt	Total / unfiltered sample.									
*	Subcontracted test.									
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery									
(F)	Trigger breach confirmed									
Component	LOD/Units	Method								
GRO Surrogate % recovery**	%	TM089			70	50	78	98		
GRO >C5-C12	<44 µg/kg	TM089			89600	38700	96100	60200		
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089			<5	<5	<5	<5		
Benzene	<10 µg/kg	TM089			<10	<10	<10	<10		
Toluene	<2 µg/kg	TM089			<2	<2	1080	<2		
Ethylbenzene	<3 µg/kg	TM089			<3	<3	<3	<3		
m,p-Xylene	<6 µg/kg	TM089			<6	<6	<6	<6		
o-Xylene	<3 µg/kg	TM089			<3	<3	<3	<3		
sum of detected mpo xylene by GC	<9 µg/kg	TM089			<9	<9	<9	<9		
sum of detected BTEX by GC	<24 µg/kg	TM089			<24	<24	1080	<24		
Aliphatics >C5-C6	<10 µg/kg	TM089			1380	679	1800	833		
Aliphatics >C6-C8	<10 µg/kg	TM089			18000	6560	22500	14400		
Aliphatics >C8-C10	<10 µg/kg	TM089			22000	7960	23600	16500		
Aliphatics >C10-C12	<10 µg/kg	TM089			20100	10900	18800	10500		
Aliphatics >C12-C16	<100 µg/kg	TM173			200000	65000	3380000	1490000		
Aliphatics >C16-C21	<100 µg/kg	TM173			487000	194000	5180000	3520000		
Aliphatics >C21-C35	<100 µg/kg	TM173			673000	304000	3420000	3260000		
Aliphatics >C35-C44	<100 µg/kg	TM173			98600	42600	603000	399000		
Total Aliphatics >C12-C44	<100 µg/kg	TM173			1460000	606000	12600000	8680000		
Aromatics >EC5-EC7	<10 µg/kg	TM089			12.5	<10	15.6	13.2		
Aromatics >EC7-EC8	<10 µg/kg	TM089			<10	<10	1080	<10		
Aromatics >EC8-EC10	<10 µg/kg	TM089			14700	5310	15700	11000		
Aromatics >EC10-EC12	<10 µg/kg	TM089			13400	7260	12600	7010		
Aromatics >EC12-EC16	<100 µg/kg	TM173			164000	85600	1830000	1090000		
Aromatics >EC16-EC21	<100 µg/kg	TM173			333000	129000	2910000	2550000		
Aromatics >EC21-EC35	<100 µg/kg	TM173			632000	389000	2510000	2340000		
Aromatics >EC35-EC44	<100 µg/kg	TM173			127000	102000	516000	379000		
Aromatics >EC40-EC44	<100 µg/kg	TM173			42800	33000	188000	146000		
Total Aromatics >EC12-EC44	<100 µg/kg	TM173			1260000	706000	7770000	6360000		
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173			2810000	1350000	20500000	15100000		
Total Aliphatics >C5-35	<100 µg/kg	TM173			1420000	590000	12100000	8320000		
Total Aromatics >C5-35	<100 µg/kg	TM173			1160000	616000	7290000	6000000		
Total Aliphatics & Aromatics >C5-35	<100 µg/kg	TM173			2580000	1210000	19300000	14300000		



CERTIFICATE OF ANALYSIS

SDG: 111125-34
Job: H_ATKINS_LDC-75
Client Reference: NSR

Location: Coed Darcy Urban Village
Customer: Atkins Global Ltd
Attention: Alex Mann

Order Number: CD190
Report Number: 162695
Superseded Report:

VOC MS (S)

Results Legend			Customer Sample R		NSR 3	NSR 6	NSR 8	NSR 9		
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Date Received SDG Ref Lab Sample No.(s) AGS Reference		Soil/Solid 24/11/2011 25/11/2011 111125-34 4761792	Soil/Solid 24/11/2011 25/11/2011 111125-34 4761793	Soil/Solid 24/11/2011 25/11/2011 111125-34 4761797	Soil/Solid 24/11/2011 25/11/2011 111125-34 4761800		
M	mCERTS accredited.									
S	Deviating sample.									
aq	Aqueous / settled sample.									
diss.filt	Dissolved / filtered sample.									
tot.unfilt	Total / unfiltered sample.									
*	Subcontracted test.									
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery									
(F)	Trigger breach confirmed									
Component	LOD/Units	Method								
Dibromofluoromethane**	%	TM116			92.8	90.9	96.2	99.3		
					\$	\$	\$	\$		
Toluene-d8**	%	TM116			86.4	79.7	82.8	86.3		
					\$	\$	\$	\$		
4-Bromofluorobenzene**	%	TM116			146	170	141	162		
					\$	\$	\$	\$		
Dichlorodifluoromethane	<4 µg/kg	TM116			<4	<4	<4	<4		
					\$ M	\$ M	\$ M	\$ M		
Chloromethane	<7 µg/kg	TM116			<7	<7	<7	<7		
					\$ #	\$ #	\$ #	\$ #		
Vinyl Chloride	<10 µg/kg	TM116			<10	<10	<10	<10		
					\$ #	\$ #	\$ #	\$ #		
Bromomethane	<13 µg/kg	TM116			<13	<13	<13	<13		
					\$ M	\$ M	\$ M	\$ M		
Chloroethane	<14 µg/kg	TM116			<14	<14	<14	<14		
					\$ M	\$ M	\$ M	\$ M		
Trichlorofluoromethane	<6 µg/kg	TM116			<6	<6	<6	<6		
					\$ M	\$ M	\$ M	\$ M		
1,1-Dichloroethene	<10 µg/kg	TM116			<10	<10	<10	<10		
					\$ #	\$ #	\$ #	\$ #		
Carbon Disulphide	<7 µg/kg	TM116			79.7	244	117	155		
					\$ M	\$ M	\$ M	\$ M		
Dichloromethane	<10 µg/kg	TM116			<10	<10	<10	<10		
					\$ #	\$ #	\$ #	\$ #		
Methyl Tertiary Butyl Ether	<11 µg/kg	TM116			<11	<11	<11	<11		
					\$ M	\$ M	\$ M	\$ M		
trans-1-2-Dichloroethene	<11 µg/kg	TM116			<11	<11	<11	<11		
					\$ M	\$ M	\$ M	\$ M		
1,1-Dichloroethane	<8 µg/kg	TM116			<8	<8	<8	<8		
					\$ M	\$ M	\$ M	\$ M		
cis-1-2-Dichloroethene	<5 µg/kg	TM116			<5	<5	<5	<5		
					\$ M	\$ M	\$ M	\$ M		
2,2-Dichloropropane	<12 µg/kg	TM116			<12	<12	<12	<12		
					\$ M	\$ M	\$ M	\$ M		
Bromochloromethane	<14 µg/kg	TM116			<14	<14	<14	<14		
					\$ M	\$ M	\$ M	\$ M		
Chloroform	<8 µg/kg	TM116			<8	<8	<8	<8		
					\$ M	\$ M	\$ M	\$ M		
1,1,1-Trichloroethane	<7 µg/kg	TM116			<7	<7	<7	<7		
					\$ M	\$ M	\$ M	\$ M		
1,1-Dichloropropene	<11 µg/kg	TM116			<11	<11	<11	<11		
					\$ M	\$ M	\$ M	\$ M		
Carbontetrachloride	<14 µg/kg	TM116			<14	<14	<14	<14		
					\$ M	\$ M	\$ M	\$ M		
1,2-Dichloroethane	<5 µg/kg	TM116			<5	<5	<5	<5		
					\$ M	\$ M	\$ M	\$ M		
Benzene	<9 µg/kg	TM116			39.6	37.3	34.3	<9		
					\$ M	\$ M	\$ M	\$ M		
Trichloroethene	<9 µg/kg	TM116			<9	<9	<9	<9		
					\$ M	\$ M	\$ M	\$ M		
1,2-Dichloropropane	<12 µg/kg	TM116			<12	<12	<12	<12		
					\$ M	\$ M	\$ M	\$ M		
Dibromomethane	<9 µg/kg	TM116			<9	<9	<9	<9		
					\$ M	\$ M	\$ M	\$ M		
Bromodichloromethane	<7 µg/kg	TM116			<7	<7	<7	<7		
					\$ M	\$ M	\$ M	\$ M		
cis-1-3-Dichloropropene	<14 µg/kg	TM116			<14	<14	<14	<14		
					\$ M	\$ M	\$ M	\$ M		
Toluene	<5 µg/kg	TM116			73	80	1190	19.3		
					\$ M	\$ M	\$ M	\$ M		
trans-1-3-Dichloropropene	<14 µg/kg	TM116			<14	<14	<14	<14		
					\$	\$	\$	\$		
1,1,2-Trichloroethane	<10 µg/kg	TM116			<10	<10	<10	<10		
					\$ M	\$ M	\$ M	\$ M		
1,3-Dichloropropane	<7 µg/kg	TM116			<7	<7	<7	<7		
					\$ #	\$ #	\$ #	\$ #		
Tetrachloroethene	<5 µg/kg	TM116			<5	<5	<5	<5		
					\$ M	\$ M	\$ M	\$ M		
Dibromochloromethane	<13 µg/kg	TM116			<13	<13	<13	<13		
					\$ M	\$ M	\$ M	\$ M		



