



WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin		Client: Gallagher Developments Group Ltd.		Window Sample: WS2	
Contract Ref: 340110	Start: 11.11.19 End: 11.11.19	Ground Level (m AOD): ---	National Grid Co-ordinate: E:519935.1 N:231239.0	Sheet: 1 of 1	

Progress	Samples / Tests				Water	Backfill & Instru- mentation	Description of Strata	Depth (Thick- ness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
							Firm dark brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse gravel is angular to sub-rounded fine to coarse chalk and flint (AGRICULTURAL TOPSOIL)	(0.30)	
							Firm light orangish brown slightly gravelly silty CLAY. Gravel is angular to sub-rounded fine to coarse chalk and flint (AGRICULTURAL TOPSOIL)	0.30	
							CHALK recovered as cream slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded.	0.50	
	1.00-1.45	1	SPT	N=34				(1.40)	
	1.70-1.90	2	SPT	N:50 for 195mm (SPT inferred = N:176.5)				1.90	
							Window sample hole refused at 1.90 m		

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	1. Position scanned with a CAT and Genny prior to excavation. 2. UXO checked before and during drilling. 3. Trial pit to 1.20 mbgl. 4. Refused at 1.70 mbgl. 5. No groundwater encountered. 6. Install to 1.70 mbgl.			
All dimensions in metres						Scale:	1:28		
Method Used:	Tracked window sampling		Plant Used:	Premier 110		Drilled By:	???	Logged By:	HSalkeld
						Checked By:			AGS



WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin		Client: Gallagher Developments Group Ltd.		Window Sample: WS3	
Contract Ref: 340110	Start: 12.11.19 End: 12.11.19	Ground Level (m AOD): ---	National Grid Co-ordinate: E:520091.5 N:231231.5	Sheet: 1 of 1	

Progress	Samples / Tests				Water	Backfill & Instru- mentation	Description of Strata	Depth (Thick- ness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
							Firm dark brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse gravel is angular to sub-rounded fine to coarse chalk and flint (AGRICULTURAL TOPSOIL)	0.20	
	1.00-1.45	1	SPT	N=16			CHALK recovered as cream slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded. Locally light orangish brown with trace of brown clay	(1.80)	
	2.00-2.45	2	SPT	N=20			CHALK recovered as cream slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded. Rare orangish brown staining	2.00	
	3.00-3.45	3	SPT	N=29				(2.45)	
	4.00-4.45	4	SPT	N=39				4.45	
							Window sample hole terminated at 4.0 m		

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	1. Position scanned with a CAT and Genny prior to excavation. 2. UXO checked before and during drilling. 3. Trial pit to 1.20 mbgl. 4. No groundwater encountered. 5. Install to 4.00 mbgl			
Method Used: Tracked window sampling		Plant Used: Premier 110		Drilled By: ???	Logged By: HSalkeld	All dimensions in metres		Scale: 1:28	Checked By:



WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin		Client: Gallagher Developments Group Ltd.		Window Sample: WS4	
Contract Ref: 340110	Start: 11.11.19 End: 11.11.19	Ground Level (m AOD): ---	National Grid Co-ordinate: E:519861.1 N:231168.4	Sheet: 1 of 1	

Progress	Samples / Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
	1.00-1.42	1	SPT	N:50 for 270mm (SPT inferred = N:55.5)			Firm dark brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse gravel is angular to sub-rounded fine to coarse chalk and flint (AGRICULTURAL TOPSOIL) Firm light orangish brown slightly gravelly silty CLAY. Gravel is angular to sub-rounded fine to coarse chalk and flint (AGRICULTURAL TOPSOIL) CHALK recovered as light orangish brown slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded. CHALK recovered as cream slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded. Window sample hole refused at 1.42 m	(0.30) 0.30 0.40 0.60 (0.82) 1.42	       

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	1. Position scanned with a CAT and Genny prior to excavation. 2. UXO checked before and during drilling. 3. On completion, borehole backfilled with arisings. 4. Refused at 1.00 mbgl. 5. No groundwater encountered.			
						All dimensions in metres			
Method Used: Tracked window sampling		Plant Used: Premier 110		Drilled By: ???	Logged By: HSalkeld	Scale: 1:28	Checked By:		



WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin		Client: Gallagher Developments Group Ltd.		Window Sample: WS5	
Contract Ref: 340110		Start: 12.11.19 End: 12.11.19	Ground Level (m AOD): 72.86	National Grid Co-ordinate: E:520013.9 N:231155.4	Sheet: 1 of 1

Progress	Samples / Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
	1.00-1.45	1	SPT	N=15			Firm dark brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse gravel is angular to sub-rounded fine to coarse chalk and flint (AGRICULTURAL TOPSOIL) CHALK recovered as cream slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded	(0.30) 0.30	 
	2.00-2.37	2	SPT	N:50 for 215mm (SPT inferred = N:69.8)				(2.07) 2.37	                 
							Window sample hole refused at 2.37 m		

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	1. Position scanned with a CAT and Genny prior to excavation. 2. UXO checked before and during drilling. 3. Trial pit to 1.20 mbgl. 4. On completion, borehole backfilled with arisings. 5. Refused at 2.00 mbgl. 6. No groundwater encountered.			
						All dimensions in metres			
Method Used: Tracked window sampling		Plant Used: Premier 110		Drilled By: ???		Logged By: HSalkeld		Checked By: AGS	



WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin		Client: Gallagher Developments Group Ltd.		Window Sample: WS6	
Contract Ref: 340110	Start: 11.11.19 End: 11.11.19	Ground Level (m AOD): 74.92	National Grid Co-ordinate: E:520162.1 N:231159.0	Sheet: 1 of 1	

Progress	Samples / Tests				Water	Backfill & Instru- mentation	Description of Strata	Depth (Thick- ness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
							Firm brown sandy silty CLAY. Sand is fine (AGRICULTURAL TOPSOIL)	(0.30)	
							Firm orangish brown slightly gravelly slightly sandy silty CLAY. Sand is fine to coarse gravel is sub-angular to sub-rounded fine to coarse chalk and flint (AGRICULTURAL TOPSOIL)	0.30 (0.30)	
	1.00-1.45	1	SPT	N=27			CHALK recovered as light orangish brown slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded	0.60 (1.11)	
	1.50-1.71	2	SPT	N:50 for 115mm (SPT inferred = N:130.4)			Window sample hole refused at 1.71 m	1.71	

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	- Position scanned with a CAT and Genny prior to excavation. - UXO checked before and during drilling. - Trial pit to 1.20 mbgl. - No groundwater encountered. - Refused at 1.50 mbgl. - Install to 1.50 mbgl.			
						All dimensions in metres			
Method Used: Tracked window sampling		Plant Used: Premier 110		Drilled By: ???	Logged By: HSalkeld	Scale: 1:28	Checked By:		



WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin		Client: Gallagher Developments Group Ltd.		Window Sample: WS7
Contract Ref: 340110	Start: 11.11.19 End: 11.11.19	Ground Level (m AOD): 72.59	National Grid Co-ordinate: E:519936.6 N:231082.4	Sheet: 1 of 1

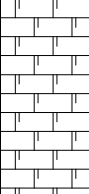
Progress	Samples / Tests				Water	Backfill & Instru-mentation	Description of Strata	Depth (Thick-ness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
							Firm brown sandy silty CLAY. Sand is fine (AGRICULTURAL TOPSOIL)	(0.30)	
							Firm orangish brown slightly gravelly sandy silty CLAY. Sand is fine to coarse gravel is sub-angular to sub-rounded fine to coarse chalk and flint (AGRICULTURAL TOPSOIL)	0.30 (0.30) 0.60	
	1.00-1.45	1	SPT	N=27			CHALK recovered as cream slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded	(1.44)	
	1.80-2.04	2	SPT	N:50 for 93mm (SPT inferred = N:161.3)			Window sample hole refused at 2.04 m	2.04	

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	- Position scanned with a CAT and Genny prior to excavation. - UXO checked before and during drilling. - Trial pit to 1.20 mbgl. - No groundwater encountered. - Refused at 1.80 mbgl. - Install to 1.80 mbgl.			
						All dimensions in metres Scale: 1:28			
Method Used:	Tracked window sampling		Plant Used:	Premier 110		Drilled By:	???	Logged By:	HSalkeld
						Checked By:			



WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin		Client: Gallagher Developments Group Ltd.		Window Sample: WS8	
Contract Ref: 340110	Start: 11.11.19 End: 11.11.19	Ground Level (m AOD): 74.56	National Grid Co-ordinate: E:520049.6 N:231090.2	Sheet: 1 of 1	

Progress	Samples / Tests				Water	Backfill & Instru-mentation	Description of Strata	Depth (Thick-ness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
	1.00-1.32	1	SPT	N:50 for 170mm (SPT inferred = N:88.2)			Firm brown sandy silty CLAY. Sand is fine (AGRICULTURAL TOPSOIL) Firm orangish brown slightly gravelly slightly sandy silty CLAY. Sand is fine to coarse gravel is sub-angular to sub-rounded fine to coarse chalk and flint (AGRICULTURAL TOPSOIL) CHALK recovered as cream slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded.	(0.30) 0.30 (0.30) 0.60 (0.72) 1.32	  
							Window sample hole refused at 1.32 m		

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)				
						1. Position scanned with a CAT and Genny prior to excavation. 2. UXO checked before and during drilling. 3. No groundwater encountered. 4. Refused at 1.00 mbgl. 5. Install to 1.00 mbgl.			
All dimensions in metres						Scale:	1:28		
Method Used:	Tracked window sampling		Plant Used:	Premier 110		Drilled By:	???	Logged By:	HSalkeld
						Checked By:			



WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin		Client: Gallagher Developments Group Ltd.		Window Sample: WS9	
Contract Ref: 340110	Start: 11.11.19 End: 11.11.19	Ground Level (m AOD): 76.69	National Grid Co-ordinate: E:520160.9 N:231087.1	Sheet: 1 of 1	

Progress	Samples / Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
							Firm brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse gravel is angular to sub-rounded fine to coarse chalk and flint (AGRICULTURAL TOPSOIL)	(0.30)	
							Firm light brown slightly sandy silty CLAY. Sand is fine (AGRICULTURAL TOPSOIL)	(0.40)	
							CHALK recovered as cream slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded	(1.36)	
	1.00-1.45	1	SPT	N=41					
	1.70-2.06	2	SPT	N:50 for 205mm (SPT inferred = N:73.2)					
							Window sample hole refused at 2.06 m		

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)				
						1. Position scanned with a CAT and Genny prior to excavation. 2. UXO checked before and during drilling. 3. Trial pit to 1.20 mbgl. 4. On completion, borehole backfilled with arisings. 5. Refused at 1.70 mbgl. 6. No groundwater encountered.			
All dimensions in metres						Scale:	1:28		
Method Used:	Tracked window sampling		Plant Used:	Premier 110		Drilled By:	???	Logged By:	HSalkeld
						Checked By:			



WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin		Client: Gallagher Developments Group Ltd.		Window Sample: WS10	
Contract Ref: 340110	Start: 06.11.19 End: 06.11.19	Ground Level (m AOD): 72.52	National Grid Co-ordinate: E:519776.9 N:231011.3	Sheet: 1 of 1	

Progress	Samples / Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
	1.00-1.37	1	SPT	N:50 for 220mm (SPT inferred = N:68.2)			Firm brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse gravel is angular to sub-rounded fine to coarse chalk and flint (AGRICULTURAL TOPSOIL) Firm light orangish brown slightly gravelly silty CLAY. Gravel is angular to sub-rounded fine to coarse chalk and flint (LOWESTOFT FORMATION) CHALK recovered as cream slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded.	(0.30) 0.30 0.50 (0.87) 1.37	
							Window sample hole refused at 1.37 m		

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)				
						1. Position scanned with a CAT and Genny prior to excavation. 2. UXO checked before and during drilling. 3. On completion, borehole backfilled with arisings. 4. Refused at 1.00 mbgl. 5. No groundwater encountered.			
All dimensions in metres						Scale:	1:28		
Method Used:	Tracked window sampling		Plant Used:	Premier 110		Drilled By:	???	Logged By:	HSalkeld
						Checked By:			



Progress	Samples / Tests				Water	Backfill	Description of Strata	Depth (Thick ness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
	1.00-1.45	1	SPT	N=19			Firm brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse gravel is angular to sub-rounded fine to coarse chalk and flint (AGRICULTURAL TOPSOIL)	(0.30)	
							0.30		
							0.50		
							(0.50)		
							1.00		
	2.00-2.45	2	SPT	N=18			CHALK recovered as cream slightly sandy slightly silty GRAVEL. Gravel is very weak low density with occasional black specks and rounded.	1.20	
							CHALK recovered as cream slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded. Orange-brown staining		
							CHALK recovered as cream slightly gravelly sandy SILT. Gravel is weak low density with occasional black specks and rounded		
									
									
3.00-3.45	3	SPT	N=14		(3.23)				
									
									
									
									
4.00-4.43	4	SPT	N:50 for 280mm (SPT inferred = N:53.6)		4.43				
				Window sample hole refused at 4.43 m					

SINT_LIBRARY_v8_07.GLB LibVersion: v8_07 | ProjVersion: v8_07 | Log WINDOW SAMPLE LOG - A4P | 340110_HITCHIN.GPU - v8_07.
 24/12/19 - 13:25 [CAW] |



WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin		Client: Gallagher Developments Group Ltd.		Window Sample: WS12	
Contract Ref: 340110	Start: 11.11.19 End: 11.11.19	Ground Level (m AOD): 75.65	National Grid Co-ordinate: E:520010.4 N:231014.6	Sheet: 1 of 1	

Progress	Samples / Tests				Water	Backfill & Instrumentation	Description of Strata	Depth (Thickness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
	1.00-1.45	1	SPT	N=36			Firm brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse gravel is angular to sub-rounded fine to coarse chalk and flint (AGRICULTURAL TOPSOIL)	(0.30)	
							Firm orangish brown slightly gravelly slightly sandy silty CLAY. Sand is fine to coarse gravel is sub-angular to sub-rounded fine to coarse chalk and flint (AGRICULTURAL TOPSOIL)	(0.30)	
							CHALK recovered as cream slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded	(1.55)	
	1.80-2.15	2	SPT	N:50 for 200mm (SPT inferred = N:75)				2.15	
							Window sample hole refused at 2.15 m		

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)				
						1. Position scanned with a CAT and Genny prior to excavation. 2. UXO checked before and during drilling. 3. Trial pit to 1.20 mbgl. 4. No groundwater encountered. 5. Refused at 1.80 mbgl. 6. Install to 1.80 mbgl.			
All dimensions in metres						Scale:	1:28		
Method Used:	Tracked window sampling		Plant Used:	Premier 110		Drilled By:	???	Logged By:	HSalkeld
						Checked By:			



WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin		Client: Gallagher Developments Group Ltd.		Window Sample: WS13	
Contract Ref: 340110	Start: 11.11.19 End: 11.11.19	Ground Level (m AOD): 78.40	National Grid Co-ordinate: E:520159.7 N:231014.2	Sheet: 1 of 1	

Progress	Samples / Tests				Water	Backfill	Description of Strata	Depth (Thick ness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
							Firm brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse gravel is angular to sub-rounded fine to coarse chalk and flint (AGRICULTURAL TOPSOIL)	(0.30)	
							CHALK recovered as cream slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded	0.30	
	1.00-1.45	1	SPT	N=20					
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									
									



WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin			Client: Gallagher Developments Group Ltd.		Window Sample: WS14
Contract Ref: 340110	Start: 06.11.19 End: 06.11.19	Ground Level (m AOD): 73.51	National Grid Co-ordinate: E:519705.6 N:230932.7		Sheet: 1 of 1

Progress	Samples / Tests				Water	Backfill & Instru-mentation	Description of Strata	Depth (Thick-ness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
							Firm brown slightly gravelly slightly sandy silty CLAY. Sand is fine to coarse gravel is sub-angular to sub-rounded fine to medium chalk and flint (AGRICULTURAL TOPSOIL)	(0.30) 0.30	
							Stiff light orangish brown gravelly silty CLAY. Gravel is angular to sub-rounded fine to coarse chalk and flint (LOWESTOFT FORMATION)	(0.70) 1.00	
	1.00-1.45	1	SPT	N=24			Stiff mottled light grey and orangish brown gravelly silty CLAY. Gravel is angular to sub-rounded fine to coarse chalk and flint with black specks (LOWESTOFT FORMATION)	(1.20) 2.20	
	2.00-2.45	2	SPT	N=16			Stiff mottled dark grey and brown gravelly silty CLAY. Gravel is sub-angular to sub-rounded fine to coarse flint and chalk. (LOWESTOFT FORMATION)	(2.25) 4.45	
	3.00-3.45	3	SPT	N=19					
	4.00-4.45	4	SPT	N=23					
							Window sample hole terminated at 4.45 m depth.		

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	1. Position scanned with a CAT and Genny prior to excavation. 2. UXO checked before and during drilling. 3. Trial pit to 1.20 mbgl. 4. No groundwater encountered. 5. Install to 4.00 mbgl			
Method Used: Tracked window sampling						All dimensions in metres		Scale: 1:28	
Plant Used: Premier 110			Drilled By: ???		Logged By: HSalkeld	Checked By:			



Progress	Samples / Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
							Firm orangish brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse gravel is sub-angular to sub-rounded fine to medium chalk and flint (AGRICULTURAL TOPSOIL)	(0.30) 0.30	
	1.00-1.42	1	SPT	N:50 for 270mm (SPT inferred = N:55.6)			CHALK recovered as cream slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded. With occasional orange-brown staining	(1.12) 1.42	
							Window sample hole refused at 1.42 m		

SINT_LIBRARY_v8_07.GLB LibVersion: v8_07 | ProjVersion: v8_07 | Log WINDOW SAMPLE LOG - A4P | 340110_HITCHIN.GPU - v8_07.
 24/12/19 - 13:25 [CAW] |



WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin		Client: Gallagher Developments Group Ltd.		Window Sample: WS16	
Contract Ref: 340110	Start: 07.11.19 End: 07.11.19	Ground Level (m AOD): 77.92	National Grid Co-ordinate: E:520084.5 N:230939.0	Sheet: 1 of 1	

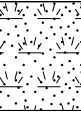
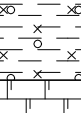
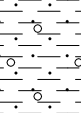
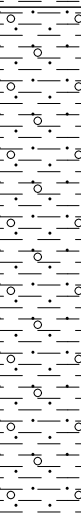
Progress	Samples / Tests				Water	Backfill & Instru-mentation	Description of Strata	Depth (Thick-ness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
	1.00-1.40	1	SPT	N:50 for 250mm (SPT inferred = N:60)			Firm orangish brown slightly gravelly slightly sandy CLAY. Sand is fine to coarse gravel is sub-angular to sub-rounded fine to medium chalk and flint (AGRICULTURAL TOPSOIL) CHALK recovered as cream slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded. With occasional orange-brown staining	(0.30) 0.30 (1.10) 1.40	 
							Window sample hole refused at 1.40 m		

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	1. Position scanned with a CAT and Genny prior to excavation. 2. UXO checked before and during drilling. 3. No groundwater encountered. 4. Refused at 1.00 mbgl. 5. Install to 1.00 mbgl.			
Method Used: Tracked window sampling						All dimensions in metres		Scale: 1:28	
Plant Used: Premier 110			Drilled By: ???		Logged By: HSalkeld		Checked By:		



WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin			Client: Gallagher Developments Group Ltd.		Window Sample: WS17	
Contract Ref: 340110		Start: 07.11.19 End: 07.11.19	Ground Level (m AOD): 81.07	National Grid Co-ordinate: E:520234.9 N:230946.9	Sheet: 1 of 1	

Progress	Samples / Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
							Firm brown gravelly slightly sandy silty CLAY. Sand is fine to coarse gravel is sub-angular to sub-rounded fine to coarse flint and chalk (AGRICULTURAL TOPSOIL)	(0.40)	
							Firm orangish brown slightly gravelly silty CLAY. Gravel is angular to sub-rounded fine to medium flint and chalk (LOWESTOFT FORMATION)	(0.30)	
	1.00-1.45	1	SPT	N=25			CHALK recovered as cream slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded. (LOWESTOFT FORMATION)	(0.80)	
							Very stiff orangish brown slightly gravelly fine to coarse sandy CLAY. Gravel is sub-angular to sub-rounded fine to medium flint and chalk (LOWESTOFT FORMATION)	(0.50)	
	2.00-2.45	2	SPT	N=19			Very stiff brown gravelly slightly fine to coarse sandy CLAY. Gravel is sub-angular to sub-rounded fine to coarse flint chalk and ironstone nodules with occasional black specks. Occasional silty sand lenses (LOWESTOFT FORMATION)	(1.90)	
	3.00-3.45	3	SPT	N=21			CHALK recovered as cream slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded.	(0.40)	
	4.00-4.30	4	SPT	N:50 for 190mm (SPT inferred = N:79)			Window sample hole terminated at 4.30 m depth		

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)				
						1. Position scanned with a CAT and Genny prior to excavation. 2. UXO checked before and during drilling. 3. Trail pit to 1.2 mbgl. 4. Refused at 4.00 mbgl. 5. On completion, borehole backfilled with arisings. 6. No groundwater encountered.			
Method Used: Tracked window sampling						All dimensions in metres		Scale: 1:28	
Plant Used: Premier 110			Drilled By: ???		Logged By: HSalkeld	Checked By:			



WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin		Client: Gallagher Developments Group Ltd.		Window Sample: WS18	
Contract Ref: 340110	Start: 06.11.19 End: 06.11.19	Ground Level (m AOD): 73.76	National Grid Co-ordinate: E:519711.0 N:230860.8	Sheet: 1 of 1	

Progress	Samples / Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
	1.00-1.41	1	SPT	N=32			Firm brown slightly gravelly slightly sandy silty CLAY. Sand is fine to coarse gravel is sub-angular to sub-rounded fine chalk with occasional flint (AGRICULTURAL TOPSOIL)	(0.30) 0.30	
							Firm to stiff orangish brown gravelly silty CLAY with rootlets. Gravel is sub-angular to sub-rounded fine flint (LOWESTOFT FORMATION)	(0.30) 0.60	
							Stiff light orangish brown dessicated gravelly CLAY. Gravel is sub-angular to sub-rounded fine to coarse chalk and flint (LOWESTOFT FORMATION)	(0.40) 1.00	
	2.00-2.45	2	SPT	N=21			Very stiff becoming stiff mottled brownish grey and orange brown gravelly CLAY. Gravel is sub-angular to sub-rounded flint and chalk (LOWESTOFT FORMATION)	(3.45)	
	3.00-3.45	3	SPT	N=18					
	4.00-4.45	4	SPT	N=21					
							Window sample hole terminated at 4.45 m depth.	4.45	

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	1. Position scanned with a CAT and Genny prior to excavation. 2. UXO checked before and during drilling. 3. On completion, borehole backfilled with arisings. 4. No groundwater encountered.			
Method Used: Tracked window sampling						All dimensions in metres		Scale: 1:28	
Plant Used: Premier 110			Drilled By: ???		Logged By: HSalkeld	Checked By:			



WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin		Client: Gallagher Developments Group Ltd.		Window Sample: WS19	
Contract Ref: 340110	Start: 07.11.19 End: 07.11.19	Ground Level (m AOD): 77.39	National Grid Co-ordinate: E:519999.1 N:230841.3	Sheet: 1 of 1	

Progress	Samples / Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
	1.00-1.45	1	SPT	N=20			Firm brown gravelly slightly sandy silty CLAY. Sand is fine to coarse gravel is sub-angular to sub-rounded fine to coarse flint and chalk (AGRICULTURAL TOPSOIL) CHALK recovered as light orange brown and cream slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded CHALK recovered as light orange brown and cream slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded	0.20 (0.60) 0.80 (1.60)	
	2.00-2.40	2	SPT	N:50 for 245mm (SPT inferred = N:61.2)			Window sample hole refused at 2.40 m	2.40	

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)				
						1. Position scanned with a CAT and Genny prior to excavation. 2. UXO checked before and during drilling. 3. Trial pit to 1.20 mbgl. 4. On completion, borehole backfilled with arisings. 5. Refused at 2.00 mbgl. 6. No groundwater encountered.			
All dimensions in metres						Scale:	1:28		
Method Used:	Tracked window sampling		Plant Used:	Premier 110		Drilled By:	???	Logged By:	HSalkeld
						Checked By:			



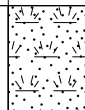
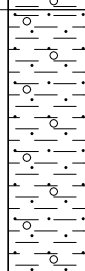
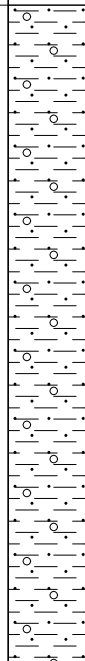
WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin			Client: Gallagher Developments Group Ltd.		Window Sample: WS20
Contract Ref: 340110	Start: 07.11.19 End: 07.11.19	Ground Level (m AOD): 71.50	National Grid Co-ordinate: E:519657.0 N:230800.9		Sheet: 1 of 1

Progress		Samples / Tests			Water	Backfill & Instrumentation	Description of Strata	Depth (Thickness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
							Firm brown gravelly slightly sandy silty CLAY. Sand is fine to coarse gravel is sub-angular to sub-rounded fine to coarse flint and chalk (AGRICULTURAL TOPSOIL)	(0.40)	
							Stiff light orangish brown and creamy slightly gravelly silty CLAY. Gravel is sub-angular to sub-rounded fine chalk with occasional flint. Occasional fine sand lenses (LOWESTOFT FORMATION)	0.40 (0.40) 0.80	
	1.00-1.45	1	SPT	N=24			Stiff mottled orange orangish brown and brown gravelly silty CLAY. Gravel is sub-angular to rounded fine to coarse chalk and flint (LOWESTOFT FORMATION)	(2.20)	
	2.00-2.45	2	SPT	N=22					
	3.00-3.45	3	SPT	N=21			Stiff mottled orangish brown and brown gravelly silty CLAY with black specks. Gravel sub-angular to rounded fine to coarse chalk (LOWESTOFT FORMATION)	3.00 (1.45)	
	4.00-4.45	4	SPT	N=25				4.45	
							Window sample hole terminated at 4.45 m depth.		

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	1. Position scanned with a CAT and Genny prior to excavation. 2. UXO checked before and during drilling. 3. Trial pit to 1.20 mbgl. 4. No groundwater encountered. 5. Install to 4.00 mbgl.			
						All dimensions in metres Scale: 1:28			
Method Used:	Tracked window sampling		Plant Used:	Premier 110		Drilled By:	???	Logged By:	HSalkeld
						Checked By:			



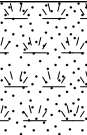
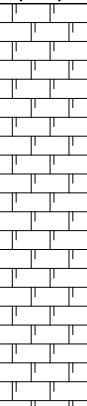
Progress	Samples / Tests				Water	Backfill	Description of Strata	Depth (Thick ness)	Material Graphic Legend	
Window Run	Depth	No	Type	Results						
	1.00-1.45	1	SPT	N=9			Firm dark brown to black gravelly sandy CLAY. Sand is fine to coarse gravel is sub-angular to sub-rounded fine to coarse flint chalk brick and concrete (AGRICULTURAL TOPSOIL)	(0.40)		
							0.40			
							Firm white and light brown very gravelly slightly sandy CLAY. Sand is fine to coarse gravel is sub-angular to sub-rounded fine to coarse flint and chalk (LOWESTOFT FORMATION)	(0.40)		
							0.80			
							Firm orangish brown very gravelly slightly sandy CLAY. Sand is fine to coarse gravel is sub-angular to sub-rounded fine to coarse flint and chalk (LOWESTOFT FORMATION)	1.00		
	2.00-2.45	2	SPT	N=18				Firm orangish brown very gravelly slightly sandy CLAY. Sand is fine to coarse gravel is sub-angular to sub-rounded fine to coarse flint and chalk (LOWESTOFT FORMATION)	(1.00)	
							2.00			
	3.00-3.45	3	SPT	N=17			Stiff brown occasionally mottled orange brown very gravelly slightly sandy CLAY. Sand is fine to coarse gravel is sub-angular to sub-rounded fine to coarse flint and chalk with occasional fragments of brick (LOWESTOFT FORMATION)	(2.45)		
	4.00-4.45	4	SPT	N=24						
								4.45		

SINT_LIBRARY_v8_07.GLB LibVersion: v8_07 | ProjVersion: v8_07 | Log WINDOW SAMPLE LOG - A4P | 340110_HITCHIN.GPU - v8_07.
 24/12/19 - 13:25 [CAW] |



WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin			Client: Gallagher Developments Group Ltd.		Window Sample: WS22
Contract Ref: 340110	Start: 07.11.19 End: 07.11.19	Ground Level (m AOD): 76.32	National Grid Co-ordinate: E:520080.1 N:230792.1		Sheet: 1 of 1

Progress	Samples / Tests				Water	Backfill & Instru-mentation	Description of Strata	Depth (Thick-ness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
							Firm brown gravelly slightly sandy silty CLAY. Sand is fine to coarse gravel is sub-angular to sub-rounded fine to coarse flint and chalk (AGRICULTURAL TOPSOIL)	(0.50)	
	1.00-1.33	1	SPT	N:50 for 180mm (SPT inferred = N:83.3)			CHALK recovered as cream slightly gravelly sandy SILT. Gravel is very weak low density with occasional black specks and rounded. Occasional orange brown staining	(1.50)	
							Window sample hole refused at 2.00 m	2.00	

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	1. Position scanned with a CAT and Genny prior to excavation. 2. UXO checked before and during drilling. 4. Refused at 1.00 mbgl. 5. No groundwater encountered. 6. Install to 1.00 mbgl.			
Method Used: Tracked window sampling						All dimensions in metres		Scale: 1:28	
Plant Used: Premier 110			Drilled By: ???		Logged By: HSalkeld	Checked By:			



WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin		Client: Gallagher Developments Group Ltd.		Window Sample: WS23	
Contract Ref: 340110	Start: 11.11.19 End: 11.11.19	Ground Level (m AOD): 72.00	National Grid Co-ordinate: E:519711.0 N:230710.1	Sheet: 1 of 2	

Progress	Samples / Tests				Water Backfill & Instrumentation	Description of Strata	Depth (Thickness)	Material Graphic Legend
Window Run	Depth	No	Type	Results				
						Firm orangish brown silty CLAY with rootlets (AGRICULTURAL TOPSOIL)	(0.40)	
						Stiff light orangish brown and cream slightly gravelly silty CLAY. Gravel is sub-angular to sub-rounded fine chalk with occasional flint. Occasional orangish brown fine sand lenses (LOWESTOFT FORMATION)	0.40	
	1.00-1.45	1	SPT	N=26			(2.60)	
	2.00-2.45	2	SPT	N=15				
	3.00-3.45	3	SPT	N=26		Stiff greyish brown and light brown gravelly slightly sandy silty CLAY. Sand is fine to coarse gravel is sub-angular to rounded chalk and flint (LOWESTOFT FORMATION)	3.00	
	4.00-4.45	4	SPT	N=24			(1.40)	
						Stiff grey becoming dark grey gravelly silty CLAY. Gravel is sub-angular to rounded chalk and flint (LOWESTOFT FORMATION)	4.40	

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	1. Position scanned with a CAT and Genny prior to excavation. 2. UXO checked before and during drilling. 3. Trial pit to 1.20 mbgl. 4. No groundwater encountered. 5. Install to 6.00 mbgl.			
						All dimensions in metres			
Method Used: Tracked window sampling		Plant Used: Premier 110		Drilled By: ???	Logged By: HSalkeld	Scale: 1:28	Checked By:		



WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin			Client: Gallagher Developments Group Ltd.		Window Sample: WS23
Contract Ref: 340110	Start: 11.11.19 End: 11.11.19	Ground Level (m AOD): 72.00	National Grid Co-ordinate: E:519711.0 N:230710.1		Sheet: 2 of 2

Progress	Samples / Tests				Water Backfill & Instrumentation	Description of Strata	Depth (Thickness)	Material Graphic Legend
Window Run	Depth	No	Type	Results				
	5.00-5.45	5	SPT	N=23		Stiff grey becoming dark grey gravelly silty CLAY. Gravel is sub-angular to rounded chalk and flint (LOWESTOFT FORMATION) (stratum copied from 4.40m from previous sheet)	(2.05)	
	6.00-6.45	6	SPT	N=27			6.45	
						Window sample hole terminated at 6.45 m depth.		

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)				
						All dimensions in metres		Scale: 1:28	
Method Used: Tracked window sampling	Plant Used: Premier 110			Drilled By: ???	Logged By: HSalkeld	Checked By:			



WINDOW SAMPLE LOG

Contract: Highover Farm, Hitchin			Client: Gallagher Developments Group Ltd.		Window Sample: WS24
Contract Ref: 340110	Start: 11.11.19 End: 11.11.19	Ground Level (m AOD): 77.37	National Grid Co-ordinate: E:519942.5 N:230726.8		Sheet: 1 of 1

Progress		Samples / Tests			Water	Backfill & Instru- mentation	Description of Strata	Depth (Thick- ness)	Material Graphic Legend
Window Run	Depth	No	Type	Results					
							Firm brown slightly gravelly slightly sandy silty CLAY. Sand is fine to coarse gravel is sub-angular to sub-rounded fine to medium flint and chalk (AGRICULTURAL TOPSOIL)	(0.40) 0.40	
	1.00-1.45	1	SPT	N=20			Firm orangish brown gravelly sandy CLAY with occasional silt partings. Sand is fine to coarse gravel is angular to sub-rounded fine to coarse flint and chalk (LOWESTOFT FORMATION)	(1.10) 1.50	
	2.00-2.45	2	SPT	N=24			Stiff or very stiff brown gravelly slightly sandy CLAY. Sand is fine to coarse gravel is angular to sub-rounded fine to coarse flint and chalk (LOWESTOFT FORMATION)	(2.95) 4.45	
	3.00-3.45	3	SPT	N=28					
	4.00-4.45	4	SPT	N=14					
							Window sample hole terminated at 4.45 m		

Drilling Progress and Water Observations						General Remarks			
Date	Time	Borehole Depth (m)	Casing Depth (m)	Borehole Diameter (mm)	Water Depth (m)	1. Position scanned with a CAT and Genny prior to excavation. 2. UXO checked before and during drilling. 3. Trial pit to 1.20 mbgl. 4. Water seepage at 4.00 m depth. 5. Install to 4.00 mbgl.			
						All dimensions in metres		Scale:	1:28
Method Used:	Tracked window sampling		Plant Used:	Premier 110		Drilled By:	???	Logged By:	HSalkeld
								Checked By:	



APPENDIX G

GROUND GAS AND GROUNDWATER MONITORING DATA

IN-SITU GAS MONITORING RESULTS

	Start Date	End Date	Previous	Pressures During	Start	End	Equipment Used & Remarks
Round 1	18/11/2019	18/11/2019	-	Fluctuating	1008	1007	Weather: Cloudy Ground: Wet Air Temp: 5°C
Round 2	28/11/2019	28/11/2019	-	Fluctuating	985	987	Weather: Light rain Ground: Wet Air Temp: 10°C
Round 3	06/12/2019	06/12/2019	-	Fluctuating	996	992	Weather: Strong wind, light rain Ground: Wet Air Temp: 11°C
Round 4	13/12/2019	13/12/2019	-	Fluctuating	970	973	Weather: Overcast Ground: Wet Air Temp: 6°C
Round 5	20/12/2019	20/12/2019	-	Fluctuating	969	969	Weather: Rain Ground: Wet Air Temp: 9°C
Round 6	24/12/2019	24/12/2019	-	Fluctuating	998	998	Weather: Overcast Ground: Wet Air Temp: 10°C

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
BH1	1	50	1	20.00	19.18	1.00 to 20.00	18/11/2019 09:50:00	1007	1008	0.0 _(l)	16.85	0.1	0.0	20.9	0.0	0	0
BH1	1	50	1		19.18	1.00 to 20.00	15 secs	1007	1008	0.0 _(ss)	16.85	0.2	0.0	20.6	0.0	0	0
BH1	1	50	1		19.18	1.00 to 20.00	30 secs	1007	1008	0.0 _(ss)	16.85	0.3	0.0	20.1	0.0	0	0
BH1	1	50	1		19.18	1.00 to 20.00	60 secs	1007	1008	0.0 _(ss)	16.85	0.4	0.0	19.5	0.0	0	0
BH1	1	50	1		19.18	1.00 to 20.00	90 secs	1007	1008	0.0 _(ss)	16.85	0.4	0.0	19.2	0.0	0	0
BH1	1	50	1		19.18	1.00 to 20.00	120 secs	1007	1008	0.0 _(ss)	16.85	0.4	0.0	19.1	0.0	0	0
BH1	1	50	1		19.18	1.00 to 20.00	180 secs	1007	1008	0.0 _(ss)	16.85	0.5	0.0	18.9	0.0	0	0
BH1	1	50	1		19.18	1.00 to 20.00	240 secs	1007	1008	0.0 _(ss)	16.85	0.5	0.0	18.9	0.0	0	0
BH1	1	50	1		19.18	1.00 to 20.00	300 secs	1007	1008	0.0 _(ss)	16.85	0.5	0.0	18.9	0.0	0	0
BH1	1	50	2	20.00	19.16	1.00 to 20.00	28/11/2019 09:35:00	986	985	0.0 _(l)	16.84	0.1	0.0	20.9	0.0	0	0
BH1	1	50	2		19.16	1.00 to 20.00	15 secs	986	985	0.0 _(ss)	16.84	0.7	0.0	19.6	0.0	0	0
BH1	1	50	2		19.16	1.00 to 20.00	30 secs	986	985	0.0 _(ss)	16.84	0.7	0.0	18.7	0.0	0	0
BH1	1	50	2		19.16	1.00 to 20.00	60 secs	986	985	0.0 _(ss)	16.84	0.6	0.0	19.1	0.0	0	0
BH1	1	50	2		19.16	1.00 to 20.00	90 secs	986	985	0.0 _(ss)	16.84	0.6	0.0	18.8	0.0	0	0
BH1	1	50	2		19.16	1.00 to 20.00	120 secs	986	985	0.0 _(ss)	16.84	0.7	0.0	18.8	0.0	0	0
BH1	1	50	2		19.16	1.00 to 20.00	180 secs	986	985	0.0 _(ss)	16.84	0.7	0.0	18.7	0.0	0	0
BH1	1	50	2		19.16	1.00 to 20.00	240 secs	986	985	0.0 _(ss)	16.84	0.7	0.0	18.7	0.0	0	0
BH1	1	50	2		19.16	1.00 to 20.00	300 secs	986	985	0.0 _(ss)	16.84	0.7	0.0	18.9	0.0	0	0

Key: l = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

 RSK Environment Ltd Battlegate Road Boxworth Cambridge CB23 4NN	Compiled By	Date	Checked By	Date	Contract Ref:
		02/01/20			340110
	Contract: Highover Farm, Hitchin				Page: 1 of 33 

IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
BH1	1	50	3	20.00	19.10	1.00 to 20.00	06/12/2019 10:31:00	996	996	0.0 _(l)	16.85	0.1	0.0	20.9	0.0	0	0
BH1	1	50	3		19.10	1.00 to 20.00	15 secs	996	996	0.0 _(ss)	16.85	0.7	0.0	19.5	0.0	0	0
BH1	1	50	3		19.10	1.00 to 20.00	30 secs	996	996	0.0 _(ss)	16.85	0.7	0.0	19.0	0.0	0	0
BH1	1	50	3		19.10	1.00 to 20.00	60 secs	996	996	0.0 _(ss)	16.85	0.7	0.0	19.0	0.0	0	0
BH1	1	50	3		19.10	1.00 to 20.00	90 secs	996	996	0.0 _(ss)	16.85	0.7	0.0	19.0	0.0	0	0
BH1	1	50	3		19.10	1.00 to 20.00	120 secs	996	996	0.0 _(ss)	16.85	0.7	0.0	19.0	0.0	0	0
BH1	1	50	3		19.10	1.00 to 20.00	180 secs	996	996	0.0 _(ss)	16.85	0.7	0.0	19.0	0.0	0	0
BH1	1	50	3		19.10	1.00 to 20.00	240 secs	996	996	0.0 _(ss)	16.85	0.7	0.0	19.1	0.0	0	0
BH1	1	50	3		19.10	1.00 to 20.00	300 secs	996	996	0.0 _(ss)	16.85	0.8	0.0	19.2	0.0	0	0
BH1	1	50	4	20.00	19.10	1.00 to 20.00	13/12/2019 08:57:00	971	971	0.1 _(l)	16.81	0.1	0.0	20.9	0.0	0	0
BH1	1	50	4		19.10	1.00 to 20.00	15 secs	971	971	0.2 _(ss)	16.81	0.7	0.0	20.5	0.0	0	0
BH1	1	50	4		19.10	1.00 to 20.00	30 secs	971	971	0.2 _(ss)	16.81	0.8	0.0	20.0	0.0	0	0
BH1	1	50	4		19.10	1.00 to 20.00	60 secs	971	971	0.2 _(ss)	16.81	1.0	0.0	19.5	0.0	0	0
BH1	1	50	4		19.10	1.00 to 20.00	90 secs	971	971	0.2 _(ss)	16.81	1.0	0.0	19.5	0.0	0	0
BH1	1	50	4		19.10	1.00 to 20.00	120 secs	971	971	0.2 _(ss)	16.81	1.0	0.0	19.5	0.0	0	0
BH1	1	50	4		19.10	1.00 to 20.00	180 secs	971	971	0.2 _(ss)	16.81	1.0	0.0	19.5	0.0	0	0
BH1	1	50	4		19.10	1.00 to 20.00	240 secs	971	971	0.2 _(ss)	16.81	1.0	0.0	19.6	0.0	0	0
BH1	1	50	4		19.10	1.00 to 20.00	300 secs	971	971	0.2 _(ss)	16.81	1.0	0.0	19.7	0.0	0	0
BH1	1	50	5	20.00	19.15	1.00 to 20.00	20/12/2019 09:10:00	969	969	0.0 _(l)	16.57	0.1	0.0	20.9	0.0	0	0
BH1	1	50	5		19.15	1.00 to 20.00	15 secs	969	969	0.1 _(ss)	16.57	0.2	0.0	20.8	0.0	0	0
BH1	1	50	5		19.15	1.00 to 20.00	30 secs	969	969	0.1 _(ss)	16.57	0.4	0.0	20.4	0.0	0	0
BH1	1	50	5		19.15	1.00 to 20.00	60 secs	969	969	0.1 _(ss)	16.57	0.7	0.0	19.6	0.0	0	0
BH1	1	50	5		19.15	1.00 to 20.00	90 secs	969	969	0.1 _(ss)	16.57	0.8	0.0	19.4	0.0	0	0
BH1	1	50	5		19.15	1.00 to 20.00	120 secs	969	969	0.1 _(ss)	16.57	0.9	0.0	19.3	0.0	0	0
BH1	1	50	5		19.15	1.00 to 20.00	180 secs	969	969	0.1 _(ss)	16.57	0.9	0.0	19.4	0.0	0	0

Key: l = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
BH1	1	50	5		19.15	1.00 to 20.00	240 secs	969	969	0.1 _(SS)	16.57	0.9	0.0	19.4	0.0	0	0
BH1	1	50	5		19.15	1.00 to 20.00	300 secs	969	969	0.1 _(SS)	16.57	1.0	0.0	19.5	0.0	0	0
BH1	1	50	6	20.00	19.16	1.00 to 20.00	24/12/2019 09:07:00	998	998	0.0 _(I)	16.25	0.1	0.0	20.9	0.0	0	0
BH1	1	50	6		19.16	1.00 to 20.00	15 secs	998	998	0.0 _(SS)	16.25	0.1	0.0	21.0	0.0	0	0
BH1	1	50	6		19.16	1.00 to 20.00	30 secs	998	998	0.0 _(SS)	16.25	0.1	0.0	21.0	0.0	0	0
BH1	1	50	6		19.16	1.00 to 20.00	60 secs	998	998	0.0 _(SS)	16.25	0.2	0.0	20.8	0.0	0	0
BH1	1	50	6		19.16	1.00 to 20.00	90 secs	998	998	0.0 _(SS)	16.25	0.4	0.0	20.1	0.0	0	0
BH1	1	50	6		19.16	1.00 to 20.00	120 secs	998	998	0.0 _(SS)	16.25	0.6	0.0	19.3	0.0	0	0
BH1	1	50	6		19.16	1.00 to 20.00	180 secs	998	998	0.0 _(SS)	16.25	0.9	0.0	18.5	0.0	0	0
BH1	1	50	6		19.16	1.00 to 20.00	240 secs	998	998	0.0 _(SS)	16.25	0.9	0.0	18.4	0.0	0	0
BH1	1	50	6		19.16	1.00 to 20.00	300 secs	998	998	0.0 _(SS)	16.25	1.0	0.0	18.4	0.0	0	0
BH2	1	50	1	20.00	18.50	1.00 to 20.00	18/11/2019 10:33:00	1006	1007	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
BH2	1	50	1		18.50	1.00 to 20.00	15 secs	1006	1007	0.0 _(SS)	DRY	0.1	0.0	20.9	0.0	1	0
BH2	1	50	1		18.50	1.00 to 20.00	30 secs	1006	1007	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
BH2	1	50	1		18.50	1.00 to 20.00	60 secs	1006	1007	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
BH2	1	50	1		18.50	1.00 to 20.00	90 secs	1006	1007	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
BH2	1	50	1		18.50	1.00 to 20.00	120 secs	1006	1007	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
BH2	1	50	1		18.50	1.00 to 20.00	180 secs	1006	1007	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
BH2	1	50	1		18.50	1.00 to 20.00	240 secs	1006	1007	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
BH2	1	50	1		18.50	1.00 to 20.00	300 secs	1006	1007	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
BH2	1	50	2	20.00	18.50	1.00 to 20.00	28/11/2019 10:06:00	986	985	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
BH2	1	50	2		18.50	1.00 to 20.00	15 secs	986	985	0.0 _(SS)	DRY	0.1	0.0	20.8	0.0	0	0
BH2	1	50	2		18.50	1.00 to 20.00	30 secs	986	985	0.0 _(SS)	DRY	0.1	0.0	20.8	0.0	0	0
BH2	1	50	2		18.50	1.00 to 20.00	60 secs	986	985	0.0 _(SS)	DRY	0.2	0.0	20.8	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
BH2	1	50	2		18.50	1.00 to 20.00	90 secs	986	985	0.0 _(SS)	DRY	0.2	0.0	20.8	0.0	0	0
BH2	1	50	2		18.50	1.00 to 20.00	120 secs	986	985	0.0 _(SS)	DRY	0.3	0.0	20.8	0.0	0	0
BH2	1	50	2		18.50	1.00 to 20.00	180 secs	986	985	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
BH2	1	50	2		18.50	1.00 to 20.00	240 secs	986	985	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
BH2	1	50	2		18.50	1.00 to 20.00	300 secs	986	985	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
BH2	1	50	3	20.00	18.50	1.00 to 20.00	06/12/2019 11:02:00	995	995	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
BH2	1	50	3		18.50	1.00 to 20.00	15 secs	995	995	0.0 _(SS)	DRY	0.8	0.0	20.8	0.0	0	0
BH2	1	50	3		18.50	1.00 to 20.00	30 secs	995	995	0.0 _(SS)	DRY	0.9	0.0	20.7	0.0	0	0
BH2	1	50	3		18.50	1.00 to 20.00	60 secs	995	995	0.0 _(SS)	DRY	1.0	0.0	20.6	0.0	0	0
BH2	1	50	3		18.50	1.00 to 20.00	90 secs	995	995	0.0 _(SS)	DRY	1.1	0.0	20.6	0.0	0	0
BH2	1	50	3		18.50	1.00 to 20.00	120 secs	995	995	0.0 _(SS)	DRY	1.2	0.0	20.5	0.0	0	0
BH2	1	50	3		18.50	1.00 to 20.00	180 secs	995	995	0.0 _(SS)	DRY	1.3	0.0	20.4	0.0	0	0
BH2	1	50	3		18.50	1.00 to 20.00	240 secs	995	995	0.0 _(SS)	DRY	1.5	0.0	20.3	0.0	0	0
BH2	1	50	3		18.50	1.00 to 20.00	300 secs	995	995	0.0 _(SS)	DRY	1.5	0.0	20.3	0.0	0	0
BH2	1	50	4	20.00	18.49	1.00 to 20.00	13/12/2019 09:19:00	971	971	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
BH2	1	50	4		18.49	1.00 to 20.00	15 secs	971	971	0.0 _(SS)	DRY	0.9	0.0	20.7	0.0	0	0
BH2	1	50	4		18.49	1.00 to 20.00	30 secs	971	971	0.0 _(SS)	DRY	1.1	0.0	20.5	0.0	0	0
BH2	1	50	4		18.49	1.00 to 20.00	60 secs	971	971	0.0 _(SS)	DRY	1.4	0.0	20.2	0.0	0	0
BH2	1	50	4		18.49	1.00 to 20.00	90 secs	971	971	0.0 _(SS)	DRY	1.4	0.0	20.2	0.0	0	0
BH2	1	50	4		18.49	1.00 to 20.00	120 secs	971	971	0.0 _(SS)	DRY	1.4	0.0	20.2	0.0	0	0
BH2	1	50	4		18.49	1.00 to 20.00	180 secs	971	971	0.0 _(SS)	DRY	1.4	0.0	20.2	0.0	0	0
BH2	1	50	4		18.49	1.00 to 20.00	240 secs	971	971	0.0 _(SS)	DRY	1.5	0.0	20.2	0.0	0	0
BH2	1	50	4		18.49	1.00 to 20.00	300 secs	971	971	0.0 _(SS)	DRY	1.5	0.0	20.2	0.0	0	0
BH2	1	50	5	20.00	19.27	1.00 to 20.00	20/12/2019 09:39:00	968	968	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
BH2	1	50	5		19.27	1.00 to 20.00	15 secs	968	968	0.1 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
BH2	1	50	5		19.27	1.00 to 20.00	30 secs	968	968	0.1 _(SS)	DRY	0.2	0.0	21.0	0.0	0	0
BH2	1	50	5		19.27	1.00 to 20.00	60 secs	968	968	0.1 _(SS)	DRY	0.2	0.0	21.0	0.0	0	0
BH2	1	50	5		19.27	1.00 to 20.00	90 secs	968	968	0.1 _(SS)	DRY	0.3	0.0	20.9	0.0	0	0
BH2	1	50	5		19.27	1.00 to 20.00	120 secs	968	968	0.1 _(SS)	DRY	0.4	0.0	20.8	0.0	0	0
BH2	1	50	5		19.27	1.00 to 20.00	180 secs	968	968	0.1 _(SS)	DRY	0.5	0.0	20.7	0.0	0	0
BH2	1	50	5		19.27	1.00 to 20.00	240 secs	968	968	0.1 _(SS)	DRY	0.7	0.0	20.5	0.0	0	0
BH2	1	50	5		19.27	1.00 to 20.00	300 secs	968	968	0.1 _(SS)	DRY	0.7	0.0	20.5	0.0	0	0
BH2	1	50	6	20.00	18.51	1.00 to 20.00	24/12/2019 09:33:00	998	998	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
BH2	1	50	6		18.51	1.00 to 20.00	15 secs	998	998	0.0 _(SS)	DRY	1.2	0.0	19.2	0.0	0	0
BH2	1	50	6		18.51	1.00 to 20.00	30 secs	998	998	0.0 _(SS)	DRY	1.2	0.0	18.7	0.0	0	0
BH2	1	50	6		18.51	1.00 to 20.00	60 secs	998	998	0.0 _(SS)	DRY	1.2	0.0	18.7	0.0	0	0
BH2	1	50	6		18.51	1.00 to 20.00	90 secs	998	998	0.0 _(SS)	DRY	1.2	0.0	18.8	0.0	0	0
BH2	1	50	6		18.51	1.00 to 20.00	120 secs	998	998	0.0 _(SS)	DRY	1.2	0.0	18.8	0.0	0	0
BH2	1	50	6		18.51	1.00 to 20.00	180 secs	998	998	0.0 _(SS)	DRY	1.3	0.0	18.9	0.0	0	0
BH2	1	50	6		18.51	1.00 to 20.00	240 secs	998	998	0.0 _(SS)	DRY	1.3	0.0	19.0	0.0	0	0
BH2	1	50	6		18.51	1.00 to 20.00	300 secs	998	998	0.0 _(SS)	DRY	1.3	0.0	19.0	0.0	0	0
BH3	1	50	1	20.00	19.72	1.00 to 20.00	18/11/2019 13:48:00	1006	1006	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
BH3	1	50	1		19.72	1.00 to 20.00	15 secs	1006	1006	0.0 _(SS)	DRY	0.8	0.0	20.0	0.0	0	0
BH3	1	50	1		19.72	1.00 to 20.00	30 secs	1006	1006	0.0 _(SS)	DRY	0.8	0.0	19.0	0.0	0	0
BH3	1	50	1		19.72	1.00 to 20.00	60 secs	1006	1006	0.0 _(SS)	DRY	0.8	0.0	18.9	0.0	0	0
BH3	1	50	1		19.72	1.00 to 20.00	90 secs	1006	1006	0.0 _(SS)	DRY	0.8	0.0	18.9	0.0	0	0
BH3	1	50	1		19.72	1.00 to 20.00	120 secs	1006	1006	0.0 _(SS)	DRY	0.8	0.0	19.0	0.0	0	0
BH3	1	50	1		19.72	1.00 to 20.00	180 secs	1006	1006	0.0 _(SS)	DRY	0.8	0.0	19.0	0.0	0	0
BH3	1	50	1		19.72	1.00 to 20.00	240 secs	1006	1006	0.0 _(SS)	DRY	0.8	0.0	19.0	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
BH3	1	50	1		19.72	1.00 to 20.00	300 secs	1006	1006	0.0 _(SS)	DRY	0.8	0.0	19.0	0.0	0	0
BH3	1	50	2	20.00	19.76	1.00 to 20.00	28/11/2019 12:50:00	986	986	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
BH3	1	50	2		19.76	1.00 to 20.00	15 secs	986	986	0.0 _(SS)	DRY	0.6	0.0	20.1	0.0	0	0
BH3	1	50	2		19.76	1.00 to 20.00	30 secs	986	986	0.0 _(SS)	DRY	0.6	0.0	19.5	0.0	0	0
BH3	1	50	2		19.76	1.00 to 20.00	60 secs	986	986	0.0 _(SS)	DRY	0.7	0.0	19.4	0.0	0	0
BH3	1	50	2		19.76	1.00 to 20.00	90 secs	986	986	0.0 _(SS)	DRY	0.7	0.0	19.4	0.0	0	0
BH3	1	50	2		19.76	1.00 to 20.00	120 secs	986	986	0.0 _(SS)	DRY	0.7	0.0	19.4	0.0	0	0
BH3	1	50	2		19.76	1.00 to 20.00	180 secs	986	986	0.0 _(SS)	DRY	0.8	0.0	19.4	0.0	0	0
BH3	1	50	2		19.76	1.00 to 20.00	240 secs	986	986	0.0 _(SS)	DRY	0.9	0.0	19.3	0.0	0	0
BH3	1	50	2		19.76	1.00 to 20.00	300 secs	986	986	0.0 _(SS)	DRY	0.9	0.0	19.3	0.0	0	0
BH3	1	50	3	20.00	19.78	1.00 to 20.00	06/12/2019 13:30:00	992	992	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
BH3	1	50	3		19.78	1.00 to 20.00	15 secs	992	992	0.0 _(SS)	DRY	0.2	0.0	20.5	0.0	0	0
BH3	1	50	3		19.78	1.00 to 20.00	30 secs	992	992	0.0 _(SS)	DRY	0.3	0.0	20.4	0.0	0	0
BH3	1	50	3		19.78	1.00 to 20.00	60 secs	992	992	0.0 _(SS)	DRY	0.3	0.0	20.3	0.0	0	0
BH3	1	50	3		19.78	1.00 to 20.00	90 secs	992	992	0.0 _(SS)	DRY	0.4	0.0	20.3	0.0	0	0
BH3	1	50	3		19.78	1.00 to 20.00	120 secs	992	992	0.0 _(SS)	DRY	0.5	0.0	20.3	0.0	0	0
BH3	1	50	3		19.78	1.00 to 20.00	180 secs	992	992	0.0 _(SS)	DRY	0.5	0.0	20.3	0.0	0	0
BH3	1	50	3		19.78	1.00 to 20.00	240 secs	992	992	0.0 _(SS)	DRY	0.6	0.0	20.3	0.0	0	0
BH3	1	50	3		19.78	1.00 to 20.00	300 secs	992	992	0.0 _(SS)	DRY	0.6	0.0	20.3	0.0	0	0
BH3	1	50	4	20.00	19.78	1.00 to 20.00	13/12/2019 10:53:00	972	972	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
BH3	1	50	4		19.78	1.00 to 20.00	15 secs	972	972	0.0 _(SS)	DRY	0.5	0.0	20.4	0.0	1	0
BH3	1	50	4		19.78	1.00 to 20.00	30 secs	972	972	0.0 _(SS)	DRY	0.6	0.0	20.0	0.0	1	0
BH3	1	50	4		19.78	1.00 to 20.00	60 secs	972	972	0.0 _(SS)	DRY	0.6	0.0	19.9	0.0	1	0
BH3	1	50	4		19.78	1.00 to 20.00	90 secs	972	972	0.0 _(SS)	DRY	0.6	0.0	19.9	0.0	0	0
BH3	1	50	4		19.78	1.00 to 20.00	120 secs	972	972	0.0 _(SS)	DRY	0.6	0.0	19.9	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
BH3	1	50	4		19.78	1.00 to 20.00	180 secs	972	972	0.0 _(SS)	DRY	0.6	0.0	19.9	0.0	0	0
BH3	1	50	4		19.78	1.00 to 20.00	240 secs	972	972	0.0 _(SS)	DRY	0.7	0.0	19.9	0.0	0	0
BH3	1	50	4		19.78	1.00 to 20.00	300 secs	972	972	0.0 _(SS)	DRY	0.7	0.0	19.9	0.0	0	0
BH3	1	50	5	20.00	19.76	1.00 to 20.00	20/12/2019 11:56:00	968	968	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
BH3	1	50	5		19.76	1.00 to 20.00	15 secs	968	968	0.0 _(SS)	DRY	0.1	0.0	20.9	0.0	1	0
BH3	1	50	5		19.76	1.00 to 20.00	30 secs	968	968	0.0 _(SS)	DRY	0.1	0.0	20.9	0.0	1	0
BH3	1	50	5		19.76	1.00 to 20.00	60 secs	968	968	0.0 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0
BH3	1	50	5		19.76	1.00 to 20.00	90 secs	968	968	0.0 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0
BH3	1	50	5		19.76	1.00 to 20.00	120 secs	968	968	0.0 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0
BH3	1	50	5		19.76	1.00 to 20.00	180 secs	968	968	0.0 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0
BH3	1	50	5		19.76	1.00 to 20.00	240 secs	968	968	0.0 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0
BH3	1	50	5		19.76	1.00 to 20.00	300 secs	968	968	0.0 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0
BH3	1	50	6	20.00	19.76	1.00 to 20.00	24/12/2019 11:48:00	997	997	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
BH3	1	50	6		19.76	1.00 to 20.00	15 secs	997	997	0.0 _(SS)	DRY	0.5	0.0	19.7	0.0	0	0
BH3	1	50	6		19.76	1.00 to 20.00	30 secs	997	997	0.0 _(SS)	DRY	0.6	0.0	19.2	0.0	0	0
BH3	1	50	6		19.76	1.00 to 20.00	60 secs	997	997	0.0 _(SS)	DRY	0.6	0.0	19.1	0.0	0	0
BH3	1	50	6		19.76	1.00 to 20.00	90 secs	997	997	0.0 _(SS)	DRY	0.6	0.0	19.1	0.0	0	0
BH3	1	50	6		19.76	1.00 to 20.00	120 secs	997	997	0.0 _(SS)	DRY	0.7	0.0	19.1	0.0	0	0
BH3	1	50	6		19.76	1.00 to 20.00	180 secs	997	997	0.0 _(SS)	DRY	0.8	0.0	19.1	0.0	0	0
BH3	1	50	6		19.76	1.00 to 20.00	240 secs	997	997	0.0 _(SS)	DRY	0.9	0.0	19.1	0.0	0	0
BH3	1	50	6		19.76	1.00 to 20.00	300 secs	997	997	0.0 _(SS)	DRY	0.9	0.0	19.2	0.0	0	0
WS2	1	25	1	1.90	1.52	0.50 to 1.90	18/11/2019 10:07:00	1008	1008	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS2	1	25	1		1.52	0.50 to 1.90	15 secs	1008	1008	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
WS2	1	25	1		1.52	0.50 to 1.90	30 secs	1008	1008	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS2	1	25	1		1.52	0.50 to 1.90	60 secs	1008	1008	0.0 _(SS)	DRY	0.3	0.0	20.7	0.0	0	0
WS2	1	25	1		1.52	0.50 to 1.90	90 secs	1008	1008	0.0 _(SS)	DRY	0.4	0.0	20.6	0.0	0	0
WS2	1	25	1		1.52	0.50 to 1.90	120 secs	1008	1008	0.0 _(SS)	DRY	0.4	0.0	20.6	0.0	0	0
WS2	1	25	1		1.52	0.50 to 1.90	180 secs	1008	1008	0.0 _(SS)	DRY	0.4	0.0	20.6	0.0	0	0
WS2	1	25	1		1.52	0.50 to 1.90	240 secs	1008	1008	0.0 _(SS)	DRY	0.4	0.0	20.5	0.0	0	0
WS2	1	25	1		1.52	0.50 to 1.90	300 secs	1008	1008	0.0 _(SS)	DRY	0.4	0.0	20.5	0.0	0	0
WS2	1	25	2	1.90	1.51	0.50 to 1.90	28/11/2019 09:49:00	986	986	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS2	1	25	2		1.51	0.50 to 1.90	15 secs	986	986	0.0 _(SS)	DRY	0.1	0.0	20.9	0.0	0	0
WS2	1	25	2		1.51	0.50 to 1.90	30 secs	986	986	0.0 _(SS)	DRY	0.2	0.0	20.8	0.0	0	0
WS2	1	25	2		1.51	0.50 to 1.90	60 secs	986	986	0.0 _(SS)	DRY	0.3	0.0	20.8	0.0	0	0
WS2	1	25	2		1.51	0.50 to 1.90	90 secs	986	986	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
WS2	1	25	2		1.51	0.50 to 1.90	120 secs	986	986	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
WS2	1	25	2		1.51	0.50 to 1.90	180 secs	986	986	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
WS2	1	25	2		1.51	0.50 to 1.90	240 secs	986	986	0.0 _(SS)	DRY	0.3	0.0	20.9	0.0	0	0
WS2	1	25	2		1.51	0.50 to 1.90	300 secs	986	986	0.0 _(SS)	DRY	0.3	0.0	20.8	0.0	0	0
WS2	1	25	3	1.90	1.51	0.50 to 1.90	06/12/2019 10:46:00	996	996	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS2	1	25	3		1.51	0.50 to 1.90	15 secs	996	996	0.0 _(SS)	DRY	0.3	0.0	20.7	0.0	0	0
WS2	1	25	3		1.51	0.50 to 1.90	30 secs	996	996	0.0 _(SS)	DRY	0.5	0.0	20.4	0.0	0	0
WS2	1	25	3		1.51	0.50 to 1.90	60 secs	996	996	0.0 _(SS)	DRY	0.4	0.0	20.6	0.0	0	0
WS2	1	25	3		1.51	0.50 to 1.90	90 secs	996	996	0.0 _(SS)	DRY	0.3	0.0	20.9	0.0	0	0
WS2	1	25	3		1.51	0.50 to 1.90	120 secs	996	996	0.0 _(SS)	DRY	0.3	0.0	20.8	0.0	0	0
WS2	1	25	3		1.51	0.50 to 1.90	180 secs	996	996	0.0 _(SS)	DRY	0.4	0.0	20.7	0.0	0	0
WS2	1	25	3		1.51	0.50 to 1.90	240 secs	996	996	0.0 _(SS)	DRY	0.4	0.0	20.7	0.0	0	0
WS2	1	25	3		1.51	0.50 to 1.90	300 secs	996	996	0.0 _(SS)	DRY	0.5	0.0	20.6	0.0	0	0
WS2	1	25	4	1.90	1.51	0.50 to 1.90	13/12/2019 09:07:00	971	971	0.1 _(I)	DRY	0.1	0.0	20.9	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS2	1	25	4		1.51	0.50 to 1.90	15 secs	971	971	0.3 _(SS)	DRY	0.2	0.0	20.4	0.0	0	0
WS2	1	25	4		1.51	0.50 to 1.90	30 secs	971	971	0.3 _(SS)	DRY	0.2	0.0	20.1	0.0	0	0
WS2	1	25	4		1.51	0.50 to 1.90	60 secs	971	971	0.3 _(SS)	DRY	0.3	0.0	20.0	0.0	0	0
WS2	1	25	4		1.51	0.50 to 1.90	90 secs	971	971	0.3 _(SS)	DRY	0.4	0.0	20.0	0.0	0	0
WS2	1	25	4		1.51	0.50 to 1.90	120 secs	971	971	0.3 _(SS)	DRY	0.5	0.0	20.0	0.0	0	0
WS2	1	25	4		1.51	0.50 to 1.90	180 secs	971	971	0.3 _(SS)	DRY	0.6	0.0	20.1	0.0	0	0
WS2	1	25	4		1.51	0.50 to 1.90	240 secs	971	971	0.3 _(SS)	DRY	0.6	0.0	20.1	0.0	0	0
WS2	1	25	4		1.51	0.50 to 1.90	300 secs	971	971	0.3 _(SS)	DRY	0.7	0.0	20.1	0.0	0	0
WS2	1	25	5	1.90	1.52	0.50 to 1.90	20/12/2019 09:25:00	969	969	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS2	1	25	5		1.52	0.50 to 1.90	15 secs	969	969	0.0 _(SS)	DRY	0.5	0.0	20.0	0.0	0	0
WS2	1	25	5		1.52	0.50 to 1.90	30 secs	969	969	0.0 _(SS)	DRY	0.5	0.0	19.6	0.0	0	0
WS2	1	25	5		1.52	0.50 to 1.90	60 secs	969	969	0.0 _(SS)	DRY	0.5	0.0	19.5	0.0	0	0
WS2	1	25	5		1.52	0.50 to 1.90	90 secs	969	969	0.0 _(SS)	DRY	0.6	0.0	19.6	0.0	0	0
WS2	1	25	5		1.52	0.50 to 1.90	120 secs	969	969	0.0 _(SS)	DRY	0.7	0.0	19.7	0.0	0	0
WS2	1	25	5		1.52	0.50 to 1.90	180 secs	969	969	0.0 _(SS)	DRY	0.7	0.0	19.7	0.0	0	0
WS2	1	25	5		1.52	0.50 to 1.90	240 secs	969	969	0.0 _(SS)	DRY	0.8	0.0	19.8	0.0	0	0
WS2	1	25	5		1.52	0.50 to 1.90	300 secs	969	969	0.0 _(SS)	DRY	0.8	0.0	19.8	0.0	0	0
WS2	1	25	6	1.90	1.51	0.50 to 1.90	24/12/2019 09:20:00	998	998	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS2	1	25	6		1.51	0.50 to 1.90	15 secs	998	998	0.0 _(SS)	DRY	0.9	0.0	19.8	0.0	0	0
WS2	1	25	6		1.51	0.50 to 1.90	30 secs	998	998	0.0 _(SS)	DRY	0.9	0.0	19.3	0.0	0	0
WS2	1	25	6		1.51	0.50 to 1.90	60 secs	998	998	0.0 _(SS)	DRY	0.9	0.0	19.3	0.0	0	0
WS2	1	25	6		1.51	0.50 to 1.90	90 secs	998	998	0.0 _(SS)	DRY	0.9	0.0	19.4	0.0	0	0
WS2	1	25	6		1.51	0.50 to 1.90	120 secs	998	998	0.0 _(SS)	DRY	0.9	0.0	19.5	0.0	0	0
WS2	1	25	6		1.51	0.50 to 1.90	180 secs	998	998	0.0 _(SS)	DRY	0.9	0.0	19.5	0.0	0	0
WS2	1	25	6		1.51	0.50 to 1.90	240 secs	998	998	0.0 _(SS)	DRY	0.9	0.0	19.5	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS2	1	25	6		1.51	0.50 to 1.90	300 secs	998	998	0.0 _(SS)	DRY	0.9	0.0	19.5	0.0	0	0
WS3	1	25	1	4.45	3.96	0.50 to 4.45	18/11/2019 09:32:00	1008	1008	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS3	1	25	1		3.96	0.50 to 4.45	15 secs	1008	1008	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
WS3	1	25	1		3.96	0.50 to 4.45	30 secs	1008	1008	0.0 _(SS)	DRY	0.4	0.0	20.7	0.0	0	0
WS3	1	25	1		3.96	0.50 to 4.45	60 secs	1008	1008	0.0 _(SS)	DRY	0.5	0.0	20.7	0.0	0	0
WS3	1	25	1		3.96	0.50 to 4.45	90 secs	1008	1008	0.0 _(SS)	DRY	0.4	0.0	20.8	0.0	0	0
WS3	1	25	1		3.96	0.50 to 4.45	120 secs	1008	1008	0.0 _(SS)	DRY	0.3	0.0	20.9	0.0	0	0
WS3	1	25	1		3.96	0.50 to 4.45	180 secs	1008	1008	0.0 _(SS)	DRY	0.2	0.0	21.1	0.0	0	0
WS3	1	25	1		3.96	0.50 to 4.45	240 secs	1008	1008	0.0 _(SS)	DRY	0.2	0.0	21.2	0.0	0	0
WS3	1	25	1		3.96	0.50 to 4.45	300 secs	1008	1008	0.0 _(SS)	DRY	0.2	0.0	21.2	0.0	0	0
WS3	1	25	2	4.45	3.97	0.50 to 4.45	28/11/2019 09:22:00	985	985	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS3	1	25	2		3.97	0.50 to 4.45	15 secs	985	985	0.0 _(SS)	DRY	0.3	0.0	21.0	0.0	0	0
WS3	1	25	2		3.97	0.50 to 4.45	30 secs	985	985	0.0 _(SS)	DRY	0.5	0.0	20.7	0.0	0	0
WS3	1	25	2		3.97	0.50 to 4.45	60 secs	985	985	0.0 _(SS)	DRY	0.6	0.0	20.7	0.0	0	0
WS3	1	25	2		3.97	0.50 to 4.45	90 secs	985	985	0.0 _(SS)	DRY	0.5	0.0	20.8	0.0	0	0
WS3	1	25	2		3.97	0.50 to 4.45	120 secs	985	985	0.0 _(SS)	DRY	0.4	0.0	21.0	0.0	0	0
WS3	1	25	2		3.97	0.50 to 4.45	180 secs	985	985	0.0 _(SS)	DRY	0.3	0.0	21.2	0.0	0	0
WS3	1	25	2		3.97	0.50 to 4.45	240 secs	985	985	0.0 _(SS)	DRY	0.2	0.0	21.3	0.0	0	0
WS3	1	25	2		3.97	0.50 to 4.45	300 secs	985	985	0.0 _(SS)	DRY	0.2	0.0	21.4	0.0	0	0
WS3	1	25	3	4.45	3.84	0.50 to 4.45	06/12/2019 10:18:00	996	996	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS3	1	25	3		3.84	0.50 to 4.45	15 secs	996	996	0.0 _(SS)	DRY	0.2	0.0	20.8	0.0	0	0
WS3	1	25	3		3.84	0.50 to 4.45	30 secs	996	996	0.0 _(SS)	DRY	0.4	0.0	20.5	0.0	0	0
WS3	1	25	3		3.84	0.50 to 4.45	60 secs	996	996	0.0 _(SS)	DRY	0.7	0.0	20.3	0.0	0	0
WS3	1	25	3		3.84	0.50 to 4.45	90 secs	996	996	0.0 _(SS)	DRY	0.6	0.0	20.4	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

