

START DATE 10/02/99

DRILLING METHOD CABLE PERCUSSION

EQUIPMENT BANDO 2000

RECORD OF BOREHOLE No: BH C4

CASING DETAILS: 150 mm to 13.80 m
mm to m

SHEET 1 OF 2

BOREHOLE DIA: 150 mm to 1400 m
mm to m

NATIONAL GRID CO-ORDINATES:

E..... N.....
GROUND LEVEL 82.15 m O.D.

Date & Time	Casing Depth (m)	Depth to Water (m)	SAMPLE			U100 Blows	U100 Rec. (m)	DESCRIPTION OF STRATA	Depth (Thickness) (m)	Level (m O.D.)	Strata Symbol
			Depth (m) At/From To	Type	No						
10/02			0.50 1.00	B	1			MADE GROUND: Black, fine to coarse ash sand and subangular fine to coarse gravel of ash and clinker with some silt and occasional subangular fragments of pottery and burnt shale. Locally grading to sand with a little gravel.			
	Nil	Dry	1.20 1.21	D B	2		S 4				
	1.70	Dry	2.20 2.21	D B	3		S 4				
	3.00	Dry	3.20 3.21	D B	7		S 2				
	4.00	Dry	4.20 4.21	D B	9		S 4		(7.60)		
10/02	4.70	Dry						Below 7.00m, with occasional fragments of brick.			
11/02	4.70	Dry	5.20 5.21	D B	11		S 7				
	6.10	Dry	6.70 6.71	D B	13		S 10				
	7.00	Dry	7.60 7.70	D U	14				7.60	74.55	
	8.30	Dry	8.20 8.35 8.40 8.41	D B	16		S 12		(0.60)		
								MADE GROUND: Firm, orange-brown, clay with some fine to coarse sand.			
								MADE GROUND: Orange-brown, fine and medium sand with a little silt and a little clay. At 8.40m, with occasional subangular coarse gravel of brick.	8.20	73.95	
	9.10	Dry	9.70 9.71	U B	20		0.25		(2.10)		

REMARKS:

1. Prior to boring, a Cable Avoidance Tool (CAT) survey was carried out. An inspection pit was hand-dug to 1.20m depth (1.0 hr) and rescanned using the CAT to check for services. Services were not located.
2. Groundwater was encountered at 11.00m depth rising to 8.75m after 5 mins, to 8.60m after 10 mins, to 8.45m after 15 mins and to 8.35m after 20 mins.
3. The borehole was advanced by chiselling techniques from 13.40m to 13.45m depth (0.25 hr) and 13.85m to 14.00m depth (1.0 hr)

SCALE 1:50

Logged by

GL/kmh

Date

19/02

Checked by

SJR

23/02

Approved by

RJE

09/04

FOUNDATION
& EXPLORATION
SERVICESBUCKLEY WELLS LOCOMOTIVE DEPOT,
BURY, LANCASHIRE

CONTRACT No 1452

FIGURE: BHC4

START DATE 04/02/99

DRILLING METHOD CABLE PERCUSSION

EQUIPMENT: BANDO 2000

RECORD OF BOREHOLE No: BH G1

CASING DETAILS: 150 mm to 13.90 m
mm to m

SHEET 1 OF 2

BOREHOLE DIA: 150 mm to 15.00 m
mm to mNATIONAL GRID CO-ORDINATES:
E N
GROUND LEVEL 85.05 m.O.D.

Date & Time	Casing Depth (m)	Depth to Water (m)	SAMPLE			U100 Blows	U100 Rec (m)	DESCRIPTION OF STRATA	Depth (Thickness) (m)	Level (m.O.D.)	Strata Symbol
			Depth (m)	Type	No						
04/02	0.00	Dry	0.00	B	1			MADE GROUND: Black, fine to coarse ash sand with a little subangular coarse gravel of limestone.	(0.60)	84.45	
			0.60	B	2						
			1.20	B	3			MADE GROUND: Black, fine to coarse ash sand with some subangular fine to coarse gravel and some cobbles including brick and concrete and occasional fragments of wood. Locally grading in to gravel with some sand.	(1.40)		
			1.20	B	3					83.05	
			2.00	B	4						
			2.00	B	4			MADE GROUND: Dark brown, fine to coarse sand with a little silt, a little clay, a little subrounded fine to coarse gravel including sandstone and occasional subangular fragments of brick.	(0.70)		
			2.70	B	5					82.35	
			2.70	B	5			Stiff, dark brown, CLAY with some locally a little fine to coarse sand and a little subrounded fine gravel including mudstone.	(2.20)		
			3.10	B	6			(GLACIAL DRIFT)			
			3.10	B	7					80.15	
			3.10	B	7						
			3.10	B	7						
			3.10	B	7					78.35	
			3.10	B	7						
			3.10	B	7						
05/02	7.20	Damp	3.10	B	8					75.75	
			3.10	B	8						
			3.10	B	8						
			3.10	B	8					75.05	
			3.10	B	8						
			3.10	B	8						
			3.10	B	8					75.05	
			3.10	B	8						
			3.10	B	8						
			3.10	B	8					75.05	
			3.10	B	8						
			3.10	B	8						
			3.10	B	8					75.05	
			3.10	B	8						
			3.10	B	8						

REMARKS: 1. Prior to boring, a Cable Avoidance Tool (CAT) survey was carried out. An inspection pit was hand-dug to 1.20m depth (1.25 hrs) and rescanned using the CAT to check for services. Services were not located.

2. The borehole was advanced by chiselling techniques from 3.20m to 3.30m depth (0.25 hr), 6.35m to 6.70m depth (0.5 hr), 9.60m to 9.85m depth (0.5 hr) and 14.80m to 14.90m depth (0.5 hr).

3. Groundwater was encountered at 4.80m depth rising to 3.90m after 5 mins, to 3.70m after 10 mins, to 3.65m after 15 mins and to 3.60m after 20 mins. This strike was sealed off by the casing at low 8.20m depth.

SCALE 1:50

FOUNDATION
& EXPLORATION
SERVICESBUCKLEY WELLS LOCOMOTIVE DEPOT,
BURY, LANCASHIRE

CONTR. No: 4452

FIGURE: BHG1

Logged by

GL/kmh

Date

19/02

Checked by

SJR

23/02

Approved by

RJE

09/04

START DATE 04/02/99

DRILLING METHOD CABLE PERCUSSION

EQUIPMENT: DANDG 2000

RECORD OF BOREHOLE No BH G1

CASING DETAILS: 150 mm to 1390 m
mm to m

SHEET 2 OF 2

BOREHOLE DIA: 150 mm to 1500 m
mm to mNATIONAL GRID CO-ORDINATES
E. N
GROUND LEVEL: 85.05 m O.D.

Date & Time	Casing Depth (m)	Depth to Water (m)	SAMPLE				U100 Blows	U100 Rec (m)	DESCRIPTION OF STRATA	Depth (Thickness) (m)	Level (m O.D.)	Strata Symbol
			Depth (m) At/From	To	Type	No						
05/02	10.10	1.50	10.20 10.20	10.65 10.70	- B	- 20		S 21	Medium dense, grey fine SAND with some silt/clay. Locally grading to brown clay with some sand and a little gravel	10.00	75.05	
	11.60	1.20	11.70 11.71	12.15 12.20	D B	22 22		S 34	Below 11.70m, dense	(3.80)		
	13.00	3.00	13.20 13.21	13.45 13.70	D B	24 23		S 46				
	13.90	9.40	13.80 13.90	14.30	D U	25 26	120	0.35	Very stiff, dark grey CLAY with much subangular fine to coarse gravel of mudstone. (Completely Weathered Mudstone).	13.80	71.25	
			14.30 14.31	- 15.00	D B	27 28				(1.20)		
05/02	13.90	9.40							END OF BOREHOLE	15.00	70.05	

REMARKS: 4 A second groundwater strike was encountered at 9.40m depth rising to 4.80m over a 20 minute monitoring period.
5. On completion of sampling, a 50mm diameter slotted standpipe was installed with the slotted section from 1.00m to 15.00m depth with the following details: gravel filter from the base of the hole up to 0.80m, bentonite seal up to 0.30m and concrete to ground level with a flush lockable protective stopcock box cover.

SCALE 1:50

Logged by	Date
GL/kmh	19/02
Checked by	
SJR	23/02
Approved by	
RJE	09/04

FOUNDATION
& EXPLORATION
SERVICESBUCKLEY WELLS LOCOMOTIVE DEPOT,
BURY, LANCASHIRE

CONTRACT No 4452

FIGURE: BHG1

START DATE 05/02/99

DRILLING METHOD CABLE PERCUSSION

EQUIPMENT DANDD 2000

RECORD OF BOREHOLE No: BH G2

CASING DETAILS 150 mm to 12.00 m
mm to m

SHEET 1 OF 2

BOREHOLE DIA: 150 mm to 15.00 m
mm to mNATIONAL GRID CO-ORDINATES
Easting N
Ground Level 84.65 m O.D.

Date & Time	Casing Depth (m)	Depth to Water (m)	SAMPLE				U100 Blows	U100 Rec. (m)	DESCRIPTION OF STRATA	Depth (Thickness) (m)	Level (m O.D.)	Strata Symbol
			Depth (m) At From	To	Type	No						
05/02			0.50	1.00	B	1			MADE GROUND Black, fine to coarse ash sand and subangular fine and medium gravel of ash and clinker with some silt and a little gravel of limestone. Locally grading in to sand with a little gravel.			
	0.00	Dry	1.20 1.21	1.45 1.70	D B	2 3		S 6		(1.85)		
	1.50	Dry	1.85 1.90	2.35	D U	4 5	42	0.40	Soft, grey CLAY/SILT with a little fine to coarse sand and a little organic matter (ALLUVIUM)	1.85	82.80	
	2.40	Dry	2.40 2.60	3.05	D U	6 7			Firm, dark brown-grey, CLAY with a little fine to coarse sand and a little subrounded fine gravel including mudstone.	(0.55)	82.25	
			3.10		D	8			<GLACIAL DRIFT>	2.40		
	3.10	Dry	3.60 3.60	4.10 4.05	B D	9 10		S 20		(1.80)		
05/02 06/02	4.20 4.20	Dry Dry	4.30		D	11			Stiff, dark brown, CLAY with a little fine to coarse sand.	4.20	80.45	
	4.30	Dry	4.50	4.95	U	12	120		<GLACIAL DRIFT>			
			5.00 5.10	5.60	D B	13 14			At 5.00m with a little subrounded fine and medium gravel including mudstone.			
	4.50	Dry	6.00 6.01	6.45 6.50	U# B	15	97	0.00				
	6.10	Dry	6.50	6.95	D	16		S 29				
	7.50	Dry	8.00	8.45	U	17	105			(7.10)		
			8.50		D	18						
			9.00		2W	23						
	7.70	Dry	9.50 9.51	9.95 10.00	D B	20 19		S 37				

REMARKS: 1. Prior to boring, a Cable Avoidance Tool (CAT) survey was carried out. An inspection pit was hand-dug to 1.20m depth (125 hrs) and rescanned using the CAT to check for services. Services were not located.
2. Groundwater was encountered at 11.30m depth rising to 9.00m over a 20 minute monitoring period. This strike was sealed off by the casing below 12.50m depth.
3. The borehole was advanced by chiselling techniques to 13.90m to 14.10m depth (0.5 hr).
4. On completion of sampling, the borehole was backfilled to ground level with cement bentonite grout.

Logged by	Date
GL/kmh	19/02
Checked by	
SJR	23/02
Approved by	
RJE	09/04

SCALE 1:50

FOUNDATION
& EXPLORATION
SERVICESBUCKLEY WELLS LOCOMOTIVE DEPOT,
BURY, LANCASHIRE

CONTRACT No 4452

FIGURE: BHG2

NATIONAL GRID CO-ORDINATES
E N
GROUND LEVEL 84.65 m O.D.

FIGURE: BHG2

START DATE 02 02 99

DRILLING METHOD: CABLE PERCUSSION

EQUIPMENT: BAVDD 2000

RECORD OF BOREHOLE No: BH G3

CASING DETAILS 150 mm to 1210 m
mm to m

SHEET 1 OF 2

BOREHOLE DIA: 150 mm to 1520 m
mm to mNATIONAL GRID CO-ORDINATES
E N
GROUND LEVEL 83.35 m O.D.

Date & Time	Casing Depth (m)	Depth to Water (m)	SAMPLE			U100 Blows	U100 Rec (m)	DESCRIPTION OF STRATA	Depth (Thickness) (m)	Level (m O.D.)	Strata Symbol
			Depth (m) At From To	Type	No						
06/02			0.00 0.55	B	1			MADE GROUND: Black, subangular fine to coarse gravel and occasional cobbles of ash with much fine to coarse sand, some silt and coal	(0.55)		
			0.60 1.20	B	2						
	0.00	Dry	1.20 1.45 1.20 1.70	B	3	100	C 50	Very dense, brown, subangular and subrounded fine to coarse GRAVEL and occasional cobbles of sandstone with some fine to coarse sand and a little clay	0.55 (1.25)	82.80	
	1.90	Dry	2.00 2.45 2.00 2.50	B	4		C 16				
								Medium dense, brown, subrounded fine to coarse GRAVEL and occasional cobbles of sandstone with some to much fine to coarse sand and a little to some clay/silt	1.80	81.55	
	2.80	Dry	3.00 3.45 3.00 3.50	B	5		C 29				
06/02 07/02	3.10 3.10	Dry Dry									
	3.10	Dry	4.00 4.45 4.00 4.50	B	6		C 40	Below 4.00m dense.	(4.00)		
	4.70	Dry	5.00 5.45 5.00 5.50	B	7		C 35				
	5.50	Dry	6.00 6.25 6.00 6.60	D U B	8 9 10 11	120	0.35	Firm, grey CLAY with a little fine to coarse sand and a little subrounded fine and medium gravel including mudstone. (GLACIAL DRIFT)	5.80 (6.40)	77.55	
								Stiff, dark brown, CLAY with a little locally some fine to coarse sand and a little subrounded fine gravel including coal and mudstone.	6.20	77.15	
	6.10	Dry	7.20 7.75 7.00 7.80	B W B	20 12 13		S 29	(GLACIAL DRIFT)			
	7.50	Dry	8.80 9.25	U	14	115	0.40		(4.70)		
			9.30	D	15			Below 9.30m; very stiff.			

REMARKS:

- 1 Prior to boring a Cable Avoidance Tool (CAT) survey was carried out. An inspection pit was hand-dug to 1.20m depth (1.0 hr) and rescanned using the CAT to check for services. Services were not located.
- 2 The borehole was advanced by chiselling techniques from 1.50m to 1.80m depth (0.75 hrs) and 5.25m to 5.60m depth (0.75 hr).
- 3 Groundwater was encountered at 11.00m depth rising to 7.20m over a 20 minute monitoring period. This strike was sealed off by the casing below 11.70m depth.
- 4 On completion of sampling, the borehole was backfilled to ground level with cement bentonite grout.

SCALE 1:50

Logged by	Date
GL/kmh	19/02
Checked by	
SJR	23/02
Approved by	
RJE	09/04

CONTRACT NO 4452

FIGURE: BHG3

BUCKLEY WELLS LOCOMOTIVE DEPOT,
BURY, LANCASHIREFOUNDATION
& EXPLORATION
SERVICES

START DATE 06/02/99

RECORD OF BOREHOLE No: BH G3

DRILLING METHOD CABLE PERCUSSION

CASING DETAILS 150 mm to 12.10 m
mm to m

SHEET 2 OF 2

EQUIPMENT DANDO 2000

BOREHOLE DIA: 50 mm to 15.20 m
mm to mNATIONAL GRID CO-ORDINATES
E N
GROUND LEVEL 83.25 m.O.D.

Date & Time	Casing Depth (m)	Depth to Water (m)	SAMPLE				U100 Blows	U100 Rec. (m)	DESCRIPTION OF STRATA	Depth (Thickness) (m)	Level (m.O.D.)	Strata Symbol
			Depth (m) At/From	To	Type	No						
07/02	9.10	Dry	10.20 10.21	10.65 10.70	D B	17 16		S 33	CLAY as previous page			
Strik 20min	10.60 10.60	11.00 7.20	11.00 11.01	11.45 11.50	D B	19 18		S 24	Stiff, grey, CLAY with a little fine to coarse sand and a little subrounded fine gravel including mudstone (GLACIAL DRIFT)	10.90 (0.70)	72.45	
	11.60	Dry	11.60 11.70	12.15	D U	21 22	120	0.42	Dense, grey, fine and medium SAND with some silt (GLACIAL DRIFT)	11.60	71.75	
			12.20		D	23						
	12.10	Dry	13.20 13.21	13.65 13.70	D B	25 24		S 36		(3.60)		
	12.10	Dry	14.70	15.15	U	26	120	0.40				
07/02	12.10	Dry	15.20		D	27			END OF BOREHOLE	15.20	68.15	

REMARKS:

Logged by	Date
GL/kmh	19/02
Checked by	
SJR	23/02
Approved by	
RJE	09/04

SCALE 1:50

FOUNDATION
& EXPLORATION
SERVICESBUCKLEY WELLS LOCOMOTIVE DEPOT,
BURY, LANCASHIRE

CONTRACT No 4452

FIGURE: BHG3

PROJECT: BUCKLEY WELLS LOCOMOTIVE DEPOT, LOCATION: BURY, LANCASHIRE CONTRACT NO: 4452				METHOD OF EXCAVATION: MECHANICAL EXCAVATION SURFACE DIMENSIONS OF PIT: 100m x 2.00m START DATE: 26/01/99.. FINISH DATE: 26/01/1999				RECORD OF TRIAL PIT NO: TP 2 CO-ORDINATES: E..... N..... Sheet 1 of 1 GROUND LEVEL 85.20 m O.O			
IN SITU TESTING		SAMPLES		DESCRIPTION OF STRATA							
Depth (m)	Type	Result	Depth (m)	Type	No.	Thickness (m)	Depth (m)	Level (m O.O.)	Strata Symbol		
0.00	CD		0.00	CD	1	0.20	85.00				
0.40	B		0.40	B	2						
0.90	CD		0.90	CD	3						
1.40	B		1.40	B	4						
1.90	CD		1.90	CD	5						
2.20	CD		2.20	CD	6						
2.60	V		2.60	V	8						
3.00	CD		3.00	CD	7						
END OF TRIAL PIT											

1. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out to check for services. Services were not located.

2. Slight seepages of groundwater were encountered at 0.20m depth (not enough to sample).

3. Moderate seepages of groundwater were encountered at 2.00m depth.

4. The sides of the trial pit were unstable and collapsing when excavating below 2.00m depth.

5. On completion the trial pit was backfilled to ground level with compacted arisings.

PLAN

Scale 1:25

Logged by: GL/kmh

Checked by: SJR

Approved by: RJE

Date: 26/01

04/02

09/04

FOUNDATION & EXPLORATION SERVICES

FIGURE TP2

PROJECT: BUCKLEY WELLS LOCOMOTIVE DEPOT, LOCATION: BURY, LANCASHIRE CONTRACT NO: 4452				METHOD OF EXCAVATION: MECHANICAL EXCAVATION SURFACE DIMENSIONS OF PIT: 100m x 2.20m START DATE: 26/01/99... FINISH DATE: 26/01/1999				RECORD OF TRIAL PIT NO: TP 8 CO-ORDINATES: E:..... N:..... Sheet 1 of 1 GROUND LEVEL 2215 m O D			
INSITU TESTING		SAMPLES		DESCRIPTION OF STRATA				Thickness (m)	Depth (m)	Level (m.a.s.l.)	Strata Symbol
Depth (m)	Type	Result	Depth (m)	Type	No.						
0.00	CD		0.00	CD	1	MADE GROUND: Black with occasional brown bands, fine to coarse ash sand and subangular fine to coarse gravel and occasional cobbles of ash and clinker with some silt and a little subangular coarse gravel of brick.					
0.80			0.80	CD	2						
1.30			1.30	B	3						
1.80			1.80	CD	4						
2.30			2.30	CD	5						
2.80			2.80	CD	6						
3.10			3.10	CD	7						
						END OF TRIAL PIT				3.30	78.85
REMARKS: 1. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out for services. Services were not located. 2. The presence of groundwater was not apparent during excavation. 3. The sides of the trial pit were unstable and collapsing below 2.00m depth. 4. On completion the trial pit was backfilled to ground level with compacted arisings.											

PLAN

Scale 1:25

Logged by: GL/knh

Checked by: SJR

Approved by: RJE

Date: 26/01

04/02

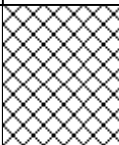
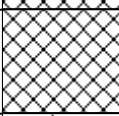
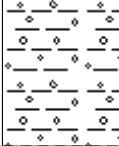
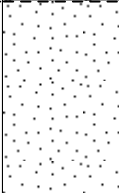
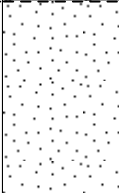
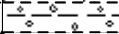
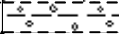
09/04

FOUNDATION & EXPLORATION SERVICES

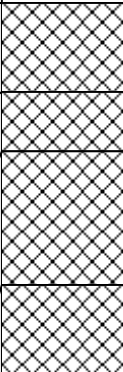
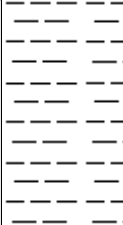
FIGURE: TP8

PROJECT: BUCKLEY WELLS LOCOMOTIVE DEPOT, LOCATION: BURY, LANCASHIRE CONTRACT NO. 445E			METHOD OF EXCAVATION: MECHANICAL EXCAVATION SURFACE DIMENSIONS OF PIT: 0.80m x 1.50m START DATE: 26/01/99... FINISH DATE: 26/01/1999			RECORD OF TRIAL PIT NO: TP 9 CO-ORDINATES: E..... N..... Sheet 1 of 1 GROUND LEVEL 82.05 m O.D.		
INSITU TESTING			DESCRIPTION OF STRATA			PLAN		
Depth (m)	Type	Result	Depth (m)	Type	No.	Thickness (m)	Depth (m)	Level (m O.D.)
0.10	B		0.10	B	1	0.10	81.95	
0.50	CD			CD	2			
1.00	B			B	3			
1.50	CD			CD	4			
2.00	CD			CD	5			
2.50	CD			CD	6			
3.00	CD			CD	7			
3.30	CD			CD	8			
			MADE GROUND: Grey, subangular coarse gravel of granite.					
			MADE GROUND: Black, fine to coarseish sand and subangular fine to coarse gravel of ash and clinker with some silt and a little subangular coarse gravel of granite with occasional rootlets.					
			Brown, subrounded fine to coarse GRAVEL including mudstone with a little fine to coarse sand, some silt and a little clay.					
			END OF TRIAL PIT					
REMARKS:			1. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out for services. Services were not located. 2. The presence of groundwater was not apparent during excavation. 3. The sides of the trial pit were unstable and collapsing below 1.50m depth. 4. On completion the trial pit was backfilled to ground level with compacted arisings.					
			Scale 1:25					
			Logged by: GL/kmh Checked by: SJR Approved by: RJE			Date: 26/01 04/02 09/04		
			FOUNDATION & EXPLORATION SERVICES			FIGURE: TP9		

PROJECT: BUCKLEY WELLS LOCOMOTIVE DEPOT, LOCATION: BURY, LANCASHIRE CONTRACT NO: 4452			METHOD OF EXCAVATION: MECHANICAL EXCAVATION SURFACE DIMENSIONS OF PIT: 120m x 2.00m START DATE: 04/02/99... FINISH DATE: 04/02/1999			RECORD OF TRIAL PIT NO: TP15 CO-ORDINATES: E..... N..... Sheet 1 of 1 GROUND LEVEL: 84.00 m.O.D.		
INSITU TESTING			DESCRIPTION OF STRATA			PLAN		
Depth (m)	Type	Result	Depth (m)	Type	No.	Thickness (m)	Level (m.a.d.)	Strata Symbol
0.10	CD		0.20	CD	1	(0.20)	83.80	
0.40	B				2			
1.00	CD				3			
1.50	CD				4	(2.00)		
2.00	CD				5			
2.60	VN/ VR	62/22 55/18 42/20	2.60	CD	6	(0.90)	81.80	
3.10	VN/ VR	70/26 60/20 48/18	3.10	CD	7		80.90	
			END OF TRIAL PIT					
REMARKS:			Scale 1:25					
1. Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out to check for services. Services were not located.								
2. The presence of groundwater was not apparent during excavation.								
3. The sides of the trial pit remained stable during excavation.								
4. On completion the trial pit was backfilled to ground level with compacted arisings.								
			FOUNDAION & EXPLORATION SERVICES FIGURE: TP15					
			Logged by: GL/kmh Checked by: SJR Approved by: RJE Date: 04/02 05/02 09/04					