CERTIFICATE OF ANALYSIS

SDG: 111125-34
Job: H_ATKINS_LDC-75
Client Reference: NSR

Location: Coed Darcy Urban Village
Customer: Atkins Global Ltd
Attention: Alex Mann

Order Number: CD190
Report Number: 162695
Superseded Report:

VOC MS (S)

Results Legend		Customer Sample R	NSR 3		NSR 6		NSR 8		NSR 9			
#	ISO17025 accredited.		Soil/Solid		Soil/Solid		Soil/Solid		Soil/Solid			
M	mCERTS accredited.	Depth (m) Sample Type Date Sampled Date Received SDG Ref Lab Sample No.(s) AGS Reference	24/11/2011		24/11/2011		24/11/2011		24/11/2011			
S	Deviating sample.		25/11/2011		25/11/2011		25/11/2011		25/11/2011			
aq	Aqueous / settled sample.		111125-34		111125-34		111125-34		111125-34			
diss.filt	Dissolved / filtered sample.		4761792		4761793		4761797		4761800			
tot.unfilt	Total / unfiltered sample.											
*	Subcontracted test.											
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery											
(F)	Trigger breach confirmed											
Component	LOD/Units	Method										
1.2-Dibromoethane	<12 µg/kg	TM116	<12 § M		<12 § M		<12 § M		<12 § M			
Chlorobenzene	<5 µg/kg	TM116	<5 § M		<5 § M		<5 § M		<5 § M			
1.1.1.2-Tetrachloroethane	<10 µg/kg	TM116	<10 § M		<10 § M		<10 § M		<10 § M			
Ethylbenzene	<4 µg/kg	TM116	40.9 § M		47.3 § M		<4 § M		21.9 § M			
p/m-Xylene	<14 µg/kg	TM116	236 § #		387 § #		174 § #		143 § #			
o-Xylene	<10 µg/kg	TM116	188 § M		316 § M		101 § M		90 § M			
Styrene	<10 µg/kg	TM116	<10 § M		<10 § M		<10 § M		<10 § M			
Bromoform	<10 µg/kg	TM116	<10 § M		<10 § M		<10 § M		<10 § M			
Isopropylbenzene	<5 µg/kg	TM116	68.2 § M		<5 § M		115 § M		51.3 § M			
1.1.2.2-Tetrachloroethane	<10 µg/kg	TM116	<10 § #		<10 § #		<10 § #		<10 § #			
1.2.3-Trichloropropane	<17 µg/kg	TM116	<17 § M		<17 § M		<17 § M		<17 § M			
Bromobenzene	<10 µg/kg	TM116	<10 § M		<10 § M		<10 § M		<10 § M			
Propylbenzene	<11 µg/kg	TM116	<11 § M		<11 § M		85.5 § M		<11 § M			
2-Chlorotoluene	<9 µg/kg	TM116	<9 § M		<9 § M		<9 § M		<9 § M			
1.3.5-Trimethylbenzene	<8 µg/kg	TM116	47.6 § #		<8 § #		<8 § #		34.9 § #			
4-Chlorotoluene	<12 µg/kg	TM116	<12 § M		<12 § M		<12 § M		<12 § M			
tert-Butylbenzene	<12 µg/kg	TM116	<12 § #		<12 § #		<12 § #		<12 § #			
1.2.4-Trimethylbenzene	<9 µg/kg	TM116	428 § #		<9 § #		416 § #		408 § #			
sec-Butylbenzene	<10 µg/kg	TM116	285 § M		<10 § M		518 § M		230 § M			
4-Isopropyltoluene	<11 µg/kg	TM116	254 § M		<11 § M		<11 § M		<11 § M			
1.3-Dichlorobenzene	<6 µg/kg	TM116	<6 § M		<6 § M		<6 § M		<6 § M			
1.4-Dichlorobenzene	<5 µg/kg	TM116	<5 § M		<5 § M		<5 § M		<5 § M			
n-Butylbenzene	<10 µg/kg	TM116	<10 § M		<10 § M		<10 § M		<10 § M			
1.2-Dichlorobenzene	<12 µg/kg	TM116	<12 § M		<12 § M		<12 § M		<12 § M			
1.2-Dibromo-3-chloropropene	<14 µg/kg	TM116	<14 § M		<14 § M		<14 § M		<14 § M			
Tert-amyl methyl ether	<15 µg/kg	TM116	<15 §		<15 §		<15 §		<15 §			
1.2.4-Trichlorobenzene	<6 µg/kg	TM116	<6 § #		<6 § #		<6 § #		<6 § #			
Hexachlorobutadiene	<12 µg/kg	TM116	<12 §		<12 §		<12 §		<12 §			
Naphthalene	<13 µg/kg	TM116	<13 § M		<13 § M		<13 § M		<13 § M			
1.2.3-Trichlorobenzene	<6 µg/kg	TM116	<6 § M		<6 § M		<6 § M		<6 § M			