 RSK Environment Ltd Battlegate Road Boxworth Cambridge CB23 4NN	Compiled By	Date	Checked By	Date	Contract Ref:
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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS3	1	25	3		3.84	0.50 to 4.45	120 secs	996	996	0.0 _(SS)	DRY	0.5	0.0	20.6	0.0	0	0
WS3	1	25	3		3.84	0.50 to 4.45	180 secs	996	996	0.0 _(SS)	DRY	0.4	0.0	20.8	0.0	0	0
WS3	1	25	3		3.84	0.50 to 4.45	240 secs	996	996	0.0 _(SS)	DRY	0.3	0.0	20.9	0.0	0	0
WS3	1	25	3		3.84	0.50 to 4.45	300 secs	996	996	0.0 _(SS)	DRY	0.3	0.0	20.9	0.0	0	0
WS3	1	25	4	4.45	3.84	0.50 to 4.45	13/12/2019 08:48:00	970	970	0.1 _(I)	DRY	0.1	0.0	20.9	0.0	1	0
WS3	1	25	4		3.84	0.50 to 4.45	15 secs	970	970	0.3 _(SS)	DRY	0.5	0.0	20.9	0.0	0	0
WS3	1	25	4		3.84	0.50 to 4.45	30 secs	970	970	0.3 _(SS)	DRY	0.7	0.0	20.9	0.0	0	0
WS3	1	25	4		3.84	0.50 to 4.45	60 secs	970	970	0.3 _(SS)	DRY	0.9	0.0	20.8	0.0	0	0
WS3	1	25	4		3.84	0.50 to 4.45	90 secs	970	970	0.3 _(SS)	DRY	1.1	0.0	20.8	0.0	0	0
WS3	1	25	4		3.84	0.50 to 4.45	120 secs	970	970	0.3 _(SS)	DRY	1.1	0.0	20.7	0.0	0	0
WS3	1	25	4		3.84	0.50 to 4.45	180 secs	970	970	0.3 _(SS)	DRY	1.2	0.0	20.7	0.0	0	0
WS3	1	25	4		3.84	0.50 to 4.45	240 secs	970	970	0.3 _(SS)	DRY	1.2	0.0	20.8	0.0	0	0
WS3	1	25	4		3.84	0.50 to 4.45	300 secs	970	970	0.3 _(SS)	DRY	1.2	0.0	20.8	0.0	0	0
WS3	1	25	5	4.45	3.97	0.50 to 4.45	20/12/2019 08:56:00	969	969	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS3	1	25	5		3.97	0.50 to 4.45	15 secs	969	969	0.0 _(SS)	DRY	0.7	0.0	20.5	0.0	0	0
WS3	1	25	5		3.97	0.50 to 4.45	30 secs	969	969	0.0 _(SS)	DRY	0.5	0.0	20.8	0.0	0	0
WS3	1	25	5		3.97	0.50 to 4.45	60 secs	969	969	0.0 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0
WS3	1	25	5		3.97	0.50 to 4.45	90 secs	969	969	0.0 _(SS)	DRY	0.3	0.0	20.8	0.0	0	0
WS3	1	25	5		3.97	0.50 to 4.45	120 secs	969	969	0.0 _(SS)	DRY	0.3	0.0	20.9	0.0	0	0
WS3	1	25	5	4.45	---	0.50 to 4.45	20/12/2019 09:02:00	-	-	-	-	-	-	-	-	-	-
Remarks: Readings aborted - Pump failure																	
WS3	1	25	6	4.45	3.97	0.50 to 4.45	24/12/2019 08:55:00	998	998	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS3	1	25	6		3.97	0.50 to 4.45	15 secs	998	998	0.0 _(SS)	DRY	0.8	0.0	20.5	0.0	0	0
WS3	1	25	6		3.97	0.50 to 4.45	30 secs	998	998	0.0 _(SS)	DRY	1.0	0.0	19.7	0.0	0	0
WS3	1	25	6		3.97	0.50 to 4.45	60 secs	998	998	0.0 _(SS)	DRY	1.0	0.0	19.6	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS3	1	25	6		3.97	0.50 to 4.45	90 secs	998	998	0.0 _(SS)	DRY	1.1	0.0	19.5	0.0	0	0
WS3	1	25	6		3.97	0.50 to 4.45	120 secs	998	998	0.0 _(SS)	DRY	1.1	0.0	19.5	0.0	0	0
WS3	1	25	6		3.97	0.50 to 4.45	180 secs	998	998	0.0 _(SS)	DRY	1.2	0.0	19.5	0.0	0	0
WS3	1	25	6		3.97	0.50 to 4.45	240 secs	998	998	0.0 _(SS)	DRY	1.1	0.0	19.6	0.0	0	0
WS3	1	25	6		3.97	0.50 to 4.45	300 secs	998	998	0.0 _(SS)	DRY	1.2	0.0	19.6	0.0	0	0
WS6	1	25	1	1.71	1.58	0.50 to 1.71	18/11/2019 14:05:00	1007	1007	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS6	1	25	1		1.58	0.50 to 1.71	15 secs	1007	1007	0.0 _(SS)	DRY	0.8	0.0	20.5	0.0	0	0
WS6	1	25	1		1.58	0.50 to 1.71	30 secs	1007	1007	0.0 _(SS)	DRY	0.8	0.0	20.1	0.0	0	0
WS6	1	25	1		1.58	0.50 to 1.71	60 secs	1007	1007	0.0 _(SS)	DRY	0.8	0.0	20.1	0.0	0	0
WS6	1	25	1		1.58	0.50 to 1.71	90 secs	1007	1007	0.0 _(SS)	DRY	0.8	0.0	20.1	0.0	0	0
WS6	1	25	1		1.58	0.50 to 1.71	120 secs	1007	1007	0.0 _(SS)	DRY	0.8	0.0	20.2	0.0	0	0
WS6	1	25	1		1.58	0.50 to 1.71	180 secs	1007	1007	0.0 _(SS)	DRY	0.7	0.0	20.4	0.0	0	0
WS6	1	25	1		1.58	0.50 to 1.71	240 secs	1007	1007	0.0 _(SS)	DRY	0.6	0.0	20.5	0.0	0	0
WS6	1	25	1		1.58	0.50 to 1.71	300 secs	1007	1007	0.0 _(SS)	DRY	0.6	0.0	20.5	0.0	0	0
WS6	1	25	2	1.71	1.56	0.50 to 1.71	28/11/2019 13:05:00	987	987	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS6	1	25	2		1.56	0.50 to 1.71	15 secs	987	987	0.0 _(SS)	DRY	0.6	0.0	20.7	0.0	0	0
WS6	1	25	2		1.56	0.50 to 1.71	30 secs	987	987	0.0 _(SS)	DRY	0.7	0.0	20.5	0.0	0	0
WS6	1	25	2		1.56	0.50 to 1.71	60 secs	987	987	0.0 _(SS)	DRY	0.8	0.0	20.4	0.0	0	0
WS6	1	25	2		1.56	0.50 to 1.71	90 secs	987	987	0.0 _(SS)	DRY	0.8	0.0	20.3	0.0	0	0
WS6	1	25	2		1.56	0.50 to 1.71	120 secs	987	987	0.0 _(SS)	DRY	0.8	0.0	20.3	0.0	0	0
WS6	1	25	2		1.56	0.50 to 1.71	180 secs	987	987	0.0 _(SS)	DRY	0.7	0.0	20.4	0.0	0	0
WS6	1	25	2		1.56	0.50 to 1.71	240 secs	987	987	0.0 _(SS)	DRY	0.7	0.0	20.5	0.0	0	0
WS6	1	25	2		1.56	0.50 to 1.71	300 secs	987	987	0.0 _(SS)	DRY	0.7	0.0	20.6	0.0	0	0
WS6	1	25	3	1.71	1.57	0.50 to 1.71	06/12/2019 13:43:00	992	992	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS6	1	25	3		1.57	0.50 to 1.71	15 secs	992	992	0.0 _(SS)	DRY	0.3	0.0	20.8	0.0	0	0
WS6	1	25	3		1.57	0.50 to 1.71	30 secs	992	992	0.0 _(SS)	DRY	0.4	0.0	20.8	0.0	0	0
WS6	1	25	3		1.57	0.50 to 1.71	60 secs	992	992	0.0 _(SS)	DRY	0.5	0.0	20.8	0.0	0	0
WS6	1	25	3		1.57	0.50 to 1.71	90 secs	992	992	0.0 _(SS)	DRY	0.5	0.0	20.8	0.0	0	0
WS6	1	25	3		1.57	0.50 to 1.71	120 secs	992	992	0.0 _(SS)	DRY	0.5	0.0	20.8	0.0	0	0
WS6	1	25	3		1.57	0.50 to 1.71	180 secs	992	992	0.0 _(SS)	DRY	0.4	0.0	20.8	0.0	0	0
WS6	1	25	3		1.57	0.50 to 1.71	240 secs	992	992	0.0 _(SS)	DRY	0.4	0.0	20.9	0.0	0	0
WS6	1	25	3		1.57	0.50 to 1.71	300 secs	992	992	0.0 _(SS)	DRY	0.4	0.0	20.9	0.0	0	0
WS6	1	25	4	1.71	1.57	0.50 to 1.71	13/12/2019 11:02:00	973	973	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS6	1	25	4		1.57	0.50 to 1.71	15 secs	973	973	0.0 _(SS)	DRY	0.2	0.0	20.8	0.0	0	0
WS6	1	25	4		1.57	0.50 to 1.71	30 secs	973	973	0.0 _(SS)	DRY	0.2	0.0	20.7	0.0	0	0
WS6	1	25	4		1.57	0.50 to 1.71	60 secs	973	973	0.0 _(SS)	DRY	0.3	0.0	20.7	0.0	0	0
WS6	1	25	4		1.57	0.50 to 1.71	90 secs	973	973	0.0 _(SS)	DRY	0.3	0.0	20.7	0.0	0	0
WS6	1	25	4		1.57	0.50 to 1.71	120 secs	973	973	0.0 _(SS)	DRY	0.3	0.0	20.7	0.0	0	0
WS6	1	25	4		1.57	0.50 to 1.71	180 secs	973	973	0.0 _(SS)	DRY	0.2	0.0	20.8	0.0	0	0
WS6	1	25	4		1.57	0.50 to 1.71	240 secs	973	973	0.0 _(SS)	DRY	0.2	0.0	20.8	0.0	0	0
WS6	1	25	4		1.57	0.50 to 1.71	300 secs	973	973	0.0 _(SS)	DRY	0.2	0.0	20.8	0.0	0	0
WS6	1	25	5	1.71	1.55	0.50 to 1.71	20/12/2019 12:08:00	969	969	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS6	1	25	5		1.55	0.50 to 1.71	15 secs	969	969	0.0 _(SS)	DRY	0.2	0.0	20.7	0.0	0	0
WS6	1	25	5		1.55	0.50 to 1.71	30 secs	969	969	0.0 _(SS)	DRY	0.3	0.0	20.4	0.0	0	0
WS6	1	25	5		1.55	0.50 to 1.71	60 secs	969	969	0.0 _(SS)	DRY	0.3	0.0	20.3	0.0	0	0
WS6	1	25	5		1.55	0.50 to 1.71	90 secs	969	969	0.0 _(SS)	DRY	0.3	0.0	20.3	0.0	0	0
WS6	1	25	5		1.55	0.50 to 1.71	120 secs	969	969	0.0 _(SS)	DRY	0.3	0.0	20.3	0.0	0	0
WS6	1	25	5		1.55	0.50 to 1.71	180 secs	969	969	0.0 _(SS)	DRY	0.2	0.0	20.4	0.0	0	0
WS6	1	25	5		1.55	0.50 to 1.71	240 secs	969	969	0.0 _(SS)	DRY	0.2	0.0	20.5	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS6	1	25	5		1.55	0.50 to 1.71	300 secs	969	969	0.0 _(SS)	DRY	0.2	0.0	20.6	0.0	0	0
WS6	1	25	6	1.71	1.56	0.50 to 1.71	24/12/2019 12:00:00	998	998	0.0 _(I)	DRY	0.2	0.0	20.8	0.0	0	0
WS6	1	25	6		1.56	0.50 to 1.71	15 secs	998	998	0.0 _(SS)	DRY	0.2	0.0	20.8	0.0	0	0
WS6	1	25	6		1.56	0.50 to 1.71	30 secs	998	998	0.0 _(SS)	DRY	0.2	0.0	20.8	0.0	0	0
WS6	1	25	6		1.56	0.50 to 1.71	60 secs	998	998	0.0 _(SS)	DRY	0.2	0.0	20.8	0.0	0	0
WS6	1	25	6		1.56	0.50 to 1.71	90 secs	998	998	0.0 _(SS)	DRY	0.3	0.0	20.8	0.0	0	0
WS6	1	25	6		1.56	0.50 to 1.71	120 secs	998	998	0.0 _(SS)	DRY	0.2	0.0	20.8	0.0	0	0
WS6	1	25	6		1.56	0.50 to 1.71	180 secs	998	998	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
WS6	1	25	6		1.56	0.50 to 1.71	240 secs	998	998	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
WS6	1	25	6		1.56	0.50 to 1.71	300 secs	998	998	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
WS7	1	25	1	2.04	1.54	#REF! to 0.50	18/11/2019 12:28:00	1007	1007	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS7	1	25	1		1.54	#REF! to 0.50	15 secs	1007	1007	0.0 _(SS)	DRY	0.2	0.0	21.0	0.0	0	0
WS7	1	25	1		1.54	#REF! to 0.50	30 secs	1007	1007	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
WS7	1	25	1		1.54	#REF! to 0.50	60 secs	1007	1007	0.0 _(SS)	DRY	0.3	0.0	20.8	0.0	0	0
WS7	1	25	1		1.54	#REF! to 0.50	90 secs	1007	1007	0.0 _(SS)	DRY	0.4	0.0	20.7	0.0	0	0
WS7	1	25	1		1.54	#REF! to 0.50	120 secs	1007	1007	0.0 _(SS)	DRY	0.4	0.0	20.6	0.0	0	0
WS7	1	25	1		1.54	#REF! to 0.50	180 secs	1007	1007	0.0 _(SS)	DRY	0.5	0.0	20.5	0.0	0	0
WS7	1	25	1		1.54	#REF! to 0.50	240 secs	1007	1007	0.0 _(SS)	DRY	0.6	0.0	20.4	0.0	0	0
WS7	1	25	1		1.54	#REF! to 0.50	300 secs	1007	1007	0.0 _(SS)	DRY	0.6	0.0	20.4	0.0	0	0
WS7	1	25	2	2.04	1.55	#REF! to 0.50	28/11/2019 11:40:00	986	986	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS7	1	25	2		1.55	#REF! to 0.50	15 secs	986	986	0.0 _(SS)	DRY	0.2	0.0	20.8	0.0	0	0
WS7	1	25	2		1.55	#REF! to 0.50	30 secs	986	986	0.0 _(SS)	DRY	0.2	0.0	20.8	0.0	0	0
WS7	1	25	2		1.55	#REF! to 0.50	60 secs	986	986	0.0 _(SS)	DRY	0.2	0.0	20.7	0.0	0	0
WS7	1	25	2		1.55	#REF! to 0.50	90 secs	986	986	0.0 _(SS)	DRY	0.3	0.0	20.7	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS7	1	25	2		1.55	#REF! to 0.50	120 secs	986	986	0.0 _(SS)	DRY	0.3	0.0	20.7	0.0	0	0
WS7	1	25	2		1.55	#REF! to 0.50	180 secs	986	986	0.0 _(SS)	DRY	0.3	0.0	20.7	0.0	0	0
WS7	1	25	2		1.55	#REF! to 0.50	240 secs	986	986	0.0 _(SS)	DRY	0.3	0.0	20.7	0.0	0	0
WS7	1	25	2		1.55	#REF! to 0.50	300 secs	986	986	0.0 _(SS)	DRY	0.4	0.0	20.6	0.0	0	0
WS7	1	25	3	2.04	1.55	#REF! to 0.50	06/12/2019 12:27:00	994	994	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS7	1	25	3		1.55	#REF! to 0.50	15 secs	994	994	0.0 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0
WS7	1	25	3		1.55	#REF! to 0.50	30 secs	994	994	0.0 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0
WS7	1	25	3		1.55	#REF! to 0.50	60 secs	994	994	0.0 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0
WS7	1	25	3		1.55	#REF! to 0.50	90 secs	994	994	0.0 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0
WS7	1	25	3		1.55	#REF! to 0.50	120 secs	994	994	0.0 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0
WS7	1	25	3		1.55	#REF! to 0.50	180 secs	994	994	0.0 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0
WS7	1	25	3		1.55	#REF! to 0.50	240 secs	994	994	0.0 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0
WS7	1	25	3		1.55	#REF! to 0.50	300 secs	994	994	0.0 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0
WS7	1	25	4	2.04	1.55	#REF! to 0.50	13/12/2019 10:11:00	972	972	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS7	1	25	4		1.55	#REF! to 0.50	15 secs	972	972	0.1 _(SS)	DRY	0.3	0.0	20.7	0.0	0	0
WS7	1	25	4		1.55	#REF! to 0.50	30 secs	972	972	0.1 _(SS)	DRY	0.3	0.0	20.5	0.0	0	0
WS7	1	25	4		1.55	#REF! to 0.50	60 secs	972	972	0.1 _(SS)	DRY	0.4	0.0	20.4	0.0	0	0
WS7	1	25	4		1.55	#REF! to 0.50	90 secs	972	972	0.1 _(SS)	DRY	0.5	0.0	20.5	0.0	0	0
WS7	1	25	4		1.55	#REF! to 0.50	120 secs	972	972	0.1 _(SS)	DRY	0.5	0.0	20.5	0.0	0	0
WS7	1	25	4		1.55	#REF! to 0.50	180 secs	972	972	0.1 _(SS)	DRY	0.6	0.0	20.5	0.0	0	0
WS7	1	25	4		1.55	#REF! to 0.50	240 secs	972	972	0.1 _(SS)	DRY	0.6	0.0	20.5	0.0	0	0
WS7	1	25	4		1.55	#REF! to 0.50	300 secs	972	972	0.1 _(SS)	DRY	0.6	0.0	20.6	0.0	0	0
WS7	1	25	5	2.04	1.55	#REF! to 0.50	20/12/2019 10:54:00	969	969	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS7	1	25	5		1.55	#REF! to 0.50	15 secs	969	969	0.0 _(SS)	DRY	0.7	0.0	20.3	0.0	0	0
WS7	1	25	5		1.55	#REF! to 0.50	30 secs	969	969	0.0 _(SS)	DRY	0.7	0.0	20.0	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS7	1	25	5		1.55	#REF! to 0.50	60 secs	969	969	0.0 _(SS)	DRY	0.7	0.0	20.0	0.0	0	0
WS7	1	25	5		1.55	#REF! to 0.50	90 secs	969	969	0.0 _(SS)	DRY	0.7	0.0	20.0	0.0	0	0
WS7	1	25	5		1.55	#REF! to 0.50	120 secs	969	969	0.0 _(SS)	DRY	0.8	0.0	20.0	0.0	0	0
WS7	1	25	5		1.55	#REF! to 0.50	180 secs	969	969	0.0 _(SS)	DRY	0.8	0.0	20.0	0.0	0	0
WS7	1	25	5		1.55	#REF! to 0.50	240 secs	969	969	0.0 _(SS)	DRY	0.8	0.0	20.1	0.0	0	0
WS7	1	25	5		1.55	#REF! to 0.50	300 secs	969	969	0.0 _(SS)	DRY	0.8	0.0	20.1	0.0	0	0
WS7	1	25	6	2.04	1.55	#REF! to 0.50	24/12/2019 10:49:00	998	998	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS7	1	25	6		1.55	#REF! to 0.50	15 secs	998	998	0.0 _(SS)	DRY	0.8	0.0	20.0	0.0	0	0
WS7	1	25	6		1.55	#REF! to 0.50	30 secs	998	998	0.0 _(SS)	DRY	0.8	0.0	19.7	0.0	0	0
WS7	1	25	6		1.55	#REF! to 0.50	60 secs	998	998	0.0 _(SS)	DRY	0.8	0.0	19.6	0.0	0	0
WS7	1	25	6		1.55	#REF! to 0.50	90 secs	998	998	0.0 _(SS)	DRY	0.8	0.0	19.6	0.0	0	0
WS7	1	25	6		1.55	#REF! to 0.50	120 secs	998	998	0.0 _(SS)	DRY	0.8	0.0	19.6	0.0	0	0
WS7	1	25	6		1.55	#REF! to 0.50	180 secs	998	998	0.0 _(SS)	DRY	0.8	0.0	19.6	0.0	0	0
WS7	1	25	6		1.55	#REF! to 0.50	240 secs	998	998	0.0 _(SS)	DRY	0.8	0.0	19.6	0.0	0	0
WS7	1	25	6		1.55	#REF! to 0.50	300 secs	998	998	0.0 _(SS)	DRY	0.8	0.0	19.6	0.0	0	0
WS8	1	25	1	1.32	1.03	0.50 to 1.32	18/11/2019 12:42:00	1007	1007	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS8	1	25	1		1.03	0.50 to 1.32	15 secs	1007	1007	0.0 _(SS)	DRY	0.5	0.0	20.7	0.0	2	0
WS8	1	25	1		1.03	0.50 to 1.32	30 secs	1007	1007	0.0 _(SS)	DRY	0.5	0.0	20.3	0.0	1	0
WS8	1	25	1		1.03	0.50 to 1.32	60 secs	1007	1007	0.0 _(SS)	DRY	0.5	0.0	20.3	0.0	0	0
WS8	1	25	1		1.03	0.50 to 1.32	90 secs	1007	1007	0.0 _(SS)	DRY	0.5	0.0	20.3	0.0	0	0
WS8	1	25	1		1.03	0.50 to 1.32	120 secs	1007	1007	0.0 _(SS)	DRY	0.5	0.0	20.4	0.0	0	0
WS8	1	25	1		1.03	0.50 to 1.32	180 secs	1007	1007	0.0 _(SS)	DRY	0.5	0.0	20.4	0.0	0	0
WS8	1	25	1		1.03	0.50 to 1.32	240 secs	1007	1007	0.0 _(SS)	DRY	0.4	0.0	20.5	0.0	0	0
WS8	1	25	1		1.03	0.50 to 1.32	300 secs	1007	1007	0.0 _(SS)	DRY	0.4	0.0	20.6	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS8	1	25	2	1.32	1.02	0.50 to 1.32	28/11/2019 11:53:00	987	987	0.0 _(l)	DRY	0.1	0.0	20.9	0.0	0	0
WS8	1	25	2		1.02	0.50 to 1.32	15 secs	987	987	0.0 _(ss)	DRY	0.5	0.0	20.5	0.0	1	0
WS8	1	25	2		1.02	0.50 to 1.32	30 secs	987	987	0.0 _(ss)	DRY	0.6	0.0	20.2	0.0	0	0
WS8	1	25	2		1.02	0.50 to 1.32	60 secs	987	987	0.0 _(ss)	DRY	0.6	0.0	20.1	0.0	0	0
WS8	1	25	2		1.02	0.50 to 1.32	90 secs	987	987	0.0 _(ss)	DRY	0.7	0.0	20.1	0.0	0	0
WS8	1	25	2		1.02	0.50 to 1.32	120 secs	987	987	0.0 _(ss)	DRY	0.7	0.0	20.1	0.0	0	0
WS8	1	25	2		1.02	0.50 to 1.32	180 secs	987	987	0.0 _(ss)	DRY	0.7	0.0	20.0	0.0	0	0
WS8	1	25	2		1.02	0.50 to 1.32	240 secs	987	987	0.0 _(ss)	DRY	0.7	0.0	20.1	0.0	0	0
WS8	1	25	2		1.02	0.50 to 1.32	300 secs	987	987	0.0 _(ss)	DRY	0.6	0.0	20.2	0.0	0	0
WS8	1	25	3	1.32	1.03	0.50 to 1.32	06/12/2019 12:39:00	994	993	0.0 _(l)	DRY	0.1	0.0	20.9	0.0	0	0
WS8	1	25	3		1.03	0.50 to 1.32	15 secs	994	993	0.0 _(ss)	DRY	0.6	0.0	20.5	0.0	0	0
WS8	1	25	3		1.03	0.50 to 1.32	30 secs	994	993	0.0 _(ss)	DRY	0.7	0.0	20.3	0.0	0	0
WS8	1	25	3		1.03	0.50 to 1.32	60 secs	994	993	0.0 _(ss)	DRY	0.7	0.0	20.3	0.0	0	0
WS8	1	25	3		1.03	0.50 to 1.32	90 secs	994	993	0.0 _(ss)	DRY	0.8	0.0	20.2	0.0	0	0
WS8	1	25	3		1.03	0.50 to 1.32	120 secs	994	993	0.0 _(ss)	DRY	0.7	0.0	20.2	0.0	0	0
WS8	1	25	3		1.03	0.50 to 1.32	180 secs	994	993	0.0 _(ss)	DRY	0.7	0.0	20.3	0.0	0	0
WS8	1	25	3		1.03	0.50 to 1.32	240 secs	994	993	0.0 _(ss)	DRY	0.7	0.0	20.3	0.0	0	0
WS8	1	25	3		1.03	0.50 to 1.32	300 secs	994	993	0.0 _(ss)	DRY	0.7	0.0	20.3	0.0	0	0
WS8	1	25	4	1.32	1.03	0.50 to 1.32	13/12/2019 10:19:00	972	972	0.0 _(l)	DRY	0.1	0.0	20.9	0.0	0	0
WS8	1	25	4		1.03	0.50 to 1.32	15 secs	972	972	0.0 _(ss)	DRY	0.7	0.0	20.8	0.0	0	0
WS8	1	25	4		1.03	0.50 to 1.32	30 secs	972	972	0.0 _(ss)	DRY	0.7	0.0	20.7	0.0	0	0
WS8	1	25	4		1.03	0.50 to 1.32	60 secs	972	972	0.0 _(ss)	DRY	0.7	0.0	20.7	0.0	0	0
WS8	1	25	4		1.03	0.50 to 1.32	90 secs	972	972	0.0 _(ss)	DRY	0.7	0.0	20.7	0.0	0	0
WS8	1	25	4		1.03	0.50 to 1.32	120 secs	972	972	0.0 _(ss)	DRY	0.6	0.0	20.7	0.0	0	0
WS8	1	25	4		1.03	0.50 to 1.32	180 secs	972	972	0.0 _(ss)	DRY	0.6	0.0	20.7	0.0	0	0

Key: l = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS8	1	25	4		1.03	0.50 to 1.32	240 secs	972	972	0.0 _(SS)	DRY	0.6	0.0	20.7	0.0	0	0
WS8	1	25	4		1.03	0.50 to 1.32	300 secs	972	972	0.0 _(SS)	DRY	0.6	0.0	20.7	0.0	0	0
WS8	1	25	5	1.32	1.02	0.50 to 1.32	20/12/2019 11:07:00	969	969	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS8	1	25	5		1.02	0.50 to 1.32	15 secs	969	969	0.0 _(SS)	DRY	0.7	0.0	20.3	0.0	0	0
WS8	1	25	5		1.02	0.50 to 1.32	30 secs	969	969	0.0 _(SS)	DRY	0.7	0.0	20.0	0.0	0	0
WS8	1	25	5		1.02	0.50 to 1.32	60 secs	969	969	0.0 _(SS)	DRY	0.7	0.0	20.0	0.0	0	0
WS8	1	25	5		1.02	0.50 to 1.32	90 secs	969	969	0.0 _(SS)	DRY	0.7	0.0	19.9	0.0	0	0
WS8	1	25	5		1.02	0.50 to 1.32	120 secs	969	969	0.0 _(SS)	DRY	0.8	0.0	19.9	0.0	0	0
WS8	1	25	5		1.02	0.50 to 1.32	180 secs	969	969	0.0 _(SS)	DRY	0.8	0.0	19.9	0.0	0	0
WS8	1	25	5		1.02	0.50 to 1.32	240 secs	969	969	0.0 _(SS)	DRY	0.8	0.0	19.8	0.0	0	0
WS8	1	25	5		1.02	0.50 to 1.32	300 secs	969	969	0.0 _(SS)	DRY	0.8	0.0	19.8	0.0	0	0
WS8	1	25	6	1.32	1.02	0.50 to 1.32	24/12/2019 11:00:00	998	998	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS8	1	25	6		1.02	0.50 to 1.32	15 secs	998	998	0.0 _(SS)	DRY	0.2	0.0	20.6	0.0	0	0
WS8	1	25	6		1.02	0.50 to 1.32	30 secs	998	998	0.0 _(SS)	DRY	0.4	0.0	20.2	0.0	0	0
WS8	1	25	6		1.02	0.50 to 1.32	60 secs	998	998	0.0 _(SS)	DRY	0.7	0.0	19.6	0.0	0	0
WS8	1	25	6		1.02	0.50 to 1.32	90 secs	998	998	0.0 _(SS)	DRY	0.8	0.0	19.5	0.0	0	0
WS8	1	25	6		1.02	0.50 to 1.32	120 secs	998	998	0.0 _(SS)	DRY	0.8	0.0	19.4	0.0	0	0
WS8	1	25	6		1.02	0.50 to 1.32	180 secs	998	998	0.0 _(SS)	DRY	0.7	0.0	19.6	0.0	0	0
WS8	1	25	6		1.02	0.50 to 1.32	240 secs	998	998	0.0 _(SS)	DRY	0.7	0.0	19.6	0.0	0	0
WS8	1	25	6		1.02	0.50 to 1.32	300 secs	998	998	0.0 _(SS)	DRY	0.7	0.0	19.6	0.0	0	0
WS12	1	25	1	2.15	1.97	0.50 to 2.15	18/11/2019 12:58:00	1007	1007	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS12	1	25	1		1.97	0.50 to 2.15	15 secs	1007	1007	0.0 _(SS)	DRY	0.1	0.0	20.8	0.0	0	0
WS12	1	25	1		1.97	0.50 to 2.15	30 secs	1007	1007	0.0 _(SS)	DRY	0.2	0.0	20.8	0.0	0	0
WS12	1	25	1		1.97	0.50 to 2.15	60 secs	1007	1007	0.0 _(SS)	DRY	0.3	0.0	20.6	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS12	1	25	1		1.97	0.50 to 2.15	90 secs	1007	1007	0.0 _(SS)	DRY	0.3	0.0	20.6	0.0	0	0
WS12	1	25	1		1.97	0.50 to 2.15	120 secs	1007	1007	0.0 _(SS)	DRY	0.4	0.0	20.5	0.0	0	0
WS12	1	25	1		1.97	0.50 to 2.15	180 secs	1007	1007	0.0 _(SS)	DRY	0.5	0.0	20.3	0.0	0	0
WS12	1	25	1		1.97	0.50 to 2.15	240 secs	1007	1007	0.0 _(SS)	DRY	0.6	0.0	20.3	0.0	0	0
WS12	1	25	1		1.97	0.50 to 2.15	300 secs	1007	1007	0.0 _(SS)	DRY	0.6	0.0	20.2	0.0	0	0
WS12	1	25	2	2.15	1.96	0.50 to 2.15	28/11/2019 12:09:00	987	987	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS12	1	25	2		1.96	0.50 to 2.15	15 secs	987	987	0.0 _(SS)	DRY	1.0	0.0	20.2	0.0	0	0
WS12	1	25	2		1.96	0.50 to 2.15	30 secs	987	987	0.0 _(SS)	DRY	1.1	0.0	19.5	0.0	0	0
WS12	1	25	2		1.96	0.50 to 2.15	60 secs	987	987	0.0 _(SS)	DRY	1.3	0.0	19.1	0.0	0	0
WS12	1	25	2		1.96	0.50 to 2.15	90 secs	987	987	0.0 _(SS)	DRY	1.4	0.0	18.9	0.0	0	0
WS12	1	25	2		1.96	0.50 to 2.15	120 secs	987	987	0.0 _(SS)	DRY	1.4	0.0	18.9	0.0	0	0
WS12	1	25	2		1.96	0.50 to 2.15	180 secs	987	987	0.0 _(SS)	DRY	1.5	0.0	18.9	0.0	0	0
WS12	1	25	2		1.96	0.50 to 2.15	240 secs	987	987	0.0 _(SS)	DRY	1.5	0.0	18.9	0.0	0	0
WS12	1	25	2		1.96	0.50 to 2.15	300 secs	987	987	0.0 _(SS)	DRY	1.5	0.0	18.9	0.0	0	0
WS12	1	25	3	2.15	1.94	0.50 to 2.15	06/12/2019 12:50:00	993	993	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS12	1	25	3		1.94	0.50 to 2.15	15 secs	993	993	0.0 _(SS)	DRY	0.8	0.0	20.4	0.0	0	0
WS12	1	25	3		1.94	0.50 to 2.15	30 secs	993	993	0.0 _(SS)	DRY	1.0	0.0	20.0	0.0	0	0
WS12	1	25	3		1.94	0.50 to 2.15	60 secs	993	993	0.0 _(SS)	DRY	1.2	0.0	19.7	0.0	0	0
WS12	1	25	3		1.94	0.50 to 2.15	90 secs	993	993	0.0 _(SS)	DRY	1.2	0.0	19.6	0.0	0	0
WS12	1	25	3		1.94	0.50 to 2.15	120 secs	993	993	0.0 _(SS)	DRY	1.2	0.0	19.6	0.0	0	0
WS12	1	25	3		1.94	0.50 to 2.15	180 secs	993	993	0.0 _(SS)	DRY	1.3	0.0	19.6	0.0	0	0
WS12	1	25	3		1.94	0.50 to 2.15	240 secs	993	993	0.0 _(SS)	DRY	1.3	0.0	19.6	0.0	0	0
WS12	1	25	3		1.94	0.50 to 2.15	300 secs	993	993	0.0 _(SS)	DRY	1.3	0.0	19.6	0.0	0	0
WS12	1	25	4	2.15	1.94	0.50 to 2.15	13/12/2019 10:27:00	972	972	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS12	1	25	4		1.94	0.50 to 2.15	15 secs	972	972	0.0 _(SS)	DRY	1.2	0.0	20.4	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

 RSK Environment Ltd Battlegate Road Boxworth Cambridge CB23 4NN	Compiled By	Date	Checked By	Date	Contract Ref:
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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS12	1	25	4		1.94	0.50 to 2.15	30 secs	972	972	0.0 _(SS)	DRY	1.2	0.0	19.9	0.0	0	0
WS12	1	25	4		1.94	0.50 to 2.15	60 secs	972	972	0.0 _(SS)	DRY	1.2	0.0	19.8	0.0	0	0
WS12	1	25	4		1.94	0.50 to 2.15	90 secs	972	972	0.0 _(SS)	DRY	1.3	0.0	19.7	0.0	0	0
WS12	1	25	4		1.94	0.50 to 2.15	120 secs	972	972	0.0 _(SS)	DRY	1.3	0.0	19.7	0.0	0	0
WS12	1	25	4		1.94	0.50 to 2.15	180 secs	972	972	0.0 _(SS)	DRY	1.3	0.0	19.7	0.0	0	0
WS12	1	25	4		1.94	0.50 to 2.15	240 secs	972	972	0.0 _(SS)	DRY	1.3	0.0	19.7	0.0	0	0
WS12	1	25	4		1.94	0.50 to 2.15	300 secs	972	972	0.0 _(SS)	DRY	1.4	0.0	19.7	0.0	0	0
WS12	1	25	5	2.15	1.93	0.50 to 2.15	20/12/2019 11:19:00	969	969	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS12	1	25	5		1.93	0.50 to 2.15	15 secs	969	969	0.0 _(SS)	DRY	0.2	0.0	21.0	0.0	0	0
WS12	1	25	5		1.93	0.50 to 2.15	30 secs	969	969	0.0 _(SS)	DRY	0.4	0.0	20.8	0.0	0	0
WS12	1	25	5		1.93	0.50 to 2.15	60 secs	969	969	0.0 _(SS)	DRY	1.0	0.0	19.8	0.0	0	0
WS12	1	25	5		1.93	0.50 to 2.15	90 secs	969	969	0.0 _(SS)	DRY	1.3	0.0	19.4	0.0	0	0
WS12	1	25	5		1.93	0.50 to 2.15	120 secs	969	969	0.0 _(SS)	DRY	1.3	0.0	19.4	0.0	0	0
WS12	1	25	5		1.93	0.50 to 2.15	180 secs	969	969	0.0 _(SS)	DRY	1.4	0.0	19.3	0.0	0	0
WS12	1	25	5		1.93	0.50 to 2.15	240 secs	969	969	0.0 _(SS)	DRY	1.4	0.0	19.3	0.0	0	0
WS12	1	25	5		1.93	0.50 to 2.15	300 secs	969	969	0.0 _(SS)	DRY	1.4	0.0	19.2	0.0	0	0
WS12	1	25	6	2.15	1.93	0.50 to 2.15	24/12/2019 11:11:00	998	998	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS12	1	25	6		1.93	0.50 to 2.15	15 secs	998	998	0.0 _(SS)	DRY	1.0	0.0	19.8	0.0	0	0
WS12	1	25	6		1.93	0.50 to 2.15	30 secs	998	998	0.0 _(SS)	DRY	1.2	0.0	18.8	0.0	0	0
WS12	1	25	6		1.93	0.50 to 2.15	60 secs	998	998	0.0 _(SS)	DRY	1.3	0.0	18.6	0.0	0	0
WS12	1	25	6		1.93	0.50 to 2.15	90 secs	998	998	0.0 _(SS)	DRY	1.3	0.0	18.6	0.0	0	0
WS12	1	25	6		1.93	0.50 to 2.15	120 secs	998	998	0.0 _(SS)	DRY	1.3	0.0	18.6	0.0	0	0
WS12	1	25	6		1.93	0.50 to 2.15	180 secs	998	998	0.0 _(SS)	DRY	1.4	0.0	18.6	0.0	0	0
WS12	1	25	6		1.93	0.50 to 2.15	240 secs	998	998	0.0 _(SS)	DRY	1.4	0.0	18.6	0.0	0	0
WS12	1	25	6		1.93	0.50 to 2.15	300 secs	998	998	0.0 _(SS)	DRY	1.4	0.0	18.6	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS14	1	25	1	4.45	4.05	0.50 to 4.45	18/11/2019 11:03:00	1007	1007	0.0 _(l)	DRY	0.1	0.0	20.9	0.0	0	0
WS14	1	25	1		4.05	0.50 to 4.45	15 secs	1007	1007	0.0 _(ss)	DRY	0.9	0.0	20.3	0.0	0	0
WS14	1	25	1		4.05	0.50 to 4.45	30 secs	1007	1007	0.0 _(ss)	DRY	1.1	0.0	19.2	0.0	1	0
WS14	1	25	1		4.05	0.50 to 4.45	60 secs	1007	1007	0.0 _(ss)	DRY	1.1	0.1	19.0	2.0	0	0
WS14	1	25	1		4.05	0.50 to 4.45	90 secs	1007	1007	0.0 _(ss)	DRY	1.1	0.1	19.0	2.0	0	0
WS14	1	25	1		4.05	0.50 to 4.45	120 secs	1007	1007	0.0 _(ss)	DRY	1.1	0.1	19.0	2.0	0	0
WS14	1	25	1		4.05	0.50 to 4.45	180 secs	1007	1007	0.0 _(ss)	DRY	1.0	0.2	19.1	4.0	0	0
WS14	1	25	1		4.05	0.50 to 4.45	240 secs	1007	1007	0.0 _(ss)	DRY	0.9	0.2	19.2	4.0	0	0
WS14	1	25	1		4.05	0.50 to 4.45	300 secs	1007	1007	0.0 _(ss)	DRY	0.8	0.2	19.4	4.0	0	0
WS14	1	25	2	4.45	4.06	0.50 to 4.45	28/11/2019 10:25:00	986	986	0.0 _(l)	DRY	0.1	0.0	20.9	0.0	0	0
WS14	1	25	2		4.06	0.50 to 4.45	15 secs	986	986	0.0 _(ss)	DRY	1.1	0.0	19.7	0.0	0	0
WS14	1	25	2		4.06	0.50 to 4.45	30 secs	986	986	0.0 _(ss)	DRY	1.1	0.0	18.9	0.0	0	0
WS14	1	25	2		4.06	0.50 to 4.45	60 secs	986	986	0.0 _(ss)	DRY	1.1	0.0	18.9	0.0	0	0
WS14	1	25	2		4.06	0.50 to 4.45	90 secs	986	986	0.0 _(ss)	DRY	1.0	0.0	19.0	0.0	0	0
WS14	1	25	2		4.06	0.50 to 4.45	120 secs	986	986	0.0 _(ss)	DRY	1.0	0.0	19.0	0.0	0	0
WS14	1	25	2		4.06	0.50 to 4.45	180 secs	986	986	0.0 _(ss)	DRY	0.8	0.0	19.5	0.0	0	0
WS14	1	25	2		4.06	0.50 to 4.45	240 secs	986	986	0.0 _(ss)	DRY	0.8	0.0	19.6	0.0	0	0
WS14	1	25	2		4.06	0.50 to 4.45	300 secs	986	986	0.0 _(ss)	DRY	0.9	0.0	19.6	0.0	0	0
WS14	1	25	3	4.45	4.06	0.50 to 4.45	06/12/2019 11:18:00	994	994	0.0 _(l)	DRY	0.1	0.0	20.9	0.0	0	0
WS14	1	25	3		4.06	0.50 to 4.45	15 secs	994	994	0.0 _(ss)	DRY	1.0	0.0	19.7	0.0	0	0
WS14	1	25	3		4.06	0.50 to 4.45	30 secs	994	994	0.0 _(ss)	DRY	1.0	0.0	19.1	0.0	0	0
WS14	1	25	3		4.06	0.50 to 4.45	60 secs	994	994	0.0 _(ss)	DRY	1.0	0.0	19.1	0.0	0	0
WS14	1	25	3		4.06	0.50 to 4.45	90 secs	994	994	0.0 _(ss)	DRY	1.0	0.0	19.1	0.0	0	0
WS14	1	25	3		4.06	0.50 to 4.45	120 secs	994	994	0.0 _(ss)	DRY	1.0	0.0	19.1	0.0	0	0

Key: l = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS14	1	25	3		4.06	0.50 to 4.45	180 secs	994	994	0.0 _(SS)	DRY	0.9	0.0	19.3	0.0	0	0
WS14	1	25	3		4.06	0.50 to 4.45	240 secs	994	994	0.0 _(SS)	DRY	0.9	0.0	19.3	0.0	0	0
WS14	1	25	3		4.06	0.50 to 4.45	300 secs	994	994	0.0 _(SS)	DRY	0.8	0.0	19.4	0.0	0	0
WS14	1	25	4	4.45	4.06	0.50 to 4.45	13/12/2019 09:31:00	971	971	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS14	1	25	4		4.06	0.50 to 4.45	15 secs	971	971	0.1 _(SS)	DRY	0.6	0.0	20.7	0.0	0	0
WS14	1	25	4		4.06	0.50 to 4.45	30 secs	971	971	0.1 _(SS)	DRY	0.7	0.0	20.5	0.0	0	0
WS14	1	25	4		4.06	0.50 to 4.45	60 secs	971	971	0.1 _(SS)	DRY	0.9	0.0	20.2	0.0	0	0
WS14	1	25	4		4.06	0.50 to 4.45	90 secs	971	971	0.1 _(SS)	DRY	1.1	0.0	20.0	0.0	0	0
WS14	1	25	4		4.06	0.50 to 4.45	120 secs	971	971	0.1 _(SS)	DRY	1.2	0.0	19.9	0.0	0	0
WS14	1	25	4		4.06	0.50 to 4.45	180 secs	971	971	0.1 _(SS)	DRY	1.2	0.0	19.9	0.0	0	0
WS14	1	25	4		4.06	0.50 to 4.45	240 secs	971	971	0.1 _(SS)	DRY	1.0	0.0	20.1	0.0	0	0
WS14	1	25	4		4.06	0.50 to 4.45	300 secs	971	971	0.1 _(SS)	DRY	0.9	0.0	20.1	0.0	0	0
WS14	1	25	5	4.45	4.05	0.50 to 4.45	20/12/2019 09:52:00	968	968	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS14	1	25	5		4.05	0.50 to 4.45	15 secs	968	968	0.0 _(SS)	DRY	0.9	0.0	20.3	0.0	0	0
WS14	1	25	5		4.05	0.50 to 4.45	30 secs	968	968	0.0 _(SS)	DRY	1.1	0.0	19.7	0.0	0	0
WS14	1	25	5		4.05	0.50 to 4.45	60 secs	968	968	0.0 _(SS)	DRY	1.2	0.0	19.6	0.0	0	0
WS14	1	25	5		4.05	0.50 to 4.45	90 secs	968	968	0.0 _(SS)	DRY	1.2	0.0	19.6	0.0	0	0
WS14	1	25	5		4.05	0.50 to 4.45	120 secs	968	968	0.0 _(SS)	DRY	1.2	0.0	19.6	0.0	0	0
WS14	1	25	5		4.05	0.50 to 4.45	180 secs	968	968	0.0 _(SS)	DRY	1.2	0.0	19.6	0.0	0	0
WS14	1	25	5		4.05	0.50 to 4.45	240 secs	968	968	0.0 _(SS)	DRY	1.1	0.0	19.7	0.0	0	0
WS14	1	25	5		4.05	0.50 to 4.45	300 secs	968	968	0.0 _(SS)	DRY	1.0	0.0	19.9	0.0	0	0
WS14	1	25	6	4.45	4.05	0.50 to 4.45	24/12/2019 09:46:00	998	998	0.0 _(I)	0.79	0.2	0.0	20.9	0.0	0	0
WS14	1	25	6		4.05	0.50 to 4.45	15 secs	998	998	0.1 _(SS)	0.79	0.3	0.0	20.7	0.0	0	0
WS14	1	25	6		4.05	0.50 to 4.45	30 secs	998	998	0.1 _(SS)	0.79	0.3	0.0	20.7	0.0	0	0
WS14	1	25	6		4.05	0.50 to 4.45	60 secs	998	998	0.1 _(SS)	0.79	0.3	0.0	20.7	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS14	1	25	6	4.45	---	0.50 to 4.45	24/12/2019 09:49:00	-	-	-	-	-	-	-	-	-	-
Remarks: Readings aborted - Pump failure																	
WS16	1	25	1	1.40	1.52	0.50 to 1.40	18/11/2019 13:14:00	1007	1007	0.0 _(l)	DRY	0.2	0.0	20.9	0.0	0	0
WS16	1	25	1		1.52	0.50 to 1.40	15 secs	1007	1007	0.0 _(ss)	DRY	0.1	0.0	20.7	0.0	0	0
WS16	1	25	1		1.52	0.50 to 1.40	30 secs	1007	1007	0.0 _(ss)	DRY	0.2	0.0	20.7	0.0	0	0
WS16	1	25	1		1.52	0.50 to 1.40	60 secs	1007	1007	0.0 _(ss)	DRY	0.4	0.0	20.5	0.0	0	0
WS16	1	25	1		1.52	0.50 to 1.40	90 secs	1007	1007	0.0 _(ss)	DRY	0.4	0.0	20.6	0.0	0	0
WS16	1	25	1		1.52	0.50 to 1.40	120 secs	1007	1007	0.0 _(ss)	DRY	0.4	0.0	20.6	0.0	0	0
WS16	1	25	1		1.52	0.50 to 1.40	180 secs	1007	1007	0.0 _(ss)	DRY	0.3	0.0	20.7	0.0	0	0
WS16	1	25	1		1.52	0.50 to 1.40	240 secs	1007	1007	0.0 _(ss)	DRY	0.3	0.0	20.7	0.0	0	0
WS16	1	25	1		1.52	0.50 to 1.40	300 secs	1007	1007	0.0 _(ss)	DRY	0.3	0.0	20.8	0.0	0	0
WS16	1	25	2	1.40	1.54	0.50 to 1.40	28/11/2019 12:23:00	987	987	0.0 _(l)	DRY	0.1	0.0	20.9	0.0	0	0
WS16	1	25	2		1.54	0.50 to 1.40	15 secs	987	987	0.0 _(ss)	DRY	0.7	0.0	20.5	0.0	0	0
WS16	1	25	2		1.54	0.50 to 1.40	30 secs	987	987	0.0 _(ss)	DRY	0.8	0.0	20.1	0.0	0	0
WS16	1	25	2		1.54	0.50 to 1.40	60 secs	987	987	0.0 _(ss)	DRY	0.9	0.0	19.9	0.0	0	0
WS16	1	25	2		1.54	0.50 to 1.40	90 secs	987	987	0.0 _(ss)	DRY	1.0	0.0	19.8	0.0	0	0
WS16	1	25	2		1.54	0.50 to 1.40	120 secs	987	987	0.0 _(ss)	DRY	1.0	0.0	19.8	0.0	0	0
WS16	1	25	2		1.54	0.50 to 1.40	180 secs	987	987	0.0 _(ss)	DRY	0.9	0.0	19.9	0.0	0	0
WS16	1	25	2		1.54	0.50 to 1.40	240 secs	987	987	0.0 _(ss)	DRY	0.9	0.0	20.0	0.0	0	0
WS16	1	25	2		1.54	0.50 to 1.40	300 secs	987	987	0.0 _(ss)	DRY	0.9	0.0	20.0	0.0	0	0
WS16	1	25	3	1.40	1.54	0.50 to 1.40	06/12/2019 13:03:00	992	992	0.0 _(l)	DRY	0.2	0.0	20.9	0.0	0	0
WS16	1	25	3		1.54	0.50 to 1.40	15 secs	992	992	0.0 _(ss)	DRY	0.2	0.0	20.9	0.0	0	0
WS16	1	25	3		1.54	0.50 to 1.40	30 secs	992	992	0.0 _(ss)	DRY	0.2	0.0	20.9	0.0	0	0
WS16	1	25	3		1.54	0.50 to 1.40	60 secs	992	992	0.0 _(ss)	DRY	0.4	0.0	20.8	0.0	0	0
WS16	1	25	3		1.54	0.50 to 1.40	90 secs	992	992	0.0 _(ss)	DRY	0.5	0.0	20.8	0.0	0	0