 Leyden Kirby ASSOCIATES LTD Bury Business Centre Kay Street Bury BL9 6BU		Site Reference JB578 Site Name Buckley Wells		Equipment Auto Trip Drop Hammer Methods Window Sampling Contractor Mini Bore		
Borehole No BH4		Client Bury MBC		Date 09.12.05		
Depth (m)	Description	Legend	Sample/Tests			Field Records
			Depth	Sample		
Type	No.					
0.00	Ground Surface					
	MADE GROUND Grass underlain by medium to dark brown sandy soil with much coarse angular gravel of ash, brick, clinker, concrete and coal. Ocassional cobble sized sandstone between 0.8-1.0m					
1.00	MADE GROUND Medium dense very wet medium brown very gravelly medium sand with much coarse angular gravel of brick, concrete and coal.		1.0m	SPT		2/3-2,3,2,3 N=10
2.00	Wet firm to stiff grey gravelly CLAY with much fine to medium angular to sub rounded gravel of mudstone and coal.		2.0m	SPT		4/5-5,5,6,7 N=23
	Approximate boundary due to backfilling					
3.00	Wet grey brown slightly clayey gravelly fine to medium SAND .					
	Approximate boundary due to backfilling					
4.00	Wet soft to firm gravelly CLAY with fine gravel of mudstone and ocassional lenses of brown sand.					
	End of Borehole					
5.00						
6.00						
7.00						
8.00						
Remarks					Logged by M Waddicor	
					Scale NTS	
					Sample taken at depth 0.5	

 Leyden Kirby ASSOCIATES LTD Bury Business Centre Kay Street Bury BL9 6BU		Site Reference JB578 Site Name Buckley Wells	Equipment Auto Trip Drop Hammer Methods Window Sampling Contractor Mini Bore	
Borehole No BH3		Client Bury MBC	Date 09.12.05	

Depth (m)	Description	Legend	Sample/Tests			Field Records	
			Depth	Sample			Results
				Type	No.		
0.00	Ground Surface						
0.00 - 1.00	MADE GROUND Black coarse ash with much coarse angular gravel of crushed brick, clinker, concrete with occasional fragments of coal.						
1.00 - 2.00	MADE GROUND Soft dark brown clay mixed with much medium to coarse gravel of ash, clinker and occasional brick and coal		1.0m	SPT		3/5-2,5,2,2 N=11	
2.00 - 3.00	MADE GROUND Black coarse ash with much coarse angular gravel of crushed brick, clinker, concrete with occasional fragments of coal. Very occasional cobble sized sandstone. Very rare fragments of slate.		2.0m	SPT		5/6-4,3,4,5 N=16	
3.00 - 4.00	MADE GROUND Medium dense wet medium brown gravelly fine to medium sand with much gravel of angular to sub-rounded ash, clinker, brick, sandstone, concrete and coal. Becoming dark brown @ 2.0m		3.0m	SPT		5/5,5,5,5,5 N=20	
4.00 - 5.00	Wet firm to stiff brown slightly sandy gravelly CLAY with much coarse gravel of sandstone and mudstone Wet firm to stiff grey CLAY with fine gravel of mudstone		4.0m	SPT		2/2-3,5,4,5 N=17	
5.00	End of Borehole						Well installed to 5.0m
6.00							
7.00							
8.00							

Remarks	Logged by M Waddicor
	Scale NTS
	Sample taken at depth 0.3, 3.4

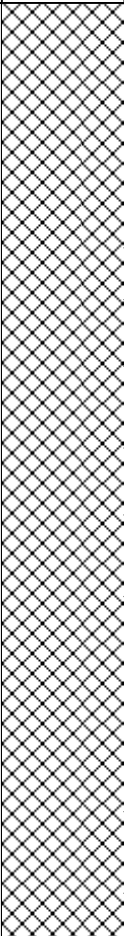
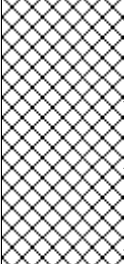
 Bury Business Centre Kay Street Bury BL9 6BU		Site Reference JB578 Site Name Buckley Wells	Equipment Auto Trip Drop Hammer Methods Window Sampling Contractor Mini Bore				
Borehole No BH7		Client Bury MBC		Date 09.12.05			
Depth (m)	Description	Legend	Sample/Tests			Field Records	
			Depth	Sample			Results
				Type	No.		
0.00	Ground Surface						
1.00	MADE GROUND Black coarse ash with much angular coarse gravel of clinker, coal and brick. Inclusions of brown fine sand. Becoming slightly clayey @ 1.7m-1.9m						
2.00							
3.00	MADE GROUND Light to medium brown coarse sand and gravel with much gravel of brick and sandstone						
4.00	MADE GROUND Black coarse ash with much angular coarse gravel of clinker, coal and brick. Inclusions of brown fine sand.						
5.00							
6.00							
7.00							
8.00	End of Borehole						
Remarks						Logged by M Waddicor	
						Scale NTS	
						Sample taken at depth 0.60	

Leyden Kirby ASSOCIATES LTD Bury Business Centre Kay Street Bury BL9 6BU		Site Reference JB578 Site Name Buckley Wells	Equipment Dando 130 Methods Cable Percussion Contractor P Blacklege				
Borehole No CP2		Client Bury MBC		Date 12.12.05			
Depth (m)	Description	Legend	Sample/Tests			Field Records	
			Depth	Sample			Results
				Type	No.		
0.00	Ground Surface MADE GROUND Black sandy soil ash and clinker (Drillers description)						
1.00							
2.00							
3.00							
4.00							
5.00							
6.00							
7.00	MADE GROUND Balcksandy soil ash clinker and gravel (Drillers description).						
8.00							
Remarks Seal from base to 8.0m, 50mm slotted pipe in gravel 1.0m. Plain pipe to GL. Seal to 0.2m, concrete to GL						Logged by PB	
						Scale NTS	
						Sample taken at depth	

 Leyden Kirby ASSOCIATES LTD Bury Business Centre Kay Street Bury BL9 6BU		Site Reference JB578 Site Name Buckley Wells		Equipment Dando 130 Methods Cable Percussion Contractor P Blacklege		
Borehole No CP2		Client Bury MBC		Date 12.12.05		

Depth (m)	Description	Legend	Sample/Tests				Field Records
			Depth	Sample		Results	
				Type	No.		
	Medium dense orange brown SAND and fine to medium GRAVEL . (Drillers description).		8.0m	SPTc		1/2-2,2,3,3 N=10	Damp from 8.0 to 9.6m
9.00	Medium dense yellowish brown clayey SAND and medium to coarse GRAVEL (Drillers description).		9.0m	SPTc		2/3-4,5,5,6 N=20	
10.00	Very stiff brown mottled grey sandy CLAY (Drillers description).		10.0m	U100		81 blows for 350mm	
11.00		11.0m	SPT		6/7-9,11,11,13 N=45		
12.00		12.0m	SPT		6/8-9,11,10,15 N=45		
13.00		13.0m	U100		100 blows for 250mm		
14.00		14.0m	SPT		10/10-13,28,22-50ref		
15.00		15.0m	SPT		11/14-20,30-50ref		
16.00		End of Borehole					

Remarks Seal from base to 8.0m, 50mm slotted pipe in gravel 1.0m. Plain pipe to GL. Seal to 0.2m, concrete to GL	Logged by PB
	Scale NTS
	Sample taken at depth

Leyden Kirby ASSOCIATES LTD Bury Business Centre Kay Street Bury BL9 6BU Site Reference JB578 Site Name Buckley Wells Equipment Dando 130 Methods Cable Percussion Contractor P Blacklege							
Borehole No CP1		Client Bury MBC		Date 13.12.05			
Depth (m)	Description	Legend	Sample/Tests			Field Records	
			Depth	Sample			Results
				Type	No.		
0.00	Ground Surface						
	MADE GROUND Medium dense black ash and clinker. (Drillers description).						
1.2m			SPT		1/1-2,1,1,2 N=6		
2.0m			SPT		1/1-1,1,1,1 N=4		
3.0m			SPT		1/1-1,1,1,1 N=4		
4.0m	SPT		1/1-1,1,1,2 N=5				
5.0m	SPT		1/1-1,1,2,1 N=5				
6.0m	SPT		1/2-2,3,3,2 N=10				
	MADE GROUND Firm brown sandy clay with some gravel and sandstone fragments. (Drillers description).						
7.0m			SPT		3/3-4,5,5,4 N=18		
8.00							
Remarks					Logged by PB		
					Scale NTS		
					Sample taken at depth		

Leyden Kirby ASSOCIATES LTD Bury Business Centre Kay Street Bury BL9 6BU		Site Reference JB578 Site Name Buckley Wells	Equipment Dando 130 Methods Cable Percussion Contractor P Blacklege				
Borehole No CP1		Client Bury MBC	Date 13.12.05				
Depth (m)	Description	Legend	Sample/Tests			Field Records	
			Depth	Sample			Results
Type	No.						
			8.0m	SPT		2/3-3,4,5,5 N=17	Water at 9.9m rising to 8.0m after 20 mins
9.00	Firm to stiff grey sandy CLAY with occasional sand inclusions. (Drillers description).		9.2m	U100		46 blows for 450mm	
10.00	Very stiff light brown mottled red and yellow CLAY . (Drillers description).		10.0m	SPT		5-7,11,14,17,19N=61	
	End of Borehole						
11.00							
12.00							
13.00							
14.00							
15.00							
16.00							
Remarks						Logged by PB	
						Scale NTS	
						Sample taken at depth	

Leyden Kirby ASSOCIATES LTD Bury Business Centre Kay Street Bury BL9 6BU		Site Reference JB578 Site Name Buckley Wells	Equipment Dando 130 Methods Cable Percussion Contractor P Blacklege				
Borehole No CP3		Client Bury MBC		Date 12.12.05			
Depth (m)	Description	Legend	Sample/Tests			Field Records	
			Depth	Sample			Results
				Type	No.		
0.00	Ground Surface						
	MADE GROUND Black coarse gravel. (Drillers description)						
	MADE GROUND Black sandy soil ash clinker and gravel with clay inclusions (Drillers description).						
1.00							
	MADE GROUND Soft brown very sandy gravelly clay. (Drillers description).						
2.00							
3.00							
4.00							
5.00							
6.00							
7.00							
8.00	Soft grey very sandy CLAY with occasional						
Remarks Seal from base to 7.5m, 50mm slotted pipe in gravel 1.0m. Plain pipe to GL. Seal to 0.2m, concrete to GL						Logged by PB	
						Scale NTS	
						Sample taken at depth	

 Leyden Kirby ASSOCIATES LTD Bury Business Centre Kay Street Bury BL9 6BU		Site Reference JB578 Site Name Buckley Wells		Equipment Dando 130 Methods Cable Percussion Contractor P Blacklege			
Borehole No CP3		Client Bury MBC		Date 12.12.05			
Depth (m)	Description	Legend	Sample/Tests				Field Records
			Depth	Sample		Results	
				Type	No.		
8.00			8.0m	SPT		1/2-2,2,2,2 N=8	Strike at 9.3m, rising to 9.0m, sealed at 11.0m
9.00			9.0m	U100		20 blows for 450mm	
10.00	Brown SAND and GRAVEL . (Drillers description).		10.0m	SPT		2/2-2,3,3,3 N=11	
11.00	Stiff light brown mottled red and yellow sandy CLAY . (Drillers description).		11.0m	SPT		0/10-13,17,19,23 N=7	
12.00			12.0m	U100		101 blows for 450mm	
13.00	End of Borehole						Strike at 12.5m, rising to 11.4m, not sealed
14.00							
15.00							
16.00							
Remarks Seal from base to 7.5m, 50mm slotted pipe in gravel 1.0m. Plain pipe to GL. Seal to 0.2m, concrete to GL						Logged by PB	
						Scale NTS	
						Sample taken at depth	

Leyden Kirby ASSOCIATES LTD Bury Business Centre Kay Street Bury BL9 6BU		Site Reference JB578 Site Name Buckley Wells	Equipment Hand Auger Methods Manual Augering Contractor				
Hand Auger No HA1		Client Bury MBC	Date 15.12.05				
Depth (m)	Description	Legend	Sample/Tests			Field Records	
			Depth	Sample			Results
				Type	No.		
0.00	Ground Surface MADE GROUND Grass and brambles underlain by black coarse ash gravel and much fine to coarse sand and fine to coarse angular to sub-rounded brick gravel. Occasional fine rootlets						
1.00	End of Hand Auger						
Remarks						Logged by M.Waddicor	
						Scale NTS	
						Sample taken at depth 0-0.3	

Leyden Kirby ASSOCIATES LTD Bury Business Centre Kay Street Bury BL9 6BU		Site Reference JB578 Site Name Buckley Wells	Equipment Hand Auger Methods Manual Augering Contractor				
Hand Auger No HA4		Client Bury MBC	Date 15.12.05				
Depth (m)	Description	Legend	Sample/Tests			Field Records	
			Depth	Sample			Results
				Type	No.		
0.00	Ground Surface MADE GROUND Grass, moss and brambles underlain by a layer of clayey topsoil with occasional fine rootlets. MADE GROUND Black coarse ash gravel and much slightly clayey fine to coarse sand and fine to coarse angular to sub-rounded brick gravel. Occasional inclusions of brown ash and brown orange clinker gravel. Rare inclusions of brown clay End of Hand Auger						
1.00							
Remarks						Logged by M.Waddicor	
						Scale NTS	
						Sample taken at depth 0-0.5	



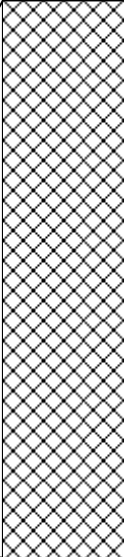
Site Name Buckley Wells

Methods Manual Augering

Contractor

Client Bury MBC

Date 15.12.05

Depth (m)	Description	Legend	Sample/Tests			Field Records	
			Depth	Sample			Results
				Type	No.		
0.00	Ground Surface						
	MADE GROUND Grass and brambles underlain by a layer of clayey topsoil with occasional fine rootlets.						
	MADE GROUND Grey black coarse ash gravel and much fine to coarse sand and fine to coarse angular to sub-rounded brick gravel. Occasional sub angular clinker cobble						
	End of Hand Auger						
1.00							
Remarks						Logged by M.Waddicor	
						Scale NTS	
						Sample taken at depth 0-0.5	



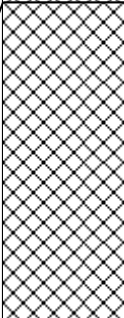
Equipment Hand Auger

Methods Manual Augering

Contractor

Client Bury MBC

Date 15.12.05

Depth (m)	Description	Legend	Sample/Tests			Field Records	
			Depth	Sample			Results
				Type	No.		
0.00	Ground Surface						
	MADE GROUND Grass and brambles underlain by a layer of clayey sand topsoil with occasional fine rootlets.						
	MADE GROUND Black coarse ash gravel and much fine to coarse sand and fine to coarse angular to sub-rounded brick gravel. Occasional fine rootlets						
	End of Hand Auger						
1.00							
Remarks						Logged by M.Waddicor	
						Scale NTS	
						Sample taken at depth 0-0.3	

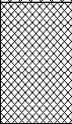
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BOREHOLE NO.:

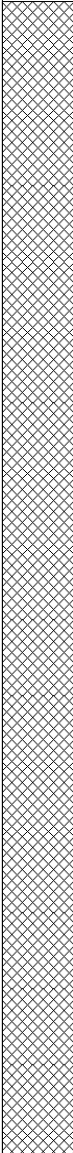
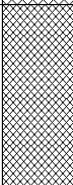
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WATER RECORD										CHISELLING TIME			CASING DETAILS			REMARKS										
START OF DAY	DEPTH OF BORE	DEPTH OF CASING	DEPTH OF WATER	STRIKE DETAILS				DEPTH		HRS	SIZE	FROM	TO													
				STRUCK	FLOW RATE	AFTER 20 MINS	SEALED	FROM	TO																	
											125	9	12.00													
END OF DAY	DEPTH OF BORE	DEPTH OF CASING	DEPTH OF WATER	8.00	1.5		No																			
				20.00	1.5		No																			
SAMPLE KEY															D	DISTURBED	B	BULK	C.S.	CPT. SPT	U	U100	W	WATER	DRILLER	CLIENT

 LK ASSOCIATES LTD Bury Business Centre, Kay Street, Bury, BL9 6BU Tel: 0161 763 7200 web: www.thelkgroup.com				Site Buckley Wells Loco Works			Number WS101			
Excavation Method Drive-in Window Sampler		Dimensions		Ground Level (mOD) 82.20		Client Bury MBC		Job Number JB578		
		Location 379741 E 409936 N		Dates 11/04/2007		Engineer LKA		Sheet 1/1		
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend	Water	
					 (8.00)	MADE GROUND.: Ash, fine to coarse angular gravel, cobbles, clinker, rootlets, coal fragments, fine brick fragments, and glass. Moist from 6.4m				
				74.20	8.00 (0.80)	MADE GROUND.: Soft brown slightly silty clay with fine coal and brick fragments				
				73.40	8.80 (0.20)	Coarse light brown silty SAND				
				73.20	9.00	Complete at 9.00m				
Remarks							Scale (approx) 1:50		Logged By MP	
							Figure No. JB578.WS101			

 LK ASSOCIATES LTD Bury Business Centre, Kay Street, Bury, BL9 6BU Tel: 0161 763 7200 web: www.thelkgroup.com				Site Buckley Wells Loco Works			Number WS102		
Excavation Method Drive-in Window Sampler		Dimensions		Ground Level (mOD) 82.20		Client Bury MBC		Job Number JB578	
		Location 379767 E 409984 N		Dates 11/04/2007		Engineer LKA		Sheet 1/1	
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend	Water

 LK ASSOCIATES LTD Bury Business Centre, Kay Street, Bury, BL9 6BU Tel: 0161 763 7200 web: www.thelkgroup.com				Site Buckley Wells Loco Works			Number WS103	
Excavation Method Drive-in Window Sampler		Dimensions		Ground Level (mOD) 82.60		Client Bury MBC		Job Number JB578
		Location 379797 E 410033 N		Dates 11/04/2007		Engineer LKA		Sheet 1/1
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend
				75.00 7.60 (7.60) 73.80 8.80	MADE GROUND.: Ash, fine to coarse angular gravel, cobbles, clinker, rootlets, coal fragments, fine brick fragments, and glass. Moist from 6.5m			
					MADE GROUND.: Soft brown slightly silty clay with fine coal and brick fragments			
					Complete at 8.80m			
Remarks							Scale (approx) 1:50	Logged By MP
							Figure No. JB578.WS103	

**LK ASSOCIATES LTD**Bury Business Centre, Kay Street, Bury, BL9 6BU
Tel: 0161 763 7200 web: www.thelkgroup.com**Site**

Buckley Wells Loco Works

Number
WS106**Excavation Method**

Drive-in Window Sampler

Dimensions**Ground Level (mOD)**

78.00

Client

Bury MBC

Job
Number
JB578**Location**

379791 E 410047 N

Dates

12/04/2007

Engineer

LKA

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
1.70-2.15	CPT N=29		1,2/5,7,12,5		(0.80)	Dark brown/black sandy TOPSOIL with rootlets.		
				77.20	0.80			
				77.00	(0.20)	Orange/brown sandy CLAY with fine gravel and coal fragments and rare medium sub-rounded gravel.		
					1.00			
					(2.10)	Orange/brown coarse wet silty SAND and fine to coarse sub-rounded gravel and cobbles, fine coal fragments and rare inclusion of clay.		
2.50-2.95	CPT N=24		5,8/9,5,5,5					
				74.90	3.10			
					(0.75)	Stiff mid brown sandy CLAY with fine to coarse angular and sub-rounded gravel and coal fragments.		
3.60-4.05	SPT N=56		4,4/26,30					
				74.15	3.85			
						Complete at 3.85m		

Remarks**Scale (approx)**

1:50

Logged By

MP

Figure No.

JB578.WS106

**LK ASSOCIATES LTD**Bury Business Centre, Kay Street, Bury, BL9 6BU
Tel: 0161 763 7200 web: www.thelkgroup.com**Site**

Buckley Wells Loco Works

Number
WS107**Excavation Method**

Drive-in Window Sampler

Dimensions**Ground Level (mOD)**

76.00

Client

Bury MBC

Job
Number
JB578**Location**

379753 E 409991 N

Dates

13/04/2007

Engineer

LKA

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
2.00-2.45	CPT N=17		2,3/3,4,4,6	75.50	(0.50)	Grass underlain by black sandy TOPSOIL with rootlets and rare coarse angular gravel		
				75.20	0.50 (0.30) 0.80	Orange/brown clayey SAND with rootlets and occasional fine coal fragments.		
				74.60	(0.60) 1.40	Soft orange/brown very sandy CLAY with rootlets fine coal fragments and fine to coarse sub-rounded gravel. Wet from 1.0m		
2.90-3.35	CPT N=30		4,8/6,7,8,9	72.60	(2.00) 3.40	Coarse orange/brown silty SAND and fine to coarse sub-rounded gravel, occasional cobble and fine coal fragments.		
3.90-4.35	SPT N=32		5,5/4,8,10,10	71.50	(1.10) 4.50	Stiff mid brown sandy CLAY with occasional fine to medium angular and sub-rounded gravel and fine coal fragments.		
						Complete at 4.50m		
Remarks							Scale (approx)	Logged By
							1:50	MP
							Figure No. JB578.WS107	

**LK ASSOCIATES LTD**Bury Business Centre, Kay Street, Bury, BL9 6BU
Tel: 0161 763 7200 web: www.thelkgroup.com**Site**

Buckley Wells Loco Works

Number
WS108**Excavation Method**

Drive-in Window Sampler

Dimensions**Ground Level (mOD)**

75.00

Client

Bury MBC

Job
Number
JB578**Location**

379719 E 409948 N

Dates

13/04/2007

Engineer

LKA

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
2.00-2.45	CPT N=7		1,1/2,1,2,2	74.40	(0.60)	MADE GROUND. Grass underlain by dark brown sandy topsoil with rootlets fine to medium angular gravel and fine brick fragments.		
				74.00	0.60 (0.40)	Orange/brown clayey SAND with rootlets and fine coal fragments.		
3.00-3.45	CPT N=4		1,1/1,1,1,1		1.00	Coarse orange/brown silty SAND and fine to coarse sub-rounded gravel and occasional cobbles, fine coal fragments and rare inclusions of sandy clay. Sand becomes dark grey from 3.5m.		
4.00-4.45	CPT N=7		1,0/1,1,2,3	70.50	(3.50)			
4.90-5.35	SPT N=45		7,8/10,10,12,13	69.65	4.50 (0.85)	Dense mid brown clayey SAND with much fine to coarse angular gravel and coal fragments.		
					5.35	Complete at 5.35m		
Remarks							Scale (approx)	Logged By
							1:50	MP
							Figure No. JB578.WS108	

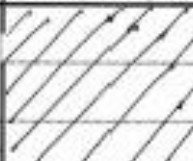
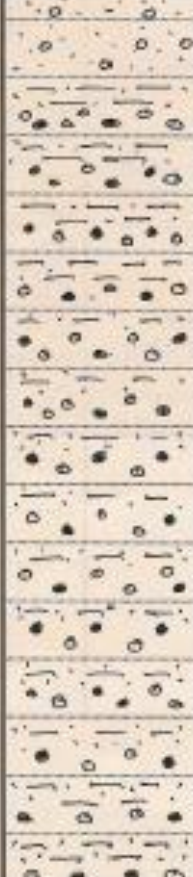
Lithology Borehole Log TDS 1A

Atlantic Environmental Consultants		Client : East Lancashire Railway Co Ltd.	B/H No = TDS 1A Sheet No 1 of 2		
Ground Elevation : Drilled By : Taylor Drilling Services Drillers Name: Decklan Taylor Hard Drilling @ None		Drill No : Drilling Method : <u>Rotary</u> Percussion Sonic Mud Type : Bentonite <u>Water</u> Mix Air Foam Drill Bit changes @ N/A		Logged by : S McDonald Date & Time Start : 30/3/20 @ 10:10	
X Co-ord Y Co-ord		Lost Circulation @ 31.5 m lost - losing all the time 9 - 31.5 Bore Hole Dia = 65mm		Date & Time Finish: 30/03/2020 16:00 T.D. 31.5	
Stratigraphy	Lithology Description	Graphic Log	Depth Mts	Water Level	Casing
Glacial Till	Made Ground: Sandy Ash with Railway Ballast & Bricks				
	Bricks		1		
	Very poor sandy returns		2		
			3		
	Light Grey Clay with sub rounded gravel of quartz		4		
	Igneous rocks - Glacial Till		5		
	Light Grey Clay with sub rounded gravel of quartz		6		
	Igneous rocks - Glacial Till		7		
	Light Grey Clay with sub rounded gravel of quartz		8		
	Igneous rocks - Glacial Till		9		
	Very poor returns - fine sand		10		
	almost losing circulation		11		
	Losing water to Sands		12		
			13		
	stop to regain circulation		14		
	almost no returns		15		
			16		
			17		
			18		
			19		
			20		
			21		
			22		
	Grey med - coarse rounded sands		23		