CERTIFICATE OF ANALYSIS

SDG: 111125-34
Job: H_ATKINS_LDC-75
Client Reference: NSR

Location: Coed Darcy Urban Village
Customer: Atkins Global Ltd
Attention: Alex Mann

Order Number: CD190
Report Number: 162695
Superseded Report:

Notification of Deviating Samples

Sample Number	Customer Sample Ref.	Depth (m)	Matrix	Test Name	Component Name	Comment
4779352	NSR 8		SOLID	GRO by GC-FID (S)	Aliphatics >C10-C12	Volatile container not received
4779352	NSR 8		SOLID	GRO by GC-FID (S)	Aliphatics >C5-C6	Volatile container not received
4779352	NSR 8		SOLID	GRO by GC-FID (S)	Aliphatics >C6-C8	Volatile container not received
4779352	NSR 8		SOLID	GRO by GC-FID (S)	Aliphatics >C8-C10	Volatile container not received
4779352	NSR 8		SOLID	GRO by GC-FID (S)	Aromatics >EC10-EC12	Volatile container not received
4779352	NSR 8		SOLID	GRO by GC-FID (S)	Aromatics >EC5-EC7	Volatile container not received
4779352	NSR 8		SOLID	GRO by GC-FID (S)	Aromatics >EC7-EC8	Volatile container not received
4779352	NSR 8		SOLID	GRO by GC-FID (S)	Aromatics >EC8-EC10	Volatile container not received
4779352	NSR 8		SOLID	GRO by GC-FID (S)	Benzene	Volatile container not received
4779352	NSR 8		SOLID	GRO by GC-FID (S)	Ethylbenzene	Volatile container not received
4779352	NSR 8		SOLID	GRO by GC-FID (S)	GRO >C5-C12	Volatile container not received
4779352	NSR 8		SOLID	GRO by GC-FID (S)	GRO Surrogate % recovery**	Volatile container not received
4779352	NSR 8		SOLID	GRO by GC-FID (S)	m,p-Xylene	Volatile container not received
4779352	NSR 8		SOLID	GRO by GC-FID (S)	Methyl tertiary butyl ether (MTBE)	Volatile container not received
4779352	NSR 8		SOLID	GRO by GC-FID (S)	o-Xylene	Volatile container not received
4779352	NSR 8		SOLID	GRO by GC-FID (S)	sum of detected BTEX by GC	Volatile container not received
4779352	NSR 8		SOLID	GRO by GC-FID (S)	sum of detected mpo xylene by GC	Volatile container not received
4779352	NSR 8		SOLID	GRO by GC-FID (S)	Toluene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	1.1.1.2-Tetrachloroethane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	1.1.1-Trichloroethane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	1.1.2.2-Tetrachloroethane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	1.1.2-Trichloroethane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	1.1-Dichloroethane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	1.1-Dichloroethene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	1.1-Dichloropropene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	1.2.3-Trichlorobenzene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	1.2.3-Trichloropropane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	1.2.4-Trichlorobenzene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	1.2.4-Trimethylbenzene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	1.2-Dibromo-3-chloropropane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	1.2-Dibromoethane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	1.2-Dichlorobenzene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	1.2-Dichloroethane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	1.2-Dichloropropane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	1.3.5-Trimethylbenzene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	1.3-Dichlorobenzene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	1.3-Dichloropropane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	1.4-Dichlorobenzene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	2.2-Dichloropropane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	2-Chlorotoluene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	4-Bromofluorobenzene**	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	4-Chlorotoluene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	4-Isopropyltoluene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Benzene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Bromobenzene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Bromochloromethane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Bromodichloromethane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Bromoform	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Bromomethane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Carbon Disulphide	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Carbontetrachloride	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Chlorobenzene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Chloroethane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Chloroform	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Chloromethane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	cis-1-2-Dichloroethene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	cis-1-3-Dichloropropene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Dibromochloromethane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Dibromofluoromethane**	Volatile container not received



CERTIFICATE OF ANALYSIS

SDG: 111125-34
Job: H_ATKINS_LDC-75
Client Reference: NSR

Location: Coed Darcy Urban Village
Customer: Atkins Global Ltd
Attention: Alex Mann

Order Number: CD190
Report Number: 162695
Superseded Report:

Sample Number	Customer Sample Ref.	Depth (m)	Matrix	Test Name	Component Name	Comment
4779356	NSR 8		SOLID	VOC MS (S)	Dibromomethane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Dichlorodifluoromethane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Dichloromethane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Ethylbenzene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Hexachlorobutadiene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Isopropylbenzene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Methyl Tertiary Butyl Ether	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Naphthalene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	n-Butylbenzene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	o-Xylene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	p/m-Xylene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Propylbenzene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	sec-Butylbenzene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Styrene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Tert-amyl methyl ether	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	tert-Butylbenzene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Tetrachloroethene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Toluene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Toluene-d8**	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	trans-1-2-Dichloroethene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	trans-1-3-Dichloropropene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Trichloroethene	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Trichlorofluoromethane	Volatile container not received
4779356	NSR 8		SOLID	VOC MS (S)	Vinyl Chloride	Volatile container not received
4779357	NSR 3		SOLID	GRO by GC-FID (S)	Aliphatics >C10-C12	Volatile container not received
4779357	NSR 3		SOLID	GRO by GC-FID (S)	Aliphatics >C5-C6	Volatile container not received
4779357	NSR 3		SOLID	GRO by GC-FID (S)	Aliphatics >C6-C8	Volatile container not received
4779357	NSR 3		SOLID	GRO by GC-FID (S)	Aliphatics >C8-C10	Volatile container not received
4779357	NSR 3		SOLID	GRO by GC-FID (S)	Aromatics >EC10-EC12	Volatile container not received
4779357	NSR 3		SOLID	GRO by GC-FID (S)	Aromatics >EC5-EC7	Volatile container not received
4779357	NSR 3		SOLID	GRO by GC-FID (S)	Aromatics >EC7-EC8	Volatile container not received
4779357	NSR 3		SOLID	GRO by GC-FID (S)	Aromatics >EC8-EC10	Volatile container not received
4779357	NSR 3		SOLID	GRO by GC-FID (S)	Benzene	Volatile container not received
4779357	NSR 3		SOLID	GRO by GC-FID (S)	Ethylbenzene	Volatile container not received
4779357	NSR 3		SOLID	GRO by GC-FID (S)	GRO >C5-C12	Volatile container not received
4779357	NSR 3		SOLID	GRO by GC-FID (S)	GRO Surrogate % recovery**	Volatile container not received
4779357	NSR 3		SOLID	GRO by GC-FID (S)	m,p-Xylene	Volatile container not received
4779357	NSR 3		SOLID	GRO by GC-FID (S)	Methyl tertiary butyl ether (MTBE)	Volatile container not received
4779357	NSR 3		SOLID	GRO by GC-FID (S)	o-Xylene	Volatile container not received
4779357	NSR 3		SOLID	GRO by GC-FID (S)	sum of detected BTEX by GC	Volatile container not received
4779357	NSR 3		SOLID	GRO by GC-FID (S)	sum of detected mpo xylene by GC	Volatile container not received
4779357	NSR 3		SOLID	GRO by GC-FID (S)	Toluene	Volatile container not received
4779359	NSR 6		SOLID	GRO by GC-FID (S)	Aliphatics >C10-C12	Volatile container not received
4779359	NSR 6		SOLID	GRO by GC-FID (S)	Aliphatics >C5-C6	Volatile container not received
4779359	NSR 6		SOLID	GRO by GC-FID (S)	Aliphatics >C6-C8	Volatile container not received
4779359	NSR 6		SOLID	GRO by GC-FID (S)	Aliphatics >C8-C10	Volatile container not received
4779359	NSR 6		SOLID	GRO by GC-FID (S)	Aromatics >EC10-EC12	Volatile container not received
4779359	NSR 6		SOLID	GRO by GC-FID (S)	Aromatics >EC5-EC7	Volatile container not received
4779359	NSR 6		SOLID	GRO by GC-FID (S)	Aromatics >EC7-EC8	Volatile container not received
4779359	NSR 6		SOLID	GRO by GC-FID (S)	Aromatics >EC8-EC10	Volatile container not received
4779359	NSR 6		SOLID	GRO by GC-FID (S)	Benzene	Volatile container not received
4779359	NSR 6		SOLID	GRO by GC-FID (S)	Ethylbenzene	Volatile container not received
4779359	NSR 6		SOLID	GRO by GC-FID (S)	GRO >C5-C12	Volatile container not received
4779359	NSR 6		SOLID	GRO by GC-FID (S)	GRO Surrogate % recovery**	Volatile container not received
4779359	NSR 6		SOLID	GRO by GC-FID (S)	m,p-Xylene	Volatile container not received
4779359	NSR 6		SOLID	GRO by GC-FID (S)	Methyl tertiary butyl ether (MTBE)	Volatile container not received
4779359	NSR 6		SOLID	GRO by GC-FID (S)	o-Xylene	Volatile container not received
4779359	NSR 6		SOLID	GRO by GC-FID (S)	sum of detected BTEX by GC	Volatile container not received
4779359	NSR 6		SOLID	GRO by GC-FID (S)	sum of detected mpo xylene by GC	Volatile container not received
4779359	NSR 6		SOLID	GRO by GC-FID (S)	Toluene	Volatile container not received



CERTIFICATE OF ANALYSIS

SDG: 111125-34
Job: H_ATKINS_LDC-75
Client Reference: NSR

Location: Coed Darcy Urban Village
Customer: Atkins Global Ltd
Attention: Alex Mann

Order Number: CD190
Report Number: 162695
Superseded Report:

Sample Number	Customer Sample Ref.	Depth (m)	Matrix	Test Name	Component Name	Comment
4779372	NSR 6		SOLID	VOC MS (S)	1.1.1.2-Tetrachloroethane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	1.1.1-Trichloroethane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	1.1.2.2-Tetrachloroethane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	1.1.2-Trichloroethane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	1.1-Dichloroethane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	1.1-Dichloroethene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	1.1-Dichloropropene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	1.2.3-Trichlorobenzene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	1.2.3-Trichloropropane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	1.2.4-Trichlorobenzene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	1.2.4-Trimethylbenzene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	1.2-Dibromo-3-chloropropane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	1.2-Dibromoethane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	1.2-Dichlorobenzene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	1.2-Dichloroethane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	1.2-Dichloropropane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	1.3.5-Trimethylbenzene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	1.3-Dichlorobenzene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	1.3-Dichloropropane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	1.4-Dichlorobenzene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	2.2-Dichloropropane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	2-Chlorotoluene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	4-Bromofluorobenzene**	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	4-Chlorotoluene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	4-Isopropyltoluene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Benzene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Bromobenzene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Bromochloromethane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Bromodichloromethane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Bromoform	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Bromomethane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Carbon Disulphide	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Carbontetrachloride	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Chlorobenzene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Chloroethane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Chloroform	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Chloromethane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	cis-1-2-Dichloroethene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	cis-1-3-Dichloropropene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Dibromochloromethane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Dibromofluoromethane**	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Dibromomethane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Dichlorodifluoromethane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Dichloromethane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Ethylbenzene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Hexachlorobutadiene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Isopropylbenzene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Methyl Tertiary Butyl Ether	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Naphthalene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	n-Butylbenzene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	o-Xylene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	p/m-Xylene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Propylbenzene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	sec-Butylbenzene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Styrene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Tert-amyl methyl ether	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	tert-Butylbenzene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Tetrachloroethene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Toluene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Toluene-d8**	Volatile container not received



CERTIFICATE OF ANALYSIS

SDG: 111125-34
Job: H_ATKINS_LDC-75
Client Reference: NSR

Location: Coed Darcy Urban Village
Customer: Atkins Global Ltd
Attention: Alex Mann

Order Number: CD190
Report Number: 162695
Superseded Report:

Sample Number	Customer Sample Ref.	Depth (m)	Matrix	Test Name	Component Name	Comment
4779372	NSR 6		SOLID	VOC MS (S)	trans-1-2-Dichloroethene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	trans-1-3-Dichloropropene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Trichloroethene	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Trichlorofluoromethane	Volatile container not received
4779372	NSR 6		SOLID	VOC MS (S)	Vinyl Chloride	Volatile container not received
4779391	NSR 9		SOLID	GRO by GC-FID (S)	Aliphatics >C10-C12	Volatile container not received
4779391	NSR 9		SOLID	GRO by GC-FID (S)	Aliphatics >C5-C6	Volatile container not received
4779391	NSR 9		SOLID	GRO by GC-FID (S)	Aliphatics >C6-C8	Volatile container not received
4779391	NSR 9		SOLID	GRO by GC-FID (S)	Aliphatics >C8-C10	Volatile container not received
4779391	NSR 9		SOLID	GRO by GC-FID (S)	Aromatics >EC10-EC12	Volatile container not received
4779391	NSR 9		SOLID	GRO by GC-FID (S)	Aromatics >EC5-EC7	Volatile container not received
4779391	NSR 9		SOLID	GRO by GC-FID (S)	Aromatics >EC7-EC8	Volatile container not received
4779391	NSR 9		SOLID	GRO by GC-FID (S)	Aromatics >EC8-EC10	Volatile container not received
4779391	NSR 9		SOLID	GRO by GC-FID (S)	Benzene	Volatile container not received
4779391	NSR 9		SOLID	GRO by GC-FID (S)	Ethylbenzene	Volatile container not received
4779391	NSR 9		SOLID	GRO by GC-FID (S)	GRO >C5-C12	Volatile container not received
4779391	NSR 9		SOLID	GRO by GC-FID (S)	GRO Surrogate % recovery**	Volatile container not received
4779391	NSR 9		SOLID	GRO by GC-FID (S)	m,p-Xylene	Volatile container not received
4779391	NSR 9		SOLID	GRO by GC-FID (S)	Methyl tertiary butyl ether (MTBE)	Volatile container not received
4779391	NSR 9		SOLID	GRO by GC-FID (S)	o-Xylene	Volatile container not received
4779391	NSR 9		SOLID	GRO by GC-FID (S)	sum of detected BTEX by GC	Volatile container not received
4779391	NSR 9		SOLID	GRO by GC-FID (S)	sum of detected mpo xylene by GC	Volatile container not received
4779391	NSR 9		SOLID	GRO by GC-FID (S)	Toluene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	1.1.1.2-Tetrachloroethane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	1.1.1-Trichloroethane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	1.1.2.2-Tetrachloroethane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	1.1.2-Trichloroethane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	1.1-Dichloroethane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	1.1-Dichloroethene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	1.1-Dichloropropene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	1.2.3-Trichlorobenzene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	1.2.3-Trichloropropane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	1.2.4-Trichlorobenzene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	1.2.4-Trimethylbenzene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	1.2-Dibromo-3-chloropropane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	1.2-Dibromoethane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	1.2-Dichlorobenzene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	1.2-Dichloroethane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	1.2-Dichloropropane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	1.3.5-Trimethylbenzene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	1.3-Dichlorobenzene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	1.3-Dichloropropane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	1.4-Dichlorobenzene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	2.2-Dichloropropane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	2-Chlorotoluene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	4-Bromofluorobenzene**	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	4-Chlorotoluene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	4-Isopropyltoluene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Benzene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Bromobenzene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Bromochloromethane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Bromodichloromethane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Bromoform	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Bromomethane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Carbon Disulphide	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Carbontetrachloride	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Chlorobenzene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Chloroethane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Chloroform	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Chloromethane	Volatile container not received



CERTIFICATE OF ANALYSIS

SDG: 111125-34
Job: H_ATKINS_LDC-75
Client Reference: NSR

Location: Coed Darcy Urban Village
Customer: Atkins Global Ltd
Attention: Alex Mann

Order Number: CD190
Report Number: 162695
Superseded Report:

Sample Number	Customer Sample Ref.	Depth (m)	Matrix	Test Name	Component Name	Comment
4779392	NSR 9		SOLID	VOC MS (S)	cis-1-2-Dichloroethene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	cis-1-3-Dichloropropene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Dibromochloromethane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Dibromofluoromethane**	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Dibromomethane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Dichlorodifluoromethane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Dichloromethane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Ethylbenzene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Hexachlorobutadiene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Isopropylbenzene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Methyl Tertiary Butyl Ether	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Naphthalene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	n-Butylbenzene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	o-Xylene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	p/m-Xylene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Propylbenzene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	sec-Butylbenzene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Styrene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Tert-amyl methyl ether	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	tert-Butylbenzene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Tetrachloroethene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Toluene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Toluene-d8**	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	trans-1-2-Dichloroethene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	trans-1-3-Dichloropropene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Trichloroethene	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Trichlorofluoromethane	Volatile container not received
4779392	NSR 9		SOLID	VOC MS (S)	Vinyl Chloride	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	1.1.1.2-Tetrachloroethane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	1.1.1-Trichloroethane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	1.1.2.2-Tetrachloroethane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	1.1.2-Trichloroethane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	1.1-Dichloroethane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	1.1-Dichloroethene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	1.1-Dichloropropene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	1.2.3-Trichlorobenzene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	1.2.3-Trichloropropane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	1.2.4-Trichlorobenzene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	1.2.4-Trimethylbenzene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	1.2-Dibromo-3-chloropropane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	1.2-Dibromoethane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	1.2-Dichlorobenzene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	1.2-Dichloroethane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	1.2-Dichloropropane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	1.3.5-Trimethylbenzene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	1.3-Dichlorobenzene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	1.3-Dichloropropane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	1.4-Dichlorobenzene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	2.2-Dichloropropane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	2-Chlorotoluene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	4-Bromofluorobenzene**	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	4-Chlorotoluene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	4-Isopropyltoluene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Benzene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Bromobenzene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Bromochloromethane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Bromodichloromethane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Bromoform	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Bromomethane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Carbon Disulphide	Volatile container not received



CERTIFICATE OF ANALYSIS

SDG: 111125-34
Job: H_ATKINS_LDC-75
Client Reference: NSR

Location: Coed Darcy Urban Village
Customer: Atkins Global Ltd
Attention: Alex Mann

Order Number: CD190
Report Number: 162695
Superseded Report:

Sample Number	Customer Sample Ref.	Depth (m)	Matrix	Test Name	Component Name	Comment
4779400	NSR 3		SOLID	VOC MS (S)	Carbontetrachloride	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Chlorobenzene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Chloroethane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Chloroform	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Chloromethane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	cis-1-2-Dichloroethene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	cis-1-3-Dichloropropene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Dibromochloromethane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Dibromofluoromethane**	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Dibromomethane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Dichlorodifluoromethane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Dichloromethane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Ethylbenzene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Hexachlorobutadiene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Isopropylbenzene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Methyl Tertiary Butyl Ether	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Naphthalene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	n-Butylbenzene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	o-Xylene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	p/m-Xylene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Propylbenzene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	sec-Butylbenzene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Styrene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Tert-amyl methyl ether	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	tert-Butylbenzene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Tetrachloroethene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Toluene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Toluene-d8**	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	trans-1-2-Dichloroethene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	trans-1-3-Dichloropropene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Trichloroethene	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Trichlorofluoromethane	Volatile container not received
4779400	NSR 3		SOLID	VOC MS (S)	Vinyl Chloride	Volatile container not received