Key: l = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS16	1	25	3		1.54	0.50 to 1.40	120 secs	992	992	0.0 _(SS)	DRY	0.5	0.0	20.8	0.0	0	0
WS16	1	25	3		1.54	0.50 to 1.40	180 secs	992	992	0.0 _(SS)	DRY	0.5	0.0	20.8	0.0	0	0
WS16	1	25	3		1.54	0.50 to 1.40	240 secs	992	992	0.0 _(SS)	DRY	0.4	0.0	20.8	0.0	0	0
WS16	1	25	3		1.54	0.50 to 1.40	300 secs	992	992	0.0 _(SS)	DRY	0.4	0.0	20.8	0.0	0	0
WS16	1	25	4	1.40	1.54	0.50 to 1.40	13/12/2019 10:35:00	972	972	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS16	1	25	4		1.54	0.50 to 1.40	15 secs	972	972	0.0 _(SS)	DRY	0.5	0.0	21.0	0.0	0	0
WS16	1	25	4		1.54	0.50 to 1.40	30 secs	972	972	0.0 _(SS)	DRY	0.5	0.0	20.8	0.0	0	0
WS16	1	25	4		1.54	0.50 to 1.40	60 secs	972	972	0.0 _(SS)	DRY	0.6	0.0	20.7	0.0	0	0
WS16	1	25	4		1.54	0.50 to 1.40	90 secs	972	972	0.0 _(SS)	DRY	0.7	0.0	20.6	0.0	0	0
WS16	1	25	4		1.54	0.50 to 1.40	120 secs	972	972	0.0 _(SS)	DRY	0.7	0.0	20.6	0.0	0	0
WS16	1	25	4		1.54	0.50 to 1.40	180 secs	972	972	0.0 _(SS)	DRY	0.7	0.0	20.7	0.0	0	0
WS16	1	25	4		1.54	0.50 to 1.40	240 secs	972	972	0.0 _(SS)	DRY	0.7	0.0	20.6	0.0	0	0
WS16	1	25	4		1.54	0.50 to 1.40	300 secs	972	972	0.0 _(SS)	DRY	0.6	0.0	20.7	0.0	0	0
WS16	1	25	5	1.40	1.57	0.50 to 1.40	20/12/2019 11:31:00	968	968	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS16	1	25	5		1.57	0.50 to 1.40	15 secs	968	968	0.0 _(SS)	DRY	0.3	0.0	20.8	0.0	0	0
WS16	1	25	5		1.57	0.50 to 1.40	30 secs	968	968	0.0 _(SS)	DRY	0.5	0.0	20.1	0.0	0	0
WS16	1	25	5		1.57	0.50 to 1.40	60 secs	968	968	0.0 _(SS)	DRY	0.7	0.0	19.8	0.0	0	0
WS16	1	25	5		1.57	0.50 to 1.40	90 secs	968	968	0.0 _(SS)	DRY	0.7	0.0	19.8	0.0	0	0
WS16	1	25	5		1.57	0.50 to 1.40	120 secs	968	968	0.0 _(SS)	DRY	0.7	0.0	19.8	0.0	0	0
WS16	1	25	5		1.57	0.50 to 1.40	180 secs	968	968	0.0 _(SS)	DRY	0.7	0.0	19.8	0.0	0	0
WS16	1	25	5		1.57	0.50 to 1.40	240 secs	968	968	0.0 _(SS)	DRY	0.7	0.0	19.8	0.0	0	0
WS16	1	25	5		1.57	0.50 to 1.40	300 secs	968	968	0.0 _(SS)	DRY	0.7	0.0	19.7	0.0	0	0
WS16	1	25	6	1.40	1.54	0.50 to 1.40	24/12/2019 11:23:00	997	997	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS16	1	25	6		1.54	0.50 to 1.40	15 secs	997	997	0.0 _(SS)	DRY	0.9	0.0	19.7	0.0	0	0
WS16	1	25	6		1.54	0.50 to 1.40	30 secs	997	997	0.0 _(SS)	DRY	0.9	0.0	19.2	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS16	1	25	6		1.54	0.50 to 1.40	60 secs	997	997	0.0 _(SS)	DRY	0.9	0.0	19.2	0.0	0	0
WS16	1	25	6		1.54	0.50 to 1.40	90 secs	997	997	0.0 _(SS)	DRY	1.0	0.0	19.2	0.0	0	0
WS16	1	25	6		1.54	0.50 to 1.40	120 secs	997	997	0.0 _(SS)	DRY	1.0	0.0	19.2	0.0	0	0
WS16	1	25	6		1.54	0.50 to 1.40	180 secs	997	997	0.0 _(SS)	DRY	1.0	0.0	19.2	0.0	0	0
WS16	1	25	6		1.54	0.50 to 1.40	240 secs	997	997	0.0 _(SS)	DRY	1.0	0.0	19.2	0.0	0	0
WS16	1	25	6		1.54	0.50 to 1.40	300 secs	997	997	0.0 _(SS)	DRY	1.0	0.0	19.2	0.0	0	0
WS20	1	25	1	4.45	4.02	0.50 to 4.45	18/11/2019 11:23:00	1007	1007	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS20	1	25	1		4.02	0.50 to 4.45	15 secs	1007	1007	0.0 _(SS)	DRY	0.9	0.0	19.9	0.0	0	0
WS20	1	25	1		4.02	0.50 to 4.45	30 secs	1007	1007	0.0 _(SS)	DRY	1.0	0.0	18.9	0.0	0	0
WS20	1	25	1		4.02	0.50 to 4.45	60 secs	1007	1007	0.0 _(SS)	DRY	1.2	0.1	18.5	2.0	0	0
WS20	1	25	1		4.02	0.50 to 4.45	90 secs	1007	1007	0.0 _(SS)	DRY	1.3	0.1	18.3	2.0	0	0
WS20	1	25	1		4.02	0.50 to 4.45	120 secs	1007	1007	0.0 _(SS)	DRY	1.2	0.1	18.2	2.0	0	0
WS20	1	25	1		4.02	0.50 to 4.45	180 secs	1007	1007	0.0 _(SS)	DRY	1.2	0.1	18.2	2.0	0	0
WS20	1	25	1		4.02	0.50 to 4.45	240 secs	1007	1007	0.0 _(SS)	DRY	1.1	0.1	18.3	2.0	0	0
WS20	1	25	1		4.02	0.50 to 4.45	300 secs	1007	1007	0.0 _(SS)	DRY	1.1	0.1	18.3	2.0	0	0
WS20	1	25	2	4.45	4.00	0.50 to 4.45	28/11/2019 10:43:00	986	986	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS20	1	25	2		4.00	0.50 to 4.45	15 secs	986	986	0.1 _(SS)	DRY	1.0	0.0	20.0	0.0	0	0
WS20	1	25	2		4.00	0.50 to 4.45	30 secs	986	986	0.1 _(SS)	DRY	1.3	0.0	18.7	0.0	0	0
WS20	1	25	2		4.00	0.50 to 4.45	60 secs	986	986	0.1 _(SS)	DRY	1.4	0.0	18.4	0.0	0	0
WS20	1	25	2		4.00	0.50 to 4.45	90 secs	986	986	0.1 _(SS)	DRY	1.4	0.0	18.3	0.0	0	0
WS20	1	25	2		4.00	0.50 to 4.45	120 secs	986	986	0.1 _(SS)	DRY	1.4	0.0	18.3	0.0	0	0
WS20	1	25	2		4.00	0.50 to 4.45	180 secs	986	986	0.1 _(SS)	DRY	1.4	0.0	18.3	0.0	0	0
WS20	1	25	2		4.00	0.50 to 4.45	240 secs	986	986	0.1 _(SS)	DRY	1.3	0.0	18.3	0.0	0	0
WS20	1	25	2		4.00	0.50 to 4.45	300 secs	986	986	0.1 _(SS)	DRY	1.3	0.0	18.3	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS20	1	25	3	4.45	4.00	0.50 to 4.45	06/12/2019 11:32:00	995	995	0.0 _(l)	DRY	0.2	0.0	20.9	0.0	0	0
WS20	1	25	3		4.00	0.50 to 4.45	15 secs	995	995	0.0 _(ss)	DRY	0.1	0.0	20.9	0.0	0	0
WS20	1	25	3		4.00	0.50 to 4.45	30 secs	995	995	0.0 _(ss)	DRY	0.1	0.0	20.9	0.0	0	0
WS20	1	25	3		4.00	0.50 to 4.45	60 secs	995	995	0.0 _(ss)	DRY	0.1	0.0	20.9	0.0	0	0
WS20	1	25	3		4.00	0.50 to 4.45	90 secs	995	995	0.0 _(ss)	DRY	0.1	0.0	20.9	0.0	0	0
WS20	1	25	3		4.00	0.50 to 4.45	120 secs	995	995	0.0 _(ss)	DRY	0.2	0.0	20.6	0.0	0	0
WS20	1	25	3		4.00	0.50 to 4.45	180 secs	995	995	0.0 _(ss)	DRY	0.5	0.0	20.3	0.0	0	0
WS20	1	25	3		4.00	0.50 to 4.45	240 secs	995	995	0.0 _(ss)	DRY	0.7	0.0	20.0	0.0	0	0
WS20	1	25	3		4.00	0.50 to 4.45	300 secs	995	995	0.0 _(ss)	DRY	0.8	0.0	19.9	0.0	0	0
WS20	1	25	4	4.45	4.00	0.50 to 4.45	13/12/2019 09:40:00	972	972	0.0 _(l)	DRY	0.1	0.0	20.9	0.0	0	0
WS20	1	25	4		4.00	0.50 to 4.45	15 secs	972	972	0.0 _(ss)	DRY	1.5	0.0	20.0	0.0	0	0
WS20	1	25	4		4.00	0.50 to 4.45	30 secs	972	972	0.0 _(ss)	DRY	1.5	0.0	19.3	0.0	0	0
WS20	1	25	4		4.00	0.50 to 4.45	60 secs	972	972	0.0 _(ss)	DRY	1.5	0.0	19.1	0.0	0	0
WS20	1	25	4		4.00	0.50 to 4.45	90 secs	972	972	0.0 _(ss)	DRY	1.6	0.0	19.0	0.0	0	0
WS20	1	25	4		4.00	0.50 to 4.45	120 secs	972	972	0.0 _(ss)	DRY	1.6	0.0	19.0	0.0	0	0
WS20	1	25	4		4.00	0.50 to 4.45	180 secs	972	972	0.0 _(ss)	DRY	1.5	0.0	19.0	0.0	0	0
WS20	1	25	4		4.00	0.50 to 4.45	240 secs	972	972	0.0 _(ss)	DRY	1.5	0.0	19.0	0.0	0	0
WS20	1	25	4		4.00	0.50 to 4.45	300 secs	972	972	0.0 _(ss)	DRY	1.5	0.0	19.0	0.0	0	0
WS20	1	25	5	4.45	4.00	0.50 to 4.45	20/12/2019 10:06:00	969	969	0.0 _(l)	DRY	0.1	0.0	20.9	0.0	0	0
WS20	1	25	5		4.00	0.50 to 4.45	15 secs	969	969	0.0 _(ss)	DRY	1.8	0.0	18.3	0.0	1	0
WS20	1	25	5		4.00	0.50 to 4.45	30 secs	969	969	0.0 _(ss)	DRY	1.9	0.0	16.9	0.0	0	0
WS20	1	25	5		4.00	0.50 to 4.45	60 secs	969	969	0.0 _(ss)	DRY	1.9	0.0	16.7	0.0	0	0
WS20	1	25	5		4.00	0.50 to 4.45	90 secs	969	969	0.0 _(ss)	DRY	2.0	0.0	16.7	0.0	0	0
WS20	1	25	5		4.00	0.50 to 4.45	120 secs	969	969	0.0 _(ss)	DRY	2.0	0.0	16.6	0.0	0	0
WS20	1	25	5		4.00	0.50 to 4.45	180 secs	969	969	0.0 _(ss)	DRY	1.9	0.0	16.5	0.0	0	0

Key: l = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS20	1	25	5		4.00	0.50 to 4.45	240 secs	969	969	0.0 _(SS)	DRY	1.8	0.0	16.3	0.0	0	0
WS20	1	25	5		4.00	0.50 to 4.45	300 secs	969	969	0.0 _(SS)	DRY	1.8	0.0	15.9	0.0	0	0
WS20	1	25	6	4.45	3.99	0.50 to 4.45	24/12/2019 09:56:00	998	998	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS20	1	25	6		3.99	0.50 to 4.45	15 secs	998	998	0.0 _(SS)	DRY	2.1	0.0	16.9	0.0	0	0
WS20	1	25	6		3.99	0.50 to 4.45	30 secs	998	998	0.0 _(SS)	DRY	2.1	0.0	15.1	0.0	0	0
WS20	1	25	6		3.99	0.50 to 4.45	60 secs	998	998	0.0 _(SS)	DRY	2.1	0.0	15.0	0.0	0	0
WS20	1	25	6		3.99	0.50 to 4.45	90 secs	998	998	0.0 _(SS)	DRY	2.1	0.0	14.9	0.0	0	0
WS20	1	25	6		3.99	0.50 to 4.45	120 secs	998	998	0.0 _(SS)	DRY	2.2	0.0	14.8	0.0	0	0
WS20	1	25	6		3.99	0.50 to 4.45	180 secs	998	998	0.0 _(SS)	DRY	2.1	0.0	14.6	0.0	0	0
WS20	1	25	6		3.99	0.50 to 4.45	240 secs	998	998	0.0 _(SS)	DRY	2.0	0.0	14.1	0.0	0	0
WS20	1	25	6		3.99	0.50 to 4.45	300 secs	998	998	0.0 _(SS)	DRY	1.9	0.0	13.6	0.0	0	0
WS22	1	25	1	2.00	1.43	0.50 to 2.00	18/11/2019 13:31:00	1007	1007	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS22	1	25	1		1.43	0.50 to 2.00	15 secs	1007	1007	0.0 _(SS)	DRY	0.1	0.0	20.9	0.0	1	0
WS22	1	25	1		1.43	0.50 to 2.00	30 secs	1007	1007	0.0 _(SS)	DRY	0.1	0.0	20.9	0.0	0	0
WS22	1	25	1		1.43	0.50 to 2.00	60 secs	1007	1007	0.0 _(SS)	DRY	0.1	0.0	20.9	0.0	0	0
WS22	1	25	1		1.43	0.50 to 2.00	90 secs	1007	1007	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
WS22	1	25	1		1.43	0.50 to 2.00	120 secs	1007	1007	0.0 _(SS)	DRY	0.1	0.0	20.9	0.0	0	0
WS22	1	25	1		1.43	0.50 to 2.00	180 secs	1007	1007	0.0 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0
WS22	1	25	1		1.43	0.50 to 2.00	240 secs	1007	1007	0.0 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0
WS22	1	25	1		1.43	0.50 to 2.00	300 secs	1007	1007	0.0 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0
WS22	1	25	2	2.00	1.44	0.50 to 2.00	28/11/2019 12:35:00	987	987	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS22	1	25	2		1.44	0.50 to 2.00	15 secs	987	987	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
WS22	1	25	2		1.44	0.50 to 2.00	30 secs	987	987	0.0 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0
WS22	1	25	2		1.44	0.50 to 2.00	60 secs	987	987	0.0 _(SS)	DRY	0.1	0.0	21.0	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS22	1	25	2		1.44	0.50 to 2.00	90 secs	987	987	0.0 _(SS)	DRY	0.2	0.0	21.0	0.0	0	0
WS22	1	25	2		1.44	0.50 to 2.00	120 secs	987	987	0.0 _(SS)	DRY	0.2	0.0	21.0	0.0	0	0
WS22	1	25	2		1.44	0.50 to 2.00	180 secs	987	987	0.0 _(SS)	DRY	0.2	0.0	21.0	0.0	0	0
WS22	1	25	2		1.44	0.50 to 2.00	240 secs	987	987	0.0 _(SS)	DRY	0.2	0.0	21.0	0.0	0	0
WS22	1	25	2		1.44	0.50 to 2.00	300 secs	987	987	0.0 _(SS)	DRY	0.2	0.0	21.0	0.0	0	0
WS22	1	25	3	2.00	1.44	0.50 to 2.00	06/12/2019 13:15:00	993	993	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS22	1	25	3		1.44	0.50 to 2.00	15 secs	993	993	0.0 _(SS)	DRY	0.1	0.0	20.9	0.0	0	0
WS22	1	25	3		1.44	0.50 to 2.00	30 secs	993	993	0.0 _(SS)	DRY	0.2	0.0	20.9	0.0	0	0
WS22	1	25	3		1.44	0.50 to 2.00	60 secs	993	993	0.0 _(SS)	DRY	0.3	0.0	20.9	0.0	0	0
WS22	1	25	3		1.44	0.50 to 2.00	90 secs	993	993	0.0 _(SS)	DRY	0.3	0.0	20.8	0.0	0	0
WS22	1	25	3		1.44	0.50 to 2.00	120 secs	993	993	0.0 _(SS)	DRY	0.4	0.0	20.8	0.0	0	0
WS22	1	25	3		1.44	0.50 to 2.00	180 secs	993	993	0.0 _(SS)	DRY	0.4	0.0	20.8	0.0	0	0
WS22	1	25	3		1.44	0.50 to 2.00	240 secs	993	993	0.0 _(SS)	DRY	0.4	0.0	20.8	0.0	0	0
WS22	1	25	3		1.44	0.50 to 2.00	300 secs	993	993	0.0 _(SS)	DRY	0.4	0.0	20.8	0.0	0	0
WS22	1	25	4	2.00	1.43	0.50 to 2.00	13/12/2019 10:44:00	972	972	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS22	1	25	4		1.43	0.50 to 2.00	15 secs	972	972	0.0 _(SS)	DRY	0.1	0.0	21.3	0.0	0	0
WS22	1	25	4		1.43	0.50 to 2.00	30 secs	972	972	0.0 _(SS)	DRY	0.1	0.0	21.4	0.0	0	0
WS22	1	25	4		1.43	0.50 to 2.00	60 secs	972	972	0.0 _(SS)	DRY	0.1	0.0	21.4	0.0	0	0
WS22	1	25	4		1.43	0.50 to 2.00	90 secs	972	972	0.0 _(SS)	DRY	0.1	0.0	21.4	0.0	0	0
WS22	1	25	4		1.43	0.50 to 2.00	120 secs	972	972	0.0 _(SS)	DRY	0.1	0.0	21.4	0.0	0	0
WS22	1	25	4		1.43	0.50 to 2.00	180 secs	972	972	0.0 _(SS)	DRY	0.1	0.0	21.4	0.0	0	0
WS22	1	25	4		1.43	0.50 to 2.00	240 secs	972	972	0.0 _(SS)	DRY	0.1	0.0	21.3	0.0	0	0
WS22	1	25	4		1.43	0.50 to 2.00	300 secs	972	972	0.0 _(SS)	DRY	0.2	0.0	21.3	0.0	0	0
WS22	1	25	5	2.00	1.44	0.50 to 2.00	20/12/2019 11:43:00	969	969	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS22	1	25	5		1.44	0.50 to 2.00	15 secs	969	969	0.0 _(SS)	DRY	0.4	0.0	20.6	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS22	1	25	5		1.44	0.50 to 2.00	30 secs	969	969	0.0 _(SS)	DRY	0.5	0.0	20.4	0.0	0	0
WS22	1	25	5		1.44	0.50 to 2.00	60 secs	969	969	0.0 _(SS)	DRY	0.4	0.0	20.7	0.0	0	0
WS22	1	25	5		1.44	0.50 to 2.00	90 secs	969	969	0.0 _(SS)	DRY	0.4	0.0	20.7	0.0	0	0
WS22	1	25	5		1.44	0.50 to 2.00	120 secs	969	969	0.0 _(SS)	DRY	0.4	0.0	20.7	0.0	0	0
WS22	1	25	5		1.44	0.50 to 2.00	180 secs	969	969	0.0 _(SS)	DRY	0.5	0.0	20.5	0.0	0	0
WS22	1	25	5		1.44	0.50 to 2.00	240 secs	969	969	0.0 _(SS)	DRY	0.5	0.0	20.5	0.0	0	0
WS22	1	25	5	2.00	1.44	0.50 to 2.00	20/12/2019 11:48:00	969	969	0.0 _(SS)	DRY	0.5	0.0	20.4	0.0	0	0
WS22	1	25	6	2.00	1.43	0.50 to 2.00	24/12/2019 11:36:00	998	998	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS22	1	25	6		1.43	0.50 to 2.00	15 secs	998	998	0.0 _(SS)	DRY	0.1	0.0	20.8	0.0	0	0
WS22	1	25	6		1.43	0.50 to 2.00	30 secs	998	998	0.0 _(SS)	DRY	0.1	0.0	20.8	0.0	0	0
WS22	1	25	6		1.43	0.50 to 2.00	60 secs	998	998	0.0 _(SS)	DRY	0.1	0.0	20.8	0.0	0	0
WS22	1	25	6		1.43	0.50 to 2.00	90 secs	998	998	0.0 _(SS)	DRY	0.2	0.0	20.8	0.0	0	0
WS22	1	25	6		1.43	0.50 to 2.00	120 secs	998	998	0.0 _(SS)	DRY	0.2	0.0	20.8	0.0	0	0
WS22	1	25	6		1.43	0.50 to 2.00	180 secs	998	998	0.0 _(SS)	DRY	0.2	0.0	20.8	0.0	0	0
WS22	1	25	6		1.43	0.50 to 2.00	240 secs	998	998	0.0 _(SS)	DRY	0.2	0.0	20.8	0.0	0	0
WS22	1	25	6		1.43	0.50 to 2.00	300 secs	998	998	0.0 _(SS)	DRY	0.2	0.0	20.7	0.0	0	0
WS23	1	25	1	6.45	3.14	0.50 to 6.45	18/11/2019 11:42:00	1007	1007	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS23	1	25	1		3.14	0.50 to 6.45	15 secs	1007	1007	0.0 _(SS)	DRY	0.8	0.0	20.5	0.0	0	0
WS23	1	25	1		3.14	0.50 to 6.45	30 secs	1007	1007	0.0 _(SS)	DRY	1.2	0.1	19.4	2.0	0	0
WS23	1	25	1		3.14	0.50 to 6.45	60 secs	1007	1007	0.0 _(SS)	DRY	1.4	0.1	19.1	2.0	0	0
WS23	1	25	1		3.14	0.50 to 6.45	90 secs	1007	1007	0.0 _(SS)	DRY	1.4	0.2	19.2	4.0	0	0
WS23	1	25	1		3.14	0.50 to 6.45	120 secs	1007	1007	0.0 _(SS)	DRY	1.3	0.2	19.3	4.0	0	0
WS23	1	25	1		3.14	0.50 to 6.45	180 secs	1007	1007	0.0 _(SS)	DRY	1.3	0.2	19.5	4.0	0	0
WS23	1	25	1		3.14	0.50 to 6.45	240 secs	1007	1007	0.0 _(SS)	DRY	1.2	0.2	19.6	4.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

 RSK Environment Ltd Battlegate Road Boxworth Cambridge CB23 4NN	Compiled By	Date	Checked By	Date	Contract Ref:
		02/01/20			340110
	Contract: Highover Farm, Hitchin				Page: 29 of 33 

IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS23	1	25	1		3.14	0.50 to 6.45	300 secs	1007	1007	0.0 _(SS)	DRY	1.1	0.2	19.7	4.0	0	0
WS23	1	25	2	6.45	3.12	0.50 to 6.45	28/11/2019 10:56:00	986	986	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS23	1	25	2		3.12	0.50 to 6.45	15 secs	986	986	0.0 _(SS)	DRY	1.2	0.0	20.1	0.0	0	0
WS23	1	25	2		3.12	0.50 to 6.45	30 secs	986	986	0.0 _(SS)	DRY	1.4	0.0	19.0	0.0	0	0
WS23	1	25	2		3.12	0.50 to 6.45	60 secs	986	986	0.0 _(SS)	DRY	1.5	0.0	18.7	0.0	0	0
WS23	1	25	2		3.12	0.50 to 6.45	90 secs	986	986	0.0 _(SS)	DRY	1.5	0.0	18.7	0.0	0	0
WS23	1	25	2		3.12	0.50 to 6.45	120 secs	986	986	0.0 _(SS)	DRY	1.5	0.0	18.7	0.0	0	0
WS23	1	25	2		3.12	0.50 to 6.45	180 secs	986	986	0.0 _(SS)	DRY	1.5	0.0	18.8	0.0	0	0
WS23	1	25	2		3.12	0.50 to 6.45	240 secs	986	986	0.0 _(SS)	DRY	1.4	0.0	18.8	0.0	0	0
WS23	1	25	2		3.12	0.50 to 6.45	300 secs	986	986	0.0 _(SS)	DRY	1.4	0.0	18.9	0.0	0	0
WS23	1	25	3	6.45	3.12	0.50 to 6.45	06/12/2019 11:46:00	994	994	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS23	1	25	3		3.12	0.50 to 6.45	15 secs	994	994	0.0 _(SS)	DRY	0.9	0.0	19.9	0.0	0	0
WS23	1	25	3		3.12	0.50 to 6.45	30 secs	994	994	0.0 _(SS)	DRY	1.0	0.0	19.3	0.0	0	0
WS23	1	25	3		3.12	0.50 to 6.45	60 secs	994	994	0.0 _(SS)	DRY	1.1	0.0	19.1	0.0	0	0
WS23	1	25	3		3.12	0.50 to 6.45	90 secs	994	994	0.0 _(SS)	DRY	1.2	0.0	18.9	0.0	0	0
WS23	1	25	3		3.12	0.50 to 6.45	120 secs	994	994	0.0 _(SS)	DRY	1.3	0.0	18.8	0.0	0	0
WS23	1	25	3		3.12	0.50 to 6.45	180 secs	994	994	0.0 _(SS)	DRY	1.3	0.0	18.7	0.0	0	0
WS23	1	25	3		3.12	0.50 to 6.45	240 secs	994	994	0.0 _(SS)	DRY	1.3	0.0	18.7	0.0	0	0
WS23	1	25	3		3.12	0.50 to 6.45	300 secs	994	994	0.0 _(SS)	DRY	1.3	0.0	18.7	0.0	0	0
WS23	1	25	4	6.45	3.12	0.50 to 6.45	13/12/2019 09:48:00	972	972	0.0 _(I)	DRY	0.1	0.0	20.9	0.0	0	0
WS23	1	25	4		3.12	0.50 to 6.45	15 secs	972	972	0.0 _(SS)	DRY	1.6	0.0	20.4	0.0	0	0
WS23	1	25	4		3.12	0.50 to 6.45	30 secs	972	972	0.0 _(SS)	DRY	1.6	0.0	19.8	0.0	0	0
WS23	1	25	4		3.12	0.50 to 6.45	60 secs	972	972	0.0 _(SS)	DRY	1.6	0.0	19.7	0.0	0	0
WS23	1	25	4		3.12	0.50 to 6.45	90 secs	972	972	0.0 _(SS)	DRY	1.6	0.1	19.7	2.0	0	0
WS23	1	25	4		3.12	0.50 to 6.45	120 secs	972	972	0.0 _(SS)	DRY	1.6	0.1	19.7	2.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

 RSK Environment Ltd Battlegate Road Boxworth Cambridge CB23 4NN	Compiled By	Date	Checked By	Date	Contract Ref:
		02/01/20			340110
	Contract: Highover Farm, Hitchin				Page: 30 of 33 

IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS23	1	25	4		3.12	0.50 to 6.45	180 secs	972	972	0.0 _(SS)	DRY	1.5	0.1	19.7	2.0	0	0
WS23	1	25	4		3.12	0.50 to 6.45	240 secs	972	972	0.0 _(SS)	DRY	1.5	0.1	19.8	2.0	0	0
WS23	1	25	4		3.12	0.50 to 6.45	300 secs	972	972	0.0 _(SS)	DRY	1.4	0.1	19.9	2.0	0	0
WS23	1	25	5	6.45	3.12	0.50 to 6.45	20/12/2019 10:18:00	968	968	0.0 _(I)	DRY	0.2	0.0	20.9	0.0	0	0
WS23	1	25	5		3.12	0.50 to 6.45	15 secs	968	968	0.0 _(SS)	DRY	1.1	0.0	19.9	0.0	0	0
WS23	1	25	5		3.12	0.50 to 6.45	30 secs	968	968	0.0 _(SS)	DRY	1.3	0.0	19.2	0.0	0	0
WS23	1	25	5		3.12	0.50 to 6.45	60 secs	968	968	0.0 _(SS)	DRY	1.4	0.0	19.1	0.0	0	0
WS23	1	25	5		3.12	0.50 to 6.45	90 secs	968	968	0.0 _(SS)	DRY	1.4	0.0	19.1	0.0	0	0
WS23	1	25	5		3.12	0.50 to 6.45	120 secs	968	968	0.0 _(SS)	DRY	1.5	0.0	19.0	0.0	0	0
WS23	1	25	5		3.12	0.50 to 6.45	180 secs	968	968	0.0 _(SS)	DRY	1.4	0.0	19.0	0.0	0	0
WS23	1	25	5		3.12	0.50 to 6.45	240 secs	968	968	0.0 _(SS)	DRY	1.3	0.0	19.0	0.0	0	0
WS23	1	25	5		3.12	0.50 to 6.45	300 secs	968	968	0.0 _(SS)	DRY	1.2	0.0	19.0	0.0	0	0
WS23	1	25	6	6.45	3.12	0.50 to 6.45	24/12/2019 10:10:00	998	998	0.0 _(I)	0.83	0.2	0.0	20.9	0.0	0	0
WS23	1	25	6		3.12	0.50 to 6.45	15 secs	998	998	0.0 _(SS)	0.83	0.3	0.0	20.8	0.0	0	0
WS23	1	25	6		3.12	0.50 to 6.45	30 secs	998	998	0.0 _(SS)	0.83	0.6	0.0	20.5	0.0	0	0
WS23	1	25	6	6.45	---	0.50 to 6.45	24/12/2019 10:15:00	-	-	-	-	-	-	-	-	-	-
Remarks: Readings aborted - Pump failure																	
WS24	1	25	1	4.45	4.11	0.50 to 4.45	18/11/2019 12:08:00	1006	1006	0.0 _(I)	1.83	0.2	0.0	20.9	0.0	0	0
WS24	1	25	1		4.11	0.50 to 4.45	15 secs	1006	1006	0.0 _(SS)	1.83	0.4	0.0	20.6	0.0	0	0
WS24	1	25	1		4.11	0.50 to 4.45	30 secs	1006	1006	0.0 _(SS)	1.83	0.6	0.0	20.0	0.0	0	0
WS24	1	25	1		4.11	0.50 to 4.45	60 secs	1006	1006	0.0 _(SS)	1.83	0.7	0.0	19.8	0.0	0	0
WS24	1	25	1		4.11	0.50 to 4.45	90 secs	1006	1006	0.0 _(SS)	1.83	0.7	0.0	19.9	0.0	0	0
WS24	1	25	1		4.11	0.50 to 4.45	120 secs	1006	1006	0.0 _(SS)	1.83	0.7	0.0	19.9	0.0	0	0
WS24	1	25	1		4.11	0.50 to 4.45	180 secs	1006	1006	0.0 _(SS)	1.83	0.6	0.0	20.1	0.0	0	0
WS24	1	25	1		4.11	0.50 to 4.45	240 secs	1006	1006	0.0 _(SS)	1.83	0.5	0.0	20.4	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

 RSK Environment Ltd Battlegate Road Boxworth Cambridge CB23 4NN	Compiled By	Date	Checked By	Date	Contract Ref:
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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS24	1	25	1		4.11	0.50 to 4.45	300 secs	1006	1006	0.0 _(SS)	1.83	0.4	0.0	20.6	0.0	0	0
WS24	1	25	2	4.45	4.10	0.50 to 4.45	28/11/2019 11:18:00	986	986	0.0 _(I)	1.74	0.2	0.0	20.9	0.0	0	0
WS24	1	25	2		4.10	0.50 to 4.45	15 secs	986	986	0.0 _(SS)	1.74	0.2	0.0	20.8	0.0	0	0
WS24	1	25	2		4.10	0.50 to 4.45	30 secs	986	986	0.0 _(SS)	1.74	0.4	0.0	20.5	0.0	0	0
WS24	1	25	2		4.10	0.50 to 4.45	60 secs	986	986	0.0 _(SS)	1.74	0.6	0.0	20.2	0.0	0	0
WS24	1	25	2		4.10	0.50 to 4.45	90 secs	986	986	0.0 _(SS)	1.74	0.7	0.0	20.1	0.0	0	0
WS24	1	25	2		4.10	0.50 to 4.45	120 secs	986	986	0.0 _(SS)	1.74	0.7	0.0	20.2	0.0	0	0
WS24	1	25	2		4.10	0.50 to 4.45	180 secs	986	986	0.0 _(SS)	1.74	0.6	0.0	20.3	0.0	0	0
WS24	1	25	2		4.10	0.50 to 4.45	240 secs	986	986	0.0 _(SS)	1.74	0.5	0.0	20.4	0.0	0	0
WS24	1	25	2		4.10	0.50 to 4.45	300 secs	986	986	0.0 _(SS)	1.74	0.5	0.0	20.6	0.0	0	0
WS24	1	25	3	4.45	4.11	0.50 to 4.45	06/12/2019 12:08:00	993	993	0.0 _(I)	1.37	0.1	0.0	20.9	0.0	0	0
WS24	1	25	3		4.11	0.50 to 4.45	15 secs	993	993	0.0 _(SS)	1.37	0.3	0.0	20.5	0.0	0	0
WS24	1	25	3		4.11	0.50 to 4.45	30 secs	993	993	0.0 _(SS)	1.37	0.5	0.0	19.9	0.0	0	0
WS24	1	25	3		4.11	0.50 to 4.45	60 secs	993	993	0.0 _(SS)	1.37	0.6	0.0	19.8	0.0	0	0
WS24	1	25	3		4.11	0.50 to 4.45	90 secs	993	993	0.0 _(SS)	1.37	0.6	0.0	19.8	0.0	0	0
WS24	1	25	3		4.11	0.50 to 4.45	120 secs	993	993	0.0 _(SS)	1.37	0.6	0.0	19.9	0.0	0	0
WS24	1	25	3		4.11	0.50 to 4.45	180 secs	993	993	0.0 _(SS)	1.37	0.5	0.0	20.4	0.0	0	0
WS24	1	25	3		4.11	0.50 to 4.45	240 secs	993	993	0.0 _(SS)	1.37	0.4	0.0	20.5	0.0	0	0
WS24	1	25	3		4.11	0.50 to 4.45	300 secs	993	993	0.0 _(SS)	1.37	0.4	0.0	20.5	0.0	0	0
WS24	1	25	4	4.45	4.11	0.50 to 4.45	13/12/2019 10:01:00	971	971	0.0 _(I)	0.89	0.1	0.0	20.9	0.0	0	0
WS24	1	25	4		4.11	0.50 to 4.45	15 secs	971	971	0.0 _(SS)	0.89	0.2	0.0	20.8	0.0	0	0
WS24	1	25	4		4.11	0.50 to 4.45	30 secs	971	971	0.0 _(SS)	0.89	0.3	0.0	20.6	0.0	0	0
WS24	1	25	4		4.11	0.50 to 4.45	60 secs	971	971	0.0 _(SS)	0.89	0.4	0.0	20.4	0.0	0	0
WS24	1	25	4		4.11	0.50 to 4.45	90 secs	971	971	0.0 _(SS)	0.89	0.4	0.0	20.3	0.0	0	0
WS24	1	25	4		4.11	0.50 to 4.45	120 secs	971	971	0.0 _(SS)	0.89	0.3	0.0	20.5	0.0	0	0

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

 RSK Environment Ltd Battlegate Road Boxworth Cambridge CB23 4NN	Compiled By	Date	Checked By	Date	Contract Ref:
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IN-SITU GAS MONITORING RESULTS

Exploratory Position ID	Pipe ref	Pipe diameter (mm)	Monitoring Round	Reported Installation Depth (m)	Measured Installation Depth (mbgl)	Response Zone	Date & Time of Monitoring (elapsed time)	Borehole Pressure (mb)	Atmos Pressure (mb)	Gas Flow (l/hr)	Water Depth (mbgl)	Carbon Dioxide (% / vol)	Methane (% / vol)	Oxygen (% / vol)	LEL (%)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)
WS24	1	25	4		4.11	0.50 to 4.45	180 secs	971	971	0.0 _(SS)	0.89	0.1	0.0	21.1	0.0	0	0
WS24	1	25	4		4.11	0.50 to 4.45	240 secs	971	971	0.0 _(SS)	0.89	0.1	0.0	21.1	0.0	0	0
WS24	1	25	4		4.11	0.50 to 4.45	300 secs	971	971	0.0 _(SS)	0.89	0.1	0.0	21.1	0.0	0	0
WS24	1	25	5	4.45	---	0.50 to 4.45	20/12/2019 10:37:00	-	-	-	-	-	-	-	-	-	-
Remarks: Unable to take readings - well flooded																	
WS24	1	25	6	4.45	---	0.50 to 4.45	24/12/2019 10:35:00	-	-	-	-	-	-	-	-	-	-
Remarks: No readings taken - Well flooded																	

Key: I = Initial, Min = Minimum, P = Peak, SS = Steady State. Note: LEL = Lower Explosive Limit = 5% v/v.

 RSK Environment Ltd Battlegate Road Boxworth Cambridge CB23 4NN	Compiled By	Date	Checked By	Date	Contract Ref:
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	Contract: Highover Farm, Hitchin				Page: 33 of 33 



APPENDIX H

INFILTRATION TESTING RESULTS



TRIAL PIT SOAKAWAY TEST TO BRE DG365

Trial Pit No.

SA01

Project Name: Highover Farm Hitchin

Project No.: 340110

Tested by:
Bkeyworth

Location: Hitchin

Co-ords: 520160.638,
231575.187
Level:Inputed by:
Cwhite

Client: Gallagher Development Group Ltd.