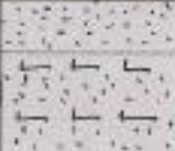
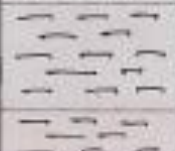
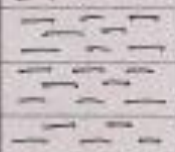
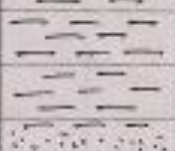
~~ Atlantic Environmental Consultants U.K. ~~
07969 122 985

Atlantic Environmental Consultants		Client : East Lancashire Railway Co Ltd. Project : Baron Street Sheds 2020	B/H No = TDS 1A Sheet No 2 of 2		
Ground Eleveation : Drilled By : Taylor Drilling Services Drillers Name: Decklan Taylor Hard Drilling @ None		Drill No : Drilling Method : Rotary Percussion Sonic Mud Type : Bentonite Water Mix Air Foam Drill Bit changes @ N/A	Logged by : S McDonald Date & Time Start : 30/03/2020 Date & Time Finish: 30/03/2020 T.D. 31.5		
X Co-ord Y Co-ord		Lost Circulation @ from 9 - 31.5 losing all the time Bore Hole Dia = 65mm			
Stratigraphy	Lithology Description	Graphic Log	Depth Mts	Water Level	Casing
	Med - course grey sand rounded		24		
	Med - course grey sand rounded		25		
	No returns from hole circulation poor.		26		
			27		
			28		
	Driller Comments - Hit Harder Drilling at 29 m		29		
			30		
	Losing water at @ 100 ltrs per 5 mins Abandoned Hole at 31.5 m		31		
			32		TD 31.5
	Red Marl noted on drill bit on extraction		33		
			34		
			35		
			36		
			37		
			38		
			39		
			40		
			41		
			42		
			43		
			44		
			45		
			46		

Lithology Borehole Log TDS 1B

Atlantic Environmental Consultants		Client : East Lancashire Railway Co Ltd.		B/H No = TDS 1B	
		Project : Baron Street Sheds 2020		Sheet No 1 of 2	
Ground Elevation :		Drill No :		Logged by : S McDonald	
Drilled By : Taylor Drilling Services		Drilling Method : Rotary Percussion Sonic		Date & Time Start :	
Drillers Name: Declan Taylor		Mud Type : Bentonite Water Mix Air Foam		31/3/20 @ 15:00	
Hard Drilling @ None		Drill Bit changes @ N/A		Date & Time Finish:	
X Co-ord		Lost Circulation @ Minimal losses		01/04/2020 13:00	
Y Co-ord		Bore Hole Dia = 65mm		Total Depth 40.5m	
Stratigraphy	Lithology Description	Graphic Log	Depth Mts	Water Level	Casing
Made Ground	Made Ground Sandy Ash with Railway Balast		1	not taken	
	Made Ground Sandy Ash with Railway Balast		2		
Glacial Till	Sandy Grey Clay with some Gravel of lithic frags		3		
			4		
			5		
	Sandy Grey Clay with some Gravel of lithic frags		6		
			7		
Glacial Sands & Gravels	Orange/Brown Course Sand & Gravel 10% clay (cement) (finished riling 31/03/20) to 9m 50% Soft Sandy Grey Clay 50% Course Gravel rounded		8		
			9		
			10		
			11		
			12		
	60% Soft Sandy Pink Clay 40% Course Gravel with clasts of igneous rocks		13		
			14		
	30% Soft Sandy Pink Clay 60% Course Gravel with clasts of igneous rocks sandstn & Siltstns/shales		15		
			16		
			17		
			18		
			19		
			20		
			21		
			22		
			23		

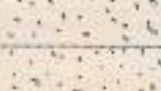
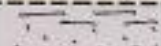
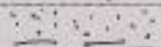
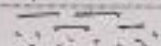
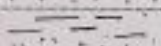
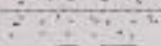
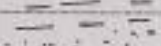
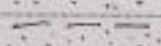
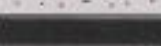
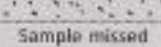
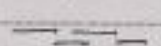
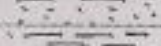
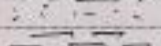
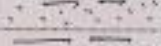
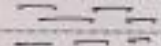
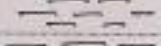
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Atlantic Environmental Consultants		Client : East Lancashire Railway Co Ltd.		B/H No = TDS 18 Sheet No 2 of 2	
Ground Elevation : Drilled By : Taylor Drilling Services Drillers Name: Decklan Taylor Hard Drilling @ None		Project : Baron Street Sheds 2020 Drill No : Drilling Method : <u>Rotary</u> Percussion Sonic Mud Type : Bentonite <u>Water</u> Mix Air Foam Drill Bit changes @ N/A Lost Circulation minimal losses Bore Hole Dia = 65mm		Logged by : S McDonald Date & Time Start : 11/1/20 @ 15:00 Date & Time Finish: 01/04/2020 13:00 Total Depth 40.5m	
X Co-ord	Y Co-ord				
Stratigraphy	Lithology Description	Graphic Log	Depth Mts	Water Level	Casing
Glacial Sands	60% Soft Sandy Pink Clay 40% Coarse Gravel with clasts of igneous, sandstn & Siltstns/shales		24		
			25		
			26		
			27		
Carboniferous Sandstones Mudstones	Hard Grey fine grained sandstone frag. of hard yellow fine sandstone 50% soft red Marl 50% grey fine hard sandstone		28		
			29		
			30		
			31		
	low returns 100% soft grey mudstone/ clay		32		
			33		
			34		
			35		
	Red and grey mudstones Red and grey mudstones one piece of coal with pyrites inclusions		36		
			37		
			38		
			39		
	40 % Red and grey mudstones 60% Thin fine grained Cream & Grey sandstones 40 % Red and grey mudstones 60% Thin fine grained Cream & Grey siltstn		40		
	TD = 40.5 Metres		41		T.D. 40.5 m
			42		
			43		
			44		
			45		
			46		

Lithology Borehole Log TDS 2

Atlantic Environmental Consultants		Client : East Lancashire Railway Co Ltd.		B/H No = TDS 2 Sheet No 1 of 2	
Ground Eleveation : Drilled By : Taylor Drilling Services Drillers Name: Decklan Taylor Hard Drilling @		Drill No : Drilling Method : <u>Rotary</u> Percussion Sonic Mud Type : Bentonite <u>Water</u> Mix Air Foam Drill Bit changes @ N/A		Logged by : S McDonald Date & Time Start : 31/03/2020 08:30	
X Co-ord		Lost Circulation @ None		Date & Time Finish: 31/03/2020 13:00	
Y Co-ord		Bore Hole Dia = 65 mm		T.D.= 40.5m	
Stratigraphy	Lithology Description	Graphic Log	Depth Mts	Water Level	Casing
Made Ground	Made Ground Black Ash with Railway balast				
	Grey Green Fine - Medium Sand well rounded & sub angular lithic fragments		1		
			2		
			3		
			4		
			5		
			6		
			7		
			8		
	Grey Green Fine sand & wood fragments		9		
			10		
	Grey Green Fine sand & wood fragments		11		
	80% Grey Green Sand 20% pink sdstn with Grey/dark grey shales		12		
			13		
Glacial Sands	Lithic Glacial sand medium sub ang grains of quartz and igneous rocks		14		
			15		
	Glacial Sands		16		
			17		
	Glacial Sands		18		
			19		
	Glacial Sands		20		
			21		
	Glacial Sands		22		
			23		

~~ Atlantic Environmental Consultants U.K. ~~
07969 122 985

Atlantic Environmental Consultants		Client : East Lancashire Railway Co Ltd.		B/H No = TDS 2 Sheet No 2 of 2	
Ground Elevation : Drilled By : Taylor Drilling Services Drillers Name: Decklan Taylor Hard Drilling @		Project : Baron Street Sheds 2020		Logged by : S McDonald	
X Co-ord		Drill No : Drilling Method : <u>Rotary</u> Percussion Sonic Mud Type : Bentonite <u>Water</u> Mix Air Foam		Date & Time Start : 310320 @08:30	
Y Co-ord		Drill Bit changes @ None Lost Circulation @ None Bore Hole Dia = 65mm		Date & Time Finish: 310320 @13:00	
				T.D. = 40.5 M	
Stratigraphy	Lithology Description	Graphic Log	Depth	Water Level	Casing
Glacial Sands	Glacial Sands		24		
Carboniferous Sandstones Mudstones	Drill mud turned dark red Dark Red Mudstone		25		
	60% pink sandstone, 40% grey/dark grey shales		26		
			27		
			28		
			29		
			30		
			31		
	Thin Soft Coal Band < 12"		32		
	20% Coal Frags 80% pink sandstone No Sample Analysed	Sample missed	33		
			34		
	70% Soft grey mudstone 30% Pink Sdstsn Green shale with coal frags & red marl		35		
			36		
	Soft Grey and dark grey mudstones		37		
			38		
			39		
	90% soft grey mudstone 10% pink sdstsn		40		T.D 40.5 M
	T.D. = 40.5 metres		41		
			42		
			43		
			44		
			45		
			46		

Appendix E – Certificates of Analysis

FESC/28217

BUCKLEY WELLS BURY LANCASHIRE
FOUNDATION & EXPLORATION SERVICES (CHESHIRE)
SOILS RECEIVED 02/03/99
YOUR REFERENCE SJR/SJR/sjr-12/4452
YOUR ORDER NO

CAS



3 FAIRFIELD COURT, WHITLEY, COVENTRY, WEST MIDLANDS CV3 4LA, TEL: 07000 CAS PLC (227752) or 01203 639012 FAX: 01203 639710 Registered in England 2050581
e-mail: info@cityanalytical.co.uk

CAS SAMPLE No SAMPLE No DEPTH(m)	1 BHC1 0.30	2 BHC2 2.20	3 BHC2 3.20	4 BHC2 5.20	5 BHC3 0.00	6 BHC4 6.70	7 BHC5 0.50	8 BHC5 5.20
Method	as	units						
30C Arsenic (total)	As	mg/kg	24	49	59	25	32	32
06 Boron (water soluble)	B	mg/kg	0.13	0.58	0.71	0.53	0.44	0.74
30 Cadmium (total)	Cd	mg/kg	0.83	2.2	1.5	0.76	0.89	1.2
30B Chromium (hexavalent)	Cr	mg/kg						
30 Chromium (total)	Cr	mg/kg	6.4	17	10	6.8	7.5	6.5
30 Copper (total)	Cu	mg/kg	60	170	160	83	74	210
15* Cyanide (free)	CN ⁻	mg/kg						
* Cyanide (total)	CN ⁻	mg/kg	0.21	0.20	0.19	0.19	<0.1	0.12
30 Lead (total)	Pb	mg/kg	230	1600	2400	170	35	210
30C Mercury (total)	Hg	mg/kg	0.32	0.49	0.54	0.18	<0.1	0.23
30 Nickel (total)	Ni	mg/kg	11	23	19	17	27	21
307 PAH (total)		mg/kg	83	290	310	470	<10	37
39 pH		pH units	7.3	7.7	7.8	7.5	6.1	7.5
40A Phenols (total)	PhOH	mg/kg	4.3	6.1	61	6.8	2.8	2.0
30C Selenium (total)	Se	mg/kg	0.37	0.61	0.75	1.0	0.66	0.74
45 Sulphate (total)	SO ₃	%	0.16	0.14	0.21	0.18	0.62	0.16
47 Sulphide	S	mg/kg	16	8.0	20	28	20	12

CHECKED AND ISSUED BY:

DATE:

15.3.99

3 FAIRFIELD COURT, WHITLEY, COVENTRY, WEST MIDLANDS CV3 4LA, TEL: 07000 CAS PLC (227752) or 01203 639012 FAX: 01203 639710 Registered in England 2050581
e-mail: info@cityanalytical.co.uk

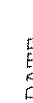
BUCKLEY WELLS BURY LANCASHIRE
FOUNDATION & EXPLORATION SERVICES (CHESHIRE)
SOILS RECEIVED 02/03/99
YOUR REFERENCE SJR/SJR/sjr-12/4452
YOUR ORDER NO

GAS

Method

SAMPLE NO DEPTH(m)	1 BHC1 0.30	2 BHC2 2.20	3 BHC2 3.20	4 BHC2 5.20	5 BHC3 0.00	6 BHC4 6.70	7 BHC5 0.50	8 BHC5 5.20
Method	as							
51 Sulphur (elemental)	units							
16* Thiocyanate	S	110	400	1800	<100	1800	260	150
30 Zinc (total)	CN ⁻							
BTEX	Zn	84	300	63	30	25	91	89
303* Chlorinated Solvents		see separate sheet						
04-S* Asbestos	presence		ND	ND		ND		

CHECKED AND ISSUED BY: 

DATE: 

DATE: 10.2.99

FESC/28217
BUCKLEY WELLS BURY LANCASHIRE
FOUNDATION & EXPLORATION SERVICES (CHESHIRE)
SOILS RECEIVED 02/03/99
YOUR REFERENCE SJR/SJR/sjr-12/4452
YOUR ORDER NO

CAS

CAS SAMPLE No
SAMPLE No
DEPTH (m)

Method	as	units	9 BHG1 1.20	10 BHG2 0.50	11 BHG3 0.00	12 BHG4 0.00	13 BHG4 3.03	14 BHC4 2.20
30C	Arsenic (total)	mg/kg	17	28	30	36	18	
06	Boron (water soluble)	mg/kg	0.35	0.33	0.83	0.34	0.95	
30	Cadmium (total)	mg/kg	0.94	2.2	2.9	2.0	0.51	
30B	Chromium (hexavalent)	mg/kg						
30	Chromium (total)	mg/kg	8.0	21	19	19	<5	
30	Copper (total)	mg/kg	150	190	380	220	60	
15*	Cyanide (free)	mg/kg						
40-	Cyanide (total)	mg/kg	0.13	0.15	0.35	<0.1	<0.1	
30	Lead (total)	mg/kg	330	94	290	190	99	
30C	Mercury (total)	mg/kg	0.23	<0.1	0.31	0.30	0.11	
30	Nickel (total)	mg/kg	9.6	39	34	29	6.0	
307	PAH (total)	mg/kg	25	28	17	27	11	
39	pH	pH units	8.0	7.3	7.4	7.2	6.2	
40A	Phenols (total)	mg/kg	2.2	1.4	3.3	2.3	3.0	
30C	Selenium (total)	mg/kg	0.21	0.74	0.76	0.93	0.34	
45	Sulphate (total)	%	0.13	0.13	0.14	0.16	0.15	
47	Sulphide	mg/kg	<5	12	<5	<5	12	

CHECKED AND ISSUED BY:

DATE:

18.3.99

FESC/28217
BUCKLEY WELLS BURY LANCASHIRE
FOUNDATION & EXPLORATION SERVICES (CHESHIRE)
SOILS RECEIVED 02/03/99
YOUR REFERENCE SJR/SJR/sjr-12/4452
YOUR ORDER NO

2000
 2001
 2002

HYDROCARBON CO. (C) PLC

	9	10	11	12	13	14
BHG1	1.20	BHG2	BHG3	BHG4	BHG4	BHG4
		0.50	0.00	0.00	3.03	2.20

as	units
stun	

Time (minutes)	mg/kg
0	0
15	0
30	0
45	0
60	0
75	0
90	0
105	0
120	0
135	0
150	0
165	0
180	0
195	0
210	0
225	0
240	0
255	0
270	0
285	0
300	0
315	0
330	0
345	0
360	0
375	0
390	0
405	0
420	0
435	0
450	0
465	0
480	0
495	0
510	0
525	0
540	0
555	0
570	0
585	0
600	0
615	0
630	0
645	0
660	0
675	0
690	0
705	0
720	0
735	0
750	0
765	0
780	0
795	0
810	0
825	0
840	0
855	0
870	0
885	0
900	0
915	0
930	0
945	0
960	0
975	0
990	0
1005	0
1020	0
1035	0
1050	0
1065	0
1080	0
1095	0
1110	0
1125	0
1140	0
1155	0
1170	0
1185	0
1200	0
1215	0
1230	0
1245	0
1260	0
1275	0
1290	0
1305	0
1320	0
1335	0
1350	0
1365	0
1380	0
1395	0
1410	0
1425	0
1440	0
1455	0
1470	0
1485	0
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1515	0
1530	0
1545	0
1560	0
1575	0
1590	0
1605	0
1620	0
1635	0
1650	0
1665	0
1680	0
1695	0
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1740	0
1755	0
1770	0
1785	0
1800	0
1815	0
1830	0
1845	0
1860	0
1875	0
1890	0
1905	0
1920	0
1935	0
1950	0
1965	0
1980	0
1995	0
2010	0
2025	0
2040	0
2055	0
2070	0
2085	0
2100	0
2115	0
2130	0
2145	0
2160	0
2175	0
2190	0
2205	0
2220	0
2235	0
2250	0
2265	0
2280	0
2295	0
2310	0
2325	0
2340	0
2355	0
2370	0
2385	0
2400	0
2415	0
2430	0
2445	0
2460	0
2475	0
2490	0
2505	0
2520	0
2535	0
2550	0
2565	0

acrylonitrile

Element	mg/kg
Zn	100

21E4

THEATRE

presence

ISSUED BY:  DATE:

15.3.99

0203 639017 FAX: 01203 639710 Registered in England 1030001
e-mail: info@cityanalytical.co.uk

BURTON WILLS BURY LANCASHIRE
FOUNDATION & EXPLORATION SERVICES (CHESHIRE)
SOILS RECEIVED 19/02/99
YOUR REFERENCE 4452
YOUR ORDER NO



CAS SAMPLE NO
SAMPLE NO
DEPTH (m)

		1							
		TP 1	TP 1	TP 3	TP 4	TP 6	TP 7	TP 7	TP 8
		0.10	1.50	0.30	0.00	0.10	1.00	1.70	0.80
Method	as	units							
30C	Arsenic (total)								
06	Boron (water soluble)	As	50	4.0	5.0	24	3.6	2.7	43
30	Cadmium (total)	B	0.54	0.20	0.34	0.37	0.21	0.32	0.46
30B	Chromium (hexavalent)	Cd	1.1	<0.5	<0.5	0.73	<0.5	<0.5	1.6
30	Chromium (total)	Cr							
30	Copper (total)	Cr	8.1	<5	5.7	<5	5.1	<5	11
15*	Cyanide (free)	Cu	110	12	15	47	4.4	12	620
44	Cyanide (total)	CN ⁻							
30	Lead (total)	CN ⁻	0.27	0.12	<0.1	0.11	<0.1	<0.1	0.19
30C	Mercury (total)	Pb	260	17	19	85	8.8	8.6	290
30	Nickel (total)	Hg	0.54	<0.1	<0.1	0.19	<0.1	<0.1	0.37
307	PH	Ni	9.6	2.3	4.7	4.7	2.3	9.0	28
39	Phenols (total)	pH	95	<10	<10	44	<10	<10	72
30C	Selenium (total)	PhOH	6.8	7.3	6.2	5.8	5.6	5.8	7.5
45	Sulphate (total)	Se	1.1	1.5	2.0	1.5	0.96	2.4	1.9
47	Sulphide	SO ₃	0.72	0.17	0.17	0.38	<0.1	<0.1	<0.1
		S	0.13	0.05	0.08	0.10	0.08	0.07	0.09
			12	<5	8.0	<5	<5	40	16

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3, FAIRFIELD COURT, WHEELER ROAD, WHITLEY, COVENTRY, WEST MIDLANDS CV3 4LA. TEL: 07000 CAS PLC (227752) or 01203 639012 FAX: 01203 639710 Registered in England 2050581
e-mail: info@cityanalytical.co.uk

FESC/28067
BUCKLEY WELLS BURY LANCASHIRE
FOUNDATION & EXPLORATION SERVICES (CHESHIRE)
SOILS RECEIVED 19/02/99
YOUR REFERENCE 4452
YOUR ORDER NO



CAS SAMPLE NO		CRYSTAL ANALYTICAL PLC							
SAMPLE No									
DEPTH (m)									
Method		1	2	3	4	5	6	7	8
51	Sulphur (elemental)	TP 1 0.10	TP 1 1.50	TP 3 0.30	TP 4 0.00	TP 6 0.10	TP 7 1.00	TP 7 1.70	TP 8 0.80
16*	Thiocyanate	as S	mg/kg	<100	<100	<100	<100	<100	310
30	Zinc (total)	CN ⁻	mg/kg						
30	BTEX	Zn	mg/kg	66	10	25	100	33	4.7
303*	Chlorinated Solvents								150
S	Herbicides		see separate sheet						
4	Triazine Herbicides		see separate sheet						
04-S*	Asbestos		see separate sheet						
		presence							ND

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FE 2806,
BUCKLEY WELLS BURY LANCASHIRE
FOUNDATION & EXPLORATION SERVICES (CHESHIRE)
SOILS RECEIVED 19/02/99
YOUR REFERENCE 4452
YOUR ORDER NO



CAS SAMPLE No		25	
SAMPLE No		TP14	
DEPTH (m)		3.10	
Method		units	
30C	Arsenic (total)	as	mg/kg
06	Boron (water soluble)	As	mg/kg
30	Cadmium (total)	B	mg/kg
30B	Cadmium (hexavalent)	Cd	mg/kg
30	Chromium (total)	Cr	mg/kg
30	Copper (total)	Cr	mg/kg
15*	Cyanide (free)	Cu	mg/kg
30	Cyanide (total)	CN ⁻	mg/kg
30	Lead (total)	CN ⁻	mg/kg
30C	Mercury (total)	Pb	mg/kg
30	Nickel (total)	Hg	mg/kg
307	PAH (total)	Ni	mg/kg
39	pH		mg/kg
40A	Phenols (total)		pH units
30C	Selenium (total)	PhOH	mg/kg
45	Sulphate (total)	Se	mg/kg
47	Sulphide	SO ₃	%
		S	mg/kg

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BUCKLEY WELLS BURY LANCASHIRE
FOUNDATION & EXPLORATION SERVICES (CHESHIRE)
SOILS RECEIVED 19/02/99
YOUR REFERENCE 4452
YOUR ORDER NO



CAS SAMPLE No		9	10	11	12	13	14	15	16
SAMPLE No		TP 8	TP 9	TP 9	TP10	TP10	TP11	TP11	TP12
DEPTH (m)		1.80	1.00	3.00	0.40	2.50	0.10	1.20	0.90
Method									
30C	Arsenic (total)	as							
06	Arsenic (total)	mg/kg							
06	Boron (water soluble)	As	35	45	46	59	42	9.0	5.1
30	Boron (total)	mg/kg	0.41	0.54	0.68	0.51	0.32	1.2	0.14
30B	Cadmium (total)	Cd	1.4	3.8	1.7	2.4	2.8	0.76	0.71
30B	Chromium (hexavalent)	Cr							
30	Chromium (total)	mg/kg							
30	Copper (total)	Cr	7.3	6.3	5.2	12	19	5.3	<5
15*	Copper (total)	Cu	300	280	480	200	240	52	36
15*	Cyanide (free)	mg/kg							
15*	Cyanide (total)	mg/kg							
30	Lead (total)	CN ⁻	0.12	0.24	0.85	0.37	0.23	<0.1	<0.1
30C	Mercury (total)	CN ⁻	250	340	280	540	160	42	12
30	Nickel (total)	Hg	<0.1	0.41	0.49	0.14	0.16	<0.1	<0.1
307	PAH (total)	Ni	21	24	22	27	36	7.8	9.5
39	pH	mg/kg	100	24	23	23	22	<10	<10
40A	Phenols (total)	pH units	7.6	7.6	7.6	7.7	6.2	6.9	7.7
30C	Selenium (total)	mg/kg	2.0	1.5	2.3	2.1	1.6	3.7	1.1
45	Sulphate (total)	Se	0.30	0.39	0.25	0.43	0.68	0.19	0.16
47	Sulphide	SO ₃	0.10	0.08	0.11	0.10	0.09	0.06	0.06
		%							
		mg/kg	16	12	8.0	12	12	16	<5

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3, FAIRFIELD COURT, WHITLEY, COVENTRY, WEST MIDLANDS CV3 4LA. TEL: 07000 CAS PLC (227752) or 01203 639012. FAX: 01203 639710 Registered in England 2050581
e-mail: info@cityanalytical.co.uk

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BUCKLEY LLS BURY LANCASHIRE
FOUND/ON EXPLORATION SERVICES (CHESHIRE)
SOILS RECEIVED 19/02/99
YOUR REFERENCE 4452
YOUR ORDER NO