Note : Test results may be compromised



SDG:	111125-34	Location:	Coed Darcy Urban Village	Order Number:	CD190
Job:	H_ATKINS_LDC-75	Customer:	Atkins Global Ltd	Report Number:	162695
Client Reference:	NSR	Attention:	Alex Mann	Superseded Report:	

Table of Results - Appendix

REPORT KEY

Results expressed as (e.g.) 1.03E-07 is equivalent to 1.03x10 ⁻⁷							
NDP	No Determination Possible	#	ISO 17025 Accredited	*	Subcontracted Test	M	MCERTS Accredited
NFD	No Fibres Detected	PFD	Possible Fibres Detected	»	Result previously reported (Incremental reports only)	EC	Equivalent Carbon (Aromatics C8-C35)

Note: Method detection limits are not always achievable due to various circumstances beyond our control

Method No	Reference	Description	Wet/Dry Sample ¹	Surrogate Corrected
PM001		Preparation of Samples for Metals Analysis		
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)		
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS		
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		

¹ Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable.



SDG:	111125-34	Location:	Coed Darcy Urban Village	Order Number:	CD190
Job:	H_ATKINS_LDC-75	Customer:	Atkins Global Ltd	Report Number:	162695
Client Reference:	NSR	Attention:	Alex Mann	Superseded Report:	

Test Completion Dates

Lab Sample No(s)	4761792	4761793	4761797	4761800
Customer Sample Ref.	NSR 3	NSR 6	NSR 8	NSR 9
AGS Ref.				
Depth				
Type	SOLID	SOLID	SOLID	SOLID
EPH CWG (Aliphatic) GC (S)	02-Dec-2011	02-Dec-2011	02-Dec-2011	02-Dec-2011
EPH CWG (Aromatic) GC (S)	02-Dec-2011	02-Dec-2011	02-Dec-2011	02-Dec-2011
GRO by GC-FID (S)	01-Dec-2011	01-Dec-2011	01-Dec-2011	01-Dec-2011
Metals by iCap-OES (Soil)	05-Dec-2011	05-Dec-2011	05-Dec-2011	05-Dec-2011
PAH by GCMS	02-Dec-2011	02-Dec-2011	06-Dec-2011	02-Dec-2011
pH	02-Dec-2011	30-Nov-2011	30-Nov-2011	30-Nov-2011
Sample description	29-Nov-2011	29-Nov-2011	29-Nov-2011	29-Nov-2011
TPH CWG GC (S)	02-Dec-2011	02-Dec-2011	02-Dec-2011	02-Dec-2011
VOC MS (S)	01-Dec-2011	01-Dec-2011	01-Dec-2011	01-Dec-2011



CERTIFICATE OF ANALYSIS

SDG:	111125-34	Location:	Coed Darcy Urban Village	Order Number:	CD190
Job:	H_ATKINS_LDC-75	Customer:	Atkins Global Ltd	Report Number:	162695
Client Reference:	NSR	Attention:	Alex Mann	Superseded Report:	

Appendix

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA Leach tests, flash point, ammonium as NH4 by the BRE method, VOC TICS, SVOC TICS, TOF-MS SCAN/SEARCH and TOF-MS TICS.

2. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for both soil jars, tubs and volatile jars. All waters and vials will be discarded 10 days after the analysis is completed (e-mailed). All material removed during an asbestos containing material screen and analysed for the presence of asbestos will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.

4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

6. When requested, the individual sub sample scheduled will be screened in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. Is an asbestos fibre type is found it will be reported as detected (for each fibre type found). If asbestos is present either as asbestos containing material or loose fibres no further analysis will be undertaken. The quantity of asbestos present is not determined unless specifically requested.

7. If no separate volatile sample is supplied by the client, the integrity of the data may be compromised if the laboratory is required to create a sub-sample from the bulk sample -similarly, if a headspace or sediment is present in the volatile sample. This will be flagged up as an invalid VOC on the test schedule or recorded on the log sheet.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP -No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals -total metals must be requested separately.

11. Results relate only to the items tested.

12. LODs for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

14. **Product analyses** -Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

20. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.

22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials -whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C4 -C10 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

SOLID MATRICES EXTRACTION SUMMARY				
ANALYSIS	DC OR WET	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
SOLVENTEXTRACTABLE MATTER	D&C	DCM	SOX THERM	GRAVIMETRIC
CYCLOHEXANE EXT. MATTER	D&C	CYCLOHEXANE	SOX THERM	GRAVIMETRIC
ELEMENTAL SULPHUR	D&C	DCM	SOX THERM	HPLC
PHENOLS BY GCMS	WET	DCM	SOX THERM	GCMS
HERBICIDES	D&C	HEXANE/ACETONE	SOX THERM	GCMS
PESTICIDES	D&C	HEXANE/ACETONE	SOX THERM	GCMS
EPH (DRO)	D&C	HEXANE/ACETONE	END OVER END	GC-FID
EPH (MIN OIL)	D&C	HEXANE/ACETONE	END OVER END	GC-FID
EPH (CLEANED UP)	D&C	HEXANE/ACETONE	END OVER END	GC-FID
EPH CWGBY GC	D&C	HEXANE/ACETONE	END OVER END	GC-FID
PCBTOT/PCB CON	D&C	HEXANE/ACETONE	END OVER END	GCMS
POLYAROMATIC HYDROCARBONS (MS)	WET	HEXANE/ACETONE	MICROWAVE TM218.	GCMS
C8-C40 (C6-C40) EZ FLASH	WET	HEXANE/ACETONE	SHAKER	GC-EZ
POLYAROMATIC HYDROCARBONS RAPID GC	WET	HEXANE/ACETONE	SHAKER	GC-EZ
SEMI VOLATILE ORGANIC COMPOUNDS	WET	DOM/ACETONE	SONICATE	GCMS