Checked by:
MM

Test: 1 Date: 04/11/2019

Length: 3.70 m

Width: 0.50 m

Depth: 2.90 m

GW Level: Dry m

WT Level: 2.66 m

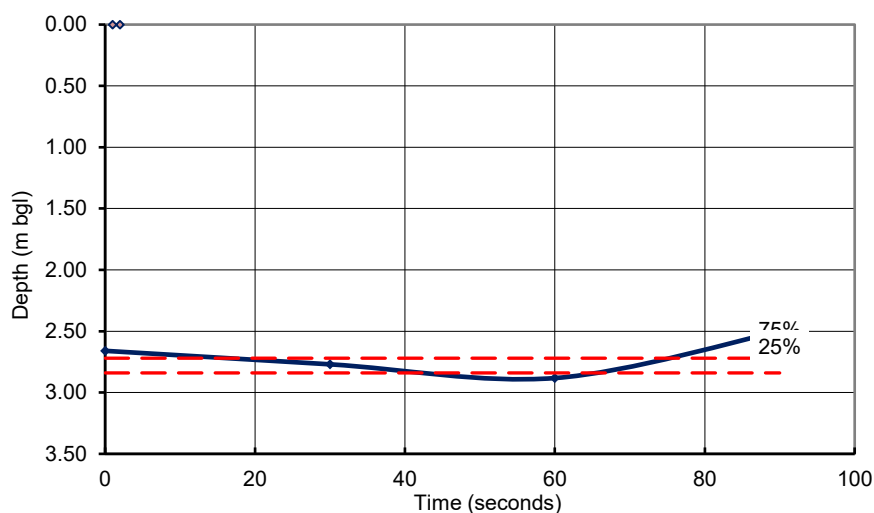
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.07 m³as 50 = 2.86 m²

tp 75-25 = 4 sec

Infiltration rate f = 5.38E-03 m/s



Test: 2 Date: N/A

Length: m

Width: m

Depth: m

GW Level: m

WT Level: m

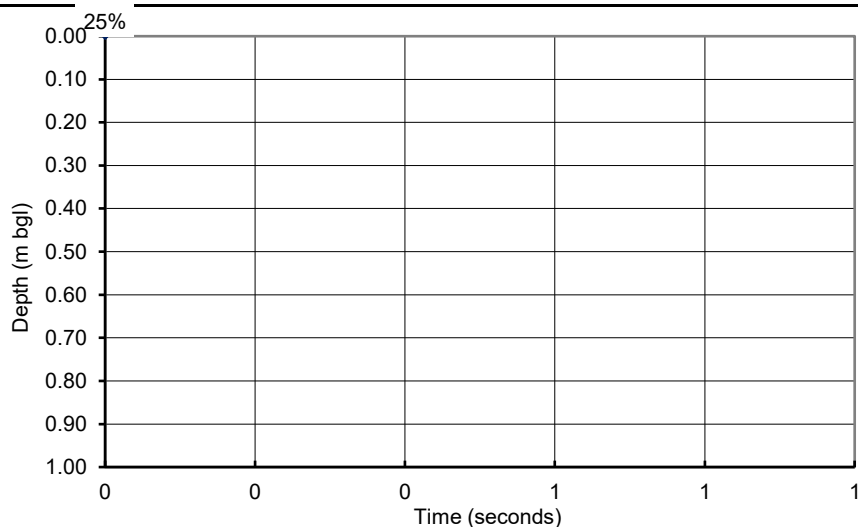
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = m³as 50 = m²

tp 75-25 = sec

Infiltration rate f = m/s



Test: 3 Date: N/A

Length: m

Width: m

Depth: m

GW Level: m

WT Level: m

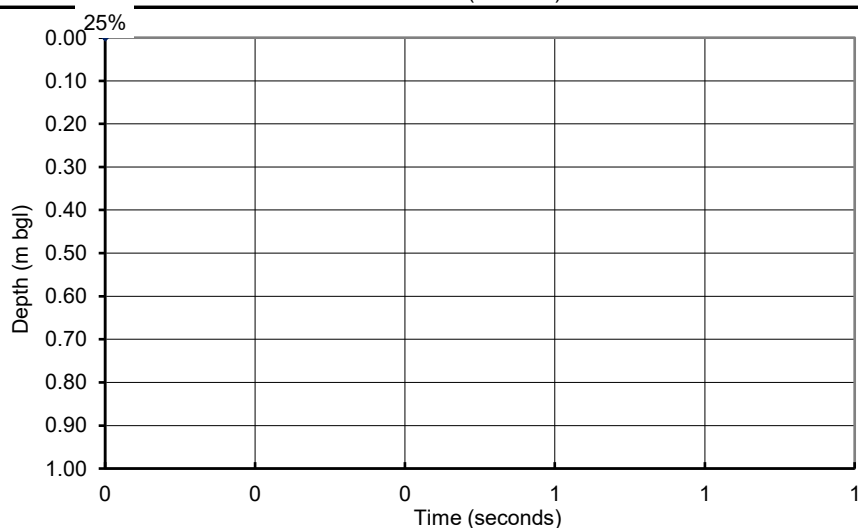
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = m³as 50 = m²

tp 75-25 = sec

Infiltration rate f = m/s



Remarks:



TRIAL PIT SOAKAWAY TEST TO BRE DG365

Trial Pit No.

SA02

Project Name: Highover Farm, Hitchin

Project No.: 340110

Tested by:
Bkeyworth

Location: Hitchin

Co-ords: 520177.975,
231519.645
Level:Inputed by:
Cwhite

Client: Gallagher Development Group Ltd.

Checked by:
MM

Test: 1 Date: 04/11/2019

Length: 3.30 m

Width: 0.45 m

Depth: 2.70 m

GW Level: Dry m

WT Level: 2.57 m

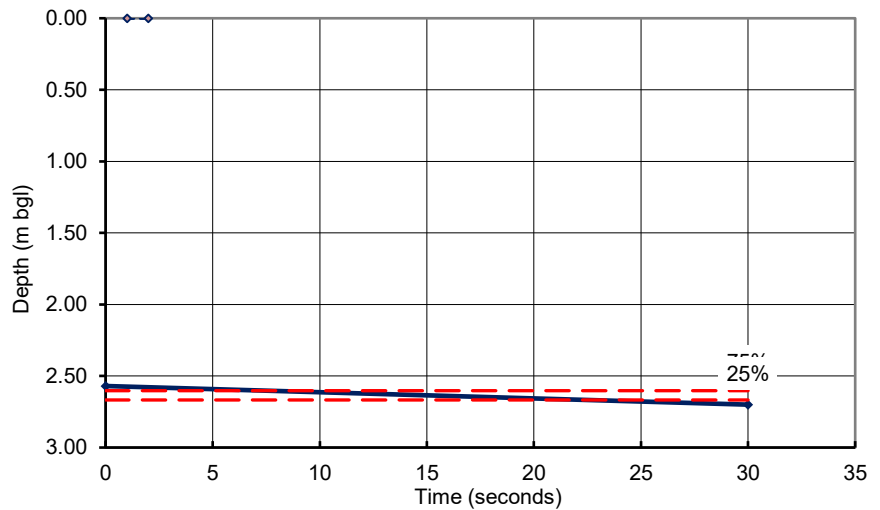
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.03 m³as 50 = 1.97 m²

tp 75-25 = 15 sec

Infiltration rate f = 9.76E-04 m/s



Test: 2 Date: N/A

Length: m

Width: m

Depth: m

GW Level: m

WT Level: m

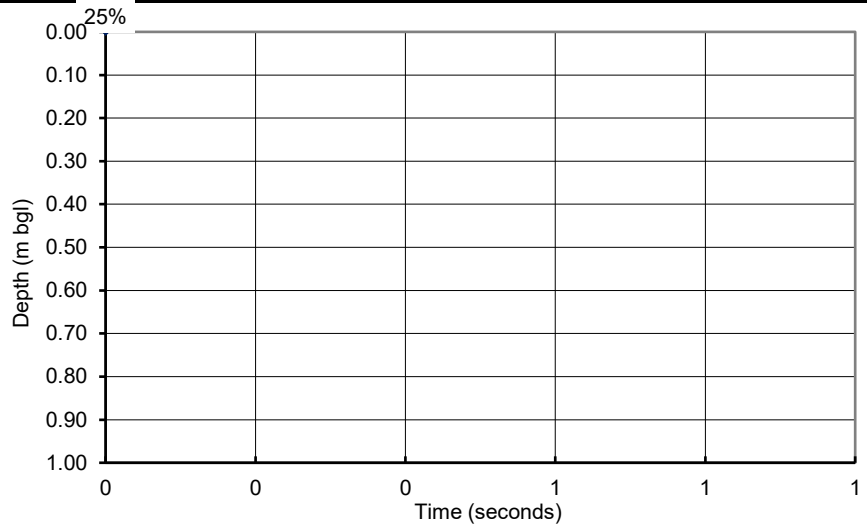
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = m³as 50 = m²

tp 75-25 = sec

Infiltration rate f = m/s



Test: 3 Date: N/A

Length: m

Width: m

Depth: m

GW Level: m

WT Level: m

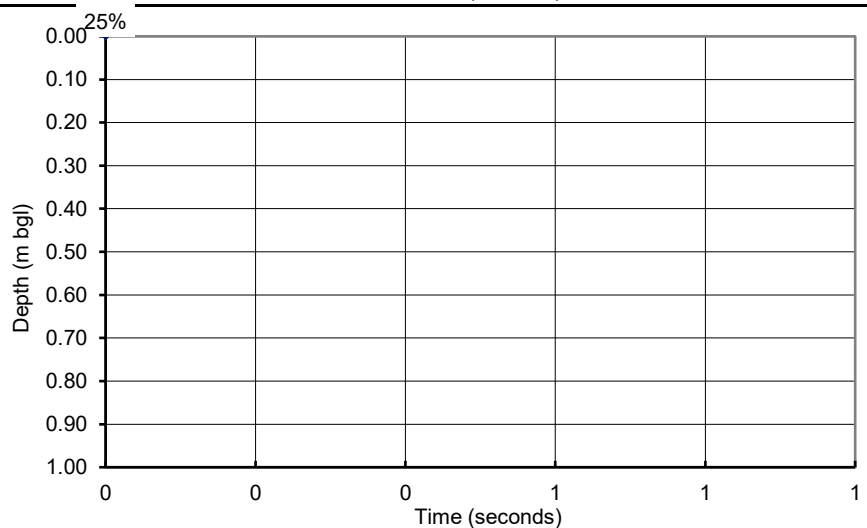
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = m³as 50 = m²

tp 75-25 = sec

Infiltration rate f = m/s



Remarks:



TRIAL PIT SOAKAWAY TEST TO BRE DG365

Trial Pit No.

SA03

Project Name: Highover Farm, Hitchin

Project No.: 340110

Tested by:
Bkeyworth

Location: Hitchin

Co-ords: 520125.000,
231500.000
Level:Inputed by:
Cwhite

Client: Gallagher Development Group Ltd.

Checked by:
MM

Test: 1 Date: 04/11/2019

Length: 2.90 m

Width: 0.50 m

Depth: 2.80 m

GW Level: Dry m

WT Level: 2.40 m

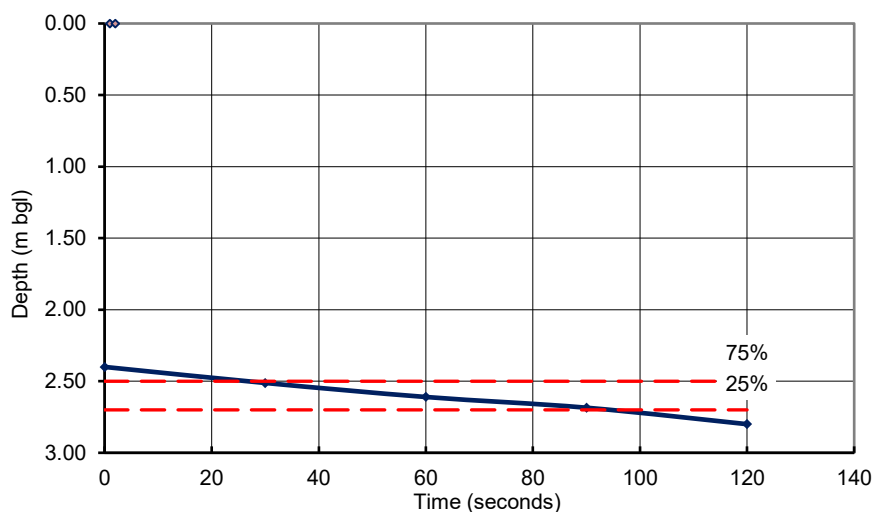
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.09 m³as 50 = 2.81 m²

tp 75-25 = 67 sec

Infiltration rate f = 4.60E-04 m/s



Test: 2 Date: N/A

Length: m

Width: m

Depth: m

GW Level: m

WT Level: m

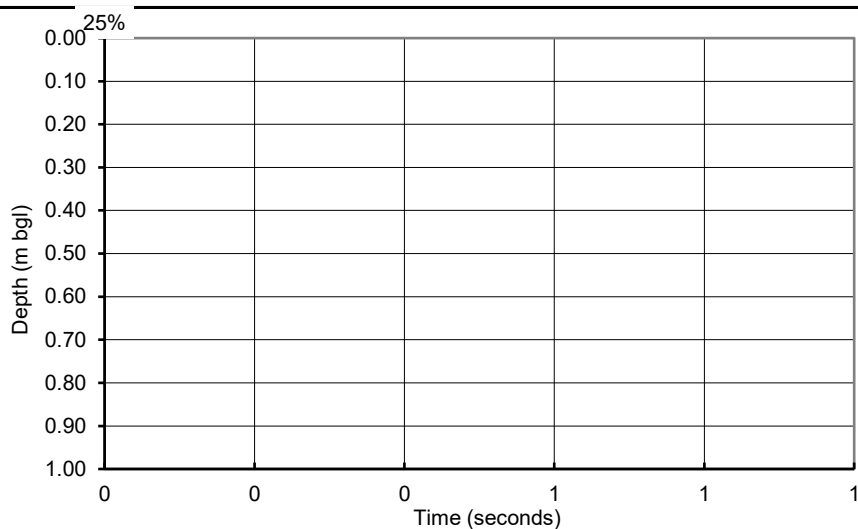
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = m³as 50 = m²

tp 75-25 = sec

Infiltration rate f = m/s



Test: 3 Date: N/A

Length: m

Width: m

Depth: m

GW Level: m

WT Level: m

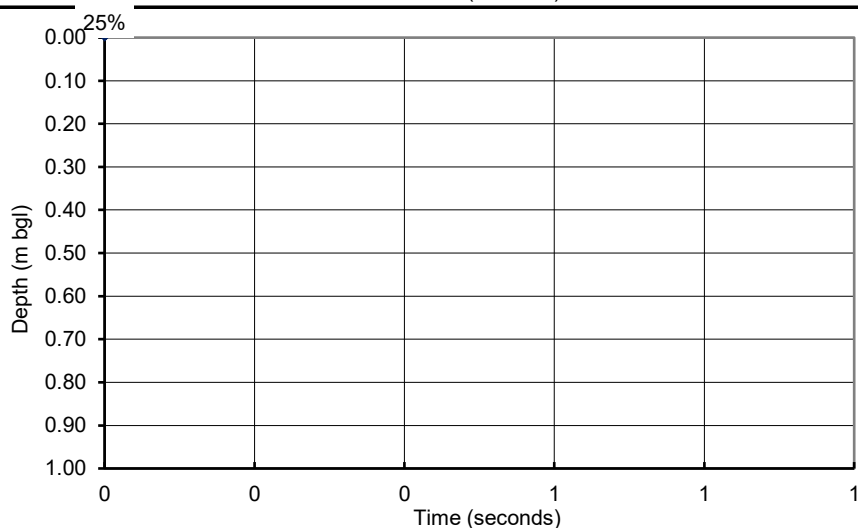
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = m³as 50 = m²

tp 75-25 = sec

Infiltration rate f = m/s



Remarks:



TRIAL PIT SOAKAWAY TEST TO BRE DG365

Trial Pit No.

SA04

Project Name: Highover Farm, Hitchin

Project No.: 340110

Tested by:
Bkeyworth

Location: Hitchin

Co-ords: 520073.443,
231470.218
Level:Inputed by:
Cwhite

Client: Gallagher Development Group Ltd.

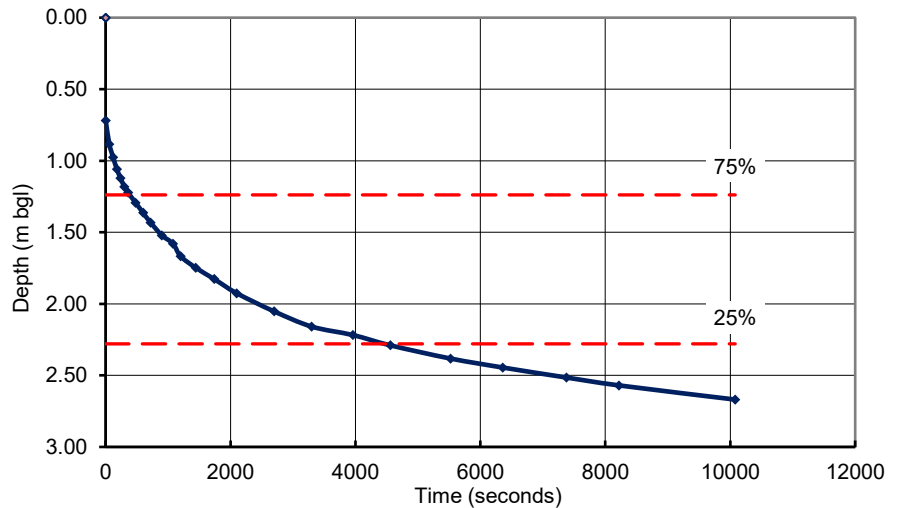
Checked by:
MM

Test: 1 Date: 04/11/2019

Length: 2.60 m
Width: 0.50 m
Depth: 2.80 m
GW Level: Dry m
WT Level: 0.72 m
Backfilled: Yes
Porosity: 30 %

Vp 75-25 = 0.40 m³
as 50 = 7.75 m²
tp 75-25 = 4086 sec

Infiltration rate f = 1.28E-05 m/s

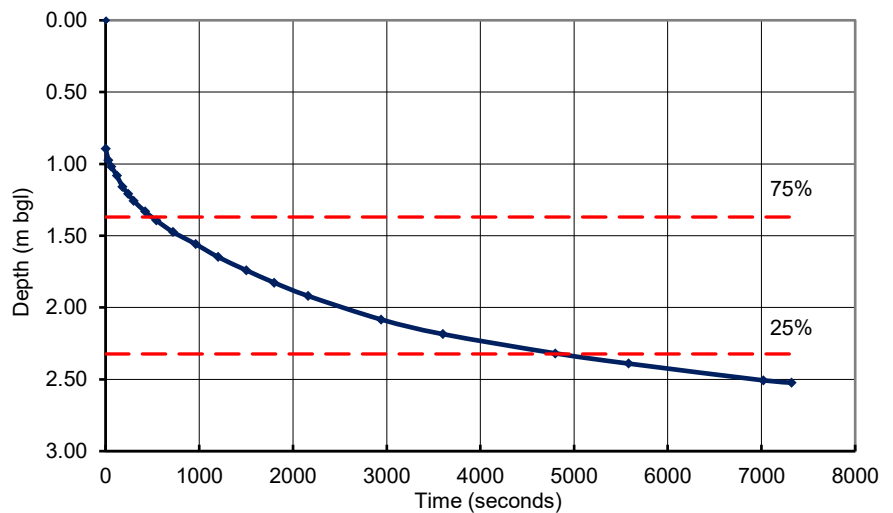


Test: 2 Date: 05/11/2019

Length: 2.60 m
Width: 0.50 m
Depth: 2.80 m
GW Level: Dry m
WT Level: 0.89 m
Backfilled: Yes
Porosity: 30 %

Vp 75-25 = 0.37 m³
as 50 = 7.75 m²
tp 75-25 = 4352 sec

Infiltration rate f = 1.10E-05 m/s

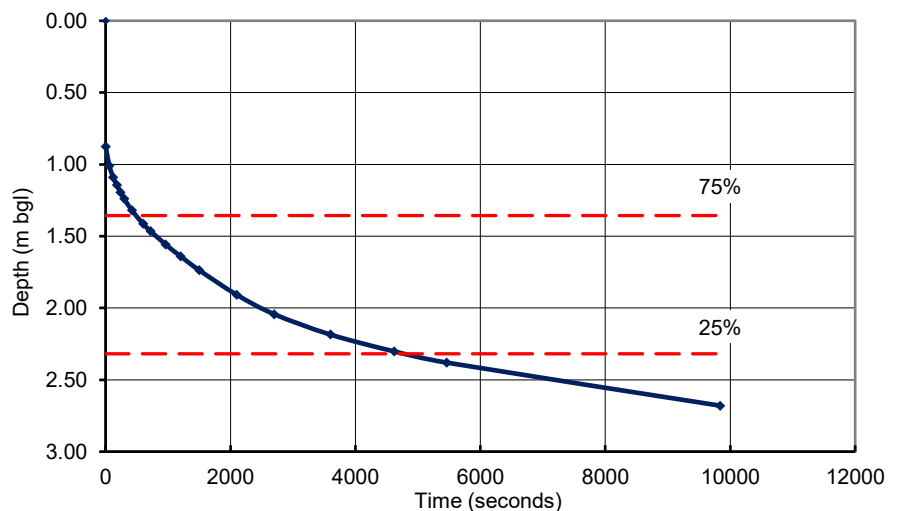


Test: 3 Date: 05/11/2019

Length: 2.60 m
Width: 0.50 m
Depth: 2.80 m
GW Level: Dry m
WT Level: 0.88 m
Backfilled: Yes
Porosity: 30 %

Vp 75-25 = 0.37 m³
as 50 = 7.75 m²
tp 75-25 = 4310 sec

Infiltration rate f = 1.12E-05 m/s



Remarks:



TRIAL PIT SOAKAWAY TEST TO BRE DG365

Trial Pit No.

SA05

Project Name: Highover Farm, Hitchin

Project No.: 340110

Tested by:
Bkeyworth

Location: Hitchin

Co-ords: 520050.000,
231425.000
Level:Inputed by:
Cwhite

Client: Gallagher Development Group Ltd.

Checked by:
MM

Test: 1 Date: 04/11/2019

Length: 2.80 m

Width: 0.50 m

Depth: 2.75 m

GW Level: Dry m

WT Level: 1.00 m

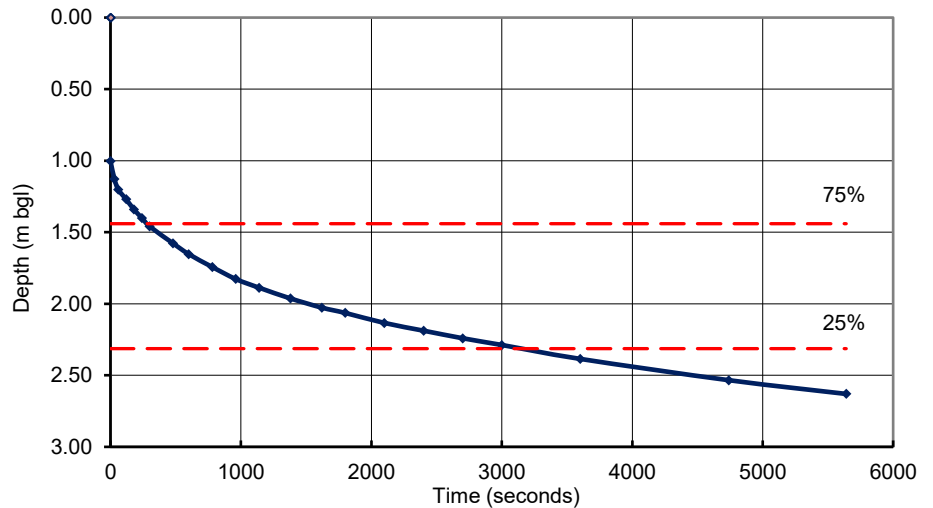
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.37 m³as 50 = 7.16 m²

tp 75-25 = 2877 sec

Infiltration rate f = 1.77E-05 m/s



Test: 2 Date: 05/11/2019

Length: 2.80 m

Width: 0.50 m

Depth: 2.75 m

GW Level: Dry m

WT Level: 1.02 m

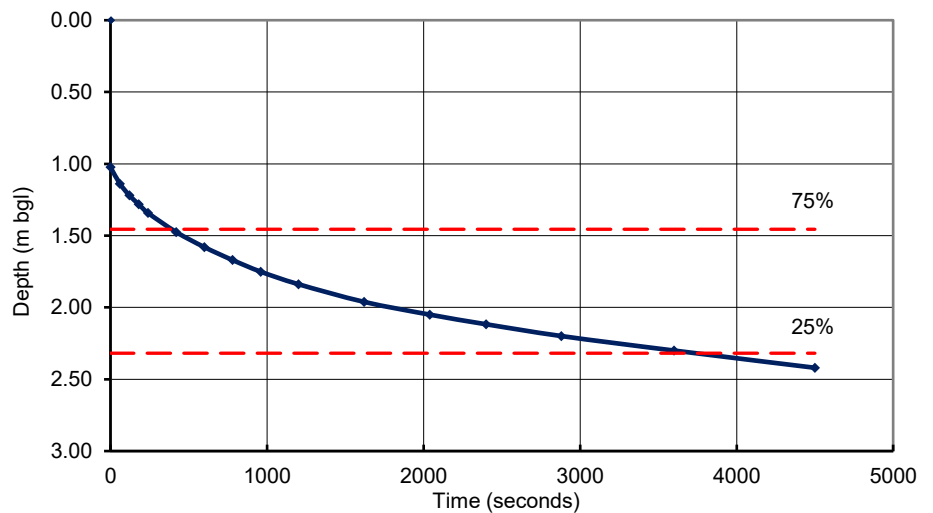
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.36 m³as 50 = 7.16 m²

tp 75-25 = 3345 sec

Infiltration rate f = 1.51E-05 m/s



Test: 3 Date: 05/11/2019

Length: 2.80 m

Width: 0.50 m

Depth: 2.75 m

GW Level: Dry m

WT Level: 1.02 m

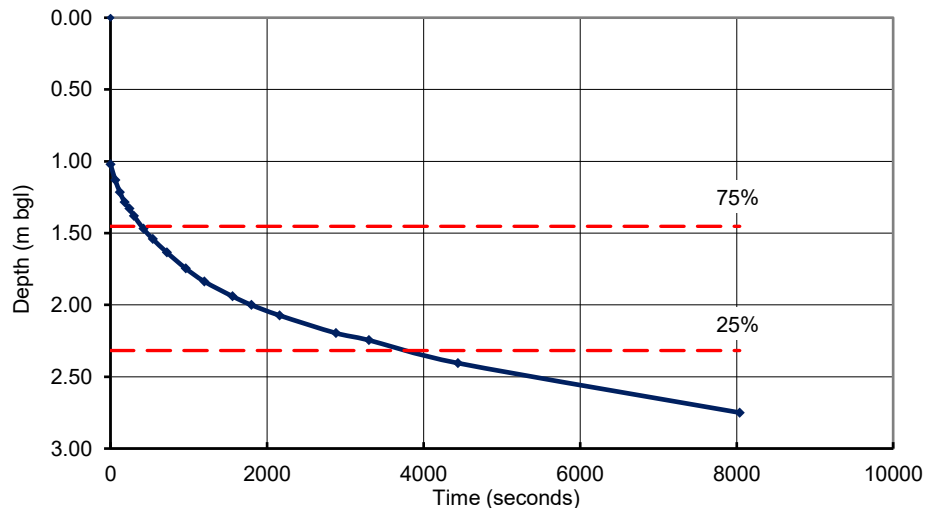
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.36 m³as 50 = 7.16 m²

tp 75-25 = 3419 sec

Infiltration rate f = 1.48E-05 m/s



Remarks:



TRIAL PIT SOAKAWAY TEST TO BRE DG365

Trial Pit No.

SA06

Project Name: Highover Farm, Hitchin

Project No.: 340110

Tested by:
Bkeyworth

Location: Hitchin

Co-ords: 520037.222,
231386.579
Level:Inputed by:
Cwhite

Client: Gallagher Development Group Ltd.

Checked by:
MM

Test: 1 Date: 04/11/2019

Length: 3.10 m

Width: 0.50 m

Depth: 2.10 m

GW Level: Dry m

WT Level: 0.61 m

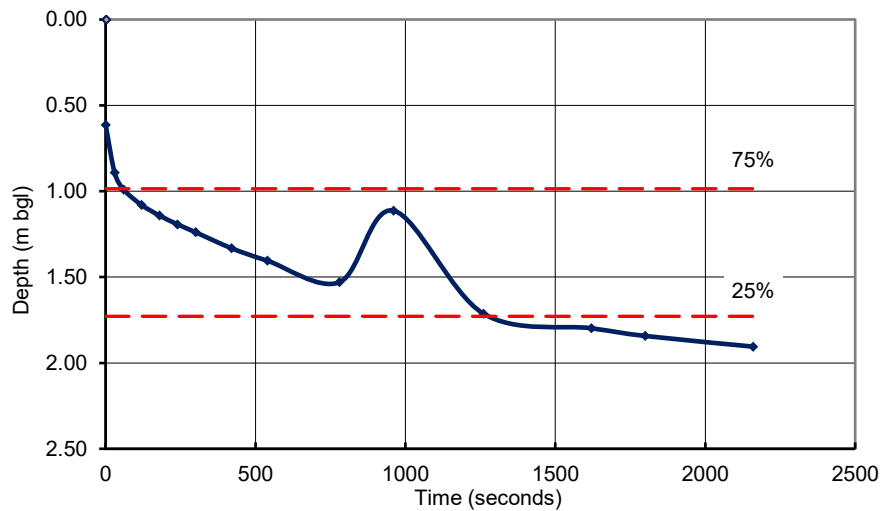
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.34 m³as 50 = 6.90 m²

tp 75-25 = 1267 sec

Infiltration rate f = 3.94E-05 m/s



Test: 2 Date: 05/11/2019

Length: 3.10 m

Width: 0.50 m

Depth: 2.10 m

GW Level: Dry m

WT Level: 0.60 m

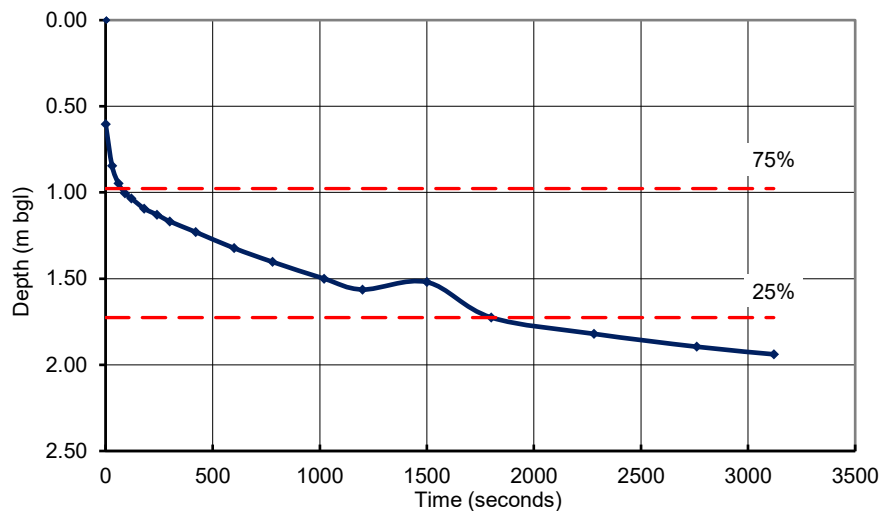
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.35 m³as 50 = 6.90 m²

tp 75-25 = 1728 sec

Infiltration rate f = 2.91E-05 m/s



Test: 3 Date: 05/11/2019

Length: 3.10 m

Width: 0.50 m

Depth: 2.10 m

GW Level: Dry m

WT Level: 0.65 m

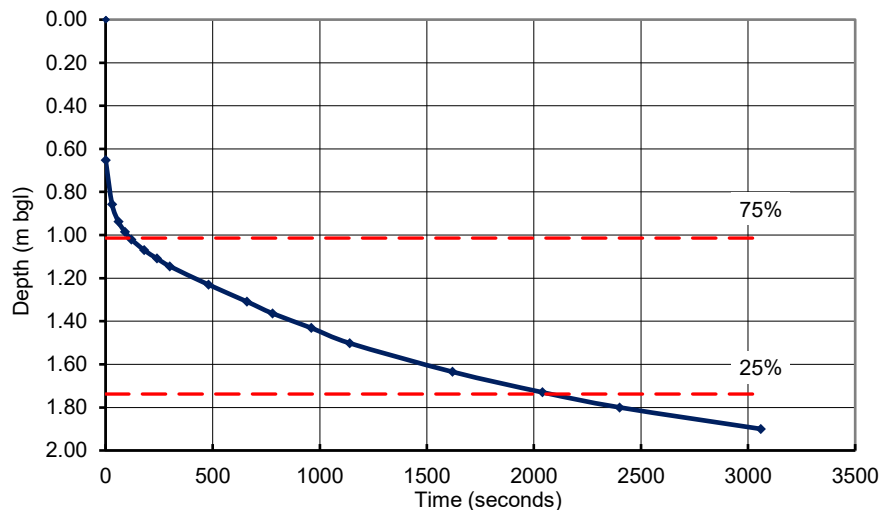
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.34 m³as 50 = 6.90 m²

tp 75-25 = 1966 sec

Infiltration rate f = 2.48E-05 m/s



Remarks:



TRIAL PIT SOAKAWAY TEST TO BRE DG365

Trial Pit No.

SA07

Project Name: Highover Farm, Hitchin

Project No.: 340110

Tested by:
Bkeyworth

Location: Hitchin

Co-ords: 520071.893,
231350.000
Level:Inputed by:
Cwhite

Client: Gallagher Development Group Ltd.

Checked by:
MM

Test: 1 Date: 04/11/2019

Length: 2.30 m

Width: 0.50 m

Depth: 2.35 m

GW Level: Dry m

WT Level: 1.20 m

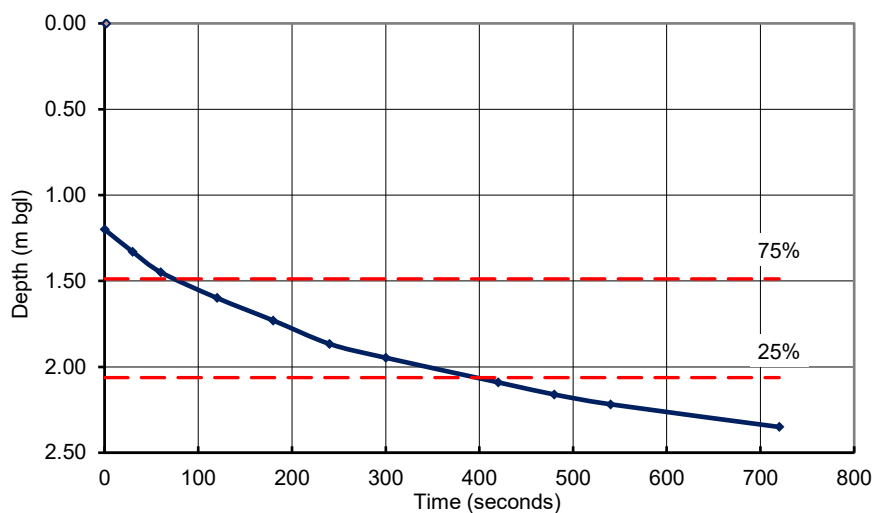
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.20 m³as 50 = 4.37 m²

tp 75-25 = 322 sec

Infiltration rate f = 1.41E-04 m/s



Test: 2 Date: 05/11/2019

Length: 2.30 m

Width: 0.50 m

Depth: 2.35 m

GW Level: Dry m

WT Level: 1.05 m

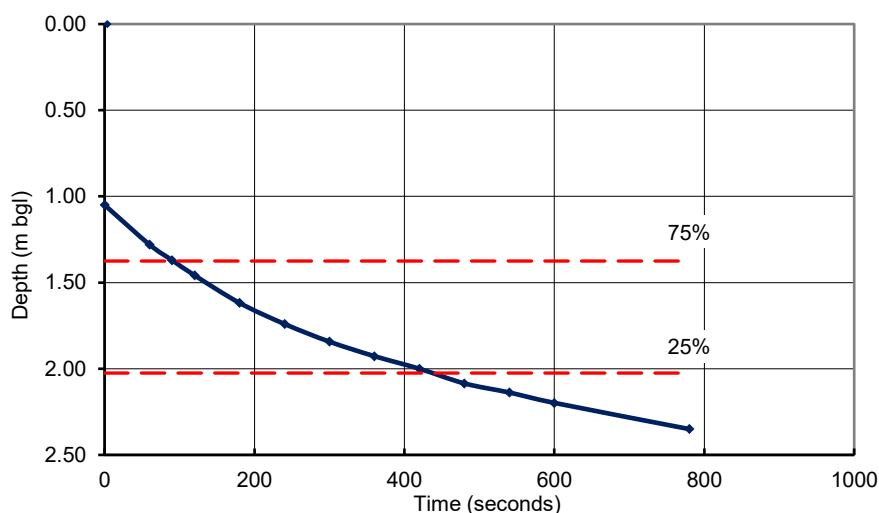
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.22 m³as 50 = 4.37 m²

tp 75-25 = 346 sec

Infiltration rate f = 1.48E-04 m/s



Test: 3 Date: 05/11/2019

Length: 2.30 m

Width: 0.50 m

Depth: 2.35 m

GW Level: Dry m

WT Level: 1.03 m

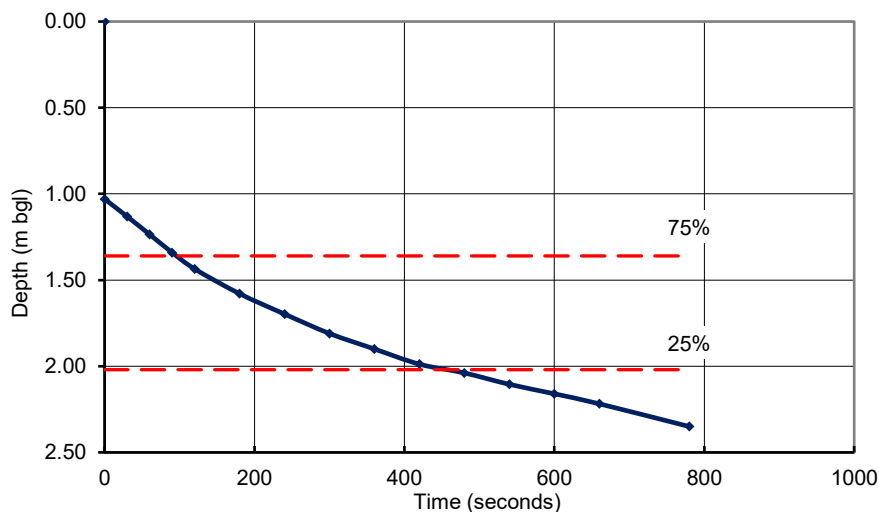
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.23 m³as 50 = 4.37 m²

tp 75-25 = 361 sec

Infiltration rate f = 1.44E-04 m/s



Remarks:



TRIAL PIT SOAKAWAY TEST TO BRE DG365

Trial Pit No.

SA08

Project Name: Highover Farm, Hitchin

Project No.: 340110

Tested by:
Bkeyworth

Location: Hitchin

Co-ords: 519930.083,
231314.617
Level:Inputed by:
Cwhite

Client: Gallagher Development Group Ltd.

Checked by:
MM

Test: 1 Date: 06/11/2019

Length: 2.40 m

Width: 0.50 m

Depth: 2.18 m

GW Level: Dry m

WT Level: 0.95 m

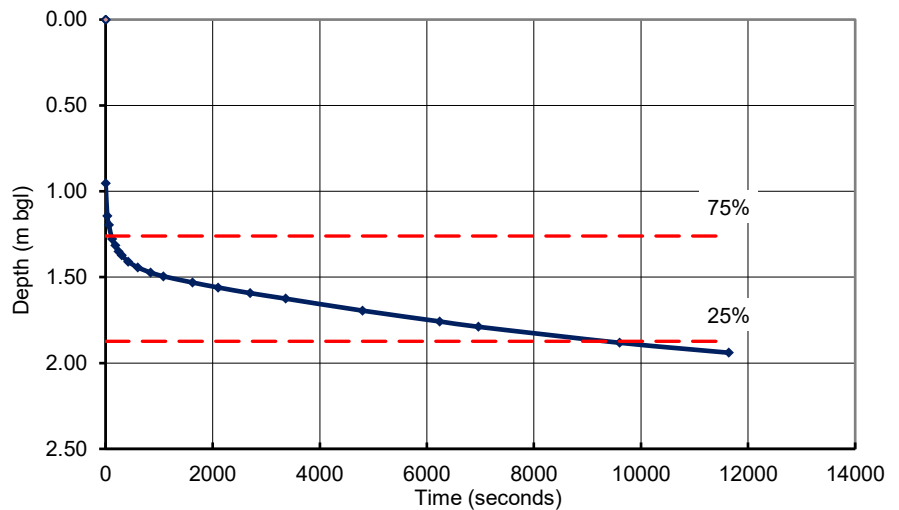
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.22 m³as 50 = 4.76 m²

tp 75-25 = 9251 sec

Infiltration rate f = 5.00E-06 m/s



Test: 2 Date: 07/11/2019

Length: 2.40 m

Width: 0.50 m

Depth: 2.18 m

GW Level: Dry m

WT Level: 0.96 m

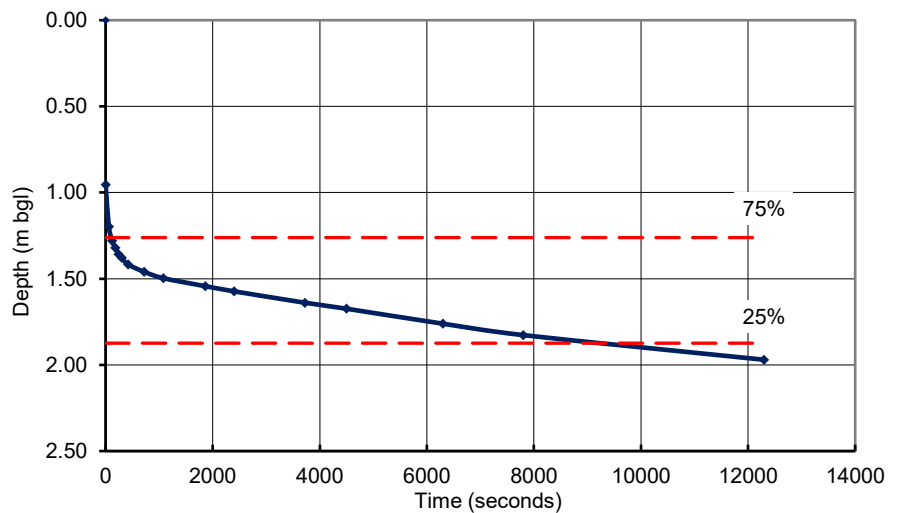
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.22 m³as 50 = 4.76 m²

tp 75-25 = 9164 sec

Infiltration rate f = 5.04E-06 m/s



Test: 3 Date: 07/11/2019

Length: 2.40 m

Width: 0.50 m

Depth: 2.18 m

GW Level: Dry m

WT Level: 0.88 m

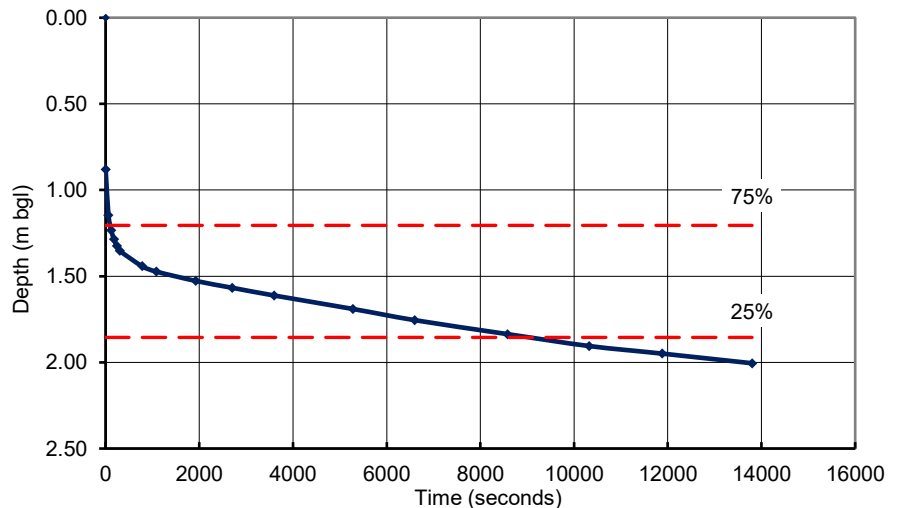
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.23 m³as 50 = 4.76 m²

tp 75-25 = 8959 sec

Infiltration rate f = 5.48E-06 m/s



Remarks:



TRIAL PIT SOAKAWAY TEST TO BRE DG365

Trial Pit No.