CAS SAMPLE No		SAMPLE No		DEPTH (m)		Method		9		10		11		12		13		14		15		16	
TP 8		TP 9		TP 9		TP 9		TP 9		TP 9		TP 9		TP 9		TP 9		TP 9		TP 9		TP 9	
1.80		1.00		1.00		1.00		1.00		1.00		3.00		0.40		2.50		0.10		1.20		0.90	
units		as		as		as		as		as		as		as		as		as		as		as	
S		S		S		S		S		S		S		S		S		S		S		S	
mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
CN ⁻		CN ⁻		CN ⁻		CN ⁻		CN ⁻		CN ⁻		CN ⁻		CN ⁻		CN ⁻		CN ⁻		CN ⁻		CN ⁻	
Zn		Zn		Zn		Zn		Zn		Zn		Zn		Zn		Zn		Zn		Zn		Zn	
mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
BTEX		BTEX		BTEX		BTEX		BTEX		BTEX		BTEX		BTEX		BTEX		BTEX		BTEX		BTEX	
Chlorinated Solvents		Chlorinated Solvents		Chlorinated Solvents		Chlorinated Solvents		Chlorinated Solvents		Chlorinated Solvents		Chlorinated Solvents		Chlorinated Solvents		Chlorinated Solvents		Chlorinated Solvents		Chlorinated Solvents		Chlorinated Solvents	
Herbicides		Herbicides		Herbicides		Herbicides		Herbicides		Herbicides		Herbicides		Herbicides		Herbicides		Herbicides		Herbicides		Herbicides	
Triazine Herbicides		Triazine Herbicides		Triazine Herbicides		Triazine Herbicides		Triazine Herbicides		Triazine Herbicides		Triazine Herbicides		Triazine Herbicides		Triazine Herbicides		Triazine Herbicides		Triazine Herbicides		Triazine Herbicides	
Asbestos		Asbestos		Asbestos		Asbestos		Asbestos		Asbestos		Asbestos		Asbestos		Asbestos		Asbestos		Asbestos		Asbestos	

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BUCKLEY WELLS BURY LANCASHIRE
FOUNDATION & EXPLORATION SERVICES (CHESHIRE)
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YOUR REFERENCE 4452
YOUR ORDER NO



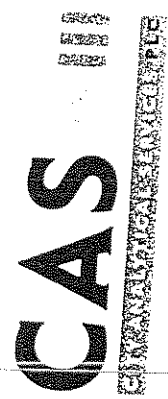
CAS SAMPLE NO SAMPLE No DEPTH (m)	17 TP12 3.50	18 TP13 0.20	19 TP13 1.20	20 TP14 0.10	21 TP14 2.10	22 TP15 0.10	23 TP 9 2.50	24 TP10 1.50
Method	as	units						
30C Arsenic (total)	As	mg/kg	21	100	9.9	36	54	17
06 Boron (water soluble)	B	mg/kg	0.55	0.31	0.63	0.39	0.47	1.1
30 Cadmium (total)	Cd	mg/kg	1.8	11	0.93	1.6	1.2	1.3
30B Chromium (hexavalent)	Cr	mg/kg		3.7				
30 Chromium (total)	Cr	mg/kg	6.5	220	5.6	7.9	13	13
30 Copper (total)	Cu	mg/kg	330	1500	140	190	810	190
15* Cyanide (free)	CN ⁻	mg/kg						
* Cyanide (total)	CN ⁻	mg/kg	0.25	0.11	<0.1	0.21	0.14	0.29
30 Lead (total)	Pb	mg/kg	330	3700	120	110	310	100
30C Mercury (total)	Hg	mg/kg	0.38	<0.1	<0.1	<0.1	0.85	<0.1
30 Nickel (total)	Ni	mg/kg	20	77	11	25	24	27
307 PAH (total)		mg/kg	18	<10	16	68	20	10
39 pH		pH units	6.8	7.0	7.2	7.2	7.5	7.4
40A Phenols (total)	PhOH	mg/kg	3.4	6.9	2.7	3.3	1.9	2.8
30C Selenium (total)	Se	mg/kg	0.17	41	0.54	0.54	<0.1	1.2
45 Sulphate (total)	SO ₃	%	0.11	0.08	0.09	0.10	0.12	0.09
47 Sulphide	S	mg/kg	16	96	20	12	<5	8.0

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FOUNDATION & EXPLORATION SERVICES (CHESHIRE)
SOILS RECEIVED 19/02/99
YOUR REFERENCE 4452
YOUR ORDER NO



CAS SAMPLE NO		SAMPLE No		DEPTH (m)		17		18		19		20		21		22		23		24	
Method		as		units		TP12		TP13		TP13		TP14		TP14		TP15		TP 9		TP10	
51	Sulphur (elemental)	S		mg/kg		3.50		0.20		1.20		0.10		2.10		0.10		2.50		1.50	
16*	Thiocyanate	CN ⁻		mg/kg		2000		<100		160		240		360		<100					
30	Zinc (total)	Zn		mg/kg		87		17000		110		74		65		85					
303*	Chlorinated Solvents					see separate sheet															
S	Herbicides					see separate sheet															
-W-	Triazine Herbicides					see separate sheet															
04-S*	Asbestos					see separate sheet															
				presence						ND								ND		ND	

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BUCKLEY WELLS BURY LANCASHIRE
FOUNDATION & EXPLORATION SERVICES (CHESHIRE)
SOILS RECEIVED 19/02/99
YOUR REFERENCE 4452
YOUR ORDER NO



CAS SAMPLE No
SAMPLE No
DEPTH (m)

Method	as	units
51 Sulphur (elemental)	S	mg/kg
16* Thiocyanate	CN ⁻	mg/kg
30 Zinc (total)	Zn	mg/kg
40 BTEX		
303* Chlorinated Solvents		
S Herbicides		
44 Triazine Herbicides		
04-S* Asbestos		

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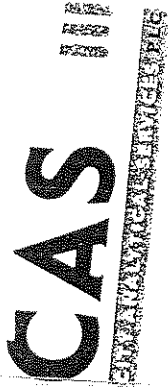
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presence ND

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FESC 28421
BUCKLEYS WELLS, BURY, LANCASHIRE
FOUNDATION & EXPLORATION SERVICES
SAMPLES RECEIVED: 15/03/99
REFERENCE No.: SJR/SJR/sjr-12/4452
ORDER No.:

TPH ANALYSIS								
CAS SAMPLE No	1	2	3	4	5	6	7	8
SAMPLE No	TP1	TP1	TP3	TP4	TP6	TP7	TP7	TP8
DEPTH (m)	0.1	1.5	0.3	0.00	0.1	1.0	1.7	0.8
	units							
TPH by GC (C6-C10)	<50	<50	<50	<50	<50	<50	<50	<50
TPH by GC (C10-C20)	<50	<50	<50	<50	<50	<50	<50	<50
TPH by GC (C20-C40)	<50	<50	<50	<50	<50	<50	<50	<50
TPH by GC (C6-C40)	<50	<50	<50	<50	<50	<50	<50	<50

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P. J. M. M. M.

DATE: 19/4/99.



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BUCKLEYS WELLS, BURY, LANCASHIRE
FOUNDATION & EXPLORATION SERVICES
SAMPLES RECEIVED: 15/03/99
REFERENCE No.: SJR/SJR/sjr-12/4452
ORDER No.:

TPH ANALYSIS

CAS SAMPLE No	9	10	11	12	13	14	15	16
SAMPLE No	TP 8	TP 9	TP 9	TP 10	TP 10	TP 11	TP 11	TP 12
DEPTH (m)	1.8	1.0	3.0	0.4	2.5	0.1	1.2	0.9
	units							
TPH by GC (C6-C10)	<50	<50	<50	<50	<50	<50	<50	<50
TPH by GC (C10-C20)	<50	<50	<50	<50	<50	<50	<50	<50
TPH by GC (C20-C40)	95	<50	<50	180	130	670	<50	<50
TPH by GC (C6-C40)	95	<50	<50	180	130	670	<50	<50

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R. J. Underwood

DATE: 19/4/99.

CAS

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PLC

FESC 28421

BUCKLEYS WELLS, BURY, LANCASHIRE
FOUNDATION & EXPLORATION SERVICES
SAMPLES RECEIVED: 15/03/99
REFERENCE No.: SJR/SJR/sjr-12/4452
ORDER No.:

CAS SAMPLE No		17	18	19	20	21	22
SAMPLE No		TP 12	TP 13	TP 13	TP 14	TP 14	TP 15
DEPTH (m)		3.5	0.2	1.2	0.1	2.1	0.1
		units					
TPH by GC (C6-C10)		mg/kg	<50	<50	<50	<50	<50
TPH by GC (C10-C20)		mg/kg	<50	<50	<50	<50	<50
TPH by GC (C20-C40)		mg/kg	<50	<50	<50	<50	<50
TPH by GC (C6-C40)		mg/kg	<50	<50	180	82	<50
					180	82	<50

TPH ANALYSIS

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CAS

ANALYTICAL
PLC

FESC/28067

BUCKLEY WELLS BURRY LANCASHIRE
FOUNDATION & EXPLORATION SERVICES (CHESHIRE)
SAMPLES RECEIVED: 19/2/99
REFERENCE No.: 4452
ORDER No.:

BTEX ANALYSIS

CAS SAMPLE No	5	7	12	16	20
SAMPLE No	TP 6	TP 7	TP 10	TP 12	TP 14
DEPTH (m)	0.10	1.70	0.40	0.90	0.10
	units				
Benzene	mg/kg	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	<0.1	<0.1	<0.1	<0.1
m&p-Xylene	mg/kg	<0.1	<0.1	<0.1	<0.1
o-Xylene	mg/kg	<0.1	<0.1	<0.1	<0.1

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BUCKLEYS WELLS, BURY, LANCASHIRE
FOUNDATION & EXPLORATION SERVICES
SAMPLES RECEIVED: 15/03/99
REFERENCE No.: SJR/SJR/sjr-12/4452
ORDER No.:

CAS

PLC

CAS SAMPLE No	26	27	28	29	30	31	32
SAMPLE No	BHC1	BHC2	BHC2	BHC2	BHC3	BHC4	BHC5
DEPTH (m)	0.3	2.2	3.2	5.2	0.0	6.7	0.5
	units						
TPH by GC (C6-C10)							
TPH by GC (C10-C20)	<50	<50	<50	<50	<50	<50	<50
TPH by GC (C20-C40)	<50	<50	63	200	<50	<50	120
TPH by GC (C6-C40)	78	310	460	510	<50	68	430
	78	310	520	710	<50	68	550

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CAS

ANALYTICAL

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FESC 28421

BUCKLEYS WELLS, BURY, LANCASHIRE
FOUNDATION & EXPLORATION SERVICES
SAMPLES RECEIVED: 15/03/99
REFERENCE No.: SJR/SJR/sjr-12/4452
ORDER No.:

CAS SAMPLE No		33	34	35	36	37	38
SAMPLE No		BHC5	BHG1	BHG2	BHG3	BHG4	BHG4
DEPTH (m)		5.2	1.2	0.5	0.0	0.0	3.0
		units					
TPH by GC (C6-C10)		mg/kg	<50	<50	<50	<50	<50
TPH by GC (C10-C20)		mg/kg	<50	<50	200	120	<50
TPH by GC (C20-C40)		mg/kg	69	230	5400	640	82
TPH by GC (C6-C40)		mg/kg	69	230	5600	760	82

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FESC 28217
 BUCKLEYS WELLS, BURY, LANCASHIRE
 FOUNDATION & EXPLORATION SERVICES
 SAMPLES RECEIVED: 02/03/99
 REFERENCE No.: SJR/SJR/sjr-12/4452
 ORDER No.:

BTEx ANALYSIS									
CAS SAMPLE No		11							
SAMPLE No		BHG3							
DEPTH (m)		0.00							
		units							
Benzene		mg/kg							
Toluene		mg/kg							
Ethylbenzene		mg/kg							
m&p-Xylene		mg/kg							
o-Xylene		mg/kg							

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FESC/28067

BUCKLEY WELLS BURRY LANCASHIRE
FOUNDATION & EXPLORATION SERVICES (CHESHIRE)
SAMPLES RECEIVED: 19/2/99
REFERENCE No.: 4452
ORDER No.:

HALOCARBONS ANALYSIS					
CAS SAMPLE No	5	7	12	16	20
SAMPLE No	TP 6	TP 7	TP 10	TP 12	TP 14
DEPTH (m)	0.10	1.70	0.40	0.90	0.10
Chloroform	units				
1,1,1-trichloroethane	mg/kg	<0.1	<0.1	<0.1	<0.1
Carbon Tetrachloride	mg/kg	<0.1	<0.1	<0.1	<0.1
Trichloroethylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Bromodichloromethane	mg/kg	<0.1	<0.1	<0.1	<0.1
Trans-1,3-dichloropropene	mg/kg	<0.1	<0.1	<0.1	<0.1
cis-1,3-dichloropropene	mg/kg	<0.1	<0.1	<0.1	<0.1
1,1,2-trichloroethane	mg/kg	<0.1	<0.1	<0.1	<0.1
Tetrachloroethylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Dibromochloromethane	mg/kg	<0.1	<0.1	<0.1	<0.1
Bromoform	mg/kg	<0.1	<0.1	<0.1	<0.1
1,1,2,2-tetrachloroethane	mg/kg	<0.1	<0.1	<0.1	<0.1
1,3-dichlorobenzene	mg/kg	<0.1	<0.1	<0.1	<0.1
1,4-dichlorobenzene	mg/kg	<0.1	<0.1	<0.1	<0.1
1,2-dichlorobenzene	mg/kg	<0.1	<0.1	<0.1	<0.1

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CAS

ANALYTICAL PLC

FESC 28217
BUCKLEYS WELLS, BURY, LANCASHIRE
FOUNDATION & EXPLORATION SERVICES
SAMPLES RECEIVED: 02/03/99
REFERENCE No.: SJR/SJR/sjr-12/4452
ORDER No.:

HALOCARBONS ANALYSIS

CAS SAMPLE No	11	
SAMPLE No	BHG3	
DEPTH (m)	0.00	
Chloroform	units	
1,1,1-trichloroethane	mg/kg	<0.1
Carbon Tetrachloride	mg/kg	<0.1
Trichloroethylene	mg/kg	<0.1
Bromochloromethane	mg/kg	<0.1
Trans-1,3-dichloropropene	mg/kg	<0.1
cis-1,3-dichloropropene	mg/kg	<0.1
1,1,2-trichloroethane	mg/kg	<0.1
Tetrachloroethylene	mg/kg	<0.1
Dibromochloromethane	mg/kg	<0.1
Bromoform	mg/kg	<0.1
1,1,2,2-tetrachloroethane	mg/kg	<0.1
1,3-dichlorobenzene	mg/kg	<0.1
1,4-dichlorobenzene	mg/kg	<0.1
1,2-dichlorobenzene	mg/kg	0.11
	mg/kg	<0.1

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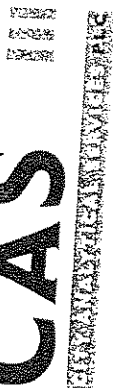
DATE: 18.3.99

CAS SAMPLE No		12	16	20
SAMPLE No		TP10	TP12	TP14
DEPTH(m)	units	0.40	0.90	0.10
COMBINE ACID HERBS				
Benazolin	mg/kg	<0.020	<0.020	<0.020
Bentazone	mg/kg	<0.020	<0.020	<0.020
Bromoxynil	mg/kg	<0.020	<0.020	<0.020
Clopyralid	mg/kg	<0.020	<0.020	<0.020
4-CPA	mg/kg	<0.020	<0.020	<0.020
2,4-D	mg/kg	<0.020	<0.020	<0.020
2,4-DB	mg/kg	<0.020	<0.020	<0.020
Dicamba	mg/kg	<0.020	<0.020	<0.020
Dichlorprop	mg/kg	<0.020	<0.020	<0.020
Dicofop	mg/kg	<0.020	<0.020	<0.020
Fenoprop	mg/kg	<0.020	<0.020	<0.020
Flamprop-m-isopropyl	mg/kg	<0.020	<0.020	<0.020
Flamprop	mg/kg	<0.020	<0.020	<0.020
Ioxynil	mg/kg	<0.020	<0.020	<0.020
NCPA	mg/kg	<0.020	<0.020	<0.020
MCPB	mg/kg	<0.020	<0.020	<0.020
MCP	mg/kg	<0.020	<0.020	<0.020
PCP	mg/kg	<0.020	<0.020	<0.020
Picloram	mg/kg	<0.020	<0.020	<0.020
2,4,5-T	mg/kg	<0.020	<0.020	<0.020
2,3,6-TBA	mg/kg	<0.020	<0.020	<0.020
Triclopyr	mg/kg	<0.020	<0.020	<0.020
NPD DETECTOR PESTICIDES				
Fenpropidin	mg/kg	<0.10	<0.10	<0.10
Fenpropimorph	mg/kg	<0.10	<0.10	<0.10
Fluazifop-butyl	mg/kg	<0.10	<0.10	<0.10
Flutriafol	mg/kg	<0.10	<0.10	<0.10
Flusilazole	mg/kg	<0.10	<0.10	<0.10
Metribusin	mg/kg	<0.10	<0.10	<0.10
CARBAMATES				
Carbaryl	mg/kg	<2.0	<2.00	<2.00
Carbetamide	mg/kg	<1.20	<1.20	<1.20
Chlorbufam	mg/kg	<0.80	<0.80	<0.80
Chlorpropham	mg/kg	<0.80	<0.80	<0.80
Methiocarb	mg/kg	<0.80	<0.80	<0.80
Pirimicarb	mg/kg	<1.20	<1.20	<1.20
Propham	mg/kg	<0.80	<80	<0.80
UREA TYPE HERBICIDES				
Chlortoluron	mg/kg	<0.10	<0.10	<0.10
Diuron	mg/kg	<0.10	<0.10	<0.10
Isoproturon	mg/kg	<0.10	<0.10	<0.10
Linuxon	mg/kg	<0.10	<0.10	<0.10
Methabenzthiazuron	mg/kg	<0.10	<0.10	<0.10
Menuro	mg/kg	<0.10	<0.10	<0.10

Results of Chemical Analyses on Leachates
Prepared from Soil Samples

FIGURES CT2/1 and CT2/2

CAS



FESC/28067

BUCKLEY WELLS BURRY LANCASHIRE
FOUNDATION & EXPLORATION SERVICES (CHESHIRE)

SAMPLES RECEIVED: 19/2/99

REFERENCE No.: 4452

ORDER No.:

TRIAZINE HERBICIDE ANALYSIS

CAS SAMPLE No	12	16	20
SAMPLE No	TP 10	TP 12	TP 14
DEPTH (m)	0.40	0.90	0.10
	units		
Simazine			
Prometon	mg/kg	<1	<1
Atrazine	mg/kg	<1	<1
Propazine	mg/kg	<1	<1
Ametryn	mg/kg	<1	<1
Prometryn	mg/kg	<1	<1
Terbutryn	mg/kg	<1	<1

CHECKED & ISSUED BY: *EFH*

DATE: 5/3/99

DOUGLAS & CO. LTD. LA. CHESHIRE
LEACHATES & EXPLORATION SERVICES (CHESHIRE)
YOUR LEACHATES RECEIVED 19/02/99
YOUR REFERENCE 4452
YOUR ORDER NO

CAS

CAS SAMPLE NO
SAMPLE NO
DEPTH (m)

Method	26 TP 8 0.80	27 TP 9 3.00	28 TP10 2.50	29 TP12 0.90
25C-L* Arsenic (soluble)				
07-L* Boron (soluble)	<10	<10	<10	<10
25-L* Cadmium (soluble)	<0.05	<0.05	<0.05	<0.05
25-L* Chromium (soluble)	<5	<5	<5	<5
25-L* Copper (soluble)	<10	10	<10	<10
25-L* Lead (soluble)	<10	<10	<10	<10
25X-L* Mercury (soluble)	<10	20	10	10
25-L* Nickel (soluble)	<1	<1	<1	<1
25C-L* Selenium (soluble)	<10	<10	<10	<10
25-L* Zinc (soluble)	<2	<2	<2	<2
	<10	10	<10	10

CHECKED AND ISSUED BY:

AFM.

DATE:

5/3/99

FESC/28217
BUCKLEY WELLS BURY LANCASHIRE
FOUNDATION & EXPLORATION SERVICES (CHESHIRE)
LEACHATES RECIEVED 02/03/99
YOUR REFERENCE SJR/SJR/sjr-12/4452
YOUR ORDER NO



CAS SAMPLE NO SAMPLE NO DEPTH(m)	15 BHC2 2.20	16 BHC2 5.20	17 BHC4 6.70	18 TP 4 0.00	19 TP 7 1.00	20 TP15 0.10
Method						
25C-L* Arsenic (soluble)	as	units				
07-L* Boron (soluble)	As	µg/l	<10	<10	<10	<10
25-L* Cadmium (soluble)	B	mg/l	<0.05	<0.05	<0.05	<0.05
25-L* Chromium (soluble)	Cd	µg/l	<5	<5	<5	<5
25-L* Copper (soluble)	Cr	µg/l	<10	<10	<10	<10
25-L* Lead (soluble)	Cu	µg/l	<10	10	<10	<10
25X-L* Mercury (soluble)	Pb	µg/l	<10	<10	<10	<10
25-L* Nickel (soluble)	Hg	µg/l	<1	<1	<1	<1
25C-L* Selenium (soluble)	Ni	µg/l	<10	<10	<10	<10
25-L* Zinc (soluble)	Se	µg/l	<2	<2	<2	<2
	Zn	µg/l	<10	<10	<10	<10
CHECKED AND ISSUED BY:		DATE: 16.3.99.				

CHECKED AND ISSUED BY:  DATE: 16.3.99.