LIQUID MATRICES EXTRACTION SUMMARY			
ANALYSIS	EXTRACTION SOLVENT	EXTRACTION METHOD	ANALYSIS
PAHMS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GCMS
EPH	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
EPH CWG	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
MINERAL OIL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
PCB 7 CONGENERS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GCMS
PCB TOTAL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GCMS
SVOC	DCM	LIQUID/LIQUID SHAKE	GCMS
FREESULPHUR	DCM	SOLID PHASE EXTRACTION	HPLC
PEST COC/OPP	DCM	LIQUID/LIQUID SHAKE	GCMS
TRIAZINE HERBS	DCM	LIQUID/LIQUID SHAKE	GCMS
PHENOLS MS	DCM	SOLID PHASE EXTRACTION	GCMS
TRI by INFRARED (IR)	TCE	LIQUID/LIQUID SHAKE	HPLC
MINERAL OIL by IR	TCE	LIQUID/LIQUID SHAKE	HPLC
GLYCOLS	NONE	DIRECT INJECTION	GCMS

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials or those identified as potentially asbestos containing during sample description which have been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace -Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

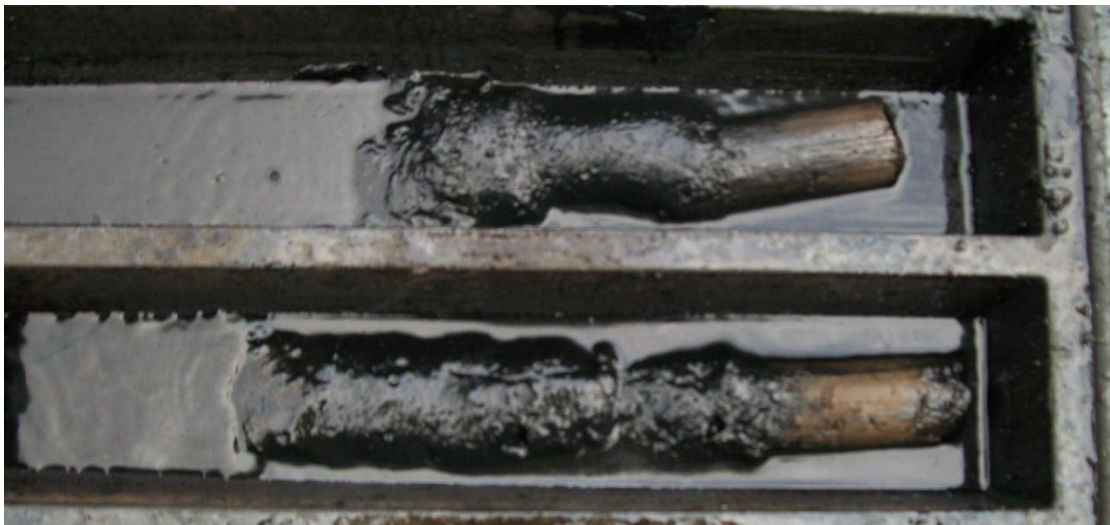
Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