SA09

Project Name: Highover Farm, Hitchin

Project No.: 340110

Tested by:
Bkeyworth

Location: Hitchin

Co-ords: 519862.447,
231212.211
Level:Inputed by:
Cwhite

Client: Gallagher Development Group Ltd.

Checked by:
MM

Test: 1 Date: 06/11/2019

Length: 2.65 m

Width: 0.55 m

Depth: 2.30 m

GW Level: Dry m

WT Level: 1.24 m

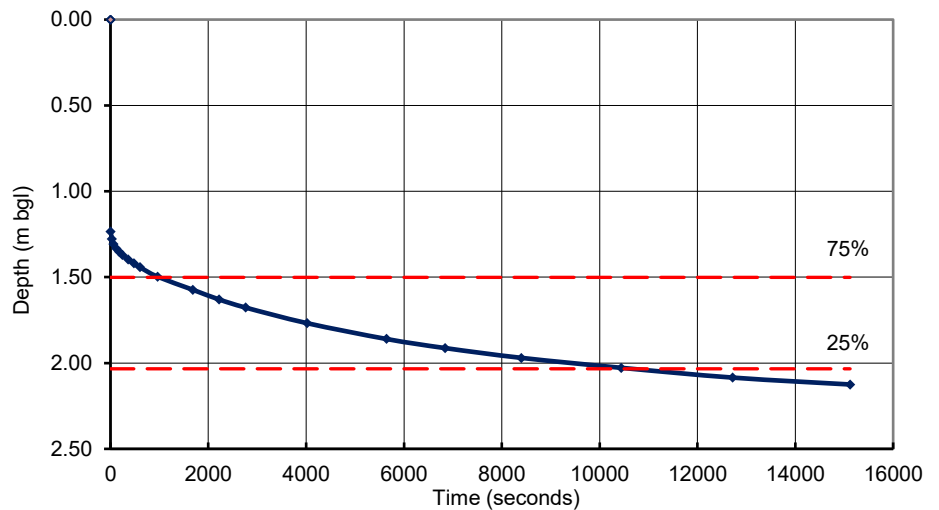
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.23 m³as 50 = 4.87 m²

tp 75-25 = 9670 sec

Infiltration rate f = 4.94E-06 m/s



Test: 2 Date: 07/11/2019

Length: 2.65 m

Width: 0.55 m

Depth: 2.30 m

GW Level: Dry m

WT Level: 1.18 m

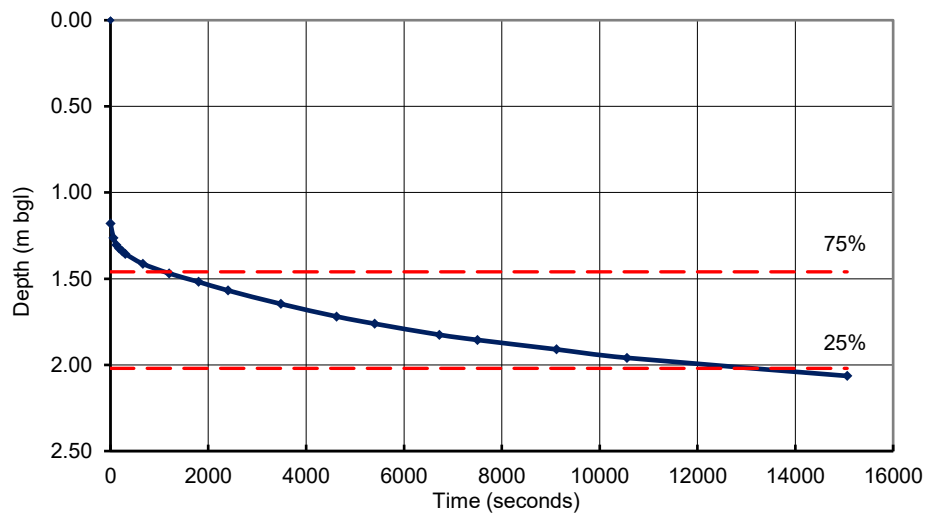
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.24 m³as 50 = 4.87 m²

tp 75-25 = 12061 sec

Infiltration rate f = 4.16E-06 m/s



Test: 3 Date: 08/11/2019

Length: 2.65 m

Width: 0.55 m

Depth: 2.30 m

GW Level: Dry m

WT Level: 1.03 m

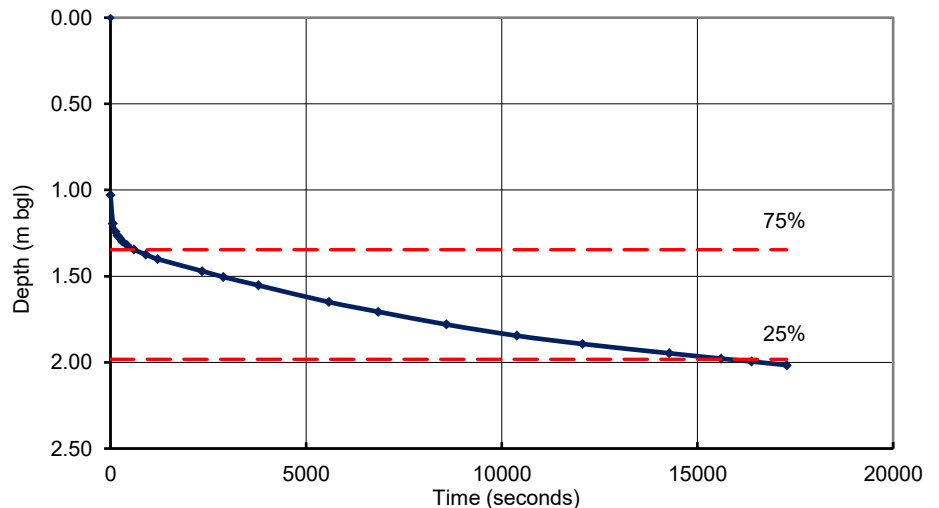
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.28 m³as 50 = 4.87 m²

tp 75-25 = 15173 sec

Infiltration rate f = 3.76E-06 m/s



Remarks:



TRIAL PIT SOAKAWAY TEST TO BRE DG365

Trial Pit No.

SA10

Project Name: Highover Farm, Hitchin

Project No.: 340110

Tested by:
Bkeyworth

Location: Hitchin

Co-ords: 520222.679,
231234.725
Level: 73.29 mAODInputed by:
Cwhite

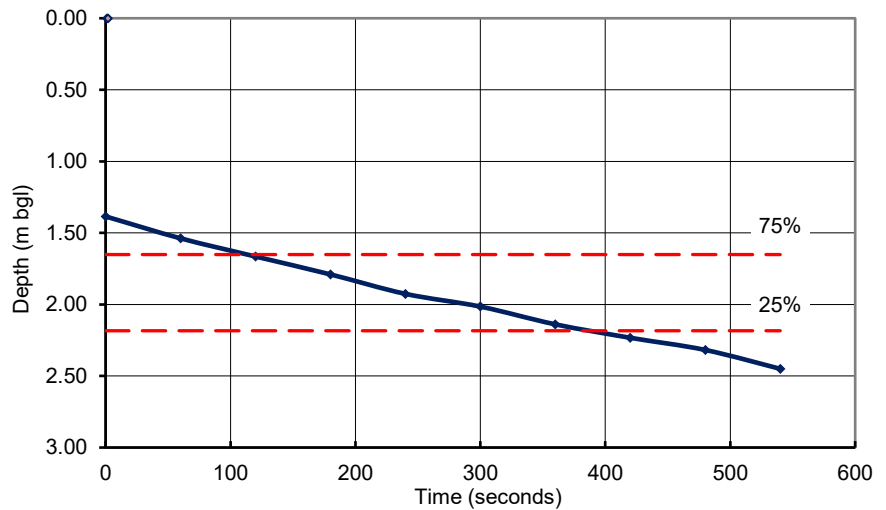
Client: Gallagher Development Group Ltd.

Checked by:
MM

Test: 1 Date: 07/11/2019

Length: 2.40 m
Width: 0.55 m
Depth: 2.45 m
GW Level: Dry m
WT Level: 1.39 m
Backfilled: Yes
Porosity: 30 %Vp 75-25 = 0.21 m³
as 50 = 4.46 m²
tp 75-25 = 275 sec

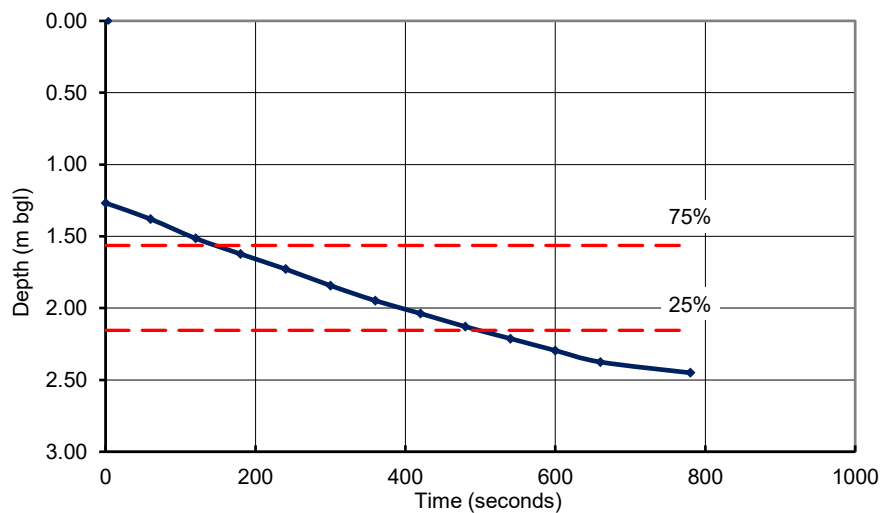
Infiltration rate f = 1.71E-04 m/s



Test: 2 Date: 07/11/2019

Length: 2.40 m
Width: 0.55 m
Depth: 2.45 m
GW Level: Dry m
WT Level: 1.27 m
Backfilled: Yes
Porosity: 30 %Vp 75-25 = 0.23 m³
as 50 = 4.46 m²
tp 75-25 = 351 sec

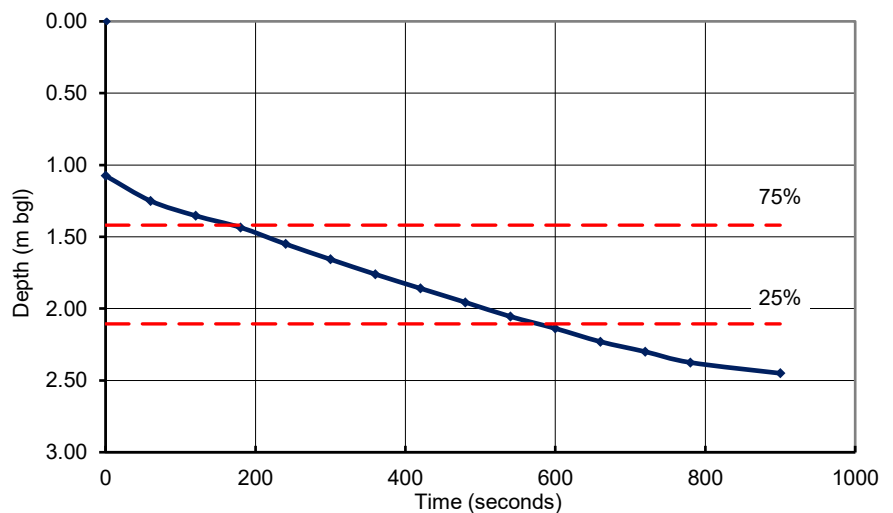
Infiltration rate f = 1.49E-04 m/s



Test: 3 Date: 07/11/2019

Length: 2.40 m
Width: 0.55 m
Depth: 2.45 m
GW Level: Dry m
WT Level: 1.08 m
Backfilled: Yes
Porosity: 30 %Vp 75-25 = 0.27 m³
as 50 = 4.46 m²
tp 75-25 = 409 sec

Infiltration rate f = 1.49E-04 m/s



Remarks:



TRIAL PIT SOAKAWAY TEST TO BRE DG365

Trial Pit No.

SA11

Project Name: Highover Farm, Hitchin

Project No.: 340110

Tested by:
Bkeyworth

Location: Hitchin

Co-ords: 520086.142,
231165.598
Level: 73.56 mAODInputed by:
Cwhite

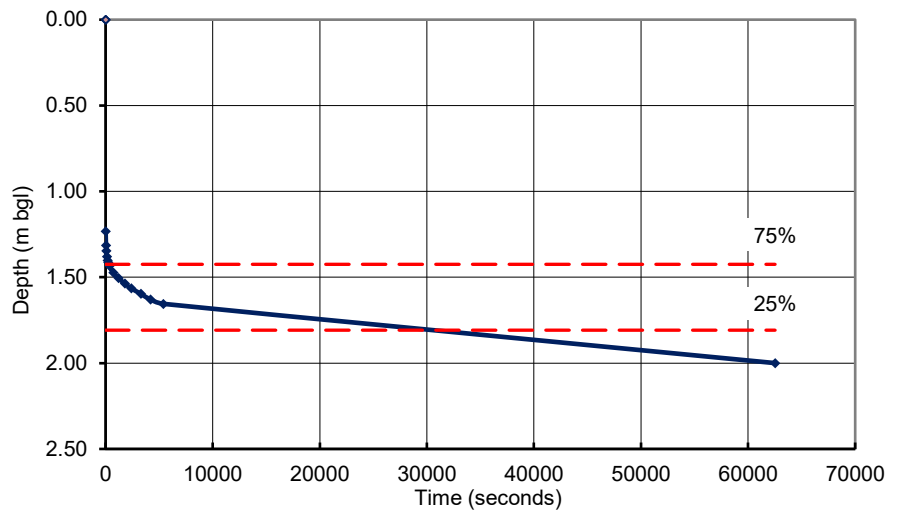
Client: Gallagher Development Group Ltd.

Checked by:
MM

Test: 1 Date: 11/11/2019

Length: 2.20 m
Width: 0.50 m
Depth: 2.00 m
GW Level: Dry m
WT Level: 1.23 m
Backfilled: Yes
Porosity: 30 %Vp 75-25 = 0.13 m³
as 50 = 3.17 m²
tp 75-25 = 30469 sec

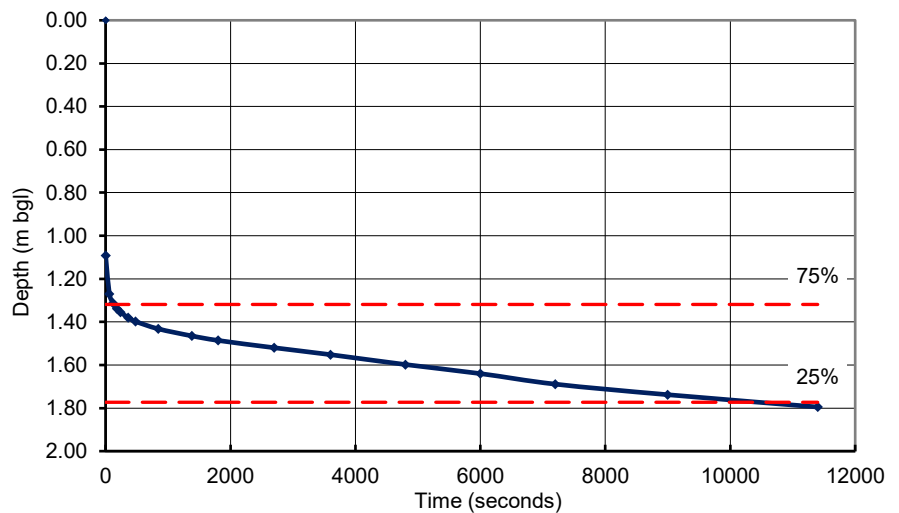
Infiltration rate f = 1.31E-06 m/s



Test: 2 Date: 11/11/2019

Length: 2.20 m
Width: 0.50 m
Depth: 2.00 m
GW Level: Dry m
WT Level: 1.09 m
Backfilled: Yes
Porosity: 30 %Vp 75-25 = 0.15 m³
as 50 = 3.17 m²
tp 75-25 = 10342 sec

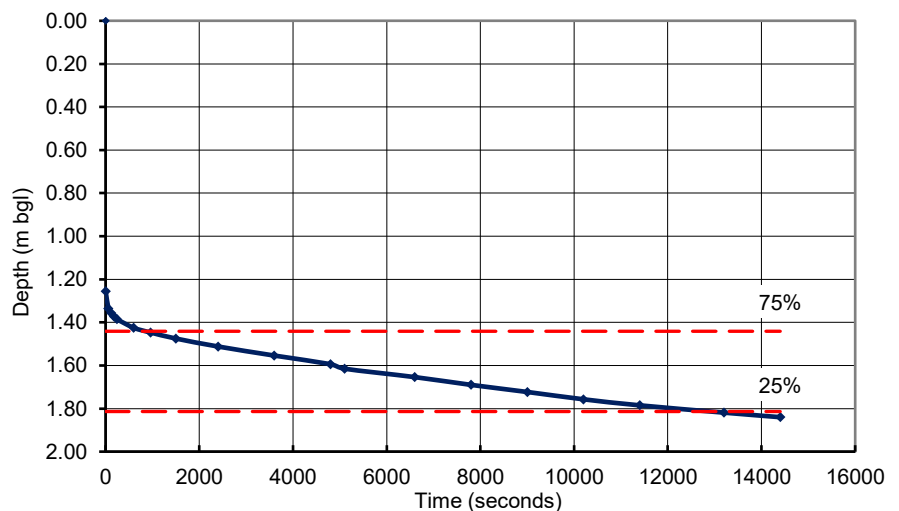
Infiltration rate f = 4.55E-06 m/s



Test: 3 Date: 11/11/2019

Length: 2.20 m
Width: 0.50 m
Depth: 2.00 m
GW Level: Dry m
WT Level: 1.26 m
Backfilled: Yes
Porosity: 30 %Vp 75-25 = 0.12 m³
as 50 = 3.17 m²
tp 75-25 = 12056 sec

Infiltration rate f = 3.20E-06 m/s



Remarks:



TRIAL PIT SOAKAWAY TEST TO BRE DG365

Trial Pit No.

SA12

Project Name: Highover Farm, Hitchin

Project No.: 340110

Tested by:
Bkeyworth

Location: Hitchin

Co-ords: 520253.515,
231152.859
Level: 76.26 mAODInputed by:
Cwhite

Client: Gallagher Development Group Ltd.

Checked by:
MM

Test: 1 Date: 11/11/2019

Length: 2.30 m

Width: 0.55 m

Depth: 2.35 m

GW Level: Dry m

WT Level: 1.18 m

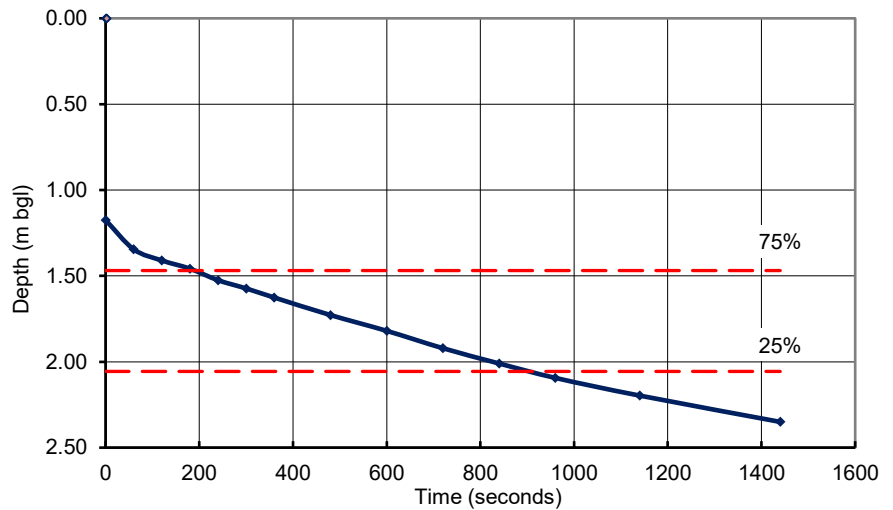
Backfilled: No

Porosity: N/A %

Vp 75-25 = 0.74 m³as 50 = 4.61 m²

tp 75-25 = 716 sec

Infiltration rate f = 2.25E-04 m/s



Test: 2 Date: 11/11/2019

Length: 2.30 m

Width: 0.55 m

Depth: 2.35 m

GW Level: Dry m

WT Level: 0.82 m

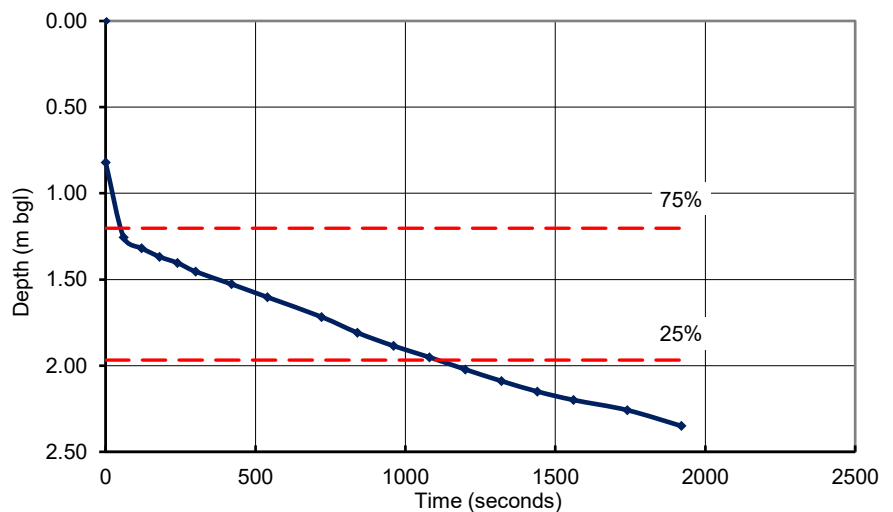
Backfilled: No

Porosity: N/A %

Vp 75-25 = 0.97 m³as 50 = 4.61 m²

tp 75-25 = 1055 sec

Infiltration rate f = 1.99E-04 m/s



Test: 3 Date: 11/11/2019

Length: 2.30 m

Width: 0.55 m

Depth: 2.35 m

GW Level: Dry m

WT Level: 0.79 m

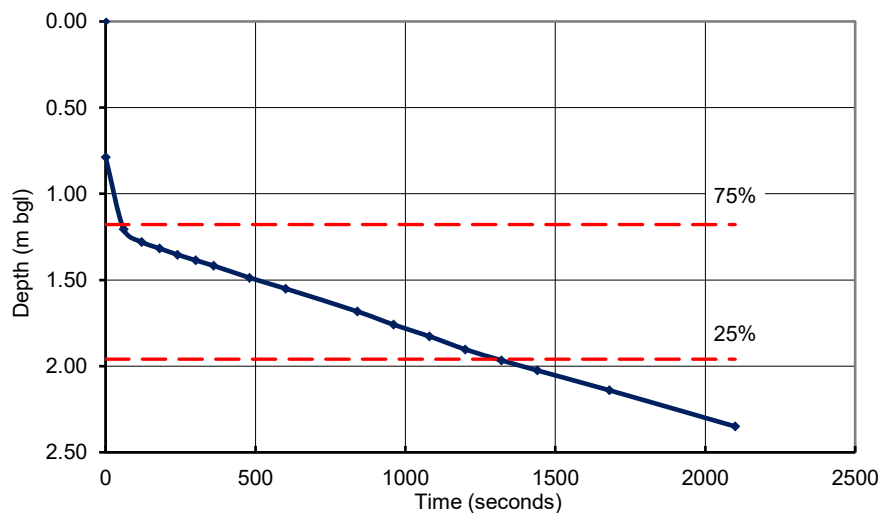
Backfilled: No

Porosity: N/A %

Vp 75-25 = 0.99 m³as 50 = 4.61 m²

tp 75-25 = 1251 sec

Infiltration rate f = 1.71E-04 m/s



Remarks:



TRIAL PIT SOAKAWAY TEST TO BRE DG365

Trial Pit No.

SA13

Project Name: Highover Farm, Hitchin

Project No.: 340110

Tested by:
Bkeyworth

Location: Hitchin

Co-ords: 519864.001,
231085.799
Level: 71.73 mAODInputed by:
Cwhite

Client: Gallagher Development Group Ltd.

Checked by:
MM

Test: 1 Date: 06/11/2019

Length: 2.30 m

Width: 0.50 m

Depth: 2.45 m

GW Level: Dry m

WT Level: 1.77 m

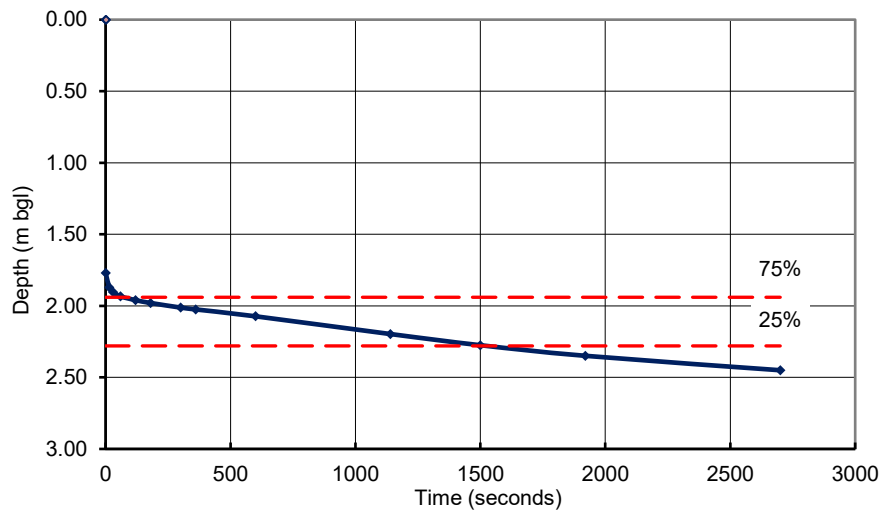
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.12 m³as 50 = 3.05 m²

tp 75-25 = 1455 sec

Infiltration rate f = 2.63E-05 m/s



Test: 2 Date: 07/11/2019

Length: 2.30 m

Width: 0.50 m

Depth: 2.45 m

GW Level: Dry m

WT Level: 1.70 m

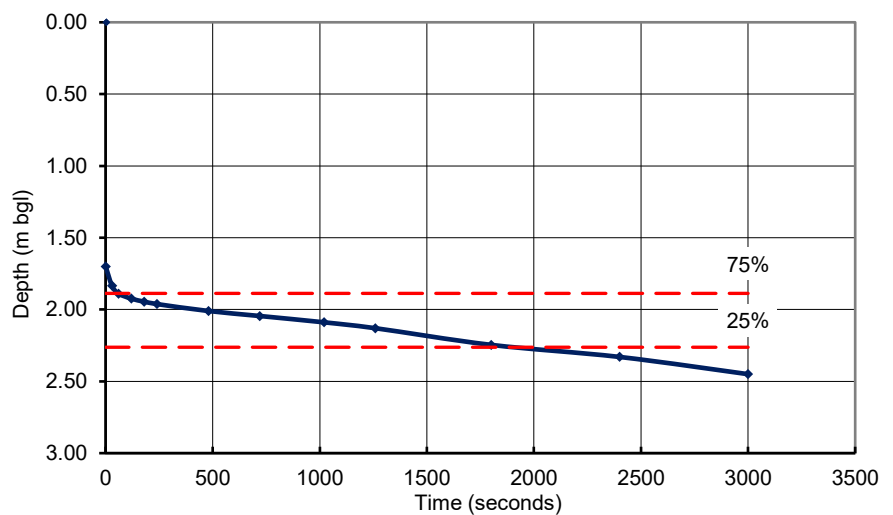
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.13 m³as 50 = 3.05 m²

tp 75-25 = 1859 sec

Infiltration rate f = 2.27E-05 m/s



Test: 3 Date: 07/11/2019

Length: 2.30 m

Width: 0.50 m

Depth: 2.45 m

GW Level: Dry m

WT Level: 1.72 m

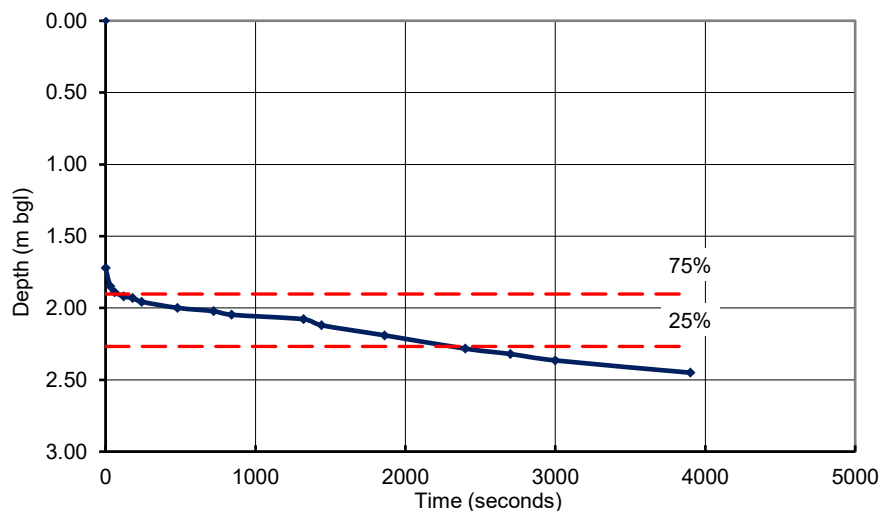
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.13 m³as 50 = 3.05 m²

tp 75-25 = 2223 sec

Infiltration rate f = 1.85E-05 m/s



Remarks:



TRIAL PIT SOAKAWAY TEST TO BRE DG365

Trial Pit No.

SA14

Project Name: Highover Farm, Hitchin

Project No.: 340110

Tested by:
Bkeyworth

Location: Hitchin

Co-ords: 519851.642,
230932.136
Level: 74.96 mAODInputed by:
Cwhite

Client: Gallagher Development Group Ltd.

Checked by:
MM

Test: 1 Date: 06/11/2019

Length: 2.55 m

Width: 0.55 m

Depth: 2.40 m

GW Level: Dry m

WT Level: 0.84 m

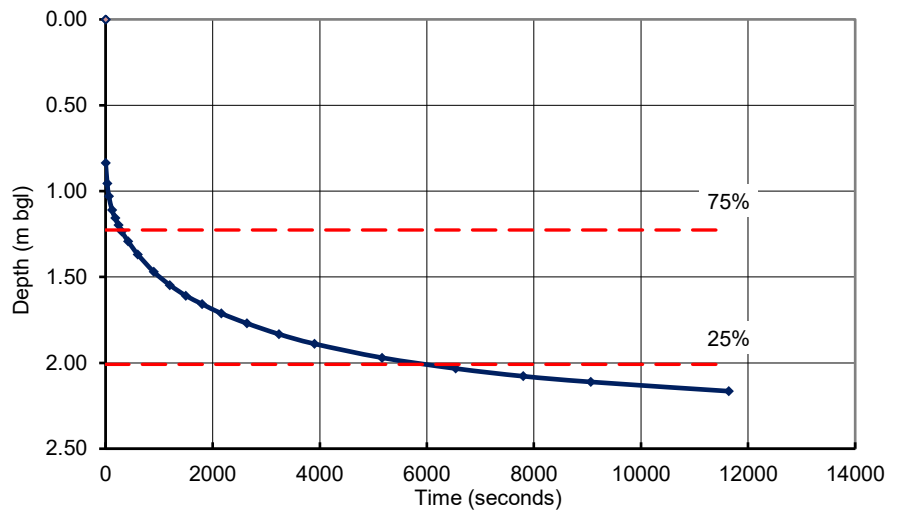
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.33 m³as 50 = 6.25 m²

tp 75-25 = 5722 sec

Infiltration rate f = 9.18E-06 m/s



Test: 2 Date: 07/11/2019

Length: 2.55 m

Width: 0.55 m

Depth: 2.40 m

GW Level: Dry m

WT Level: 0.78 m

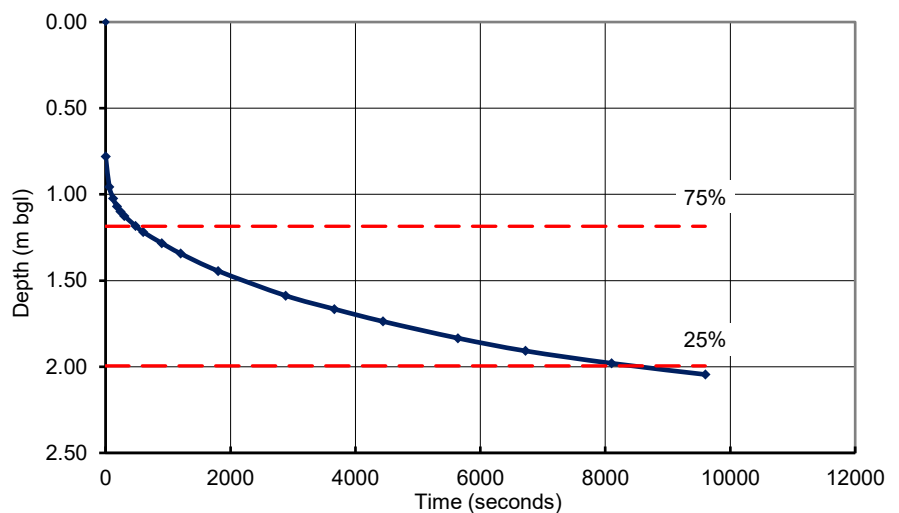
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.34 m³as 50 = 6.25 m²

tp 75-25 = 7959 sec

Infiltration rate f = 6.83E-06 m/s



Test: 3 Date: 07/11/2019

Length: 2.55 m

Width: 0.55 m

Depth: 2.40 m

GW Level: Dry m

WT Level: 0.74 m

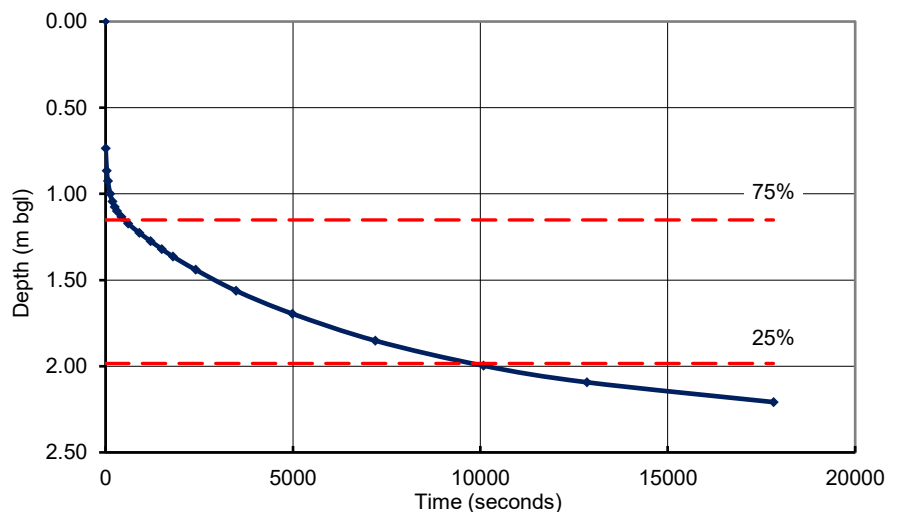
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.35 m³as 50 = 6.25 m²

tp 75-25 = 9310 sec

Infiltration rate f = 6.00E-06 m/s



Remarks:



TRIAL PIT SOAKAWAY TEST TO BRE DG365

Trial Pit No.

SA15

Project Name: Highover Farm, Hitchin

Project No.: 340110

Tested by:
Bkeyworth

Location: Hitchin

Co-ords: 520161.552,23
0936.526
Level: 79.57 mAODInputed by:
Cwhite

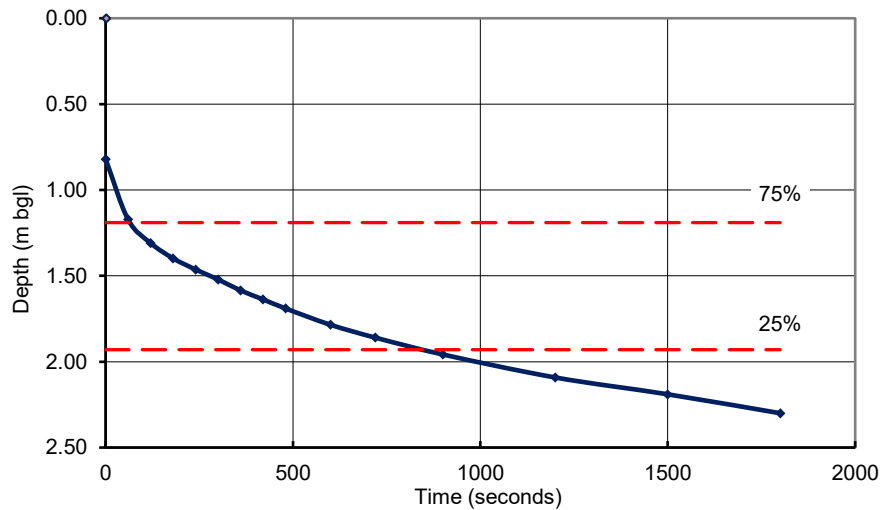
Client: Gallagher Development Group Ltd.