Results of Chemical Analyses on Groundwater Samples
FIGURES CT3/1 to CT3/9

FESC/28271
BUCKLEY WELLS BURY LANCASHIRE
FOUNDATION & EXPLORATION SERVICES (CHESHIRE)
WATERS RECEIVED 05/03/99
YOUR REFERENCE SJR/SJR/sjr-3/4452
YOUR ORDER NO



CAS SAMPLE NO SAMPLE NO		1		2		3		4		5		6	
DEPTH (m)		BHC1		BHC3		BHC4		BHC5		BHG4		BHG1	
Method													
		units											
25C-W*	Arsenic (soluble)	as											
07-W*	Boron (soluble)	As	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
25-W*	Cadmium (soluble)	B	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
13-W*	Chromium (hexavalent)	Cd	µg/l	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
25-W*	Chromium (soluble)	Cr	µg/l										
25-W*	Copper (soluble)	Cr	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
15B-W*	Cyanide (free)	Cu	µg/l	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
14B-W*	Cyanide (total)	CN ⁻	mg/l										
25-W*	Lead (soluble)	CN ⁻	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
25X-W*	Mercury (soluble)	Pb	µg/l	<10	<10	<10	<10	<10	<10	10	<10	<10	<10
25-W*	Nickel (soluble)	Hg	µg/l	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
308-W*	PAH (total)	Ni	µg/l	10	10	10	10	<10	<10	<10	<10	10	10
31-W	pH		µg/l	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
32A-W*	Phenols (total)		pH units	6.6	6.5	6.7	6.8	6.8	6.8	7.0	7.0	7.3	7.3
25C-W*	Selenium (soluble)	PhOH	mg/l	0.07	<0.05	0.10	<0.05	<0.05	<0.05	0.08	0.08	<0.05	<0.05
37-W	Sulphate	Se	µg/l	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
38-W*	Sulphide	SO ₃	g/l	0.06	0.23	0.16	0.02	0.02	0.02	0.02	0.02	0.06	0.06
		S	mg/l	0.80	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

CHECKED AND ISSUED BY: *[Signature]* DATE: 11/3/99

CAS

THE ENVIRONMENT

3	3 BHC4		sheet	10
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DATE:

300

3. FAIRFIELD COURT, WHEELER ROAD, WHITLEY, COVENTRY, WEST MIDLANDS CV3 4LA. TEL: 07000 CAS PLC (227752) or 01203 639012. FAX: 01203 639710. Registered in England 2050581
e-mail: info@cityanalytical.co.uk

Results for Groundwater Samples
Collected During the First Event

FIGURES CT3/1 to CT3/3

CAS

ANALYTICAL

PLC

FESC 28271
BUCKLEY WELLS, BURY, LANCASHIRE
FOUNDATION & EXPLORATION SERVICES
SAMPLES RECEIVED: 05/03/99
REFERENCE No.: SJR/SJR/sjr-3/4452
ORDER No.:

Waters Analysis

CAS SAMPLE No		TPH ANALYSIS					
SAMPLE No		1	2	3	4	5	6
DEPTH (m)		BHC1	BHC3	BHC4	BHC5	BHG4	BHG1
							1.54
Gasoline Range (C ₆ - C ₁₀)	units						
Diesel Range (C ₁₁ - C ₂₀)	µg/l	<600	<600	<600	<600	<600	<600
Mineral Oils Range (C ₂₁ - C ₄₀)	µg/l	<600	<600	<600	<600	<600	<600
Total Petroleum Hydrocarbons	µg/l	<600	<600	<600	<600	<600	<600

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DATE: 11/3/99

Results for Groundwater Samples
Collected During the Second Event

FIGURES CT3/4 to CT3/9

RESU/28394
F-LEY
FOUNDATION & EXPLORATION SERVICES (CHESHIRE)
WATERS RECEIVED 12/03/99
YOUR REFERENCE 4452
YOUR ORDER NO

CAS

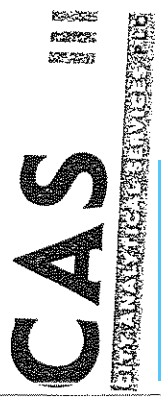
PLC

CAS SAMPLE NO
SAMPLE NO
DEPTH (m)

Method	1 BHG1 1.82	2 BHG4 7.72	3 BHC1 1.03	4 BHC3 0.87	5 BHC4 7.80	6 BHC5 7.85
25C-W* Arsenic (soluble)	as					
07-W* Boron (soluble)	As	<10	<10	<10	<10	<10
302-W* BTEX	B	0.06	0.11	<0.05	0.19	0.14
25-W* Cadmium (soluble)	Cd	see separate sheet				
304-W* Chlorinated Solvents		<5	<5	<5	<5	<5
13-W* Chromium (hexavalent)	Cr	see separate sheet				
25-W* Chromium (soluble)	Cr					
25-W* Copper (soluble)	Cr	<10	<10	<10	<10	<10
15B-W* Cyanide (free)	Cu	<10	<10	<10	<10	<10
14B-W* Cyanide (total)	CN ⁻					
25-W* Lead (soluble)	CN ⁻	<0.01	<0.01	<0.01	<0.01	<0.01
25X-W* Mercury (soluble)	Pb	<10	<10	<10	<10	<10
25-W* Nickel (soluble)	Hg	<1	<1	<1	<1	<1
308-W* PAH (speciated)	Ni	<10	<10	10	20	10
308-W* PAH (total)		see separate sheet				
31-W pH	pH	<20	<20	<20	<20	<20
32A-W* Phenols (total)	PhOH	6.7	6.5	6.4	6.6	6.7
		0.09	0.10	0.07	0.05	0.07

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FESC/28391
BUCKLEY WELLS
FOUNDATION & EXPLORATION SERVICES (CHESHIRE)
WATERS RECEIVED 12/03/99
YOUR REFERENCE 4452
YOUR ORDER NO



CAS SAMPLE No		SAMPLE No					
DEPTH (m)							
Method		1	2	3	4	5	6
25C-W* Selenium (soluble)	as	BHG1 1.82	BHG4 7.72	BHC1 1.03	BHC3 0.87	BHC4 7.80	BHC5 7.85
37-W Sulphate	Se	$\mu\text{g/l}$	$\mu\text{g/l}$	$\mu\text{g/l}$	$\mu\text{g/l}$	$\mu\text{g/l}$	$\mu\text{g/l}$
38-W* Sulphide	SO ₃	<2	<2	<2	<2	<2	<2
*	Thiocyanate	0.08	0.02	0.06	0.02	0.18	0.30
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
318-W* TPH's by GC (C6 to C40)	CN ⁻	<5	<5	<5	<5	<5	<5
25-W* Zinc (soluble)	Zn	$\mu\text{g/l}$	$\mu\text{g/l}$	$\mu\text{g/l}$	$\mu\text{g/l}$	$\mu\text{g/l}$	$\mu\text{g/l}$
see separate sheet		10	<10	10	10	20	40

CHECKED AND ISSUED BY: *W. H. Kelly* DATE: 18 March 99

FESC 28391
 BUCKLEY WELLS
 FOUNDATION & EXPLORATION SERVICES
 SAMPLES RECEIVED: 12/03/99
 REFERENCE No.: 4452
 ORDER No.:

Waters Analysis

CAS SAMPLE No	TPH ANALYSIS					
	1	2	3	4	5	6
SAMPLE No	BHG1	BHG4	BHC1	BHC3	BHC4	BHC5
DEPTH (m)	1.82	7.72	1.03	0.87	7.80	7.85
	units					
Gasoline Range (C ₆ - C ₁₀)	<600	<600	<600	<600	<600	<600
Diesel Range (C ₁₁ - C ₂₀)	<600	<600	<600	<600	<600	<600
Mineral Oils Range (C ₂₁ - C ₄₀)	<600	<600	<600	<600	<600	<600
Total Petroleum Hydrocarbons	<600	<600	<600	<600	<600	<600

CHECKED & ISSUED BY: *W. R. Long*

DATE: 18 March 99



FESC 28391
BUCKLEY WELLS
FOUNDATION & EXPLORATION SERVICES
SAMPLES RECEIVED: 12/03/99
REFERENCE No.: 4452
ORDER No.:

Waters Analysis

CAS SAMPLE No		BTEx ANALYSIS					
SAMPLE No		1	2	3	4	5	6
DEPTH (m)		BHG1 1.82	BHG4 7.72	BHC1 1.03	BHC3 0.87	BHC4 7.80	BHC5 7.85
	units						
Benzene	µg/l	<10	<10	N/R	<10	<10	<10
Toluene	µg/l	<10	<10	N/R	<10	<10	<10
Ethylbenzene	µg/l	<10	<10	N/R	<10	<10	<10
m&p-Xylene	µg/l	<10	<10	N/R	<10	<10	<10
o-Xylene	µg/l	<10	<10	N/R	<10	<10	<10

CHECKED & ISSUED BY: *Car B. L...*

DATE: 18 March 99

CAS

ANALYTICAL
PLC

FESC/28391
BUCKLEY WELLS
FOUNDATION & EXPLORATION SERVICES (CHESHIRE)
SAMPLES RECEIVED: 12/3/99
REFERENCE No.: 4452
ORDER No.:

Waters Analysis

CAS SAMPLE No			PAH ANALYSIS (HPLC)				
SAMPLE No		1	2	4	5	6	
DEPTH (m)		BHCA-D	BH 1	BH 1A	BH 1D	BH 3	
Naphthalene	units						
Acenaphthylene	µg/l	<2	<2	<2	<2	<2	
Acenaphthene	µg/l	<2	<2	<2	<2	<2	
Fluorene	µg/l	<2	<2	<2	<2	<2	
Phenanthrene	µg/l	<2	<2	<2	<2	<2	
Anthracene	µg/l	<2	<2	<2	<2	<2	
Pyrene	µg/l	<2	<2	<2	<2	<2	
Benzo(a)anthracene	µg/l	<2	<2	<2	<2	<2	
Chrysene	µg/l	<2	<2	<2	<2	<2	
Benzo(b)fluoranthene	µg/l	<2	<2	<2	<2	<2	
Benzo(k)fluoranthene	µg/l	<2	<2	<2	<2	<2	
Benzo(a)pyrene	µg/l	<2	<2	<2	<2	<2	
Dibenzo(ah)anthracene	µg/l	<2	<2	<2	<2	<2	
Benzo(ghi)perylene	µg/l	<2	<2	<2	<2	<2	
Indeno(123cd)pyrene	µg/l	<2	<2	<2	<2	<2	

CHECKED & ISSUED BY: 

CHECKED & ISSUED BY: *[Signature]*

DATE: 18 March 99

CAS

ANALYTICAL PLC

FESC 28391
BUCKLEY WELLS
FOUNDATION & EXPLORATION SERVICES
SAMPLES RECEIVED: 12/03/99
REFERENCE No.: 4452
ORDER No.:

Waters Analysis

		HALOCARBONS ANALYSIS					
CAS SAMPLE No		1	2	3	4	5	6
SAMPLE No		BHG1	BHG4	BHC1	BHC3	BHC4	BHC5
DEPTH (m)		1.82	7.72	1.03	0.87	7.80	7.85
Chloroform	units						
1,1,1-trichloroethane	µg/l	<2	<2	N/R	<2	<2	<2
Carbon Tetrachloride	µg/l	<2	<2	N/R	<2	<2	<2
Trichloroethylene	µg/l	<2	<2	N/R	<2	<2	<2
Bromodichloromethane	µg/l	<2	<2	N/R	<2	<2	<2
Trans-1,3-dichloropropene	µg/l	<10	<10	N/R	<10	<10	<10
cis-1,3-dichloropropene	µg/l	<10	<10	N/R	<10	<10	<10
1,1,2-trichloroethane	µg/l	<2	<2	N/R	<2	<2	<2
Tetrachloroethylene	µg/l	<2	<2	N/R	<2	<2	<2
Dibromochloromethane	µg/l	<2	<2	N/R	<2	<2	<2
Bromoform	µg/l	<2	<2	N/R	<2	<2	<2
1,1,2,2-tetrachloroethane	µg/l	<5	<5	N/R	<5	<5	<5
1,3-dichlorobenzene	µg/l	<5	<5	N/R	<5	<5	<5
1,4-dichlorobenzene	µg/l	<5	<5	N/R	<5	<5	<5
1,2-dichlorobenzene	µg/l	<5	<5	N/R	<5	<5	<5

CHECKED & ISSUED BY: *W. J. L. L. L.*

DATE: 18 March 99

Site	Buckley Wells	Sample Type	SOIL
Sample ID:	HA1	Job:	LKA/D0921
Other ID:	0.00m	Sample No:	776609
Your Ref:	JB578	Your Order:	1309
Received:	19/12/2005		
Description	Black and brown loam with occasional gravel and occasional organic matter		

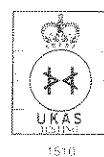
Method	Determination	Result	Units	Date of analysis
30/30C	^M Arsenic (Total)	56	mg/kg	04/01/2006
30	^M Cadmium (Total)	0.63	mg/kg	04/01/2006
30	^M Chromium (Total)	23	mg/kg	04/01/2006
30	^M Copper (Total)	190	mg/kg	04/01/2006
30	Lead (Total)	460	mg/kg	04/01/2006
30C	Mercury (Total)	0.49	mg/kg	04/01/2006
30	^M Nickel (Total)	67	mg/kg	04/01/2006
30C	^M Selenium (Total)	1.4	mg/kg	04/01/2006
30	^M Zinc (Total)	180	mg/kg	04/01/2006
39	^M pH	7.7	pH units	30/12/2005
	>> TPH SUITE <<	.		20/12/2005
	>>TPH RISK ASSESSMENT<<	.		21/12/2005
317R	>C6 to C8 aliphatic	2.3	mg/kg	28/12/2005
317R	>C8 to C10 aliphatic	4.8	mg/kg	28/12/2005
317R	>C10 to C12 aliphatic	3.5	mg/kg	28/12/2005
317R	>C12 to C16 aliphatic	8.0	mg/kg	28/12/2005
317R	>C16 to C21 aliphatic	13	mg/kg	28/12/2005
317R	>C21 TO C40 aliphatic	80	mg/kg	28/12/2005
317R	Total Aliphatic	110	mg/kg	28/12/2005
317R	>C5 to C7 aromatic	< 1.0	mg/kg	28/12/2005
317R	>C7 to C8 aromatic	< 1.0	mg/kg	28/12/2005
317R	>C8 to C10 aromatic	6.2	mg/kg	28/12/2005
317R	>C10 to C12 aromatic	9.6	mg/kg	28/12/2005
317R	>C12 to C16 aromatic	54	mg/kg	28/12/2005
317R	>C16 to C21 aromatic	200	mg/kg	28/12/2005
317R	>C21 TO C40 aromatic	550	mg/kg	28/12/2005
317R	Total Aromatic	820	mg/kg	28/12/2005
317R	Total EPH aliphatic/aromatic	930	mg/kg	28/12/2005
	^M >> PAH SUITE <<	.		21/12/2005
307	^M naphthalene	14	mg/kg	23/12/2005
307	^M acenaphthylene	< 0.50	mg/kg	23/12/2005
307	^M acenaphthene	15	mg/kg	23/12/2005
307	^M fluorene	11	mg/kg	23/12/2005
307	^M phenanthrene	89	mg/kg	23/12/2005

STL Midlands
Rayner House, 80 Lockhurst Lane,
Coventry CV6 5PZ United Kingdom

Tel +44 (0)24 7658 4800
Fax +44 (0)24 7658 4848
info@stl-ltd.com

Severn Trent Laboratories Limited.

Registered in England & Wales Registration No 2148934 Registered Office 2297 Coventry Road Birmingham B26 3PJ



Site	Buckley Wells	Sample Type	SOIL
Sample ID:	HA1	Job:	LKA/D0921
Other ID:	0.00m	Sample No:	776609
Your Ref:	JB578	Your Order:	1309
Received:	19/12/2005		
Description	Black and brown loam with occasional gravel and occasional organic matter		

Method	Determination	Result	Units	Date of analysis
307	^M anthracene	20	mg/kg	23/12/2005
307	^M fluoranthene	78	mg/kg	23/12/2005
307	^M pyrene	57	mg/kg	23/12/2005
307	^M benzo(a)anthracene	21	mg/kg	23/12/2005
307	^M chrysene	27	mg/kg	23/12/2005
307	^M benzo(b)fluoranthene	11	mg/kg	23/12/2005
307	^M benzo(k)fluoranthene	9.6	mg/kg	23/12/2005
307	^M benzo(a)pyrene	20	mg/kg	23/12/2005
307	^M dibenzo(ah)anthracene	2.1	mg/kg	23/12/2005
307	^M benzo(ghi)perylene	11	mg/kg	23/12/2005
307	^M indeno(123cd)pyrene	11	mg/kg	23/12/2005
307	^M PAH (Total)	400	mg/kg	23/12/2005

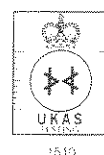
Comments

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Severn Trent Laboratories Limited.

Registered in England & Wales Registration No: 2148934 Registered Office: 2297 Coventry Road Birmingham B26 3PU



Site	Buckley Wells	Sample Type	SOIL
Sample ID:	HA2	Job:	LKA/D0921
Other ID:	0.00m	Sample No:	776610
Your Ref:	JB578	Your Order:	1309
Received:	19/12/2005		
Description	Black and brown loam with occasional gravel and occasional organic matter		

Method	Determination	Result	Units	Date of analysis
30/30C	^M Arsenic (Total)	42	mg/kg	04/01/2006
30	^M Cadmium (Total)	< 0.50	mg/kg	04/01/2006
30	^M Chromium (Total)	15	mg/kg	04/01/2006
30	^M Copper (Total)	200	mg/kg	04/01/2006
30	Lead (Total)	200	mg/kg	04/01/2006
30C	Mercury (Total)	1.1	mg/kg	04/01/2006
30	^M Nickel (Total)	57	mg/kg	04/01/2006
30C	^M Selenium (Total)	1.4	mg/kg	04/01/2006
30	^M Zinc (Total)	160	mg/kg	04/01/2006
39	^M pH	7.8	pH units	30/12/2005
	>> TPH SUITE <<	.		20/12/2005
	^M >> PAH SUITE <<	.		21/12/2005
307	^M naphthalene	< 0.50	mg/kg	23/12/2005
307	^M acenaphthylene	< 0.50	mg/kg	23/12/2005
307	^M acenaphthene	< 0.50	mg/kg	23/12/2005
307	^M fluorene	< 0.50	mg/kg	23/12/2005
307	^M phenanthrene	< 0.50	mg/kg	23/12/2005
307	^M anthracene	< 0.50	mg/kg	23/12/2005
307	^M fluoranthene	< 0.50	mg/kg	23/12/2005
307	^M pyrene	< 0.50	mg/kg	23/12/2005
307	^M benzo(a)anthracene	< 0.50	mg/kg	23/12/2005
307	^M chrysene	< 0.50	mg/kg	23/12/2005
307	^M benzo(b)fluoranthene	< 0.50	mg/kg	23/12/2005
307	^M benzo(k)fluoranthene	< 0.50	mg/kg	23/12/2005
307	^M benzo(a)pyrene	< 0.50	mg/kg	23/12/2005
307	^M dibenzo(ah)anthracene	< 0.50	mg/kg	23/12/2005
307	^M benzo(ghi)perylene	< 0.50	mg/kg	23/12/2005
307	^M indeno(123cd)pyrene	< 0.50	mg/kg	23/12/2005
307	^M PAH (Total)	5	mg/kg	23/12/2005
Comments				

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Site	Buckley Wells	Sample Type	SOIL
Sample ID:	HA3	Job:	LKA/D0921
Other ID:	0.00m	Sample No:	776611
Your Ref:	JB578	Your Order:	1309
Received:	19/12/2005		
Description	Black and brown loam with some gravel and occasional organic matter		

Method	Determination	Result	Units	Date of analysis
30/30C	^M Arsenic (Total)	46	mg/kg	04/01/2006
30	^M Cadmium (Total)	< 0.50	mg/kg	04/01/2006
30	^M Chromium (Total)	9.8	mg/kg	04/01/2006
30	^M Copper (Total)	130	mg/kg	04/01/2006
30	Lead (Total)	180	mg/kg	04/01/2006
30C	Mercury (Total)	< 0.20	mg/kg	04/01/2006
30	^M Nickel (Total)	38	mg/kg	04/01/2006
30C	^M Selenium (Total)	1.2	mg/kg	04/01/2006
30	^M Zinc (Total)	70	mg/kg	04/01/2006
39	^M pH	7.2	pH units	30/12/2005
	>> TPH SUITE <<	.		20/12/2005
	>>TPH RISK ASSESSMENT<<	.		21/12/2005
317R	>C6 to C8 aliphatic	2.3	mg/kg	28/12/2005
317R	>C8 to C10 aliphatic	4.1	mg/kg	28/12/2005
317R	>C10 to C12 aliphatic	3.0	mg/kg	28/12/2005
317R	>C12 to C16 aliphatic	6.4	mg/kg	28/12/2005
317R	>C16 to C21 aliphatic	6.8	mg/kg	28/12/2005
317R	>C21 TO C40 aliphatic	29	mg/kg	28/12/2005
317R	Total Aliphatic	51	mg/kg	28/12/2005
317R	>C5 to C7 aromatic	< 1.0	mg/kg	28/12/2005
317R	>C7 to C8 aromatic	< 1.0	mg/kg	28/12/2005
317R	>C8 to C10 aromatic	3.5	mg/kg	28/12/2005
317R	>C10 to C12 aromatic	3.5	mg/kg	28/12/2005
317R	>C12 to C16 aromatic	16	mg/kg	28/12/2005
317R	>C16 to C21 aromatic	28	mg/kg	28/12/2005
317R	>C21 TO C40 aromatic	110	mg/kg	28/12/2005
317R	Total Aromatic	170	mg/kg	28/12/2005
317R	Total EPH aliphatic/aromatic	220	mg/kg	28/12/2005
	^M >> PAH SUITE <<	.		21/12/2005
307	^M naphthalene	1.2	mg/kg	23/12/2005
307	^M acenaphthylene	< 0.50	mg/kg	23/12/2005
307	^M acenaphthene	< 0.50	mg/kg	23/12/2005
307	^M fluorene	< 0.50	mg/kg	23/12/2005
307	^M phenanthrene	1.8	mg/kg	23/12/2005

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Site	Buckley Wells	Sample Type	SOIL
Sample ID:	HA3	Job:	LKA/D0921
Other ID:	0.00m	Sample No:	776611
Your Ref:	JB578	Your Order:	1309
Received:	19/12/2005		
Description	Black and brown loam with some gravel and occasional organic matter		

Method	Determination	Result	Units	Date of analysis
307	^M anthracene	< 0.50	mg/kg	23/12/2005
307	^M fluoranthene	2.9	mg/kg	23/12/2005
307	^M pyrene	1.5	mg/kg	23/12/2005
307	^M benzo(a)anthracene	0.94	mg/kg	23/12/2005
307	^M chrysene	1.7	mg/kg	23/12/2005
307	^M benzo(b)fluoranthene	0.60	mg/kg	23/12/2005
307	^M benzo(k)fluoranthene	0.66	mg/kg	23/12/2005
307	^M benzo(a)pyrene	1.5	mg/kg	23/12/2005
307	^M dibenzo(ah)anthracene	< 0.50	mg/kg	23/12/2005
307	^M benzo(ghi)perylene	1.2	mg/kg	23/12/2005
307	^M indeno(123cd)pyrene	1.0	mg/kg	23/12/2005
307	^M PAH (Total)	16	mg/kg	23/12/2005

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Site	Buckley Wells	Sample Type	SOIL
Sample ID:	HA4	Job:	LKA/D0921
Other ID:	0.00m	Sample No:	776612
Your Ref:	JB578	Your Order:	1309
Received:	19/12/2005		
Description	Brown and black loam with some gravel and occasional organic matter		

Method	Determination	Result	Units	Date of analysis
30/30C	^M Arsenic (Total)	87	mg/kg	04/01/2006
30	^M Cadmium (Total)	1.4	mg/kg	04/01/2006
30	^M Chromium (Total)	32	mg/kg	04/01/2006
30	^M Copper (Total)	220	mg/kg	04/01/2006
30	Lead (Total)	410	mg/kg	04/01/2006
30C	Mercury (Total)	0.92	mg/kg	04/01/2006
30	^M Nickel (Total)	79	mg/kg	04/01/2006
30C	^M Selenium (Total)	1.7	mg/kg	04/01/2006
30	^M Zinc (Total)	300	mg/kg	04/01/2006
39	^M pH	7.6	pH units	30/12/2005
	>> TPH SUITE <<	.		20/12/2005
309	^M PCB (as Aroclors)	< 0.10	mg/kg	28/12/2005
	>>TPH RISK ASSESSMENT<<	.		21/12/2005
317R	>C6 to C8 aliphatic	2.5	mg/kg	28/12/2005
317R	>C8 to C10 aliphatic	5.1	mg/kg	28/12/2005
317R	>C10 to C12 aliphatic	3.6	mg/kg	28/12/2005
317R	>C12 to C16 aliphatic	7.6	mg/kg	28/12/2005
317R	>C16 to C21 aliphatic	8.3	mg/kg	28/12/2005
317R	>C21 TO C40 aliphatic	31	mg/kg	28/12/2005
317R	Total Aliphatic	58	mg/kg	28/12/2005
317R	>C5 to C7 aromatic	< 1.0	mg/kg	28/12/2005
317R	>C7 to C8 aromatic	< 1.0	mg/kg	28/12/2005
317R	>C8 to C10 aromatic	4.0	mg/kg	28/12/2005
317R	>C10 to C12 aromatic	4.3	mg/kg	28/12/2005
317R	>C12 to C16 aromatic	21	mg/kg	28/12/2005
317R	>C16 to C21 aromatic	36	mg/kg	28/12/2005
317R	>C21 TO C40 aromatic	130	mg/kg	28/12/2005
317R	Total Aromatic	190	mg/kg	28/12/2005
317R	Total EPH aliphatic/aromatic	250	mg/kg	28/12/2005
	^M >> PAH SUITE <<	.		21/12/2005
307	^M naphthalene	< 0.50	mg/kg	23/12/2005
307	^M acenaphthylene	< 0.50	mg/kg	23/12/2005
307	^M acenaphthene	< 0.50	mg/kg	23/12/2005
307	^M fluorene	< 0.50	mg/kg	23/12/2005

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Site	Buckley Wells	Sample Type	SOIL
Sample ID:	HA4	Job:	LKA/D0921
Other ID:	0.00m	Sample No:	776612
Your Ref:	JB578	Your Order:	1309
Received:	19/12/2005		
Description	Brown and black loam with some gravel and occasional organic matter		

Method	Determination	Result	Units	Date of analysis
307	^M phenanthrene	< 0.50	mg/kg	23/12/2005
307	^M anthracene	< 0.50	mg/kg	23/12/2005
307	^M fluoranthene	< 0.50	mg/kg	23/12/2005
307	^M pyrene	< 0.50	mg/kg	23/12/2005
307	^M benzo(a)anthracene	< 0.50	mg/kg	23/12/2005
307	^M chrysene	< 0.50	mg/kg	23/12/2005
307	^M benzo(b)fluoranthene	< 0.50	mg/kg	23/12/2005
307	^M benzo(k)fluoranthene	< 0.50	mg/kg	23/12/2005
307	^M benzo(a)pyrene	< 0.50	mg/kg	23/12/2005
307	^M dibenzo(ah)anthracene	< 0.50	mg/kg	23/12/2005
307	^M benzo(ghi)perylene	< 0.50	mg/kg	23/12/2005
307	^M indeno(123cd)pyrene	< 0.50	mg/kg	23/12/2005
307	^M PAH (Total)	< 2	mg/kg	23/12/2005
70	Asbestos Identification	ND		23/12/2005
70	Description of Sample*	SOIL/STONE		23/12/2005
Comments				

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ALcontrol Geochem Analytical Services

Sample Descriptions

Job Number: 07/06810/02/01

Client: Leyden Kirby Associates Limited

Client Ref : JB578

Grain sizes

<0.063mm Very Fine

0.1mm - 0.063mm Fine

0.1mm - 2mm Medium

2mm - 10mm Coarse

>10mm Very Coarse

[illegible]

* 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.