NSR Chemical Results	RTC parks <1m	RTC parks <1m		NSR 3	NSR 6	NSR 8	NSR 9
	1% SOM	3% SOM	Unit				
Visual Score							
Olfactory Score							
Arsenic	64	64	mg kg ⁻¹	83.9	117	70	29.3
Cadmium	2.6	2.6	mg kg ⁻¹	2.15	2.61	2.56	1.76
Chromium	78	78	mg kg ⁻¹	10.8	7.3	9.91	10.6
Copper	143	143	mg kg ⁻¹	173	361	183	138
Lead	337	337	mg kg ⁻¹	77.3	83.4	118	112
Mercury	1	1	mg kg ⁻¹	<0.14	<0.14	0.913	0.523
Nickel	75	75	mg kg ⁻¹	17.5	11.4	23	17.3
Selenium	3	3	mg kg ⁻¹	1.25	2	2.92	1.15
Vanadium	351	351	mg kg ⁻¹	10.8	8.51	22.1	13.6
Zinc	478	478	mg kg ⁻¹	132	92.2	239	1060
TPH aliphatic >C5-C6	294000	294000	mg kg ⁻¹				
TPH aliphatic >C6-C8	294000	294000	mg kg ⁻¹	18	6.56	22.5	14.4
TPH aliphatic >C8-C10	5740	5740	mg kg ⁻¹	22	7.96	23.6	16.5
TPH aliphatic >C10-C12	5700	5830	mg kg ⁻¹	20.1	10.9	18.8	10.5
TPH aliphatic >C12-C16	5800	5860	mg kg ⁻¹	200	65	3380	1490
TPH aliphatic >C16-C21	159000	159000	mg kg ⁻¹	487	194	5180	3520
TPH aliphatic >C21-C35	159000	159000	mg kg ⁻¹	673	304	3420	3260
TPH aliphatic >C35-C44	-	-	mg kg ⁻¹	98.6	42.6	603	399
TPH aromatic >C5-C7	26.2	27.5	mg kg ⁻¹	0.0125	0.01	0.0156	0.0132
TPH aromatic >C7-C8	21300	21300	mg kg ⁻¹	0.01	0.01	1.08	0.01
TPH aromatic >C8-C10	2230	2310	mg kg ⁻¹	14.7	5.31	15.7	11
TPH aromatic >C10-C12	2300	2340	mg kg ⁻¹	13.4	7.26	12.6	7.01
TPH aromatic >C12-C16	2330	2350	mg kg ⁻¹	164	85.6	1830	1090
TPH aromatic >C16-C21	1450	1450	mg kg ⁻¹	333	129	2910	2550
TPH aromatic >C21-C35	1450	1450	mg kg ⁻¹	632	389	2510	2340
TPH aromatic >C35-C44	-	-	mg kg ⁻¹	127	102	516	379
Total Petroleum Hydrocarbons	-	-	mg kg ⁻¹	2580	1210	19300	14300
Dichlorodifluoromethane	-	-	µg kg ⁻¹	<4	<4	<4	<4
Chloromethane	-	-	µg kg ⁻¹	<7	<7	<7	<7
Vinyl chloride	700	700	µg kg ⁻¹	<10	<10	<10	<10
Bromomethane	-	-	µg kg ⁻¹	<13	<13	<13	<13
Chloroethane	-	-	µg kg ⁻¹	<14	<14	<14	<14
Trichlorofluoromethane	-	-	µg kg ⁻¹	<6	<6	<6	<6
1,1-Dichloroethene	-	-	µg kg ⁻¹	<10	<10	<10	<10
Dichloromethane	241000	241000	µg kg ⁻¹	<10	<10	<10	<10
trans-1,2-Dichloroethene	632000	632000	µg kg ⁻¹	<11	<11	<11	<11
1,1-Dichloroethane	-	-	µg kg ⁻¹	<8	<8	<8	<8
cis-1,2-Dichloroethene	392000	468000	µg kg ⁻¹	<5	<5	<5	<5
Bromochloromethane	-	-	µg kg ⁻¹	<14	<14	<14	<14
Trichloromethane	-	-	µg kg ⁻¹				
1,1,1-Trichloroethane	27900000	27900000	µg kg ⁻¹	<7	<7	<7	<7
Tetrachloromethane	-	-	µg kg ⁻¹				
1,1-Dichloropropene	-	-	µg kg ⁻¹	<11	<11	<11	<11
Benzene	13000	13000	µg kg ⁻¹	39.6	37.3	34.3	<9
1,2-Dichloroethane	4500	4500	µg kg ⁻¹	<5	<5	<5	<5
Trichloroethene	193000	193000	µg kg ⁻¹	<9	<9	<9	<9
1,2-Dichloropropane	-	-	µg kg ⁻¹	<12	<12	<12	<12
Dibromomethane	-	-	µg kg ⁻¹	<9	<9	<9	<9
Bromodichloromethane	-	-	µg kg ⁻¹	<7	<7	<7	<7
cis-1,3-Dichloropropene	-	-	µg kg ⁻¹	<14	<14	<14	<14
Toluene	8110000	8110000	µg kg ⁻¹	73	80	1190	19.3
trans-1,3-Dichloropropene	-	-	µg kg ⁻¹	<14	<14	<14	<14
1,1,2-Trichloroethane	-	-	µg kg ⁻¹	<10	<10	<10	<10
Tetrachloroethene	641000	641000	µg kg ⁻¹	<5	<5	<5	<5
1,3-Dichloropropane	-	-	µg kg ⁻¹	<7	<7	<7	<7
Dibromochloromethane	-	-	µg kg ⁻¹	<13	<13	<13	<13
1,2-Dibromoethane	-	-	µg kg ⁻¹	<12	<12	<12	<12
Chlorobenzene	170000	170000	µg kg ⁻¹	<5	<5	<5	<5
1,1,1,2-Tetrachloroethane	498000	533000	µg kg ⁻¹	<10	<10	<10	<10
Ethylbenzene	4740000	4740000	µg kg ⁻¹	40.9	47.3	<4	21.9
m- & p-Xylene	7940000	7940000	µg kg ⁻¹	236	387	174	143
o-Xylene	7940000	7940000	µg kg ⁻¹	188	316	101	90
Styrene	-	-	µg kg ⁻¹	<10	<10	<10	<10
Tri bromomethane	-	-	µg kg ⁻¹				
Isopropylbenzene	-	-	µg kg ⁻¹	68.2	<5	115	51.3
Bromobenzene	-	-	µg kg ⁻¹				
1,1,2,2-Tetrachloroethane	516000	539000	µg kg ⁻¹	<10	<10	<10	<10
1,2,3-Trichloropropane	-	-	µg kg ⁻¹	<17	<17	<17	<17
n-Propylbenzene	-	-	µg kg ⁻¹	<11	<11	85.5	<11
2-Chlorotoluene	-	-	µg kg ⁻¹	<9	<9	<9	<9
1,3,5-Trimethylbenzene	-	-	µg kg ⁻¹	47.6	<8	<8	34.9
4-Chlorotoluene	-	-	µg kg ⁻¹	<12	<12	<12	<12
tert-Butylbenzene	-	-	µg kg ⁻¹	<12	<12	<12	<12
1,2,4-Trimethylbenzene	-	-	µg kg ⁻¹	428	<9	416	408
sec-Butylbenzene	-	-	µg kg ⁻¹	285	<10	518	230
1,3-Dichlorobenzene	-	-	µg kg ⁻¹	254	<11	<11	<11
4-Isopropyltoluene	-	-	µg kg ⁻¹	<6	<6	<6	<6
1,4-Dichlorobenzene	-	-	µg kg ⁻¹	<5	<5	<5	<5
n-Butylbenzene	-	-	µg kg ⁻¹	<10	<10	<10	<10
1,2-Dichlorobenzene	-	-	µg kg ⁻¹	<12	<12	<12	<12
1,2-Dibromo-3-chloropropane	-	-	µg kg ⁻¹	<14	<14	<14	<14
1,2,4-Trichlorobenzene	-	-	µg kg ⁻¹	<6	<6	<6	<6
Hexachlorobutadiene	-	-	µg kg ⁻¹	<12	<12	<12	<12
1,2,3-Trichlorobenzene	-	-	µg kg ⁻¹	<6	<6	<6	<6
Naphthalene	955	1340	mg kg ⁻¹	0.163	0.279	1.72	1.14
Acenaphthylene	-	-	mg kg ⁻¹	0.0309	0.0597	0.012	1.07
Acenaphthene	5340	5350	mg kg ⁻¹	0.131	0.327	4.18	3.48
Fluorene	-	-	mg kg ⁻¹	0.416	0.849	11.3	8.19
Phenanthrene	-	-	mg kg ⁻¹	0.835	0.967	20	19.4
Anthracene	26800	26800	mg kg ⁻¹	0.197	0.185	5.14	4.54
Fluoranthene	3570	3570	mg kg ⁻¹	0.189	0.0704	1.21	1.72
Pyrene	2680	2680	mg kg ⁻¹	0.358	0.172	3.35	2.93
Benzo[a]anthracene	20.8	21.1	mg kg ⁻¹	0.14	0.0893	0.94	0.909
Chrysene	2090	2090	mg kg ⁻¹	0.163	0.104	1.87	1.61
Benzo[b]fluoranthene	21.3	21.3	mg kg ⁻¹	0.106	0.0552	0.689	1.08
Benzo[k]fluoranthene	215	215	mg kg ⁻¹	0.0383	0.014	0.192	0.437
Benzo[a]pyrene	0.9	0.9	mg kg ⁻¹	0.0926	0.0575	0.444	0.757
Dibenzo[a,h]anthracene	2.16	2.16	mg kg ⁻¹	0.018	0.018	0.233	0.508
Indeno[1,2,3-cd]pyrene	21.2	21.2	mg kg ⁻¹	0.023	0.023	0.158	0.259
Benzo[g,h,i]perylene	218	218	mg kg ⁻¹	0.024	0.024	0.366	0.612
Total (of 16) PAHs	-	-	mg kg ⁻¹	2.86	3.21	51.8	48.7

Appendix E Photographs of the Works



Photograph 1: Sample of sludge prior to dredging works



Photograph 2: Sample of sludge with plug of underlying natural material



Photograph 3: Sample of sludge on a flat surface with plug of underlying natural material



Photograph 4: Show the Beaker Sampling Probe



Photographs 5: Shows the sampling probe discharging a sample



Photograph 6: Sampling probe with extension poles retrieving a sample



Photographs 7: Creation of a lined treatment area



Photograph 8: Dredging Unit on Reservoir