Checked by:
MM

Test: 1 Date: 11/11/2019

Length: 2.40 m
Width: 0.50 m
Depth: 2.30 m
GW Level: Dry m
WT Level: 0.82 m
Backfilled: Yes
Porosity: 30 %Vp 75-25 = 0.27 m³
as 50 = 5.49 m²
tp 75-25 = 781 sec

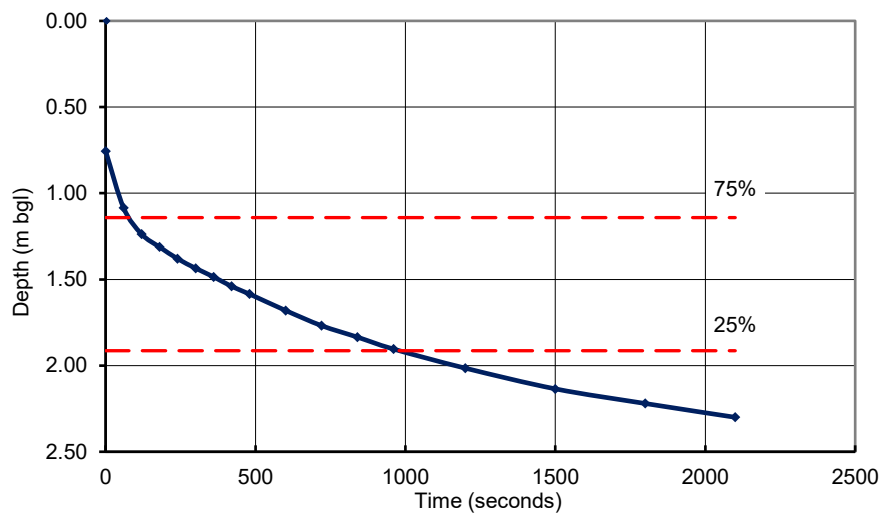
Infiltration rate f = 6.19E-05 m/s



Test: 2 Date: 11/11/2019

Length: 2.40 m
Width: 0.50 m
Depth: 2.30 m
GW Level: Dry m
WT Level: 0.76 m
Backfilled: Yes
Porosity: 30 %Vp 75-25 = 0.28 m³
as 50 = 5.49 m²
tp 75-25 = 899 sec

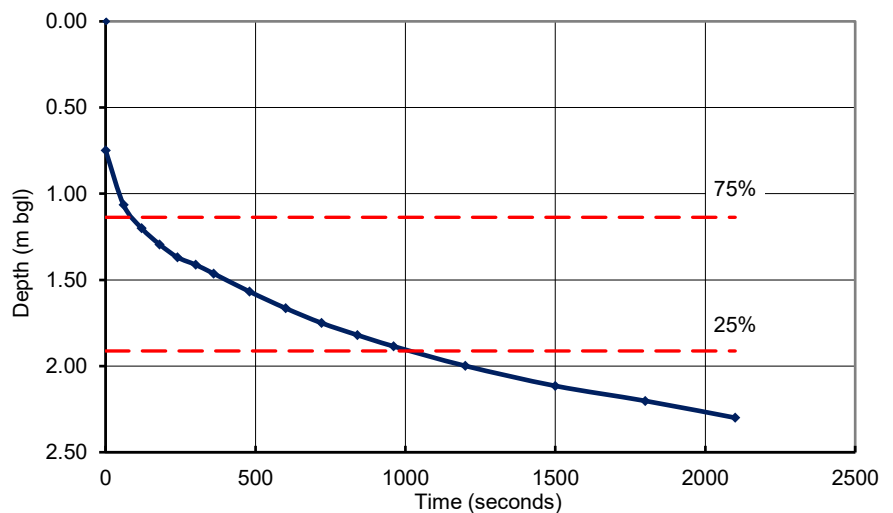
Infiltration rate f = 5.62E-05 m/s



Test: 3 Date: 11/11/2019

Length: 2.40 m
Width: 0.50 m
Depth: 2.30 m
GW Level: Dry m
WT Level: 0.75 m
Backfilled: Yes
Porosity: 30 %Vp 75-25 = 0.28 m³
as 50 = 5.49 m²
tp 75-25 = 925 sec

Infiltration rate f = 5.48E-05 m/s



Remarks:



TRIAL PIT SOAKAWAY TEST TO BRE DG365

Trial Pit No.

SA16

Project Name: Highover Farm, Hitchin

Project No.: 340110

Tested by:
Troll HH317

Location: Hitchin

Co-ords: 519627.9,
230862.5
Level: 72.68 m AODInputed by:
Cwright

Client: Gallagher Development Group Ltd.

Checked by:
MM

Test: 1 Date: 06/11/2019

Length: 2.20 m

Width: 0.50 m

Depth: 2.50 m

GW Level: 1.876 m

WT Level: 0.76 m

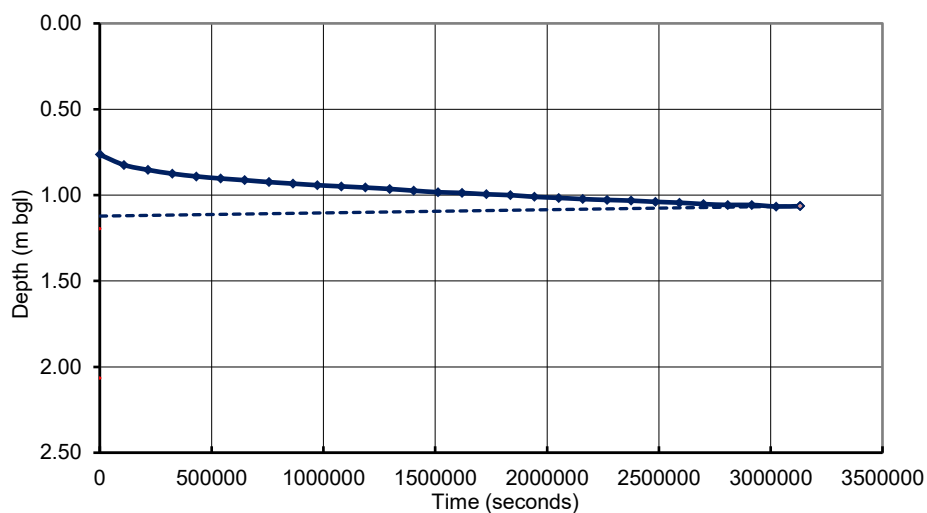
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = 0.29 m³as 50 = 5.80 m²

tp 75-25 = -54439613 sec

Infiltration rate f = -9.27E-10 m/s



Test: 2 Date: N/A

Length: m

Width: m

Depth: m

GW Level: m

WT Level: m

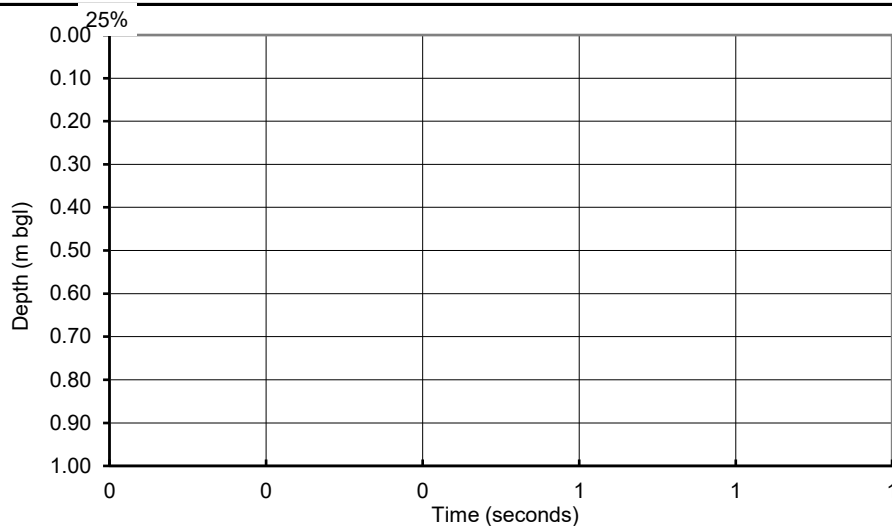
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = m³as 50 = m²

tp 75-25 = sec

Infiltration rate f = m/s



Test: 3 Date: N/A

Length: m

Width: m

Depth: m

GW Level: m

WT Level: m

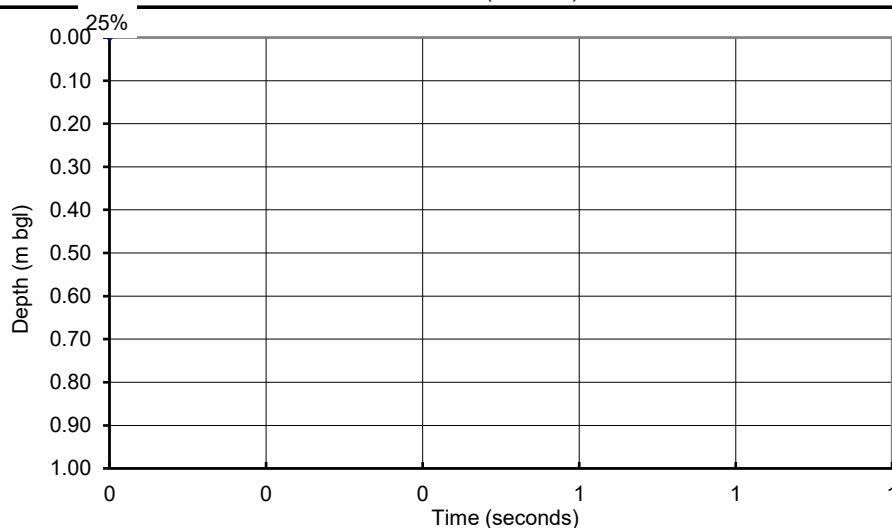
Backfilled: Yes

Porosity: 30 %

Vp 75-25 = m³as 50 = m²

tp 75-25 = sec

Infiltration rate f = m/s



Remarks:



TRIAL PIT SOAKAWAY TEST TO BRE DG365

Trial Pit No.

SA17

Project Name: Highover Farm, Hitchin

Project No.: 340110

Tested by:
Bkeyworth

Location: Hitchin

Co-ords: 519998.463,
230726.686
Level: 76.86 mAODInputed by:
Cwhite

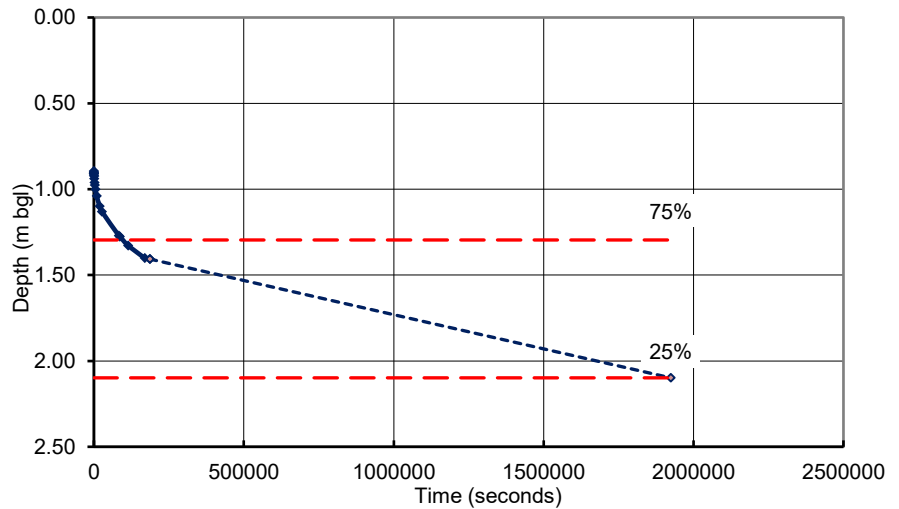
Client: Gallagher Development Group Ltd.

Checked by:
MM

Test: 1 Date: 06/11/2019

Length: 2.40 m
Width: 0.50 m
Depth: 2.50 m
GW Level: Dry m
WT Level: 0.89 m
Backfilled: Yes
Porosity: 30 %Vp 75-25 = 0.29 m³
as 50 = 5.86 m²
tp 75-25 = 1826523 sec

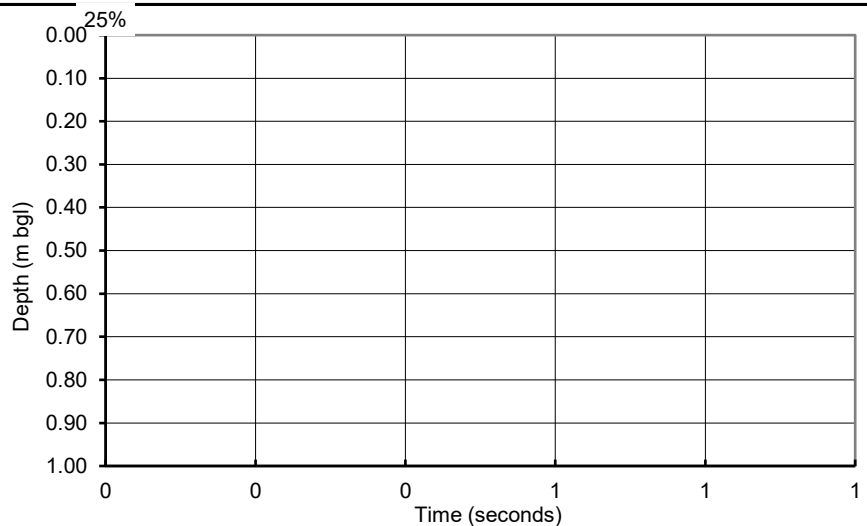
Infiltration rate f = 2.69E-08 m/s



Test: 2 Date: N/A

Length: m
Width: m
Depth: m
GW Level: m
WT Level: m
Backfilled: Yes
Porosity: 30 %Vp 75-25 = m³
as 50 = m²
tp 75-25 = sec

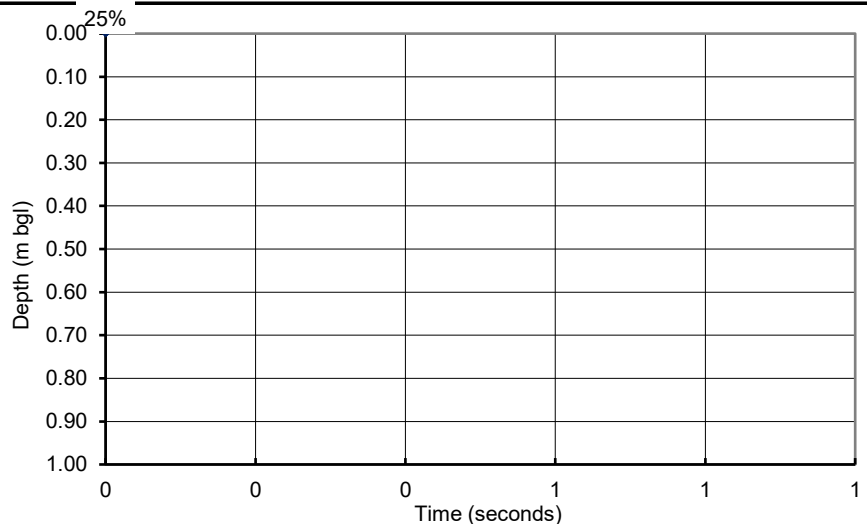
Infiltration rate f = m/s



Test: 3 Date: N/A

Length: m
Width: m
Depth: m
GW Level: m
WT Level: m
Backfilled: Yes
Porosity: 30 %Vp 75-25 = m³
as 50 = m²
tp 75-25 = sec

Infiltration rate f = m/s



Remarks:



TRIAL PIT SOAKAWAY TEST TO BRE DG365

Trial Pit No.

SA18

Project Name: Highover Farm, Hitchin

Project No.: 340110

Tested by:
Troll HH274

Location: Hitchin

Co-ords: 519710.8,
230663.9
Level: 71 mAODInputed by:
Cwright

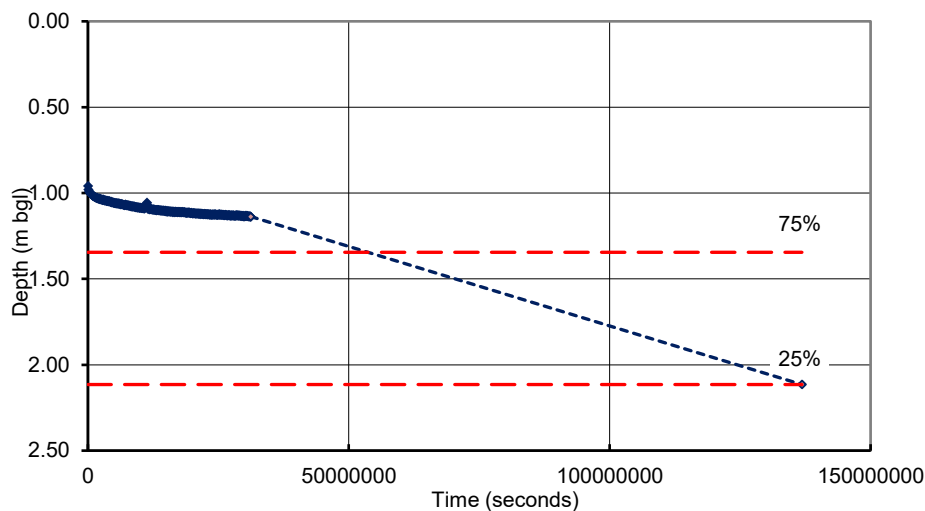
Client: Gallagher Developments Group Ltd.

Checked by:
MM

Test: 1 Date: 06/11/2019

Length: 2.40 m
Width: 0.55 m
Depth: 2.50 m
GW Level: Dry m
WT Level: 0.96 m
Backfilled: Yes
Porosity: 30 %Vp 75-25 = 0.31 m³
as 50 = 5.86 m²
tp 75-25 = 99914153 sec

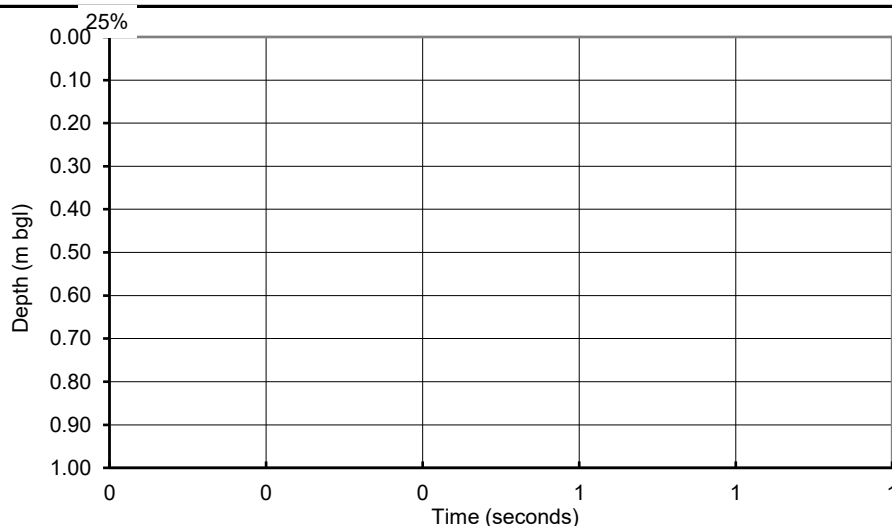
Infiltration rate f = 5.29E-10 m/s



Test: 2 Date: N/A

Length: m
Width: m
Depth: m
GW Level: m
WT Level: m
Backfilled: Yes
Porosity: 30 %Vp 75-25 = m³
as 50 = m²
tp 75-25 = sec

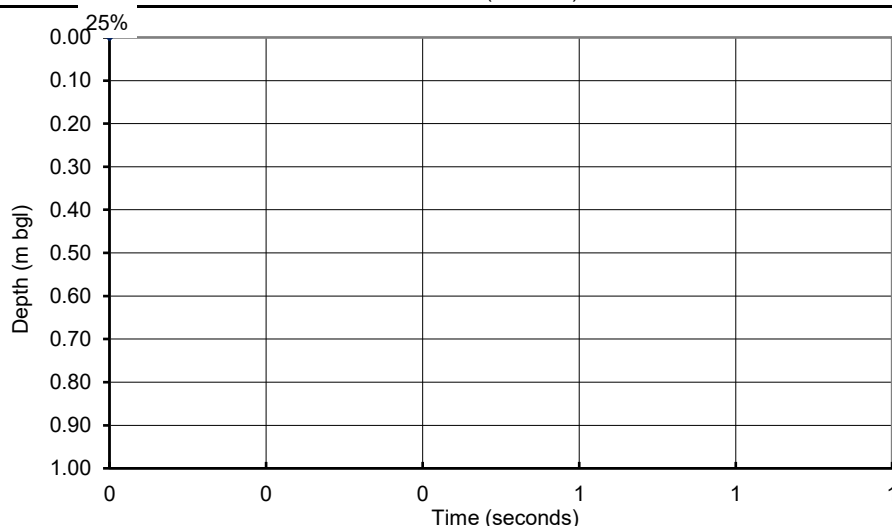
Infiltration rate f = N/A m/s



Test: 3 Date: N/A

Length: m
Width: m
Depth: m
GW Level: m
WT Level: m
Backfilled: Yes
Porosity: 30 %Vp 75-25 = m³
as 50 = m²
tp 75-25 = sec

Infiltration rate f = N/A m/s



Remarks:



APPENDIX I LABORATORY CERTIFICATES FOR SOIL ANALYSIS

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 19/10711
Issue Number: 1

Date: 25 November, 2019

Client: RSK Environment Ltd Cambridge
Battle Gate Road
Boxworth
Cambridge
CB23 4NN

Project Manager: Chris Wright/Verity Macfarlane
Project Name: Not specified
Project Ref: 340110
Order No: N/A
Date Samples Received: 04/11/19
Date Instructions Received: 12/11/19
Date Analysis Completed: 25/11/19

Prepared by:



Sophie France
Admin Assistant

Approved by:



Iain Haslock
Analytical Consultant

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/1	19/10711/2	19/10711/3	19/10711/4	19/10711/5	19/10711/6	19/10711/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SA10	SA11	SA13	SA15	SA15	SA16	SA16			
Depth to Top	0.15	0.15	0.20	0.15	0.40	0.20	0.50			
Depth To Bottom										
Date Sampled	31-Oct-19	01-Nov-19	01-Nov-19	31-Oct-19	31-Oct-19	05-Nov-19	05-Nov-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	5AE	4AE	4AE	4AE	5AE	6AE	5AE			
% Stones >10mm _A	26.8	4.2	2.8	1.5	<0.1	<0.1	<0.1	% w/w	0.1	A-T-044
pH _D ^{M#}	8.13	8.06	8.16	8.14	8.30	7.57	8.26	pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	-	-	-	<0.01	-	-	-	g/l	0.01	A-T-026s
Organic matter _D ^{M#}	2.1	2.8	4.0	2.7	1.4	8.7	1.9	% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	4	8	10	7	6	11	14	mg/kg	1	A-T-024s
Cadmium _D ^{M#}	<0.5	0.9	1.1	0.8	0.8	1.6	1.4	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	13	15	32	13	7	36	16	mg/kg	1	A-T-024s
Chromium _D ^{M#}	13	18	22	19	19	32	33	mg/kg	1	A-T-024s
Lead _D ^{M#}	18	27	48	20	9	42	20	mg/kg	1	A-T-024s
Mercury _D	0.83	0.78	0.42	0.93	0.87	0.51	0.41	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	11	14	18	16	16	30	37	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	<1	<1	1	<1	mg/kg	1	A-T-024s
Zinc _D ^{M#}	29	54	72	55	45	129	85	mg/kg	5	A-T-024s

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/1	19/10711/2	19/10711/3	19/10711/4	19/10711/5	19/10711/6	19/10711/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SA10	SA11	SA13	SA15	SA15	SA16	SA16			
Depth to Top	0.15	0.15	0.20	0.15	0.40	0.20	0.50			
Depth To Bottom										
Date Sampled	31-Oct-19	01-Nov-19	01-Nov-19	31-Oct-19	31-Oct-19	05-Nov-19	05-Nov-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	5AE	4AE	4AE	4AE	5AE	6AE	5AE			
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? ^D	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045
OCP+OPP Combined Pest Suite (incl. Atrazine and Simazine)										
Dichlobenil _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Tecnazene _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Trifluralin _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
alpha-Hexachlorocyclohexane (HCH) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Hexachlorobenzene (HCB) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Simazine _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Atrazine _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
beta-Hexachlorocyclohexane (HCH) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Quintozone (PCNB) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
gamma-Hexachlorocyclohexane (HCH) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Chlorothalonil _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
delta-Hexachlorocyclohexane (HCH) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Triallate _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Heptachlor _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Aldrin _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Triadimefon _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Telodrin _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Isodrin _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Pendimethalin _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Heptachlor epoxide _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
trans-Chlordane (Gamma) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
o,p-DDE (2,4) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Endosulphan I (Alpha) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
cis-Chlordane (Alpha) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
p,p-DDE (4,4) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Dieldrin _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
o,p-DDD (2,4) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/1	19/10711/2	19/10711/3	19/10711/4	19/10711/5	19/10711/6	19/10711/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SA10	SA11	SA13	SA15	SA15	SA16	SA16			
Depth to Top	0.15	0.15	0.20	0.15	0.40	0.20	0.50			
Depth To Bottom										
Date Sampled	31-Oct-19	01-Nov-19	01-Nov-19	31-Oct-19	31-Oct-19	05-Nov-19	05-Nov-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	5AE	4AE	4AE	4AE	5AE	6AE	5AE			
Endrin _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Endosulphan II (Beta) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
p,p-DDD (4,4) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
o,p-DDT (2,4) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Endrin Aldehyde _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Endrin Ketone _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Endosulphan Sulphate _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
p,p-DDT (4,4) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
o,p-Methoxychlor _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
p,p-Methoxychlor _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Permethrin I (cis) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Permethrin II (trans) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Dichlorvos _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Mevinphos _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Demeton-S _A	-	-	-	<0.50	-	-	-	mg/kg	0.5	A-T-056
Demeton-O _A	-	-	-	<0.50	-	-	-	mg/kg	0.5	A-T-056
Phorate _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Dimethoate _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Propetamphos _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Diazinon (Dimpylate) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Disulfoton _A	-	-	-	<0.10	-	-	-	mg/kg	0.1	A-T-056
Etrimphos _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Chlorpyrifos-methyl _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Parathion (Ethyl Parathion) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Methyl Parathion _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Pirimiphos-methyl _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Fenitrothion _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Fensulphothion _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Fenthion _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Malathion _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Chlorfenvinphos _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Chlorpyrifos _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Trichloronate _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Prothiofos (Tokuthion) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/1	19/10711/2	19/10711/3	19/10711/4	19/10711/5	19/10711/6	19/10711/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SA10	SA11	SA13	SA15	SA15	SA16	SA16			
Depth to Top	0.15	0.15	0.20	0.15	0.40	0.20	0.50			
Depth To Bottom										
Date Sampled	31-Oct-19	01-Nov-19	01-Nov-19	31-Oct-19	31-Oct-19	05-Nov-19	05-Nov-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	5AE	4AE	4AE	4AE	5AE	6AE	5AE			
Ethion _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Triazophos _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Sulprofos _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Carbophenothion _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Phosalone _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Azinphos-methyl _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Azinphos-ethyl _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Coumaphos _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/1	19/10711/2	19/10711/3	19/10711/4	19/10711/5	19/10711/6	19/10711/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SA10	SA11	SA13	SA15	SA15	SA16	SA16			
Depth to Top	0.15	0.15	0.20	0.15	0.40	0.20	0.50			
Depth To Bottom										
Date Sampled	31-Oct-19	01-Nov-19	01-Nov-19	31-Oct-19	31-Oct-19	05-Nov-19	05-Nov-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	5AE	4AE	4AE	4AE	5AE	6AE	5AE			
PAH-16MS										
Acenaphthene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	<0.04	<0.04	0.07	<0.04	<0.04	0.08	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	<0.04	<0.04	0.08	<0.04	<0.04	0.10	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	<0.05	0.08	<0.05	<0.05	0.10	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	<0.06	<0.06	0.09	<0.06	<0.06	0.12	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	<0.08	<0.08	0.14	<0.08	<0.08	0.18	<0.08	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	<0.03	0.06	<0.03	<0.03	0.07	<0.03	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	0.03	<0.03	0.05	<0.03	<0.03	0.07	<0.03	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	<0.07	<0.07	0.13	<0.07	<0.07	0.17	<0.07	mg/kg	0.07	A-T-019s
Leachate Prep BS EN 12457-1 (2:1) (1 no) _A	*	*	-	-	-	-	-			A-T-001
pH (leachable) _A [#]	7.75	7.79	-	-	-	-	-	pH	0.01	A-T-031w
Alkalinity (total) (leachable) Colorimetry _A	93	85	-	-	-	-	-	mg/l Ca CO ₃	20	A-T-038w
Arsenic (leachable) _A [#]	1	<1	-	-	-	-	-	µg/l	1	A-T-025w
Cadmium (leachable) _A [#]	<1	<1	-	-	-	-	-	µg/l	1	A-T-025w
Copper (leachable) _A [#]	6	6	-	-	-	-	-	µg/l	1	A-T-025w
Chromium (leachable) _A [#]	<1	<1	-	-	-	-	-	µg/l	1	A-T-025w
Lead (leachable) _A [#]	2	2	-	-	-	-	-	µg/l	1	A-T-025w
Mercury (leachable) _A [#]	<0.1	<0.1	-	-	-	-	-	µg/l	0.1	A-T-025w
Nickel (leachable) _A [#]	1	1	-	-	-	-	-	µg/l	1	A-T-025w
Selenium (leachable) _A [#]	<1	<1	-	-	-	-	-	µg/l	1	A-T-025w
Zinc (leachable) _A [#]	4	5	-	-	-	-	-	µg/l	1	A-T-025w
Total PAH-16MS _A ^{M#}	<0.08	<0.08	0.70	<0.08	<0.08	0.89	<0.08	mg/kg	0.01	A-T-019s

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/1	19/10711/2	19/10711/3	19/10711/4	19/10711/5	19/10711/6	19/10711/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SA10	SA11	SA13	SA15	SA15	SA16	SA16			
Depth to Top	0.15	0.15	0.20	0.15	0.40	0.20	0.50			
Depth To Bottom										
Date Sampled	31-Oct-19	01-Nov-19	01-Nov-19	31-Oct-19	31-Oct-19	05-Nov-19	05-Nov-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	5AE	4AE	4AE	4AE	5AE	6AE	5AE			
TPH CWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C21-C35 _A	3	6	6	2	<1	10	2	mg/kg	1	A-T-055s
Total Aliphatics _A	3	6	6	2	<1	10	2	mg/kg	1	A-T-055s
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C10-C12 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16 _A	<1	<1	1	<1	<1	1	<1	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	<1	1	3	<1	<1	3	<1	mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	7	11	38	3	<1	25	3	mg/kg	1	A-T-055s
Total Aromatics _A	8	12	43	3	<1	29	3	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35) _A	10	17	49	6	<1	39	6	mg/kg	1	A-T-055s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/8	19/10711/9	19/10711/10	19/10711/11	19/10711/12	19/10711/13	19/10711/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SA18	SA18	SA6	SA8	SA9	TP03	TP1			
Depth to Top	0.20	0.50	0.20	0.20	0.15	0.20	0.15			
Depth To Bottom										
Date Sampled	05-Nov-19	05-Nov-19	29-Oct-19	30-Oct-19	30-Oct-19	28-Oct-19	29-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	6AE	5AE	4AE	4ABE	4AE	4AE	4AE			
% Stones >10mm _A	<0.1	1.5	<0.1	3.8	5.0	<0.1	3.3	% w/w	0.1	A-T-044
pH _D ^{M#}	7.64	8.11	8.04	8.08	8.05	8.17	8.15	pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	<0.01	-	-	-	<0.01	-	<0.01	g/l	0.01	A-T-026s
Organic matter _D ^{M#}	4.5	1.9	3.9	3.2	3.2	2.4	3.2	% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	12	11	7	9	8	5	5	mg/kg	1	A-T-024s
Cadmium _D ^{M#}	1.8	1.6	0.8	0.9	0.9	0.7	0.9	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	39	18	22	23	24	13	18	mg/kg	1	A-T-024s
Chromium _D ^{M#}	41	35	17	17	18	15	17	mg/kg	1	A-T-024s
Lead _D ^{M#}	34	20	28	28	28	17	26	mg/kg	1	A-T-024s
Mercury _D	<0.17	<0.17	0.98	0.83	0.84	1.02	0.87	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	39	37	17	15	16	14	16	mg/kg	1	A-T-024s
Selenium _D ^{M#}	2	<1	<1	<1	<1	1	<1	mg/kg	1	A-T-024s
Zinc _D ^{M#}	103	80	49	50	54	38	51	mg/kg	5	A-T-024s

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/8	19/10711/9	19/10711/10	19/10711/11	19/10711/12	19/10711/13	19/10711/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SA18	SA18	SA6	SA8	SA9	TP03	TP1			
Depth to Top	0.20	0.50	0.20	0.20	0.15	0.20	0.15			
Depth To Bottom										
Date Sampled	05-Nov-19	05-Nov-19	29-Oct-19	30-Oct-19	30-Oct-19	28-Oct-19	29-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	6AE	5AE	4AE	4ABE	4AE	4AE	4AE			
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? ^D	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045
OCP+OPP Combined Pest Suite (incl. Atrazine and Simazine)										
Dichlobenil _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Tecnazene _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Trifluralin _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
alpha-Hexachlorocyclohexane (HCH) _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Hexachlorobenzene (HCB) _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Simazine _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Atrazine _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
beta-Hexachlorocyclohexane (HCH) _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Quintozone (PCNB) _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
gamma-Hexachlorocyclohexane (HCH) _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Chlorothalonil _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
delta-Hexachlorocyclohexane (HCH) _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Triallate _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Heptachlor _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Aldrin _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Triadimefon _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Telodrin _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Isodrin _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Pendimethalin _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Heptachlor epoxide _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
trans-Chlordane (Gamma) _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
o,p-DDE (2,4) _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Endosulphan I (Alpha) _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
cis-Chlordane (Alpha) _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
p,p-DDE (4,4) _A	<0.01	-	-	-	<0.01	-	0.01	mg/kg	0.01	A-T-056
Dieldrin _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
o,p-DDD (2,4) _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/8	19/10711/9	19/10711/10	19/10711/11	19/10711/12	19/10711/13	19/10711/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SA18	SA18	SA6	SA8	SA9	TP03	TP1			
Depth to Top	0.20	0.50	0.20	0.20	0.15	0.20	0.15			
Depth To Bottom										
Date Sampled	05-Nov-19	05-Nov-19	29-Oct-19	30-Oct-19	30-Oct-19	28-Oct-19	29-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	6AE	5AE	4AE	4ABE	4AE	4AE	4AE			
Endrin _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Endosulphan II (Beta) _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
p,p-DDD (4,4) _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
o,p-DDT (2,4) _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Endrin Aldehyde _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Endrin Ketone _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Endosulphan Sulphate _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
p,p-DDT (4,4) _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
o,p-Methoxychlor _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
p,p-Methoxychlor _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Permethrin I (cis) _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Permethrin II (trans) _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Dichlorvos _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Mevinphos _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Demeton-S _A	<0.50	-	-	-	<0.50	-	<0.50	mg/kg	0.5	A-T-056
Demeton-O _A	<0.50	-	-	-	<0.50	-	<0.50	mg/kg	0.5	A-T-056
Phorate _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Dimethoate _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Propetamphos _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Diazinon (Dimpylate) _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Disulfoton _A	<0.10	-	-	-	<0.10	-	<0.10	mg/kg	0.1	A-T-056
Etrimphos _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Chlorpyrifos-methyl _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Parathion (Ethyl Parathion) _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Methyl Parathion _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Pirimiphos-methyl _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Fenitrothion _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Fensulphothion _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Fenthion _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Malathion _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Chlorfenvinphos _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Chlorpyrifos _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Trichloronate _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Prothiofos (Tokuthion) _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/8	19/10711/9	19/10711/10	19/10711/11	19/10711/12	19/10711/13	19/10711/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SA18	SA18	SA6	SA8	SA9	TP03	TP1			
Depth to Top	0.20	0.50	0.20	0.20	0.15	0.20	0.15			
Depth To Bottom										
Date Sampled	05-Nov-19	05-Nov-19	29-Oct-19	30-Oct-19	30-Oct-19	28-Oct-19	29-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	6AE	5AE	4AE	4ABE	4AE	4AE	4AE			
Ethion _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Triazophos _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Sulprofos _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Carbophenothion _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Phosalone _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Azinphos-methyl _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Azinphos-ethyl _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056
Coumaphos _A	<0.01	-	-	-	<0.01	-	<0.01	mg/kg	0.01	A-T-056

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/8	19/10711/9	19/10711/10	19/10711/11	19/10711/12	19/10711/13	19/10711/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SA18	SA18	SA6	SA8	SA9	TP03	TP1			
Depth to Top	0.20	0.50	0.20	0.20	0.15	0.20	0.15			
Depth To Bottom										
Date Sampled	05-Nov-19	05-Nov-19	29-Oct-19	30-Oct-19	30-Oct-19	28-Oct-19	29-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	6AE	5AE	4AE	4ABE	4AE	4AE	4AE			
PAH-16MS										
Acenaphthene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.06	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	0.10	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.05	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.05	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	0.09	mg/kg	0.07	A-T-019s
Leachate Prep BS EN 12457-1 (2:1) (1 no) _A	-	-	-	*	-	-	*			A-T-001
pH (leachable) _A [#]	-	-	-	7.84	-	-	7.86	pH	0.01	A-T-031w
Alkalinity (total) (leachable) Colorimetry _A	-	-	-	93	-	-	91	mg/l Ca CO ₃	20	A-T-038w
Arsenic (leachable) _A [#]	-	-	-	1	-	-	<1	µg/l	1	A-T-025w
Cadmium (leachable) _A [#]	-	-	-	<1	-	-	<1	µg/l	1	A-T-025w
Copper (leachable) _A [#]	-	-	-	7	-	-	6	µg/l	1	A-T-025w
Chromium (leachable) _A [#]	-	-	-	<1	-	-	<1	µg/l	1	A-T-025w
Lead (leachable) _A [#]	-	-	-	1	-	-	<1	µg/l	1	A-T-025w
Mercury (leachable) _A [#]	-	-	-	<0.1	-	-	<0.1	µg/l	0.1	A-T-025w
Nickel (leachable) _A [#]	-	-	-	1	-	-	<1	µg/l	1	A-T-025w
Selenium (leachable) _A [#]	-	-	-	<1	-	-	<1	µg/l	1	A-T-025w
Zinc (leachable) _A [#]	-	-	-	6	-	-	4	µg/l	1	A-T-025w
Total PAH-16MS _A ^{M#}	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	0.35	mg/kg	0.01	A-T-019s

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/8	19/10711/9	19/10711/10	19/10711/11	19/10711/12	19/10711/13	19/10711/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SA18	SA18	SA6	SA8	SA9	TP03	TP1			
Depth to Top	0.20	0.50	0.20	0.20	0.15	0.20	0.15			
Depth To Bottom										
Date Sampled	05-Nov-19	05-Nov-19	29-Oct-19	30-Oct-19	30-Oct-19	28-Oct-19	29-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	6AE	5AE	4AE	4ABE	4AE	4AE	4AE			
TPH CWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C21-C35 _A	4	<1	17	7	5	2	3	mg/kg	1	A-T-055s
Total Aliphatics _A	4	<1	17	7	5	2	3	mg/kg	1	A-T-055s
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C10-C12 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16 _A	<1	<1	1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	<1	<1	4	2	1	<1	1	mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	6	2	30	15	10	6	9	mg/kg	1	A-T-055s
Total Aromatics _A	6	2	34	17	11	6	10	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35) _A	10	2	52	24	15	8	14	mg/kg	1	A-T-055s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/15	19/10711/16	19/10711/17	19/10711/18	19/10711/19	19/10711/20	19/10711/21	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP10	TP14	TP14	TP15	TP15	TP16	TP16			
Depth to Top	0.15	0.20	0.50	0.20	0.50	0.20	0.50			
Depth To Bottom										
Date Sampled	30-Oct-19	31-Oct-19	31-Oct-19	04-Nov-19	04-Nov-19	30-Oct-19	30-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	4AE	4A	4A	4A	8	4AE	5A			
% Stones >10mm _A	6.3	0.7	<0.1	<0.1	<0.1	1.4	<0.1	% w/w	0.1	A-T-044
pH _D ^{M#}	8.13	8.19	8.49	8.20	8.41	8.16	8.27	pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	-	-	-	<0.01	-	-	-	g/l	0.01	A-T-026s
Organic matter _D ^{M#}	3.2	2.9	2.3	3.2	5.2	3.9	1.3	% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	8	8	4	10	2	9	4	mg/kg	1	A-T-024s
Cadmium _D ^{M#}	1.0	0.9	<0.5	0.9	<0.5	0.9	0.7	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	19	14	4	18	4	21	11	mg/kg	1	A-T-024s
Chromium _D ^{M#}	19	20	7	16	5	20	14	mg/kg	1	A-T-024s
Lead _D ^{M#}	25	25	5	32	5	34	13	mg/kg	1	A-T-024s
Mercury _D	0.29	0.62	1.26	1.08	1.41	0.46	0.99	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	19	17	8	15	6	20	16	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Zinc _D ^{M#}	58	56	21	58	17	66	37	mg/kg	5	A-T-024s