¹ Sample Description supplied by client

☒

11

» Shown on prev. report

Client Contact:Michelle Pickford

Date 14.05.2007

☒

11

» Shown on prev. report

Client Contact:Michelle Pickford

Date 14.05.2007

ALcontrol Geochem Analytical Services Table Of Results - Appendix

Job Number: 07/06810/02/01
Client: Leyden Kirby Associates Limited
Client Ref. No.: JB578

Report Key :

Results expressed as (e.g.) 1.03E-07 is equivalent to 1.03×10^{-7}

NDP	No Determination Possible	*	Subcontracted test
NFD	No Fibres Detected	»	Result previously reported (Incremental reports only)
#	ISO 17025 accredited	M	MCERTS Accredited
PFD	Possible Fibres Detected	EC	Equivalent Carbon (Aromatics C8-C35)

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

Summary of Method Codes contained within report :

[illegible]

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

ALcontrol Geochem Analytical Services Table Of Results - Appendix

Job Number: 07/06810/02/01
Client: Leyden Kirby Associates Limited
Client Ref. No.: JB578

Summary of Coolbox temperatures

[illegible]

Appendix F – Gas Monitoring Results

Landfill Gas Monitoring on 4th January 2006

Weather: raining Surface ground conditions: wet

Monitoring Equipment: GA2000

Ambient concentrations (% Volume) CH4: 0%, CO2: 0%, O2: 20.2%.

Barometric pressure: Start of visit 1010mb, end of visit 1024mb.

DataField CS - GA Mode Data Output

Device ID	Date/Time dd/mm/yy	CH4(%)	CO2(%)	O2(%)	PEAKCH4(%)	PEAKCO2(%)	MIN O2(%)	BARO(mb)	.PRESSURE	FLOW POD(l/h)	Dipmeter
JB578CP2	1/4/2006 12:16	0	4	17.1	0	4	17.2	1023	-0.2	0.7	3.1
JB578CP3	1/5/2006 14:24	0	0.5	20.4	0	0.5	20.3	1010	0.1	0.7	2.5
JB578BH1	1/5/2006 14:40	0	4.3	18.1	0	4.3	17.9	1010	0.07	0.9	0.8
JB578BH3	1/4/2006 12:08	0	0	20.3	0	0	20	1023	-0.12	0.5	0.9
JB578BH4	1/4/2006 12:03	0	0	19.1	0	0	19	1024	-0.16	0.3	0.8
JB578BH7	1/5/2006 14:20	0	3.8	18	0	3.8	18	1010	-0.08	0.3	4.7

RESULTS OF IN-SITU TESTS ON SAMPLES OF GAS WITHDRAWN FROM GAS MONITORING STANDPIPES

Hole Number	BH C1A
Date of Installation	08/02/1999
Depth of Installation	10.00 m *

Date	03/03/1999	03/03/1999	03/03/1999	03/03/1999		
Time	15:10:00	15:11:00	15:12:00	15:13:00		
Instrument No and Type	GA90 (1240)					
Atmospheric Pressure (millibars)	967	967	967	967		
Depth to Sampling Point (m)	0.00					
Depth to Water (m)	0.78					
Flow Rate (m/sec)	0.03 max 0.02 ave 0.01 min (1st min)	0.01 (3rd min)				
In-situ Differential Pressure (mm H2O) millibars	-0.4					
Flammable Gas as methane (CH4)	% LEL	<1	<1	<1	<1	
	% VOL	<0.1	<0.1	<0.1	<0.1	
Oxygen (O2)	% VOL	16.4	16.7	17.0	17.2	
Carbon Dioxide (CO2)	% VOL	5.5	4.9	4.5	4.2	
Hydrogen Sulphide (H2S)	ppm	-	-	-	-	
Gas Sample Taken	No					
Operator	IRK					
Ambient Temp. (Deg C)	5					
Downhole Temp. (Deg C)	N/A					
Weather	Overcast, showers, cool, moderate breeze.					
Remarks	Tap closed.			Gas analyser drawing water after 270 seconds - unable to continue.		

KEY: 'LEL' = Lower Explosive Limit '*' = depth to base as installed
'-' = not measured / not recorded '**' = depth to base as measured

112/01

		Input by SJR	Date 16/03/1999	Checked by SJR	Date 16/03/1999		
 FOUNDATION & EXPLORATION SERVICES		Project BUCKLEY WELLS LOCOMOTIVE DEPOT, BURY, LANCASHIRE				Contract No 4452	
						Figure No FT2/1 pg 1	

RESULTS OF IN-SITU TESTS ON SAMPLES OF GAS WITHDRAWN FROM GAS MONITORING STANDPIPES

Hole Number	BH C1A
Date of Installation	08/02/1999
Depth of Installation	10.00 m *

Date	03/03/1999	03/03/1999	03/03/1999	03/03/1999	03/03/1999	
Time	16:15:00	16:16:00	16:17:00	16:18:00	16:19:00	
Instrument No and Type	GA90 (1240)					
Atmospheric Pressure (millibars)	968	968	968	968	968	
Depth to Sampling Point (m)	0.00					
Depth to Water (m)	0.78					
Flow Rate (m/sec)	-					
In-situ Differential Pressure (mm H2O) millibars	-					
Flammable Gas as methane (CH4)	% LEL	<1	<1	<1	<1	<1
	% VOL	<0.1	<0.1	<0.1	<0.1	<0.1
Oxygen (O2)	% VOL	6.0	9.8	12.8	15.5	17.1
Carbon Dioxide (CO2)	% VOL	<0.1	<0.1	0.1	0.1	0.1
Hydrogen Sulphide (H2S)	ppm	-	-	-	-	-
Gas Sample Taken	Yes					
Operator	IRK					
Ambient Temp. (Deg C)	-					
Downhole Temp. (Deg C)	-					
Weather	Overcast, showers, cool, moderate breeze.					
Remarks	Readings taken 1hr after pruging with nitrogen.					

KEY: 'LEL' = Lower Explosive Limit
 - = not measured / not recorded
 ** = depth base as installed
 *** = depth base as measured

Input by SJR	Date 16/03/1999	Checked by SJR	16/03/1999	112/01
Project BUCKLEY WELLS LOCOMOTIVE DEPOT, BURY, LANCASHIRE			Contract No 4452	
			Figure No FT2/1 pg 2	

RESULTS OF IN-SITU TESTS ON SAMPLES OF GAS WITHDRAWN FROM GAS MONITORING STANDPIPES

Hole Number	BH C1A
Date of Installation	08/02/1999
Depth of Installation	10.00 m *

Date	11/03/1999	11/03/1999	11/03/1999	11/03/1999	11/03/1999	
Time	10:00:00	10:01:00	10:02:00	10:03:00	10:04:00	
Instrument No and Type	GA90 (1240)					
Atmospheric Pressure (millibars)	1005	1005	1005	1005	1005	
Depth to Sampling Point (m)	0.00					
Depth to Water (m)	1.03					
Flow Rate (m/sec)	<0.01 (1st min)					
In-situ Differential Pressure (mm H2O) millibars	-0.4					
Flammable Gas as methane (CH4)	% LEL	<1	<1	<1	<1	
	% VOL	<0.1	<0.1	<0.1	<0.1	
Oxygen (O2)	% VOL	18.8	19.1	19.2	19.3	
Carbon Dioxide (CO2)	% VOL	1.4	1.2	0.7	0.4	
Hydrogen Sulphide (H2S)	ppm	-	-	-	-	
Gas Sample Taken	No					
Operator	IRK					
Ambient Temp. (Deg C)	5					
Downhole Temp. (Deg C)	N/A					
Weather	Clear skies, bright, dry, cool, still.					
Remarks	Tap closed.					

KEY: 'LEL' = Lower Explosive Limit '*' = depth to base as installed
'-' = not measured / not recorded '**' = depth to base as measured

112/01

	Input by SJR	Date 16/03/1999	Checked by SJR	Date 16/03/1999		
 FOUNDATION & EXPLORATION SERVICES	Project BUCKLEY WELLS LOCOMOTIVE DEPOT, BURY, LANCASHIRE				Contract No 4452	
					Figure No FT2/1 pg 3	

RESULTS OF IN-SITU TESTS ON SAMPLES OF GAS WITHDRAWN FROM GAS MONITORING STANDPIPES

Hole Number	BH C3
Date of Installation	09/02/1999
Depth of Installation	5.00 m *

Date	03/03/1999		11/03/1999	11/03/1999		
Time	15:40:00		11:25:00	11:26:00		
Instrument No and Type	GA90 (1240)		GA90 (1240)			
Atmospheric Pressure (millibars)	968		1005	1005		
Depth to Sampling Point (m)	0.00		0.00			
Depth to Water (m)	0.73		0.87			
Flow Rate (m/sec)	-		0.02 max 0.01 ave <0.01 min (1st min)	<0.01 (3rd min)		
In-situ Differential Pressure (mm H2O) millibars	-		+0.7			
Flammable Gas as methane (CH4)	% LEL	<1	<1	<1		
	% VOL	<0.1	<0.1	<0.1		
Oxygen (O2)	% VOL	19.5	19.3	19.3		
Carbon Dioxide (CO2)	% VOL	<0.1	1.1	1.1		
Hydrogen Sulphide (H2S)	ppm	-	-	-		
Gas Sample Taken	No		No			
Operator	IRK		IRK			
Ambient Temp. (Deg C)	5		7			
Downhole Temp. (Deg C)	N/A		N/A			
Weather	Overcast, showers, cool, moderate breeze.		Overcast, dry, cool, still.			
Remarks	Tap open. Stopcock box cover vandalised (removed).	Gas analyser drawing water after 111 seconds - unable to continue.	Tap closed.	Gas analyser drawing water after 125 seconds - unable to continue.		

KEY: 'LEL' = Lower Explosive Limit
'-' = not measured / not recorded

'*' = depth to base as installed
'***' = depth to base as measured

Input by SJR	Date 16/03/1999	Checked by SJR	Date 16/03/1999	12/01	
Project BUCKLEY WELLS LOCOMOTIVE DEPOT, BURY, LANCASHIRE				Contract No 4452	
				Figure No FT2/2 pg 1	



RESULTS OF IN-SITU TESTS ON SAMPLES OF GAS WITHDRAWN FROM GAS MONITORING STANDPIPES

Hole Number	BH C4
Date of Installation	11/02/1999
Depth of Installation	14.00 m *

Date	03/03/1999	03/03/1999	03/03/1999	03/03/1999	03/03/1999	
Time	14:36:00	14:37:00	14:38:00	14:39:00	14:40:00	
Instrument No and Type	GA90 (1240)					
Atmospheric Pressure (millibars)	967	967	967	967	967	
Depth to Sampling Point (m)	0.00					
Depth to Water (m)	7.64					
Flow Rate (m/sec)	1.83 max 1.53 ave 1.23 min (1st min)	1.79 max 1.65 ave 1.50 min (3rd min)	1.55 max 1.50 ave 1.45 min (5th min)	Too Windy		
In-situ Differential Pressure (mm H2O) millibars	+0.0					
Flammable Gas as methane (CH4)	% LEL	<1	<1	<1	<1	
	% VOL	<0.1	<0.1	<0.1	<0.1	
Oxygen (O2)	% VOL	18.4	18.4	18.4	18.4	
Carbon Dioxide (CO2)	% VOL	1.1	1.1	1.2	1.2	1.3
Hydrogen Sulphide (H2S)	ppm	-	-	-	-	
Gas Sample Taken	No					
Operator	IRK					
Ambient Temp. (Deg C)	5					
Downhole Temp. (Deg C)	8					
Weather	Overcast, showers, cool, moderate breeze.					
Remarks	Tap closed.					

KEY: 'LEL' = Lower Explosive Limit
'-' = not measured / not recorded

'**' = depth to base as installed
'***' = depth to base as measured

112/01

	Input by SJR	Date 16/03/1999	Checked by SJR	Date 16/03/1999		
 FOUNDATION & EXPLORATION SERVICES	Project BUCKLEY WELLS LOCOMOTIVE DEPOT, BURY, LANCASHIRE				Contract No 4452	
					Figure No FT2/3 pg 1	

RESULTS OF IN-SITU TESTS ON SAMPLES OF GAS WITHDRAWN FROM GAS MONITORING STANDPIPES

Hole Number	BH C4
Date of Installation	11/02/1999
Depth of Installation	14.00 m *

Date	11/03/1999	11/03/1999	11/03/1999	11/03/1999	11/03/1999	
Time	15:10:00	15:11:00	15:12:00	15:13:00	15:14:00	
Instrument No and Type	GA90 (1240)					
Atmospheric Pressure (millibars)	1002	1002	1002	1002	1002	
Depth to Sampling Point (m)	0.00					
Depth to Water (m)	7.80					
Flow Rate (m/sec)	0.71 max 0.54 ave 0.36 min (1st min)	0.48 max 0.42 ave 0.33 min (3rd min)	0.44 max 0.39 ave 0.34 min (5th min)	0.34 max 0.33 ave 0.31 min (7th min)		
In-situ Differential Pressure (mm H2O) millibars	+0.1					
Flammable Gas as methane (CH4)	% LEL	<1	<1	<1	<1	
	% VOL	<0.1	<0.1	<0.1	<0.1	
Oxygen (O2)	% VOL	18.8	18.8	18.7	18.7	
Carbon Dioxide (CO2)	% VOL	1.1	1.1	1.1	1.1	
Hydrogen Sulphide (H2S)	ppm	-	-	-	-	
Gas Sample Taken	No					
Operator	IRK					
Ambient Temp. (Deg C)	9					
Downhole Temp. (Deg C)	-					
Weather	Overcast, dry, cool, still.					
Remarks	Tap closed.					

KEY:

'LEL' = Lower Explosive Limit

'-' = not measured / not recorded

'*' = depth to base as installed

'**' = depth to base as measured

Input by SJR	Date 16/03/1999	Checked by SJR	Date 16/03/1999	112/01
Project BUCKLEY WELLS LOCOMOTIVE DEPOT, BURY, LANCASHIRE				Contract No 4452
				Figure No FT2/3 pg 2



RESULTS OF IN-SITU TESTS ON SAMPLES OF GAS WITHDRAWN FROM GAS MONITORING STANDPIPES

Hole Number	BH C5
Date of Installation	12/02/1999
Depth of Installation	15.00 m *

Date		03/03/1999	03/03/1999	03/03/1999	03/03/1999	03/03/1999	
Time		13:35:00	13:36:00	13:37:00	13:38:00	13:39:00	
Instrument No and Type		GA90 (1240)					
Atmospheric Pressure (millibars)		967	967	967	967	967	
Depth to Sampling Point (m)		0.00					
Depth to Water (m)		7.65					
Flow Rate (m/sec)		2.32 max 2.29 ave 2.26 min (1st min)	2.66 max 2.44 ave 2.21 min (3rd min)	2.98 max 2.85 ave 2.71 min (5th min)	Too Windy		
In-situ Differential Pressure (mm H2O) millibars							
Flammable Gas as methane (CH4)	% LEL	<1	<1	<1	<1	<1	
	% VOL	<0.1	<0.1	<0.1	<0.1	<0.1	
Oxygen (O2)	% VOL	19.4	19.4	19.4	19.4	19.4	
Carbon Dioxide (CO2)	% VOL	0.4	0.4	0.4	0.4	0.4	
Hydrogen Sulphide (H2S)	ppm	-	-	-	-	-	
Gas Sample Taken		No					
Operator		IRK					
Ambient Temp. (Deg C)		6					
Downhole Temp. (Deg C)		7					
Weather		Overcast, showers, cool, moderate breeze.					
Remarks		Tap open.					

KEY: 'LEL' = Lower Explosive Limit
'-' = not measured / not recorded

'*' = depth to base as installed
'***' = depth to base as measured

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		Input by SJR	Date 16/03/1999	Checked by SJR	Date 16/03/1999		
 FOUNDATION & EXPLORATION SERVICES	Project BUCKLEY WELLS LOCOMOTIVE DEPOT, BURY, LANCASHIRE					Contract No 4452	
						Figure No FT2/4 pg 1	

RESULTS OF IN-SITU TESTS ON SAMPLES OF GAS WITHDRAWN FROM GAS MONITORING STANDPIPES

Hole Number	BH C5
Date of Installation	12/02/1999
Depth of Installation	15.00 m *

Date	11/03/1999	11/03/1999	11/03/1999	11/03/1999	11/03/1999	
Time	13:00:00	13:01:00	13:02:00	13:03:00	13:04:00	
Instrument No and Type	GA90 (1240)					
Atmospheric Pressure (millibars)	1003	1003	1003	1003	1003	
Depth to Sampling Point (m)	0.00					
Depth to Water (m)	7.85					
Flow Rate (m/sec)	0.87 max 0.67 ave 0.47 min (1st min)	0.47 max 0.44 ave 0.41 min (3rd min)	0.50 max 0.50 ave 0.51 min (5th min)	0.42 max 0.33 ave 0.24 min (7th min)		
In-situ Differential Pressure (mm H2O) millibars	+ 0.0					
Flammable Gas as methane (CH4)	% LEL	<1	<1	<1	<1	
	% VOL	<0.1	<0.1	<0.1	<0.1	
Oxygen (O2)	% VOL	19.0	19.0	19.0	19.0	
Carbon Dioxide (CO2)	% VOL	0.5	0.5	0.5	0.5	
Hydrogen Sulphide (H2S)	ppm	-	-	-	-	
Gas Sample Taken	No					
Operator	IRK					
Ambient Temp. (Deg C)	9					
Downhole Temp. (Deg C)	-					
Weather	Overcast, dry, cool, still.					
Remarks	Tap closed.					

KEY: 'LEL' = Lower Explosive Limit
'-' = not measured / not recorded

'*' = depth to base as installed
'**' = depth to base as measured

 FOUNDATION & EXPLORATION SERVICES	Input by	Date	Checked by	Date	112/01	
	SJR	16/03/1999	SJR	16/03/1999		
	Project				Contract No	
BUCKLEY WELLS LOCOMOTIVE DEPOT, BURY, LANCASHIRE				4452		
				Figure No		FT2/4 pg 2

RESULTS OF IN-SITU TESTS ON SAMPLES OF GAS WITHDRAWN FROM GAS MONITORING STANDPIPES

Hole Number	BH G1
Date of Installation	05/02/1999
Depth of Installation	15.00 m *

Date	03/03/1999	03/03/1999	03/03/1999	03/03/1999	03/03/1999	
Time	10:30:00	10:31:00	10:32:00	10:33:00	10:34:00	
Instrument No and Type	GA90 (1240)					
Atmospheric Pressure (millibars)	965	965	965	965	965	
Depth to Sampling Point (m)	0.00					
Depth to Water (m)	1.54					
Flow Rate (m/sec)	-					
In-situ Differential Pressure (mm H2O) millibars	+0.0					
Flammable Gas as methane (CH4)	% LEL	<1	<1	<1	<1	<1
	% VOL	<0.1	<0.1	<0.1	<0.1	<0.1
Oxygen (O2)	% VOL	20.1	20.1	20.1	20.2	20.2
Carbon Dioxide (CO2)	% VOL	<0.1	<0.1	<0.1	<0.1	<0.1
Hydrogen Sulphide (H2S)	ppm	-	-	-	-	-
Gas Sample Taken	No					
Operator	IRK					
Ambient Temp. (Deg C)	7					
Downhole Temp. (Deg C)	7					
Weather	Overcast, showers, cool, moderate breeze.					
Remarks	Tap closed.					

KEY: 'LEL' = Lower Explosive Limit
'-' = not measured / not recorded

'*' = depth to base as installed
'***' = depth to base as measured

112/01

	Input by SJR	Date 16/03/1999	Checked by SJR	Date 16/03/1999		
 FOUNDATION & EXPLORATION SERVICES	Project BUCKLEY WELLS LOCOMOTIVE DEPOT, BURY, LANCASHIRE				Contract No 4452	
					Figure No FT2/5 pg 1	

RESULTS OF IN-SITU TESTS ON SAMPLES OF GAS WITHDRAWN FROM GAS MONITORING STANDPIPES

Hole Number	BH G1
Date of Installation	05/02/1999
Depth of Installation	15.00 m *

Date		11/03/1999	11/03/1999	11/03/1999	11/03/1999	11/03/1999	
Time		08:25:00	08:26:00	08:27:00	08:28:00	00:00:00	
Instrument No and Type		GA90 (1240)					
Atmospheric Pressure (millibars)		1004	1004	1004	1004	1004	
Depth to Sampling Point (m)		0.00					
Depth to Water (m)		1.82					
Flow Rate (m/sec)		0.20 max 0.19 ave 0.17 min (1st min)	0.18 max 0.14 ave 0.09 min (3rd min)	0.07 max 0.06 ave 0.04 min (5th min)			
In-situ Differential Pressure (mm H2O) millibars		+0.0					
Flammable Gas as methane (CH4)	% LEL	<1	<1	<1	<1	<1	
	% VOL	<0.1	<0.1	<0.1	<0.1	<0.1	
Oxygen (O2)	% VOL	19.0	18.9	18.9	18.9	18.9	
Carbon Dioxide (CO2)	% VOL	0.7	0.8	0.8	0.8	0.8	
Hydrogen Sulphide (H2S)	ppm	-	-				
Gas Sample Taken		No					
Operator		IRK					
Ambient Temp. (Deg C)		6					
Downhole Temp. (Deg C)		-					
Weather		Clear skies, bright, dry, cool, still.					
Remarks		Tap closed.					

KEY: 'LEL' = Lower Explosive Limit '*' = depth to base as installed
 '-' = not measured / not recorded '**' = depth to base as measured

	Input by SJR	Date 16/03/1999	Checked by SJR	Date 16/03/1999		112/01
 FOUNDATION & EXPLORATION SERVICES	Project BUCKLEY WELLS LOCOMOTIVE DEPOT, BURY, LANCASHIRE				Contract No	4452
					Figure No	FT2/5 pg 2

RESULTS OF IN-SITU TESTS ON SAMPLES OF GAS WITHDRAWN FROM GAS MONITORING STANDPIPES

Hole Number	BH G4
Date of Installation	10/02/1999
Depth of Installation	12.00 m *

Date	03/03/1999	03/03/1999	03/03/1999	03/03/1999	03/03/1999	03/03/1999
Time	09:54:00	09:55:00	09:56:00	09:57:00	09:58:00	09:59:00
Instrument No and Type	GA90 (1240)					
Atmospheric Pressure (millibars)	965	965	964	964	964	964
Depth to Sampling Point (m)	0.00					
Depth to Water (m)	5.50					
Flow Rate (m/sec)	0.07 max 0.06 ave 0.05 min (1st min)	0.05 max 0.04 ave 0.02 min (3rd min)	0.02 max 0.02 ave 0.01 min (5th min)			
In-situ Differential Pressure (mm H2O) millibars	+ 0.0					
Flammable Gas as methane (CH4)	% LEL	68	70	64	72	76
	% VOL	3.4	3.5	3.2	3.6	3.8
Oxygen (O2)	% VOL	11.2	11.1	11.1	10.7	10.4
Carbon Dioxide (CO2)	% VOL	2.2	2.2	2.1	2.2	2.3
Hydrogen Sulphide (H2S)	ppm	-	-	-	-	-
Gas Sample Taken	No					
Operator	IRK					
Ambient Temp. (Deg C)	6					
Downhole Temp. (Deg C)	7					
Weather	Overcast, showers, cool, moderate breeze.					
Remarks	Tap open.					

KEY: 'LEL' = Lower Explosive Limit '*' = depth to base as installed
'-' = not measured / not recorded '***' = depth to base as measured

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Input by SJR	Date 16/03/1999	Checked by SJR	Date 16/03/1999	Contract No 4452
Project BUCKLEY WELLS LOCOMOTIVE DEPOT, BURY, LANCASHIRE				Figure No FT1/6 pg 1



RESULTS OF IN-SITU TESTS ON SAMPLES OF GAS WITHDRAWN FROM GAS MONITORING STANDPIPES

Hole Number	BH G4
Date of Installation	10/02/1999
Depth of Installation	12.00 m *

Date		03/03/1999	03/03/1999	03/03/1999	03/03/1999	03/03/1999	
Time		11:15:00	11:16:00	11:17:00	11:18:00	11:19:00	
Instrument No and Type		GA90 (1240)					
Atmospheric Pressure (millibars)		967	967	967	967	967	
Depth to Sampling Point (m)		0.00					
Depth to Water (m)		5.50					
Flow Rate (m/sec)		0.20 max 0.13 ave 0.06 min (1st min)	<0.01 (3rd min)				
In-situ Differential Pressure (mm H2O) millibars		-					
Flammable Gas as methane (CH4)	% LEL	6	6	8	8	10	
	% VOL	0.3	0.3	0.4	0.4	0.5	
Oxygen (O2)	% VOL	8.8	8.7	8.9	9.1	9.1	
Carbon Dioxide (CO2)	% VOL	0.8	0.9	1.0	1.1	1.2	
Hydrogen Sulphide (H2S)	ppm	-	-	-	-	-	
Gas Sample Taken		Yes					
Operator		IRK					
Ambient Temp. (Deg C)		-					
Downhole Temp. (Deg C)		-					
Weather		Overcast, showers, cool, moderate breeze.					
Remarks		Readings taken 1hr after pruging with nitrogen.					

KEY: 'LEL' = Lower Explosive Limit '*' = depth to base as installed
 '-' = not measured / not recorded '**' = depth to base as measured

	Input by SJR	Date 16/03/1999	Checked by SJR	Date 16/03/1999	112/01
 FOUNDATION & EXPLORATION SERVICES	Project BUCKLEY WELLS LOCOMOTIVE DEPOT, BURY, LANCASHIRE				Contract No 4452
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RESULTS OF IN-SITU TESTS ON SAMPLES OF GAS WITHDRAWN FROM GAS MONITORING STANDPIPES

Hole Number	BH G4
Date of Installation	10/02/1999
Depth of Installation	12.00 m *

Date	11/03/1999	11/03/1999	11/03/1999	11/03/1999	11/03/1999	11/03/1999
Time	12:30:00	12:31:00	12:32:00	12:33:00	12:34:00	12:35:00
Instrument No and Type	GA90 (1240)					
Atmospheric Pressure (millibars)	1004	1004	1003	1003	1003	1003
Depth to Sampling Point (m)	0.00					
Depth to Water (m)	7.72					
Flow Rate (m/sec)	0.04 max 0.02 ave <0.01 min (1st min)	<0.01 (3rd min)				
In-situ Differential Pressure (mm H2O) millibars	+0.0					
Flammable Gas as methane (CH4)	% LEL	126	132	124	122	116
	% VOL	6.3	6.6	6.2	6.1	5.8
Oxygen (O2)	% VOL	8.0	7.9	8.7	8.5	9.1
Carbon Dioxide (CO2)	% VOL	3.0	3.1	2.9	2.9	2.8
Hydrogen Sulphide (H2S)	ppm	-	-	-	-	-
Gas Sample Taken	No					
Operator	IRK					
Ambient Temp. (Deg C)	9					
Downhole Temp. (Deg C)	-					
Weather	Overcast, dry, cool, still.					
Remarks	Tap closed.					

KEY: 'LEL' = Lower Explosive Limit '*' = depth to base as installed
'-' = not measured / not recorded '***' = depth to base as measured

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	Input by SJR	Date 16/03/1999	Checked by SJR	Date 16/03/1999		
 FOUNDATION & EXPLORATION SERVICES	Project BUCKLEY WELLS LOCOMOTIVE DEPOT, BURY, LANCASHIRE				Contract No 4452	
					Figure No FT1/6 pg 3	

RESULTS OF IN-SITU TESTS ON SAMPLES OF GAS WITHDRAWN FROM GAS MONITORING STANDPIPES

Hole Number	BH G4
Date of Installation	10/02/1999
Depth of Installation	12.00 m *

Date	11/03/1999	11/03/1999	11/03/1999	11/03/1999	11/03/1999	
Time	14:05:00	14:06:00	14:07:00	14:08:00	14:09:00	
Instrument No and Type	GA90 (1240)					
Atmospheric Pressure (millibars)	1003	1002	1002	1002	1002	
Depth to Sampling Point (m)	0.00					
Depth to Water (m)	7.72					
Flow Rate (m/sec)	<0.01 (1st min)					
In-situ Differential Pressure (mm H2O) millibars	-					
Flammable Gas as methane (CH4)	% LEL	6	6	6	6	
	% VOL	0.3	0.3	0.3	0.3	
Oxygen (O2)	% VOL	7.2	8.7	8.7	8.7	
Carbon Dioxide (CO2)	% VOL	0.4	0.4	0.4	0.4	
Hydrogen Sulphide (H2S)	ppm	-	-	-	-	
Gas Sample Taken	Yes					
Operator	IRK					
Ambient Temp. (Deg C)	-					
Downhole Temp. (Deg C)	-					
Weather	Overcast, dry, cool, still.					
Remarks	Readings taken 1hr after pruging with nitrogen.					

KEY: 'EL' = Lower Explosive Limit
 '-' = not measured / not recorded
 '*' = depth to base as installed
 '**' = depth to base as measure



**FOUNDATION
& EXPLORATION
SERVICES**

Input by
SJR

Date
16/03/1999

Checked by
SJR

Date
16/03/1999

112/01

Project
BUCKLEY WELLS LOCOMOTIVE DEPOT,
BURY, LANCASHIRE

Contract No

4452

Figure No

FT1/6 pg 4

Landfill Gas Monitoring on 12th January 2006

Weather: raining Surface ground conditions: wet

Monitoring Equipment: GA2000

Ambient concentrations (% Volume) CH4: 0%, CO2: 0%, O2: 20.2%.

Barometric pressure: Start of visit 1010mb, end of visit 1024mb.

DataField CS - GA Mode Data Output

Device ID	Date/Time dd/mm/yy	CH4(%)	CO2(%)	O2(%)	PEAKCH4(%)	PEAKCO2(%)	MIN O2(%)	BARO(mb)	PRESSURE	FLOW	POD(l/h)	Dipmeter	H2S	CO
JB578CP2	1/12/2006 14:49	0	3	18.6	0	3	18.5	1012	0.98	1.6	4.8	0	0	
JB578CP3	1/12/2006 14:55	0	0.8	20.4	0	0.8	20.3	1012	0.31	1.7	3.1	0	0	
JB578BH1	1/12/2006 15:10	0	4.4	14.2	0	4.4	13.9	1012	0.01	1.8	1.1	0	0	
JB578BH3	1/12/2006 14:36	0	3.9	17	0	3.9	17	1012	-0.04	0.5	0.6	0	0	
JB578BH4	1/12/2006 14:41	0	0	20.6	0	0	20.5	1012	0.49	0.9	0.9	0	0	
JB578BH7	1/12/2006 14:52	0	3.8	17	0	3.8	16.9	1012	0.16	1.6	3.2	0	1	

Landfill Gas Monitoring on 20th January 2006

Weather: raining Surface ground conditions: wet

Monitoring Equipment: GA2000

Ambient concentrations (% Volume) CH4: 0%, CO2: 0%, O2: 20.2%.

Barometric pressure: Start of visit 1010mb, end of visit 1024mb.

DataField CS - GA Mode Data Output

Device ID	Date/Time dd/mm/yy	CH4(%)	CO2(%)	O2(%)	PEAKCH4(%)	PEAKCO2(%)	MIN O2(%)	BARO(mb)	PRESSURE	FLOW	POD(l/h)	Dipmeter	H2S	CO
JB578CP3	20/01/06 10:17:32	0	0.7	20.3	0	0.7	20.2	1001	0	0.5	2.8	0	0	
JB578BH1	20/01/06 10:25:50	0	4.4	15.5	0	4.5	15	1001	-0.09	0.5	1	0	0	
JB578BH3	20/01/06 10:01:19	0	4.2	16.7	0	4.2	16.7	1001	0.02	0.1	0.9	0	0	
JB578BH4	20/01/06 10:04:36	0	0	20.9	0	0	20.8	1001	-0.17	0.2	0.6	0	0	
JB578BH7	20/01/06 10:13:12	0	4.2	16.9	0	4.3	16.8	1001	-0.16	0.4	3.4	0	1	

Landfill Gas Monitoring on 25th January 2006

Weather: raining Surface ground conditions: wet

Monitoring Equipment: GA2000

Ambient concentrations (% Volume) CH4: 0%, CO2: 0%, O2: 20.2%.

Barometric pressure: Start of visit 1019mb, end of visit 1020mb.

DataField CS - GA Mode Data Output

Device ID	Date/Time dd/mm/yy	CH4(%)	CO2(%)	O2(%)	PEAKCH4(%)	PEAKCO2(%)	MIN O2(%)	BARO(mb)	PRESSURE	FLOW POD(l/h)	Dipmeter	H2S	CO
JB578CP2	25/01/06 14:22:05	0	2	18.9	0	2	18.8	1019	0.04	0.5	1.1	0	0
JB578CP3	25/01/06 14:29:33	0	0.4	20	0	0.5	19.9	1019	0.04	0.8	0.9	0	0
JB578BH1	25/01/06 14:13:16	0	4	17.1	0	4	17.1	1020	-0.11	0.1	3.7	0	0
JB578BH4	25/01/06 14:16:14	0	0	20.1	0	0	19.9	1019	0.26	0.2	2.8	0	0
JB578BH7	25/01/06 14:25:46	0	2.5	19.3	0	2.4	19.3	1019	-0.07	0.7	3.1	0	0

Landfill Gas Monitoring on 3rd February 2006

Weather: raining Surface ground conditions: wet

Monitoring Equipment: GA2000

Ambient concentrations (% Volume) CH4: 0%, CO2: 0%, O2: 20.2%.

Barometric pressure: Start of visit 1017mb, end of visit 1016mb.

DataField CS - GA Mode Data Output

Device ID	Date/Time dd/mm/yy	CH4(%)	CO2(%)	O2(%)	PEAKCH4(%)	PEAKCO2(%)	MIN O2(%)	BARO(mb)	PRESSURE	FLOW	POD(l/h)	Dipmeter	H2S	CO
JB578CP2	2/3/2006 14:07	0	0	20	0	0	19.9	1016	0.05	-0.1	4	0	0	
JB578CP3	2/3/2006 14:13	0	1.5	19.5	0	1.5	19.5	1016	-0.03	0.2	1.7	0	0	
JB578BH1	2/3/2006 13:58	0	0	18.3	0	3.8	17.7	1016	-0.04	0.1	1	0	0	
JB578BH3	2/3/2006 13:55	0	3.8	17.3	0	3.7	17.4	1017	-0.17	0	1.1	0	0	
JB578BH4	2/3/2006 14:03	0	0	19.7	0	0	19.6	1016	0.82	-0.3	1.4	0	0	
JB578BH7	2/3/2006 14:10	0	1.7	19.4	0	1.7	19.4	1016	-0.25	0.1	2.9	0	0	

Landfill Gas Monitoring on 10th February 2006

Weather: raining Surface ground conditions: wet

Monitoring Equipment: GA2000

Ambient concentrations (% Volume) CH4: 0%, CO2: 0%, O2: 20.2%.

Barometric pressure: Start of visit 1016mb, end of visit 1017mb.

DataField CS - GA Mode Data Output

Device ID	Date/Time dd/mm/yy	CH4(%)	CO2(%)	O2(%)	PEAKCH4(%)	PEAKCO2(%)	MIN O2(%)	BARO(mb)	PRESSURE	FLOW	POD(l/h)	Dipmeter	H2S	CO
JB578CP2	2/10/2006 11:48	0	0	20.7	0	0	20.6	1017	0.07	0.1	2.8	0	0	
JB578CP3	2/10/2006 11:56	0	0	20.6	0	0	20.5	1016	0.11	-0.7	2	0	0	
JB578BH1	2/10/2006 11:37	0	0	19.6	0	3.9	18	1016	-0.08	0.2	1.2	0	0	
JB578BH3	2/10/2006 11:34	0	3.9	17.8	0	3.9	17.8	1016	0.05	0.1	1	0	0	
JB578BH4	2/10/2006 11:40	0	0	20.6	0	0	20.5	1016	0.4	0.1	1.3	0	0	
JB578BH7	2/10/2006 11:52	0	3.3	18.8	0	3.2	19	1016	0.11	0	2.4	0	0	

Landfill Gas Monitoring on 16th February 2006

Weather: raining Surface ground conditions: wet

Monitoring Equipment: GA2000

Ambient concentrations (% Volume) CH4: 0%, CO2: 0%, O2: 20.2%.

Barometric pressure: Start of visit 969mb, end of visit 970mb.

DataField CS - GA Mode Data Output

Device ID	Date/Time dd/mm/yy	CH4(%)	CO2(%)	O2(%)	PEAKCH4(%)	PEAKCO2(%)	MIN O2(%)	BARO(mb)	PRESSURE	FLOW	POD(l/h)	Dipmeter	H2S	CO
JB578CP2	UNABLE TO ACCESS													
JB578CP3	16/02/06 10:45:30	0	1	20.7	0	1	20.7	970	0.17	-0.1	5.6	0	0	
JB578BH1	16/02/06 10:55:21	0	2	15.7	0	4.6	15.5	969	-0.01	0.1	2	0	0	
JB578BH3	16/02/06 10:23:32	0	3.9	17.2	0	3.9	17	970	2.44	0	2	0	1	
JB578BH4	16/02/06 10:27:51	0	0	20.8	0	0	20.6	969	-0.42	0.3	0.7	0	0	
JB578BH7	16/02/06 10:40:42	0	3.4	19.1	0	3.6	18.9	970	0.2	-0.4	6	0	0	

Landfill Gas Monitoring on 23rd February 2006

Weather: raining Surface ground conditions: very wet

Monitoring Equipment: GA2000

Ambient concentrations (% Volume) CH4: 0%, CO2: 0%, O2: 20.2%.

Barometric pressure: Start of visit 971mb, end of visit 972mb.

DataField CS - GA Mode Data Output

Device ID	Date/Time dd/mm/yy	CH4(%)	CO2(%)	O2(%)	PEAKCH4(%)	PEAKCO2(%)	MIN O2(%)	BARO(mb)	.PRESSURE	FLOW	POD(l/h)	Dipmeter	H2S	CO
JB578CP2	UNABLE TO ACCESS													
JB578CP3	23/2/2006 15:57	0	1	20.4	0	1	20.1	972	0.12	-0.2	4.1	0	0	
JB578BH1	23/2/2006 15:30	0	4.6	15.8	0	4.7	15.5	971	-0.01	0.2	1.8	0	0	
JB578BH3	23/2/2006 15:37	0	3	17.6	0	3.3	17	971	0.1	0	1.1	0	1	
JB578BH4	23/2/2006 15:40	0	0	20.6	0	0	19.8	972	0.3	0.5	0.6	0	0	
JB578BH7	23/2/2006 15:47	0	3.1	19.1	0	3.4	18.5	972	0.15	-0.1	5.1	0	0	

Landfill Gas Monitoring on 23rd March 2006

Weather: raining Surface ground conditions: wet

Monitoring Equipment: GA2000

Ambient concentrations (% Volume) CH4: 0%, CO2: 0%, O2: 20.2%.

Barometric pressure: Start of visit 1001mb, end of visit 1001mb.

DataField CS - GA Mode Data Output

Device ID	Date/Time dd/mm/yy	CH4(%)	CO2(%)	O2(%)	PEAKCH4(%)	PEAKCO2(%)	MIN O2(%)	BARO(mb)	PRESSURE	FLOW	POD(l/h)	Dipmeter	H2S	CO
JB578CP2	UNABLE TO ACCESS													
JB578CP3	23/3/2006 10:54	0	0	20.4	0	0	20.3	1001	0.01	-5.3	3.7		0	1
JB578BH1	23/3/2006 10:37	0	2.2	18.5	0	2.1	18.4	1001	-0.04	-0.2	1.5		0	0
JB578BH3	23/3/2006 10:40	0	1.8	18.7	0	2	18.7	1001	-0.21	-1.1	1.1		0	1
JB578BH4	23/3/2006 10:42	0	0	20.3	0	0	20.1	1001	-0.15	-0.9	0.5		0	2
JB578BH7	23/3/2006 10:49	0	2.4	18.9	0	2.5	18.8	1001	-0.24	-1.9	4.7		0	1

Landfill Gas Monitoring on 29th March 2006

Weather: raining Surface ground conditions: wet

Monitoring Equipment: GA2000

Ambient concentrations (% Volume) CH4: 0%, CO2: 0%, O2: 20.2%.

Barometric pressure: Start of visit 995mb, end of visit 994mb.

DataField CS - GA Mode Data Output

Device ID	Date/Time dd/mm/yy	CH4(%)	CO2(%)	O2(%)	PEAKCH4(%)	PEAKCO2(%)	MIN O2(%)	BARO(mb)	PRESSURE	FLOW POD(l/h)	Dipmeter	H2S	CO
JB578CP2	29/3/2006 10:58	0	0.4	19.6	0	0.4	19.6	995	-0.03	-1.6	7.2	0	0
JB578CP3	29/3/2006 10:50	0	0	20.3	0	0	20.1	995	0.05	-1.8	7.4	0	3
JB578BH1	29/3/2006 11:09	0	4	17.2	0	4	17.1	994	0.06	-0.8	1.9	0	2
JB578BH3	29/3/2006 10:28	0	2.4	16.9	0	2.4	16.8	995	0.57	-0.2	1.8	0	4
JB578BH4	29/3/2006 10:35	0	0	20.2	0	0	20	995	0.36	-1	0.6	0	5
JB578BH7	29/3/2006 10:43	0	2.6	17.9	0	2.6	17.8	995	0.05	-2	Dry @ 6.4	0	1

JB 578 Buckley Wells Gas Monitoring Summary

		CH4	CO2	O2	Flow	DIP	H2S	CO
JB578CP2	1/4/2006 12:16	0		4	17.1	0.7	3.1	
JB578CP2	1/12/2006 14:49	0		3	18.6	1.6	4.8	0
JB578CP2	25/01/06 14:22:05	0		2	18.9	0.5	1.1	0
JB578CP2	2/3/2006 14:07	0		0	20	-0.1	4	0
JB578CP2	2/10/2006 11:48	0		0	20.7	0.1	2.8	0
JB578CP2	29/3/2006 10:58	0		0.4	19.6	-1.6	7.2	0
	MIN	0		0	17.1	-1.6	1.1	0
	MAX	0		4	20.7	1.6	7.2	0
	MEAN	0	1.566667		19.15	0.2	3.833333	0
JB578CP3	1/5/2006 14:24	0		0.5	20.4	0.7	2.5	
JB578CP3	1/12/2006 14:55	0		0.8	20.4	1.7	3.1	0
JB578CP3	20/01/06 10:17:32	0		0.7	20.3	0.5	2.8	0
JB578CP3	25/01/06 14:29:33	0		0.4	20	0.8	0.9	0
JB578CP3	2/3/2006 14:13	0		1.5	19.5	0.2	1.7	0
JB578CP3	2/10/2006 11:56	0		0	20.6	-0.7	2	0
JB578CP3	16/02/06 10:45:30	0		1	20.7	-0.1	5.6	0
JB578CP3	23/2/2006 15:57	0		1	20.4	-0.2	4.1	0
JB578CP3	23/3/2006 10:54	0		0	20.4	-5.3	3.7	1
JB578CP3	29/3/2006 10:50	0		0	20.3	-1.8	7.4	3
	MIN	0		0	19.5	-5.3	1.7	0
	MAX	0		1.5	20.7	0.2	7.4	3
	MEAN	0	0.583333	20.31667	-1.316667	4.083333		0.666667
JB578BH1	1/5/2006 14:40	0		4.3	18.1	0.9	0.8	
JB578BH1	1/12/2006 15:10	0		4.4	14.2	1.8	1.1	0
JB578BH1	20/01/06 10:25:50	0		4.4	15.5	0.5	1	0
JB578BH1	2/3/2006 13:58	0		0	18.3	0.1	1	0
JB578BH1	2/10/2006 11:37	0		0	19.6	0.2	1.2	0
JB578BH1	16/02/06 10:55:21	0		2	15.7	0.1	2	0
JB578BH1	23/2/2006 15:30	0		4.6	15.8	0.2	1.8	0
JB578BH1	23/3/2006 10:37	0		2.2	18.5	-0.2	1.5	0
JB578BH1	29/3/2006 11:09	0		4	17.2	-0.8	1.9	2
	MIN	0		0	15.7	-0.8	1	0
	MAX	0		4.6	19.6	0.2	2	2
	MEAN	0	2.133333	17.51667	-0.066667	1.566667		0.333333
JB578BH3	1/4/2006 12:08	0		0	20.3	0.5	0.9	
JB578BH3	1/12/2006 14:36	0		3.9	17	0.5	0.6	0
JB578BH3	20/01/06 10:01:19	0		4.2	16.7	0.1	0.9	0
JB578BH3	25/01/06 14:13:16	0		4	17.1	0.1	3.7	0
JB578BH3	2/3/2006 13:55	0		3.8	17.3	0	1.1	0
JB578BH3	2/10/2006 11:34	0		3.9	17.8	0.1	1	0
JB578BH3	16/02/06 10:23:32	0		3.9	17.2	0	1.8	1
JB578BH3	23/2/2006 15:37	0		3	17.6	0	1.1	1
JB578BH3	23/3/2006 10:40	0		1.8	18.7	-1.1	1.1	1
JB578BH3	29/3/2006 10:28	0		2.4	16.9	-0.2	1.8	4
	MIN	0		1.8	16.9	-1.1	1	0
	MAX	0		3.9	18.7	0.1	1.8	4
	MEAN	0	3.133333	17.58333	-0.2	1.316667		1.166667

JB578BH4	1/4/2006 12:03	0	0	19.1	0.3	0.8		
JB578BH4	1/12/2006 14:41	0	0	20.6	0.9	0.9	0	0
JB578BH4	20/01/06 10:04:36	0	0	20.9	0.2	0.6	0	0
JB578BH4	25/01/06 14:16:14	0	0	20.1	0.2	2.8	0	0
JB578BH4	2/3/2006 14:03	0	0	19.7	-0.3	1.4	0	0
JB578BH4	2/3/2006 14:03	0	0	19.7	-0.3	1.4	0	0
JB578BH4	2/10/2006 11:40	0	0	20.6	0.1	1.3	0	0
JB578BH4	16/02/06 10:27:51	0	0	20.8	0.3	0.7	0	0
JB578BH4	23/2/2006 15:40	0	0	20.6	0.5	0.6	0	0
JB578BH4	23/3/2006 10:42	0	0	20.3	-0.9	0.5	0	2
JB578BH4	29/3/2006 10:35	0	0	20.2	-1	0.6	0	5
MIN		0	0	19.7	-1	0.5	0	0
MAX		0	0	20.8	0.5	1.4	0	5
MEAN		0	0	20.36667	-0.216667	0.85	0	1.166667

JB578BH7	1/5/2006 14:20	0	3.8	18	0.3	4.7		
JB578BH7	1/12/2006 14:52	0	3.8	17	1.6	3.2	0	1
JB578BH7	20/01/06 10:13:12	0	4.2	16.9	0.4	3.4	0	1
JB578BH7	25/01/06 14:25:46	0	2.5	19.3	0.7	3.1	0	0
JB578BH7	2/3/2006 14:10	0	1.7	19.4	0.1	2.9	0	0
JB578BH7	2/3/2006 14:10	0	1.7	19.4	0.1	2.9	0	0
JB578BH7	2/10/2006 11:52	0	3.3	18.8	0	2.4	0	0
JB578BH7	16/02/06 10:40:42	0	3.4	19.1	-0.4	6	0	0
JB578BH7	23/2/2006 15:47	0	3.1	19.1	-0.1	5.1	0	0
JB578BH7	23/3/2006 10:49	0	2.4	18.9	-1.9	4.7	0	1
JB578BH7	29/3/2006 10:43	0	2.6	17.9	-2 Dry @	6.4	0	1
MIN		0	1.7	17.9	-2	2.4	0	0
MAX		0	3.4	19.4	0.1	6	0	1
MEAN		0	2.75	18.86667	-0.716667	4.22	0	0.333333

Appendix G – Generic Assessment Criteria Values

Generic Assessment Criteria Values

Contaminant	SOM	Res +	Res -	Allot.	Comm.	pos resi	pos park	Source	
Metals	Inorganic Arsenic	N/A	37	40	49	640	79	168	DEFRA C4SL
	Beryllium	N/A	1.7	1.7	35	12	2.2	63	LQM S4UL
	Boron	N/A	290	11,000	45	240,000	21,000	46,000	LQM S4UL
	Cadmium	N/A	26	149	4.9	410	220	880	DEFRA C4SL
	Chromium (III)	N/A	910	910	18,000	8,600	1,500	33,000	LQM S4UL
	Chromium (VI)	N/A	21.0	21.0	170.0	49	23.0	250	DEFRA C4SL
	Copper	N/A	2,400	7,100	520	68,000	12,000	44,000	LQM S4UL
	Lead	N/A	200	310	80	2,330	630	1,300	DEFRA C4SL
	Elemental Mercury	N/A	1.2	1.2	21	58 (25.8) ^{vap}	16	30 (25.8) ^{vap}	LQM S4UL
	Inorganic Mercury	N/A	40	56	19	1,100	120	240	LQM S4UL
	Methylmercury	N/A	11	15	6.0	320	40	68	LQM S4UL
	Nickel	N/A	180	180	230	980	230	3,400	LQM S4UL
	Selenium	N/A	250	430	88	12,000	1,100	1,800	LQM S4UL
	Vanadium	N/A	410	1,200	91	9,000	2,000	5,000	LQM S4UL
	Zinc	N/A	3,700	40,000	620	730,000	81,000	170,000	LQM S4UL
Polycyclic Aromatic Hydrocarbons (PAHs)	Acenaphthene	1%	210	3,000 (57.1) ^{sol}	34	84,000 (57.0) ^{sol}	15,000	29,000	LQM S4UL
		2.5%	510	4,700 (141) ^{sol}	85	97,000 (141) ^{sol}	15,000	30,000	LQM S4UL
		6%	1,100	6,000 (336) ^{sol}	200	100,000	15,000	30,000	LQM S4UL
	Acenaphthylene	1%	170	2,900 (86.1) ^{sol}	28	83,000 (86.1) ^{sol}	15,000	29,000	LQM S4UL
		2.5%	420	4,600 (212) ^{sol}	69	97,000 (212) ^{sol}	15,000	30,000	LQM S4UL
		6%	920	6,000 (506) ^{sol}	160	100,000	15,000	30,000	LQM S4UL
	Anthracene	1%	2,400	31,000 (1.17) ^{vap}	380	520,000	74,000	150,000	LQM S4UL
		2.5%	5,400	35,000	950	540,000	74,000	150,000	LQM S4UL
		6%	11,000	37,000	2,200	540,000	74,000	150,000	LQM S4UL
	Benz(a)anthracene	1%	7.2	11	2.9	170	29	49	LQM S4UL
		2.5%	11	14	6.5	170	29	56	LQM S4UL
		6%	13	15	13	180	29	62	LQM S4UL
	Benzo(a)pyrene (only)	1%	5.0	5.3	5.70	77	10.0	21	DEFRA C4SL
		2.5%	5.0	5.3	5.70	77	10.0	21	DEFRA C4SL
		6%	5.0	5.3	5.70	77	10.0	21	DEFRA C4SL
	Benzo(b)fluoranthene	1%	2.6	3.9	0.99	44	7.1	13	LQM S4UL
		2.5%	3.3	4.0	2.1	44	7.2	15	LQM S4UL
		6%	3.7	4.0	3.9	45	7.2	16	LQM S4UL
	Benzo(ghi)perylene	1%	320	360	290	3,900	640	1,400	LQM S4UL
		2.5%	340	360	470	4,000	640	1,500	LQM S4UL
		6%	350	360	640	4,000	640	1,600	LQM S4UL
	Benzo(k)fluoranthene	1%	77	110	37	1,200	190	370	LQM S4UL
		2.5%	93	110	75	1,200	190	410	LQM S4UL
		6%	100	110	130	1,200	190	440	LQM S4UL
	Chrysene	1%	15	30	4.1	350	57	93	LQM S4UL
		2.5%	22	31	9.4	350	57	110	LQM S4UL
		6%	27	32	19	350	57	120	LQM S4UL
	Dibenzo(ah)anthracene	1%	0.24	0.31	0.14	3.5	0.57	1.1	LQM S4UL
		2.5%	0.28	0.32	0.27	3.6	0.58	1.3	LQM S4UL
		6%	0.3	0.32	0.43	3.6	0.58	1.4	LQM S4UL
	Fluoranthene	1%	280	1,500	52	23,000	3,100	6,300	LQM S4UL
		2.5%	560	1,600	130	23,000	3,100	6,300	LQM S4UL
		6%	890	1,600	290	23,000	3,100	6,400	LQM S4UL
	Fluorene	1%	170	2,800 (36.0) ^{sol}	27	63,000 (30.9) ^{sol}	9,900	20,000	LQM S4UL
		2.5%	400	3,800 (76.5) ^{sol}	67	68,000	9,900	20,000	LQM S4UL
		6%	860	4,500 (183) ^{sol}	160	71,000	9,900	20,000	LQM S4UL
	Indeno(123-cd)pyrene	1%	27	45	9.5	500	82	150	LQM S4UL
		2.5%	36	46	21	510	82	170	LQM S4UL
		6%	41	46	39	510	82	180	LQM S4UL
	Naphthalene	1%	2.3 ^f	2.3 ^f	4.1 ^f	190 ^f (76.4) ^{sol}	4,900 ^f	1,200 ^f (76.4) ^{sol}	LQM S4UL
		2.5%	5.6 ^f	5.6 ^f	10 ^f	460 ^f (183) ^{sol}	4,900 ^f	1,900 ^f (183) ^{sol}	LQM S4UL
		6%	13 ^f	13 ^f	24 ^f	1,100 ^f (432) ^{sol}	4,900 ^f	3,000	LQM S4UL
	Phenanthrene	1%	95	1,300 (36.0) ^{sol}	15	22,000	3,100	6,200	LQM S4UL
		2.5%	220	1,500	38	22,000	3,100	6,200	LQM S4UL
		6%	440	1,500	90	22,000	3,100	6,300	LQM S4UL
	Pyrene	1%	620	3,700	110	54,000	7,400	15,000	LQM S4UL
		2.5%	1,200	3,800	270	54,000	7,400	15,000	LQM S4UL
		6%	2,000	3,800	620	54,000	7,400	15,000	LQM S4UL
	Coal Tar (B(a)P as surrogate marker)	1%	0.79	1.2	0.32	15	2.2	4.4	LQM S4UL
		2.5%	0.98	1.2	0.67	15	2.2	4.7	LQM S4UL
		6%	1.1	1.2	1.2	15	2.2	4.8	LQM S4UL

Generic Assessment Criteria Values

Contaminant		SOM	Res +	Res -	Allot.	Comm.	POS _{resi}	POS _{park}	Source
BTEX Compounds	Benzene	1%	0.087	0.38	0.017	27	72	90	LQM S4UL
		2.5%	0.17	0.70	0.034	47	72	100	LQM S4UL
		6%	0.37	1.4	0.075	90	73	110	LQM S4UL
	Toluene	1%	130	880 (869) ^{vap}	22	56,000 (869) ^{vap}	56,000	87,000 (869) ^{vap}	LQM S4UL
		2.5%	290	1,900	51	110,000 (1,920) ^{vap}	56,000	95,000 (1,920)	LQM S4UL
		6%	660	3,900	120	180,000 (4,360) ^{vap}	56,000	100,000 (4,360)	LQM S4UL
	Ethylbenzene	1%	47	83	16	5,700 (518) ^{vap}	24,000	17,000 (518) ^{vap}	LQM S4UL
		2.5%	110	190	39	13,000 (1,220) ^{vap}	24,000	22,000 (1,220)	LQM S4UL
		6%	260	440	91	27,000 (2,840) ^{vap}	25,000	27,000 (2,840)	LQM S4UL
	o-xylene	1%	60	88	28	6,600 (478) ^{sol}	41,000	17,000 (478) ^{sol}	LQM S4UL
		2.5%	140	210	67	15,000 (1,120) ^{sol}	42,000	24,000 (1,120) ^{sol}	LQM S4UL
		6%	330	480	160	33,000 (2,620) ^{sol}	43,000	33,000 (2,620) ^{sol}	LQM S4UL
	m-xylene	1%	59	82	31	6,200 (625) ^{vap}	41,000	17,000 (625) ^{vap}	LQM S4UL
		2.5%	140	190	74	14,000 (1,470) ^{vap}	42,000	24,000 (1,470)	LQM S4UL
		6%	320	450	170	31,000 (3,460) ^{vap}	43,000	32,000 (3,460)	LQM S4UL
	p-xylene	1%	56	79	29	5,900 (576) ^{sol}	41,000	17,000 (576) ^{sol}	LQM S4UL
		2.5%	130	180	69	14,000 (1,350) ^{sol}	42,000	23,000 (1,350) ^{sol}	LQM S4UL
		6%	310	430	160	30,000 (3,170) ^{sol}	43,000	31,000 (3,170) ^{sol}	LQM S4UL
Aliphatic									
EC 5-6	1%	42	42	730	3,200 (304) ^{sol}	570,000(304) ^{sol}	95,000 (304) ^{sol}	LQM S4UL	
EC>6-8	1%	100	100	2,300	7,800 (144) ^{sol}	600,000	150,000 (144) ^{sol}	LQM S4UL	
EC>8-10	1%	27	27	320	2,000 (78) ^{sol}	13,000	14,000 (78) ^{vap}	LQM S4UL	
EC>10-12	1%	130 (48) ^{vap}	130 (48) ^{vap}	2,200	9,700 (48) ^{sol}	13,000	21,000 (48) ^{vap}	LQM S4UL	
EC>12-16	1%	1,100 (24) ^{sol}	1,100 (24) ^{sol}	11,000	59,000 (24) ^{sol}	13,000	25,000 (24) ^{sol}	LQM S4UL	
EC>16-35	1%	65,000 (8.48)	65,000 (8.48) ^{f, sol}	260,000 ^f	160,000 ^f	250,000 ^f	450,000 ^f	LQM S4UL	
EC>35-44	1%	65,000 (8.48)	65,000 (8.48) ^{f, sol}	260,000 ^f	160,000 ^f	250,000 ^f	450,000 ^f	LQM S4UL	
Aliphatic									
EC 5-6	2.5%	78	78	1,700	5,900 (558) ^{sol}	590,000	130,000 (558) ^{sol}	LQM S4UL	
EC>6-8	2.5%	230	230	5,600	17,000 (322) ^{sol}	610,000	220,000 (322) ^{sol}	LQM S4UL	
EC>8-10	2.5%	65	65	770	4,800 (190) ^{vap}	13,000	18,000 (190) ^{vap}	LQM S4UL	
EC>10-12	2.5%	330 (118) ^{vap}	330 (118) ^{vap}	4,400	23,000 (118) ^{vap}	13,000	23,000 (118) ^{vap}	LQM S4UL	
EC>12-16	2.5%	2,400 (59) ^{sol}	2,400 (59) ^{sol}	13,000	82,000 (59) ^{sol}	13,000	25,000 (59) ^{sol}	LQM S4UL	
EC>16-35	2.5%	92,000 (21)	92,000 (21) ^{f, sol}	270,000 ^f	1,700,000 ^f	250,000 ^f	480,000 ^f	LQM S4UL	
EC>35-44	2.5%	92,000 (21)	92,000 (21) ^{f, sol}	270,000 ^f	1,700,000 ^f	250,000 ^f	480,000 ^f	LQM S4UL	
Aliphatic									
EC 5-6	6%	160	160	3,900	12,000 (1,150) ^{sol}	600,000	180,000 (1,150)	LQM S4UL	
EC>6-8	6%	530	530	13,000	40,000 (736) ^{sol}	620,000	320,000 (736) ^{sol}	LQM S4UL	
EC>8-10	6%	150	150	1,700	11,000 (451) ^{vap}	13,000	21,000 (451) ^{vap}	LQM S4UL	
EC>10-12	6%	760 (283) ^{vap}	760 (283) ^{vap}	7,300	47,000 (283) ^{vap}	13,000	24,000 (283) ^{vap}	LQM S4UL	
EC>12-16	6%	4,300 (142) ^{sol}	4,400 (142) ^{sol}	13,000	90,000 (142) ^{sol}	13,000	26,000 (142) ^{sol}	LQM S4UL	
EC>16-35	6%	110,000 ^f	110,000 ^f	270,000 ^f	1,800,000 ^f	250,000 ^f	490,000 ^f	LQM S4UL	
EC>35-44	6%	110,000 ^f	110,000 ^f	270,000 ^f	1,800,000 ^f	250,000 ^f	490,000 ^f	LQM S4UL	
Aromatic									
EC5-7(benzene as	1%	70	370	13	26,000 (1,220) ^{sol}	56,000	76,000 (1,220) ^{sol}	LQM S4UL	
EC>7-8(toluene)	1%	130	860	22	56,000 (869) ^{vap}	56,000	87,000 (869) ^{vap}	LQM S4UL	
EC>8-10	1%	34	47	8.6	3,500 (613) ^{vap}	5,000	7,200 (613) ^{vap}	LQM S4UL	
EC>10-12	1%	74	250	13	16,000 (364) ^{sol}	5,000	9,200 (364) ^{sol}	LQM S4UL	
EC>12-16	1%	140	1,800	23	36,000 (169) ^{sol}	5,100	10,000	LQM S4UL	
EC>16-21	1%	260 ^f	1,900 ^f	46 ^f	28,000 ^f	3,800 ^f	7,600 ^f	LQM S4UL	
EC>21-35	1%	1,100 ^f	1,900 ^f	370 ^f	28,000 ^f	3,800 ^f	7,800 ^f	LQM S4UL	
EC>35-44	1%	1,100 ^f	1,900 ^f	370 ^f	28,000 ^f	3,800 ^f	7,800 ^f	LQM S4UL	
Aromatic									
EC5-7(benzene as	2.5%	140	690	27	46,000 (2,260) ^{sol}	56,000	84,000 (2,260) ^{sol}	LQM S4UL	
EC>7-8(toluene)	2.5%	290	1,800	51	110,000 (1,920) ^{sol}	56,000	95,000 (1,920) ^{sol}	LQM S4UL	
EC>8-10	2.5%	83	110	21	8,100 (1,500) ^{vap}	5,000	8,500 (1,500) ^{vap}	LQM S4UL	
EC>10-12	2.5%	180	590	31	28,000 (899) ^{sol}	5,000	9,700 (899) ^{sol}	LQM S4UL	
EC>12-16	2.5%	330	2,300 (419) ^{sol}	57	37,000	5,100	10,000	LQM S4UL	
EC>16-21	2.5%	540 ^f	1,900 ^f	110 ^f	28,000 ^f	3,800 ^f	7,700 ^f	LQM S4UL	
EC>21-35	2.5%	1,500 ^f	1,900 ^f	820 ^f	28,000 ^f	3,800 ^f	7,800 ^f	LQM S4UL	
EC>35-44	2.5%	1,500 ^f	1,900 ^f	820 ^f	28,000 ^f	3,800 ^f	7,800 ^f	LQM S4UL	
Aromatic									
EC5-7(benzene as	6%	300	1,400	57	86,000 (4,710) ^{sol}	56,000	92,000 (4,710) ^{sol}	LQM S4UL	
EC>7-8(toluene)	6%	660	3,900	120	180,000 (4,360) ^{vap}	56,000	100,000 (4,360)	LQM S4UL	
EC>8-10	6%	190	270	51	17,000 (3,580) ^{vap}	5,000	9,300 (3,580) ^{vap}	LQM S4UL	
EC>10-12	6%	380	1,200	4	34,000 (2,150) ^{sol}	5,000	10,000	LQM S4UL	
EC>12-16	6%	660	2,500	130	38,000	5,100	10,000	LQM S4UL	
EC>16-21	6%	930 ^f	1,900 ^f	260 ^f	28,000 ^f	3,800 ^f	7,800 ^f	LQM S4UL	
EC>21-35	6%	1,700 ^f	1,900 ^f	1,600 ^f	28,000 ^f	3,800 ^f	7,900 ^f	LQM S4UL	
EC>35-44	6%	1,700 ^f	1,900 ^f	1,600 ^f	28,000 ^f	3,800 ^f	7,900 ^f	LQM S4UL	
Aliphatic +Aromatic >EC44	1%	1,600 ^f	1,900 ^f	1,200 ^f	28,000 ^f	3,800 ^f	7,800 ^f	LQM S4UL	
	2.5%	1,800 ^f	1,900 ^f	2,100 ^f	28,000 ^f	3,800 ^f	7,800 ^f	LQM S4UL	
	6%	1,900 ^f	1,900 ^f	3,000 ^f	28,000 ^f	3,800 ^f	7,900 ^f	LQM S4UL	

Generic Assessment Criteria Values

Contaminant		SOM	Res +	Res -	Allot.	Comm.	POS _{resi}	POS _{park}	Source
Chloalkanes and Alkenes & Explosives	1,2 Dichloroethane (DCA)	1%	0.0071	0.0092	0.0046	0.67	29	21	LQM S4UL
		2.5%	0.0110	0.0130	0.0083	0.97	29	24	LQM S4UL
		6%	0.0190	0.0230	0.0160	1.7	29	28	LQM S4UL
	1,1,1 Trichloroethane (TCA)	1%	8.8	9.0	48	660	140,000	57,000 (1,425)	LQM S4UL
	Trichloroethane (TCA)	2.5%	18	18	110	1,300	140,000	76,000 (2,915)	LQM S4UL
		6%	39	40	240	3,000	140,000	100,000 (6,392)	LQM S4UL
	1,1,2,2-Tetrachloroethanes (PCA)	1%	1.6	3.9	0.41	270	1,400	1,800	LQM S4UL
		2.5%	3.4	8.0	0.89	550	1,400	2,100	LQM S4UL
		6%	7.5	17	2.0	1,100	1,400	2,300	LQM S4UL
	1,1,1,2-Tetrachloroethanes (PCA)	1%	1.2	1.5	0.79	110	1,400	1,500	LQM S4UL
		2.5%	2.8	3.5	1.9	250	1,400	1,800	LQM S4UL
		6%	6.4	8.2	4.4	560	1,400	2,100	LQM S4UL
	Tetrachloroethene (PCE)	1%	0.31	0.32	2.00	24	3,200	1400	DEFRA C4SL
		2.5%	0.70	0.71	4.8	55	3,300	1900	DEFRA C4SL
		6%	1.60	1.60	11.0	130	3,400	2,500	DEFRA C4SL
	Tetrachloromethane (carbon tetrachloride)	1%	0.03	0.03	0.45	2.9	890	190	LQM S4UL
		2.5%	0.06	0.06	1.0	6.3	920	270	LQM S4UL
		6%	0.13	0.13	2.4	14	950	400	LQM S4UL
	Trichloroethene (TCE)	1%	0.009	0.010	0.032	0.7	76.0	41.0	DEFRA C4SL
		2.5%	0.020	0.020	0.072	1.5	78.0	51.0	DEFRA C4SL
		6%	0.043	0.045	0.160	3.4	79.0	69.0	DEFRA C4SL
	Trichloromethane (chloroform)	1%	0.91	1.2	0.42	99	2,500	2,600	LQM S4UL
		2.5%	1.7	2.1	0.83	170	2,500	2,800	LQM S4UL
		6%	3.4	4.2	1.7	350	2,500	3,100	LQM S4UL
	Chloroethene (vinyl chloride)	1%	0.006	0.015	0.0017	1.1E+00	7.8	18.0	DEFRA C4SL
		2.5%	0.010	0.019	0.0031	1.4E+00	7.8	19.0	DEFRA C4SL
		6%	0.017	0.029	0.0058	2.20	7.8	19.0	DEFRA C4SL
	2,4,6-Trinitrotoluene (TNT)	1%	1.6	65	0.24	1,000	130	260	LQM S4UL
		2.5%	3.7	66	0.58	1,000	130	270	LQM S4UL
		6%	8.1	66	1.4	1,000	130	270	LQM S4UL
	RDX	1%	120	13,000	17	210,000	26,000	49,000 (18.7) ^{sol}	LQM S4UL
		2.5%	250	13,000	38	210,000	26,000	51,000	LQM S4UL
		6%	540	13,000	85	210,000	27,000	53,000	LQM S4UL
	HMX	1%	5.7	6,700	0.86	110,000	13,000	23,000 (0.35) ^{vap}	LQM S4UL
		2.5%	13	6,700	1.9	110,000	13,000	23,000 (0.39) ^{vap}	LQM S4UL
		6%	26	6,700	3.9	110,000	13,000	24,000 (0.48) ^{vap}	LQM S4UL
Pesticides	Aldrin	1%	5.7	7.3	3.2	170	18	30	LQM S4UL
		2.5%	6.6	7.4	6.1	170	18	31	LQM S4UL
		6%	7.1	7.5	9.8	170	18	31	LQM S4UL
	Dieldrin	1%	0.97	7.0	0.17	170	18	30	LQM S4UL
		2.5%	2.0	7.3	0.41	170	18	30	LQM S4UL
		6%	3.5	7.4	0.96	170	18	31	LQM S4UL
	Atrazine	1%	3.3	610	0.5	9,300	1,200	2,300	LQM S4UL
		2.5%	7.8	620	1.2	9,400	1,200	2,400	LQM S4UL
		6%	17.4	620	2.7	9,400	1,200	2,400	LQM S4UL
	Dichlorvos	1%	3.2E-02	6.4	4.9E-03	140	16	26	LQM S4UL
		2.5%	6.6E-02	6.5	1.0E-02	140	16	26	LQM S4UL
		6%	0.14	6.6	2.2E-02	140	16	27	LQM S4UL
	Endosulfanns (2 isomers)	1%	7.4	160 (3.0E-03) ^{vap}	1.2	5,600 (3.0E-03) ^{vap}	1,200	2,300	LQM S4UL
		2.5%	18	280 (7.0E-03) ^{vap}	2.9	7,400 (7.0E-03) ^{vap}	1,200	2,400	LQM S4UL
		6%	41	410 (1.6E-02) ^{vap}	6.8	8,400 (1.6E-02) ^{vap}	1,200	2,500	LQM S4UL
	Hexachlorocyclohexane (3 isomers), inc Lindane	1%	8.5E-02	3.7	1.3E-02	65	8.1	15	LQM S4UL
		2.5%	0.2	3.8	3.2E-02	65	8.1	15	LQM S4UL
		6%	0.46	3.8	7.7E-02	65	8.1	16	LQM S4UL
Chlorobenzenes	Chlorobenzene	1%	0.46	0.46	5.9	56	11,000	1,300 (675) ^{sol}	LQM S4UL
		2.5%	1.0	1.0	14	130	13,000	2,000 (1,520) ^{sol}	LQM S4UL
		6%	2.4	2.4	32	290	14,000	2,900	LQM S4UL
	Dichlorobenzenes (3 isomers)	1%	23	24	94	2,000 (571) ^{sol}	90,000	24,000 (571) ^{sol}	LQM S4UL
		2.5%	55	57	230	4,800 (1,370) ^{sol}	95,000	36,000 (1,370) ^{sol}	LQM S4UL
		6%	130	130	540	11,000 (3,240) ^{sol}	98,000	51,000 (3,270) ^{sol}	LQM S4UL
	Trichlorobenzenes (3 isomers)	1%	2.6	2.6	55	220	15,000	1,700 (318) ^{vap}	LQM S4UL
		2.5%	6.4	6.4	140	530	17,000	2,600 (786) ^{vap}	LQM S4UL
		6%	15	15	320	1,300	19,000	4,000 (1,880) ^{vap}	LQM S4UL
	Tetrachlorobenzenes (3 isomers)	1%	0.66	0.75	0.38	49 (39.4) ^{vap}	78	110 (39) ^{vap}	LQM S4UL
		2.5%	1.6	1.9	0.90	120 (98.1) ^{vap}	79	120	LQM S4UL
		6%	3.7	4.3	2.2	240 (235) ^{vap}	79	130	LQM S4UL
	Pentachlorobenzene	1%	5.8	19	1.2	640 (43.0) ^{sol}	100	190	LQM S4UL
		2.5%	12	30	3.1	770 (107) ^{sol}	100	190	LQM S4UL
		6%	22	38	7.0	830	100	190	LQM S4UL
	Hexachlorobenzene	1%	1.8 (0.20) ^{vap}	4.1 (0.20) ^{vap}	0.47	110 (0.20) ^{vap}	16	30	LQM S4UL
		2.5%	3.3 (0.50) ^{vap}	5.7 (0.50) ^{vap}	1.1	120	16	30	LQM S4UL
		6%	4.9	6.7 (1.2) ^{vap}	2.5	120	16	30	LQM S4UL

Generic Assessment Criteria Values

Contaminant		SOM	Res +	Res -	Allot.	Comm.	^{POS} resi	^{POS} park	Source
Chlorophenol	Chlorophenols (4 congeners)	1%	0.87 ^g	94	0.13 ^g	3,500	620	1,100	LQM S4UL
		2.5%	2.0	150	0.30	4,000	620	1,100	LQM S4UL
		6%	4.5	210	0.70	4,300	620	1,100	LQM S4UL
	Pentachlorophenol	1%	0.22	27 (16.4) ^{vap}	3.0E-02	400	60	110	LQM S4UL
		2.5%	0.52	29	8.0E-02	400	60	120	LQM S4UL
		6%	1.2	31	0.19	400	60	120	LQM S4UL
Others	Carbon Disulphide	1%	0.14	0.14	4.8	11	11,000	1,300	LQM S4UL
		2.5%	0.29	0.29	10	22	11,000	1,900	LQM S4UL
		6%	0.62	0.62	23	47	11,000	2,700	LQM S4UL
	Hexachlorobutadiene	1%	0.29	0.32	0.25	31	25	48	LQM S4UL
		2.5%	0.7	0.78	0.61	66	25	50	LQM S4UL
		6%	1.6	1.8	1.4	120	25	51	LQM S4UL
	Phenol	1%	280	750	66	760 ^{dir} (31,000)	760 ^{dir} (11,000)	760 ^{dir} (8,600)	LQM S4UL
		2.5%	550	1,300	140	1,500 ^{dir} (35,000)	1,500 ^{dir}	1,500 ^{dir} (9,700)	LQM S4UL
		6%	1,100	2,300	280	3,200 ^{dir} (37,000)	3,200 ^{dir}	3,200 ^{dir} (11,000)	LQM S4UL
sol/vap = solubility/vapour limit (potentially use if free product identified, although highly conservative)									
f=naphthalene is based on comparison of inhalation exposure with TDI(inhal) for localised effect									
f = oral, dermal and inhalation exposures compared to oral HCV									
dir = S4ULs based on threshold protective of direct skin contact with phenol)brackets long term exposure for illustration purposes)									
g = derived based on 2,3,4-tetrachlorophenol									

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