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/15	19/10711/16	19/10711/17	19/10711/18	19/10711/19	19/10711/20	19/10711/21	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP10	TP14	TP14	TP15	TP15	TP16	TP16			
Depth to Top	0.15	0.20	0.50	0.20	0.50	0.20	0.50			
Depth To Bottom										
Date Sampled	30-Oct-19	31-Oct-19	31-Oct-19	04-Nov-19	04-Nov-19	30-Oct-19	30-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	4AE	4A	4A	4A	8	4AE	5A			
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? ^D	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045
OCP+OPP Combined Pest Suite (incl. Atrazine and Simazine)										
Dichlobenil _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Tecnazene _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Trifluralin _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
alpha-Hexachlorocyclohexane (HCH) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Hexachlorobenzene (HCB) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Simazine _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Atrazine _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
beta-Hexachlorocyclohexane (HCH) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Quintozone (PCNB) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
gamma-Hexachlorocyclohexane (HCH) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Chlorothalonil _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
delta-Hexachlorocyclohexane (HCH) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Triallate _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Heptachlor _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Aldrin _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Triadimefon _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Telodrin _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Isodrin _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Pendimethalin _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Heptachlor epoxide _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
trans-Chlordane (Gamma) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
o,p-DDE (2,4) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Endosulphan I (Alpha) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
cis-Chlordane (Alpha) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
p,p-DDE (4,4) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Diieldrin _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
o,p-DDD (2,4) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/15	19/10711/16	19/10711/17	19/10711/18	19/10711/19	19/10711/20	19/10711/21	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP10	TP14	TP14	TP15	TP15	TP16	TP16			
Depth to Top	0.15	0.20	0.50	0.20	0.50	0.20	0.50			
Depth To Bottom										
Date Sampled	30-Oct-19	31-Oct-19	31-Oct-19	04-Nov-19	04-Nov-19	30-Oct-19	30-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	4AE	4A	4A	4A	8	4AE	5A			
Endrin _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Endosulphan II (Beta) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
p,p-DDD (4,4) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
o,p-DDT (2,4) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Endrin Aldehyde _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Endrin Ketone _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Endosulphan Sulphate _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
p,p-DDT (4,4) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
o,p-Methoxychlor _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
p,p-Methoxychlor _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Permethrin I (cis) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Permethrin II (trans) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Dichlorvos _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Mevinphos _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Demeton-S _A	-	-	-	<0.50	-	-	-	mg/kg	0.5	A-T-056
Demeton-O _A	-	-	-	<0.50	-	-	-	mg/kg	0.5	A-T-056
Phorate _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Dimethoate _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Propetamphos _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Diazinon (Dimpylate) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Disulfoton _A	-	-	-	<0.10	-	-	-	mg/kg	0.1	A-T-056
Etrimphos _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Chlorpyrifos-methyl _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Parathion (Ethyl Parathion) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Methyl Parathion _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Pirimiphos-methyl _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Fenitrothion _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Fensulphothion _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Fenthion _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Malathion _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Chlorfenvinphos _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Chlorpyrifos _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Trichloronate _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Prothiofos (Tokuthion) _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/15	19/10711/16	19/10711/17	19/10711/18	19/10711/19	19/10711/20	19/10711/21	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP10	TP14	TP14	TP15	TP15	TP16	TP16			
Depth to Top	0.15	0.20	0.50	0.20	0.50	0.20	0.50			
Depth To Bottom										
Date Sampled	30-Oct-19	31-Oct-19	31-Oct-19	04-Nov-19	04-Nov-19	30-Oct-19	30-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	4AE	4A	4A	4A	8	4AE	5A			
Ethion _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Triazophos _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Sulprofos _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Carbophenothion _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Phosalone _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Azinphos-methyl _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Azinphos-ethyl _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Coumaphos _A	-	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/15	19/10711/16	19/10711/17	19/10711/18	19/10711/19	19/10711/20	19/10711/21	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP10	TP14	TP14	TP15	TP15	TP16	TP16			
Depth to Top	0.15	0.20	0.50	0.20	0.50	0.20	0.50			
Depth To Bottom										
Date Sampled	30-Oct-19	31-Oct-19	31-Oct-19	04-Nov-19	04-Nov-19	30-Oct-19	30-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	4AE	4A	4A	4A	8	4AE	5A			
PAH-16MS										
Acenaphthene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	<0.04	<0.04	<0.04	0.05	<0.04	0.06	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	<0.06	<0.06	<0.06	<0.06	<0.06	0.07	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	<0.03	<0.03	0.05	<0.03	0.04	<0.03	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	<0.03	<0.03	<0.03	0.04	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Leachate Prep BS EN 12457-1 (2:1) (1 no) _A	*	*	-	-	-	-	-			A-T-001
pH (leachable) _A [#]	7.84	7.87	-	-	-	-	-	pH	0.01	A-T-031w
Alkalinity (total) (leachable) Colorimetry _A	77	80	-	-	-	-	-	mg/l Ca CO ₃	20	A-T-038w
Arsenic (leachable) _A [#]	<1	<1	-	-	-	-	-	µg/l	1	A-T-025w
Cadmium (leachable) _A [#]	<1	<1	-	-	-	-	-	µg/l	1	A-T-025w
Copper (leachable) _A [#]	6	4	-	-	-	-	-	µg/l	1	A-T-025w
Chromium (leachable) _A [#]	<1	<1	-	-	-	-	-	µg/l	1	A-T-025w
Lead (leachable) _A [#]	1	1	-	-	-	-	-	µg/l	1	A-T-025w
Mercury (leachable) _A [#]	<0.1	<0.1	-	-	-	-	-	µg/l	0.1	A-T-025w
Nickel (leachable) _A [#]	1	<1	-	-	-	-	-	µg/l	1	A-T-025w
Selenium (leachable) _A [#]	<1	<1	-	-	-	-	-	µg/l	1	A-T-025w
Zinc (leachable) _A [#]	3	5	-	-	-	-	-	µg/l	1	A-T-025w
Total PAH-16MS _A ^{M#}	<0.08	<0.08	<0.08	0.14	<0.08	0.23	<0.08	mg/kg	0.01	A-T-019s

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Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/15	19/10711/16	19/10711/17	19/10711/18	19/10711/19	19/10711/20	19/10711/21	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP10	TP14	TP14	TP15	TP15	TP16	TP16			
Depth to Top	0.15	0.20	0.50	0.20	0.50	0.20	0.50			
Depth To Bottom										
Date Sampled	30-Oct-19	31-Oct-19	31-Oct-19	04-Nov-19	04-Nov-19	30-Oct-19	30-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	4AE	4A	4A	4A	8	4AE	5A			
TPH CWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C21-C35 _A	5	<1	<1	4	<1	8	<1	mg/kg	1	A-T-055s
Total Aliphatics _A	5	<1	<1	4	<1	8	<1	mg/kg	1	A-T-055s
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	<1	<1	<1	<1	<1	1	<1	mg/kg	1	A-T-055s
Aro >C10-C12 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16 _A	<1	<1	<1	<1	<1	1	<1	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	<1	<1	<1	<1	<1	2	<1	mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	10	2	<1	8	<1	19	2	mg/kg	1	A-T-055s
Total Aromatics _A	10	2	<1	8	<1	24	2	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35) _A	16	2	<1	12	<1	32	2	mg/kg	1	A-T-055s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

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Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/22	19/10711/23	19/10711/24	19/10711/25	19/10711/26	19/10711/27	19/10711/28	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP17	TP2	TP2	TP22	TP23	TP23	TP24			
Depth to Top	0.15	0.20	0.45	0.20	0.20	0.50	0.15			
Depth To Bottom										
Date Sampled	30-Oct-19	29-Oct-19	29-Oct-19	05-Nov-19	04-Nov-19	04-Nov-19	31-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Solid	Soil			
Sample Matrix Code	4AE	5AE	8	5AE	6AE	7	4AE			
% Stones >10mm _A	1.7	<0.1	<0.1	5.1	0.9	<0.1	<0.1	% w/w	0.1	A-T-044
pH _D ^{M#}	8.11	8.24	8.59	8.08	8.14	8.20	8.07	pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	<0.01	-	-	0.25	-	-	-	g/l	0.01	A-T-026s
Organic matter _D ^{M#}	3.3	3.7	6.8	1.3	3.9	1.2	3.6	% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	22	4	<1	8	10	5	7	mg/kg	1	A-T-024s
Cadmium _D ^{M#}	1.6	0.8	<0.5	0.9	1.1	0.7	1.0	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	26	17	4	10	18	7	16	mg/kg	1	A-T-024s
Chromium _D ^{M#}	30	14	10	22	21	14	21	mg/kg	1	A-T-024s
Lead _D ^{M#}	35	23	7	12	30	10	24	mg/kg	1	A-T-024s
Mercury _D	<0.17	0.92	1.56	0.60	0.28	1.08	0.77	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	31	14	9	23	22	14	18	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Zinc _D ^{M#}	95	42	14	55	68	34	60	mg/kg	5	A-T-024s

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/22	19/10711/23	19/10711/24	19/10711/25	19/10711/26	19/10711/27	19/10711/28	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP17	TP2	TP2	TP22	TP23	TP23	TP24			
Depth to Top	0.15	0.20	0.45	0.20	0.20	0.50	0.15			
Depth To Bottom										
Date Sampled	30-Oct-19	29-Oct-19	29-Oct-19	05-Nov-19	04-Nov-19	04-Nov-19	31-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Solid	Soil			
Sample Matrix Code	4AE	5AE	8	5AE	6AE	7	4AE			
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? ^D	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045
OCP+OPP Combined Pest Suite (incl. Atrazine and Simazine)										
Dichlobenil _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Tecnazene _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Trifluralin _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
alpha-Hexachlorocyclohexane (HCH) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Hexachlorobenzene (HCB) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Simazine _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Atrazine _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
beta-Hexachlorocyclohexane (HCH) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Quintozone (PCNB) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
gamma-Hexachlorocyclohexane (HCH) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Chlorothalonil _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
delta-Hexachlorocyclohexane (HCH) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Triallate _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Heptachlor _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Aldrin _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Triadimefon _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Telodrin _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Isodrin _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Pendimethalin _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Heptachlor epoxide _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
trans-Chlordane (Gamma) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
o,p-DDE (2,4) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Endosulphan I (Alpha) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
cis-Chlordane (Alpha) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
p,p-DDE (4,4) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Dieldrin _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
o,p-DDD (2,4) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/22	19/10711/23	19/10711/24	19/10711/25	19/10711/26	19/10711/27	19/10711/28	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP17	TP2	TP2	TP22	TP23	TP23	TP24			
Depth to Top	0.15	0.20	0.45	0.20	0.20	0.50	0.15			
Depth To Bottom										
Date Sampled	30-Oct-19	29-Oct-19	29-Oct-19	05-Nov-19	04-Nov-19	04-Nov-19	31-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Solid	Soil			
Sample Matrix Code	4AE	5AE	8	5AE	6AE	7	4AE			
Endrin _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Endosulphan II (Beta) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
p,p-DDD (4,4) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
o,p-DDT (2,4) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Endrin Aldehyde _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Endrin Ketone _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Endosulphan Sulphate _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
p,p-DDT (4,4) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
o,p-Methoxychlor _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
p,p-Methoxychlor _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Permethrin I (cis) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Permethrin II (trans) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Dichlorvos _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Mevinphos _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Demeton-S _A	<0.50	-	-	<0.50	-	-	-	mg/kg	0.5	A-T-056
Demeton-O _A	<0.50	-	-	<0.50	-	-	-	mg/kg	0.5	A-T-056
Phorate _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Dimethoate _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Propetamphos _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Diazinon (Dimpylate) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Disulfoton _A	<0.10	-	-	<0.10	-	-	-	mg/kg	0.1	A-T-056
Etrimphos _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Chlorpyrifos-methyl _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Parathion (Ethyl Parathion) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Methyl Parathion _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Pirimiphos-methyl _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Fenitrothion _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Fensulphothion _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Fenthion _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Malathion _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Chlorfenvinphos _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Chlorpyrifos _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Trichloronate _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Prothiofos (Tokuthion) _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/22	19/10711/23	19/10711/24	19/10711/25	19/10711/26	19/10711/27	19/10711/28	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP17	TP2	TP2	TP22	TP23	TP23	TP24			
Depth to Top	0.15	0.20	0.45	0.20	0.20	0.50	0.15			
Depth To Bottom										
Date Sampled	30-Oct-19	29-Oct-19	29-Oct-19	05-Nov-19	04-Nov-19	04-Nov-19	31-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Solid	Soil			
Sample Matrix Code	4AE	5AE	8	5AE	6AE	7	4AE			
Ethion _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Triazophos _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Sulprofos _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Carbophenothion _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Phosalone _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Azinphos-methyl _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Azinphos-ethyl _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056
Coumaphos _A	<0.01	-	-	<0.01	-	-	-	mg/kg	0.01	A-T-056

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/22	19/10711/23	19/10711/24	19/10711/25	19/10711/26	19/10711/27	19/10711/28	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP17	TP2	TP2	TP22	TP23	TP23	TP24			
Depth to Top	0.15	0.20	0.45	0.20	0.20	0.50	0.15			
Depth To Bottom										
Date Sampled	30-Oct-19	29-Oct-19	29-Oct-19	05-Nov-19	04-Nov-19	04-Nov-19	31-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Solid	Soil			
Sample Matrix Code	4AE	5AE	8	5AE	6AE	7	4AE			
PAH-16MS										
Acenaphthene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	0.07	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.08	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	0.11	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	0.17	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	0.07	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	0.15	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Leachate Prep BS EN 12457-1 (2:1) (1 no) _A	-	*	-	-	-	-	*			A-T-001
pH (leachable) _A [#]	-	7.92	-	-	-	-	7.88	pH	0.01	A-T-031w
Alkalinity (total) (leachable) Colorimetry _A	-	88	-	-	-	-	77	mg/l Ca CO ₃	20	A-T-038w
Arsenic (leachable) _A [#]	-	<1	-	-	-	-	<1	µg/l	1	A-T-025w
Cadmium (leachable) _A [#]	-	<1	-	-	-	-	<1	µg/l	1	A-T-025w
Copper (leachable) _A [#]	-	5	-	-	-	-	6	µg/l	1	A-T-025w
Chromium (leachable) _A [#]	-	<1	-	-	-	-	<1	µg/l	1	A-T-025w
Lead (leachable) _A [#]	-	<1	-	-	-	-	1	µg/l	1	A-T-025w
Mercury (leachable) _A [#]	-	<0.1	-	-	-	-	<0.1	µg/l	0.1	A-T-025w
Nickel (leachable) _A [#]	-	<1	-	-	-	-	1	µg/l	1	A-T-025w
Selenium (leachable) _A [#]	-	<1	-	-	-	-	<1	µg/l	1	A-T-025w
Zinc (leachable) _A [#]	-	4	-	-	-	-	5	µg/l	1	A-T-025w
Total PAH-16MS _A ^{M#}	0.79	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	mg/kg	0.01	A-T-019s

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/22	19/10711/23	19/10711/24	19/10711/25	19/10711/26	19/10711/27	19/10711/28	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP17	TP2	TP2	TP22	TP23	TP23	TP24			
Depth to Top	0.15	0.20	0.45	0.20	0.20	0.50	0.15			
Depth To Bottom										
Date Sampled	30-Oct-19	29-Oct-19	29-Oct-19	05-Nov-19	04-Nov-19	04-Nov-19	31-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Solid	Soil			
Sample Matrix Code	4AE	5AE	8	5AE	6AE	7	4AE			
TPH CWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	<1	<1	<1	2	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C21-C35 _A	9	7	<1	7	5	<1	5	mg/kg	1	A-T-055s
Total Aliphatics _A	9	7	<1	9	5	<1	5	mg/kg	1	A-T-055s
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	1	<1	<1	1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C10-C12 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16 _A	2	1	<1	1	1	<1	1	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	4	1	<1	1	1	<1	1	mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	28	16	1	17	13	<1	13	mg/kg	1	A-T-055s
Total Aromatics _A	36	18	1	21	16	<1	15	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35) _A	45	25	1	30	20	<1	20	mg/kg	1	A-T-055s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/29	19/10711/30	19/10711/31	19/10711/32	19/10711/33	19/10711/34	19/10711/35	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP28	TP30	TP5	TP6	TP6	TP8	TP8			
Depth to Top	0.20	0.20	0.15	0.20	0.50	0.15	0.40			
Depth To Bottom										
Date Sampled	05-Nov-19	04-Nov-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	6AE	5AE	4ABE	4AE	8	4ABE	5AE			
% Stones >10mm _A	<0.1	<0.1	<0.1	3.9	<0.1	1.7	4.1	% w/w	0.1	A-T-044
pH _D ^{M#}	7.89	8.01	8.18	8.11	8.31	8.10	8.17	pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	-	<0.01	<0.01	-	-	<0.01	-	g/l	0.01	A-T-026s
Organic matter _D ^{M#}	6.3	3.6	2.6	3.4	1.4	3.3	2.9	% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	11	15	4	4	<1	7	13	mg/kg	1	A-T-024s
Cadmium _D ^{M#}	1.5	1.4	0.7	0.7	<0.5	0.9	0.8	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	25	20	14	14	8	22	17	mg/kg	1	A-T-024s
Chromium _D ^{M#}	34	29	13	12	9	18	14	mg/kg	1	A-T-024s
Lead _D ^{M#}	29	33	21	21	8	29	20	mg/kg	1	A-T-024s
Mercury _D	<0.17	0.30	1.17	1.09	1.29	0.73	0.88	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	33	29	14	12	12	18	18	mg/kg	1	A-T-024s
Selenium _D ^{M#}	1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Zinc _D ^{M#}	92	80	41	37	24	52	39	mg/kg	5	A-T-024s

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/29	19/10711/30	19/10711/31	19/10711/32	19/10711/33	19/10711/34	19/10711/35	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP28	TP30	TP5	TP6	TP6	TP8	TP8			
Depth to Top	0.20	0.20	0.15	0.20	0.50	0.15	0.40			
Depth To Bottom										
Date Sampled	05-Nov-19	04-Nov-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	6AE	5AE	4ABE	4AE	8	4ABE	5AE			
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? ^D	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045
OCP+OPP Combined Pest Suite (incl. Atrazine and Simazine)										
Dichlobenil _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Tecnazene _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Trifluralin _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
alpha-Hexachlorocyclohexane (HCH) _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Hexachlorobenzene (HCB) _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Simazine _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Atrazine _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
beta-Hexachlorocyclohexane (HCH) _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Quintozone (PCNB) _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
gamma-Hexachlorocyclohexane (HCH) _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Chlorothalonil _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
delta-Hexachlorocyclohexane (HCH) _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Triallate _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Heptachlor _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Aldrin _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Triadimefon _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Telodrin _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Isodrin _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Pendimethalin _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Heptachlor epoxide _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
trans-Chlordane (Gamma) _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
o,p-DDE (2,4) _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Endosulphan I (Alpha) _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
cis-Chlordane (Alpha) _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
p,p-DDE (4,4) _A	-	<0.01	<0.01	-	-	0.02	-	mg/kg	0.01	A-T-056
Dieldrin _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
o,p-DDD (2,4) _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/29	19/10711/30	19/10711/31	19/10711/32	19/10711/33	19/10711/34	19/10711/35	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP28	TP30	TP5	TP6	TP6	TP8	TP8			
Depth to Top	0.20	0.20	0.15	0.20	0.50	0.15	0.40			
Depth To Bottom										
Date Sampled	05-Nov-19	04-Nov-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	6AE	5AE	4ABE	4AE	8	4ABE	5AE			
Endrin _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Endosulphan II (Beta) _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
p,p-DDD (4,4) _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
o,p-DDT (2,4) _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Endrin Aldehyde _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Endrin Ketone _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Endosulphan Sulphate _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
p,p-DDT (4,4) _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
o,p-Methoxychlor _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
p,p-Methoxychlor _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Permethrin I (cis) _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Permethrin II (trans) _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Dichlorvos _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Mevinphos _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Demeton-S _A	-	<0.50	<0.50	-	-	<0.50	-	mg/kg	0.5	A-T-056
Demeton-O _A	-	<0.50	<0.50	-	-	<0.50	-	mg/kg	0.5	A-T-056
Phorate _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Dimethoate _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Propetamphos _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Diazinon (Dimpylate) _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Disulfoton _A	-	<0.10	<0.10	-	-	<0.10	-	mg/kg	0.1	A-T-056
Etrimphos _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Chlorpyrifos-methyl _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Parathion (Ethyl Parathion) _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Methyl Parathion _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Pirimiphos-methyl _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Fenitrothion _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Fensulphothion _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Fenthion _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Malathion _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Chlorfenvinphos _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Chlorpyrifos _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Trichloronate _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Prothiofos (Tokuthion) _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/29	19/10711/30	19/10711/31	19/10711/32	19/10711/33	19/10711/34	19/10711/35	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP28	TP30	TP5	TP6	TP6	TP8	TP8			
Depth to Top	0.20	0.20	0.15	0.20	0.50	0.15	0.40			
Depth To Bottom										
Date Sampled	05-Nov-19	04-Nov-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	6AE	5AE	4ABE	4AE	8	4ABE	5AE			
Ethion _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Triazophos _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Sulprofos _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Carbophenothion _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Phosalone _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Azinphos-methyl _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Azinphos-ethyl _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056
Coumaphos _A	-	<0.01	<0.01	-	-	<0.01	-	mg/kg	0.01	A-T-056

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/29	19/10711/30	19/10711/31	19/10711/32	19/10711/33	19/10711/34	19/10711/35	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP28	TP30	TP5	TP6	TP6	TP8	TP8			
Depth to Top	0.20	0.20	0.15	0.20	0.50	0.15	0.40			
Depth To Bottom										
Date Sampled	05-Nov-19	04-Nov-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	6AE	5AE	4ABE	4AE	8	4ABE	5AE			
PAH-16MS										
Acenaphthene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	<0.04	<0.04	0.05	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	<0.04	<0.04	0.07	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	<0.05	0.07	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	<0.03	0.04	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Leachate Prep BS EN 12457-1 (2:1) (1 no) _A	-	-	-	*	-	*	-			A-T-001
pH (leachable) _A [#]	-	-	-	7.88	-	7.28	-	pH	0.01	A-T-031w
Alkalinity (total) (leachable) Colorimetry _A	-	-	-	87	-	99	-	mg/l Ca CO ₃	20	A-T-038w
Arsenic (leachable) _A [#]	-	-	-	<1	-	1	-	µg/l	1	A-T-025w
Cadmium (leachable) _A [#]	-	-	-	<1	-	<1	-	µg/l	1	A-T-025w
Copper (leachable) _A [#]	-	-	-	6	-	7	-	µg/l	1	A-T-025w
Chromium (leachable) _A [#]	-	-	-	<1	-	<1	-	µg/l	1	A-T-025w
Lead (leachable) _A [#]	-	-	-	<1	-	1	-	µg/l	1	A-T-025w
Mercury (leachable) _A [#]	-	-	-	<0.1	-	<0.1	-	µg/l	0.1	A-T-025w
Nickel (leachable) _A [#]	-	-	-	2	-	2	-	µg/l	1	A-T-025w
Selenium (leachable) _A [#]	-	-	-	<1	-	<1	-	µg/l	1	A-T-025w
Zinc (leachable) _A [#]	-	-	-	7	-	5	-	µg/l	1	A-T-025w
Total PAH-16MS _A ^{M#}	<0.08	<0.08	0.23	<0.08	<0.08	<0.08	<0.08	mg/kg	0.01	A-T-019s

Envirolab Job Number: 19/10711

Client Project Name: Not specified

Client Project Ref: 340110

Lab Sample ID	19/10711/29	19/10711/30	19/10711/31	19/10711/32	19/10711/33	19/10711/34	19/10711/35	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP28	TP30	TP5	TP6	TP6	TP8	TP8			
Depth to Top	0.20	0.20	0.15	0.20	0.50	0.15	0.40			
Depth To Bottom										
Date Sampled	05-Nov-19	04-Nov-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19	30-Oct-19			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	6AE	5AE	4ABE	4AE	8	4ABE	5AE			
TPH CWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C21-C35 _A	5	5	2	5	<1	9	2	mg/kg	1	A-T-055s
Total Aliphatics _A	5	5	2	5	<1	9	2	mg/kg	1	A-T-055s
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	<1	1	<1	1	<1	1	<1	mg/kg	1	A-T-055s
Aro >C10-C12 _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16 _A	1	1	<1	<1	<1	1	<1	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	1	1	<1	1	<1	1	<1	mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	13	16	6	12	1	21	5	mg/kg	1	A-T-055s
Total Aromatics _A	15	21	6	14	1	26	5	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35) _A	20	25	8	19	1	35	6	mg/kg	1	A-T-055s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

REPORT NOTES

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Analytical results reflect the quality of the sample at the time of analysis only.

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The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Please contact us if you need any further information.

APPENDIX J

LABORATORY CERTIFICATES FOR

GEOTECHNICAL ANALYSIS

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 19/11669
Issue Number: 1

Date: 13 December, 2019

Client: Ian Farmer Associates (Newcastle)
Unit 4, Faraday Close
Pattinson North Industrial Estate
Washington
Tyne and Wear
NE38 8QJ

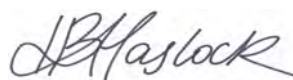
Project Manager: Paul Cathcart; washington@ianfarmer.co.uk
Project Name: Highover Farm, Hitchin
Project Ref: 2280064
Order No: P7520540
Date Samples Received: 09/12/19
Date Instructions Received: 09/12/19
Date Analysis Completed: 13/12/19

Prepared by:



Richard Wong
Client Manager

Approved by:



Iain Haslock
Analytical Consultant

Envirolab Job Number: 19/11669

Client Project Name: Highover Farm, Hitchin

Client Project Ref: 2280064

Lab Sample ID	19/11669/1	19/11669/2	19/11669/3	19/11669/4	19/11669/5	19/11669/6	19/11669/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SA17	SA17	SA18	SA8	TP02	TP08	TP14			
Depth to Top	1.20	2.20	1.80	1.50	0.80	0.60	0.90			
Depth To Bottom										
Date Sampled	04-Nov-19	04-Nov-19	04-Nov-19	30-Oct-19	29-Oct-19	31-Oct-19	31-Oct-19			
Sample Type	Soil - D	Soil - D	Solid	Solid	Solid	Solid	Soil - D			
Sample Matrix Code	5	5	7	7	7	7	5			
% Stones >10mm _A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	0.1	A-T-044
pH BRE _p ^{M#}	8.34	8.27	8.98	8.83	8.63	8.55	8.70	pH	0.01	A-T-031s
Sulphate BRE (water sol 2:1) _p ^{M#}	10	18	<10	<10	<10	<10	<10	mg/l	10	A-T-026s

Envirolab Job Number: 19/11669

Client Project Name: Highover Farm, Hitchin

Client Project Ref: 2280064

Lab Sample ID	19/11669/8	19/11669/9	19/11669/10	19/11669/11	19/11669/12	19/11669/13	19/11669/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP17	TP17	TP20	TP23	TP25	TP26	TP26			
Depth to Top	0.50	2.00	0.90	1.00	1.50	0.90	1.90			
Depth To Bottom										
Date Sampled	30-Oct-19	30-Oct-19	04-Nov-19	09-Nov-19	31-Oct-19	05-Nov-19	05-Nov-19			
Sample Type	Soil - D	Solid	Soil - D	Soil - D	Solid	Soil - D	Soil - D			
Sample Matrix Code	3	7	3	5A	7	5A	5A			
% Stones >10mm _A	<0.1	<0.1	<0.1	<0.1	<0.1	2.8	3.2	% w/w	0.1	A-T-044
pH BRE _p ^{M#}	8.08	8.74	8.16	8.47	9.00	8.34	8.32	pH	0.01	A-T-031s
Sulphate BRE (water sol 2:1) _p ^{M#}	<10	<10	<10	<10	15	<10	<10	mg/l	10	A-T-026s

Envirolab Job Number: 19/11669

Client Project Name: Highover Farm, Hitchin

Client Project Ref: 2280064

Lab Sample ID	19/11669/15	19/11669/16	19/11669/17	19/11669/18	19/11669/19	19/11669/20		Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP28	TP29	TP30	TP30	WS14	WS23				
Depth to Top	1.10	0.45	0.70	2.10	0.60	4.70				
Depth To Bottom										
Date Sampled	05-Nov-19	31-Oct-19	02-Nov-19	04-Nov-19						
Sample Type	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D	Soil - D				
Sample Matrix Code	3A	5	3	5A	5	3A				
% Stones >10mm _A	<0.1	<0.1	<0.1	0.8	<0.1	<0.1		% w/w	0.1	A-T-044
pH BRE _D ^{M#}	8.32	8.34	8.28	8.31	8.34	7.85		pH	0.01	A-T-031s
Sulphate BRE (water sol 2:1) _D ^{M#}	<10	<10	<10	22	26	406		mg/l	10	A-T-026s

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Please contact us if you need any further information.

F.A.O.

Final Test Report - 2280064 / 2

Site: Highover Farm, Hitchin

Job Number: 2280064

Originating Client: RSK

Originating Reference: 340110

Date Sampled: Not Given

Date Scheduled: 20/11/2019

Date Testing Started: 09/12/2019

Date Testing Finished: 19/12/2019

Previous Reports		Amendments	Date Issued
1	Interim		18/12/2019

Amendments: 3x SMC results added

Authorised By:



Tim Robinson
Quality Technician

Report Issue Date: 19/12/2019

Site: Highover Farm, Hitchin

Job Number: 2280064

Client: RSK

Page: 2

**Determination of Water Content, Liquid Limit and Plastic Limit
and Derivation of Plasticity and Liquidity Index**

Borehole / Trial Pit	Depth (m)	Sample	Natural / Sieved	Natural Water Content %	Sample Passing 425 µm Sieve		Liquid Limit %	Plastic Limit %	Plasticity Index %	Liquidity Index	Class	Description / Remarks
					Percentage %	Water Content %						
SA16	1.00	D	Natural	20	100	20.0	33	20	13	0.00	CL	Brown slightly gravelly CLAY
SA16	2.50	D	Natural	16	67	21.0	37	20	17	0.08	CI	Brown gravelly, silty CLAY
SA17	1.20	D	Natural	17	98	17.0	30	20	10	-0.27	CL	Brown slightly chalky, slightly gravelly CLAY
SA17	2.20	D	Natural	17	90	18.0	42	21	21	-0.13	CI	Brown slightly gravelly, silty CLAY
TP17	0.50	D	Natural	16	73	20.0	59	24	35	-0.11	CH	Brown slightly sandy, slightly gravelly, silty CLAY
TP17	0.90	D	Natural	17	100	17.0	35	17	18	0.00	CL/CI	Brown slightly sandy, slightly chalky, slightly gravelly, silty CLAY
TP20	0.90	D	Natural	21	94	22.0	43	19	24	0.13	CI	Brown slightly gravelly, silty CLAY
TP22	1.30	D	Natural	17	95	18.0	41	19	22	-0.06	CI	Brown slightly chalky, slightly gravelly CLAY
TP22	2.80	D	Natural	17	94	18.0	38	19	19	-0.07	CI	Brown slightly gravelly, silty CLAY
TP26	0.90	D	Natural	15	82	17.0	38	21	17	-0.22	CI	Brown gravelly, silty CLAY
TP26	1.90	D	Natural	16	80	19.0	42	21	21	-0.11	CI	Brown gravelly, silty CLAY
TP26	2.90	D	Natural	17	86	19.0	37	20	17	-0.06	CI	Brown slightly sandy, slightly gravelly CLAY
TP27	0.60	D	Natural	20	77	24.0	38	22	16	0.15	CI	Brown gravelly, silty CLAY
TP27	3.00	D	Natural	17	97	17.0	37	19	18	-0.09	CI	Brown slightly gravelly CLAY
TP28	1.10	D	Natural	14	100	14.0	41	23	18	-0.50	CI	Brown slightly gravelly CLAY
TP28	2.20	D	Natural	15	95	15.0	37	23	14	-0.54	CI	Brown slightly gravelly CLAY
TP29	0.45	D	Natural	22	100	22.0	40	24	16	-0.13	CI	Brown slightly sandy, slightly gravelly, silty CLAY
TP30	0.70	D	Natural	20	100	20.0	41	20	21	0.00	CI	Brown slightly gravelly, silty CLAY
TP30	1.10	D	Sieved	15	82	17.0	42	23	19	-0.31	CI	Brown gravelly, silty CLAY
TP30	2.10	D	Natural	16	94	17.0	43	20	23	-0.14	CI	Brown slightly sandy, slightly gravelly, silty CLAY
WS14	0.60	D	Natural	15	93	16.0	41	20	21	-0.20	CI	Brown slightly gravelly CLAY
WS14	1.50	D	Natural	14	96	14.0	38	20	18	-0.31	CI	Brown slightly sandy, slightly gravelly CLAY
WS20	1.50	D	Natural	16	94	17.0	41	22	19	-0.28	CI	Brown slightly chalky, slightly gravelly CLAY
WS23	4.70	D	Natural	15	23	49.0	40	18	22	1.42	CI	Brown chalky, gravelly CLAY

Method of Preparation: BS 1377 : Part 1 : 1990 : Clause 7 Preparation of disturbed samples for testing
BS 1377 : Part 1 : 2016 : Clause 8.4.3 Preparation of samples for plasticity tests
BS 1377 : Part 2 : 1990 : Clause 4.2 Preparation of samples for plastic limit tests

Method of Test: BS 1377 : Part 2 : 1990 : Clause 3.2 Determination of moisture content
BS 1377 : Part 2 : 1990 : Clause 4.3 or 4.4 Determination of the liquid limit
BS 1377 : Part 2 : 1990 : Clause 5.3 Determination of the plastic limit and plasticity index



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Saturation Moisture Content of Chalk

Borehole / Trial Pit	Depth (m)	Sample	Sample description	SMC %	Bulk Density %	Dry Density %	Remarks
SA1	1.70	D	Brown/White silty CHALK	18	2.14	1.83	
SA10	1.30	D	White slightly silty CHALK	19	2.13	1.79	
SA12	1.40	D	Brown/White silty CHALK	19	2.11	1.79	
SA13	1.90	D	White CHALK	13	2.24	1.99	
SA18	1.80	D	White CHALK	14	2.20	1.96	
SA19	1.20	D	White CHALK	15	2.18	1.92	
SA4	2.00	D	White slightly silty CHALK	29	1.94	1.52	
SA7	1.90	D	White CHALK	25	2.00	1.60	
SA8	1.50	D	White CHALK	14	2.21	1.96	
SA9	1.00	D	White/Brown silty CHALK	16	2.17	1.90	
SA9	1.70	D	White CHALK	14	2.23	1.97	
TP02	0.80	D	White CHALK	21	2.06	1.72	
TP04	1.60	D	White CHALK	29	1.94	1.51	
TP05	0.75	D	White slightly silty CHALK	28	1.97	1.55	
TP05	2.10	D	White CHALK	27	1.96	1.55	
TP06	1.20	D	White CHALK	22	2.09	1.69	
TP07	0.80	D	Brown chalky, gravelly CLAY	24	2.02	1.64	
TP07	1.60	D	White CHALK	26	1.96	1.58	
TP08	0.60	D	White/Brown silty CHALK	19	2.12	1.80	
TP08	1.70	D	White slightly silty CHALK	25	2.01	1.61	
TP08	2.90	D	White CHALK	25	2.02	1.62	
TP09	1.00	D	White slightly silty CHALK	25	2.00	1.62	
TP09	2.40	D	White CHALK	24	2.02	1.64	

Method of Preparation: BS 1377 : Part 2 : 1990 : Clause 3.3 Method for saturation moisture content of chalk

Method of Test: BS 1377 : Part 2 : 1990 : Clause 3.3 Method for saturation moisture content of chalk



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Saturation Moisture Content of Chalk

Borehole / Trial Pit	Depth (m)	Sample	Sample description	SMC %	Bulk Density %	Dry Density %	Remarks
TP10	2.00	D	White CHALK	13	2.24	2.01	
TP11	2.10	D	White CHALK	25	2.02	1.62	
TP12	1.90	D	White CHALK	27	1.95	1.57	
TP13	2.80	D	White/Brown silty CHALK	30	1.95	1.49	
TP14	2.10	D	White CHALK	21	2.06	1.73	
TP15	1.80	D	White CHALK	23	2.02	1.66	
TP16	1.60	D	White CHALK	24	2.03	1.63	
TP17	2.00	D	White CHALK	18	2.13	1.81	
TP19	1.30	D	Brown/White silty CHALK	20	2.07	1.75	
TP19	2.10	D	Brown/White silty, chalky CLAY	22	2.04	1.69	
TP21	2.70	D	White CHALK	21	2.09	1.73	
TP23	1.00	D	Brown slightly chalky, gravelly SAND	23	2.01	1.65	
TP23	2.80	D	White CHALK	16	2.17	1.89	
TP24	1.50	D	White CHALK	18	2.13	1.81	
TP24	2.80	D	White CHALK	19	2.10	1.80	
TP25	1.50	D	White CHALK	20	2.05	1.74	
TP29	1.80	D	White CHALK	21	2.01	1.73	

Method of Preparation: BS 1377 : Part 2 : 1990 : Clause 3.3 Method for saturation moisture content of chalk

Method of Test: BS 1377 : Part 2 : 1990 : Clause 3.3 Method for saturation moisture content of chalk

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Determination of Particle Density by Gas Jar Method

Borehole / Trial Pit	Depth (m)	Sample	Particle Density Mg/m3	Description / Remarks
TP20	1.60	D	2.72	Brown gravelly, sandy CLAY
TP27	1.10	D	2.70	Brown gravelly, clayey SAND
TP28	2.20	D	2.71	Brown slightly gravelly CLAY

Method of Test: BS 1377 : Part 2 : 1990 : Clause 8.2 Determination of particle density (Gas jar method)

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Point Load Strength Index Tests Summary of Results

Borehole No.	Depth m	Sample	Rock Type and Test condition	Test Type see ISRM		Failure Valid (Y/N)	Dimensions				Force P kN	Equivalent diameter, De mm	Point Load Strength Index		Remarks (including water content if measured)
				Type (D, A, I, B)	Direction (PL, PD or U)		Lne mm	W mm	Dps mm	Dps' mm			Is MPa	Is (50) MPa	
BH01a	6.9	C	White CHALK As received	A	PD	YES		105.4	57.3	50.3	0.7	87.7	0.09	0.12	
BH01a	11.83	C	White CHALK As received	A	PD	YES		166.6	72.3	67.3	1.4	123.8	0.09	0.14	
BH01a	13.25	C	White CHALK As received	A	PD	YES		106.9	72.5	64.5	1.6	99.4	0.16	0.22	
BH1	5.9	C	White CHALK As received	A	PD	YES		105.9	96.6	93.6	0.3	114.1	0.02	0.03	
BH1	13.3	C	White CHALK As received	A	PD	YES		105.8	95.1	89.1	1.1	113.1	0.08	0.12	
BH1	14.75	C	White CHALK As received	A	PD	YES		103.0	51.3	47.3	0.3	82.0	0.04	0.05	
BH1	19.75	C	White CHALK As received	A	PD	YES		104.9	54.8	51.8	1.2	85.6	0.16	0.20	
BH2	4.85	C	White CHALK As received	A	PD	YES		109.3	72.1	48.1	1.6	100.2	0.16	0.21	
BH2	6	C	White CHALK As received	A	PD	YES		106.0	94.5	90.5	0.3	112.9	0.03	0.04	
BH2	8.45	C	White CHALK As received	A	PD	YES		104.7	98.1	94.1	0.3	114.3	0.02	0.03	
BH2	12.55	C	White CHALK As received	A	PD	YES		106.3	120.6	118.6	0.1	127.7	0.01	0.01	
BH2	15.3	C	White CHALK As received	A	PD	YES		100.6	56.9	54.9	0.3	85.3	0.04	0.06	
BH2	18.7	C	White CHALK As received	A	PD	YES		105.4	60.3	50.3	0.9	89.9	0.11	0.14	
BH3	3.45	C	White CHALK As received	A	PD	YES		86.0	53.7	48.7	0.9	76.6	0.14	0.18	
BH3	5.3	C	White CHALK As received	A	PD	YES		86.4	88.4	84.4	0.6	98.6	0.06	0.08	
BH3	8.3	C	White CHALK As received	A	PD	YES		86.0	69.2	66.2	0.8	87.0	0.11	0.14	
BH3	11	C	White CHALK As received	A	PD	YES		85.5	81.7	74.7	1.7	94.3	0.19	0.26	

Test Type

D - Diametral, A - Axial, I - Irregular Lump, B - Block

Direction

PL - Parallel to planes of weakness

PD - Perpendicular to planes of weakness

U - Unknown or random

Dimensions

Dps - Distance between platens (platen separation)

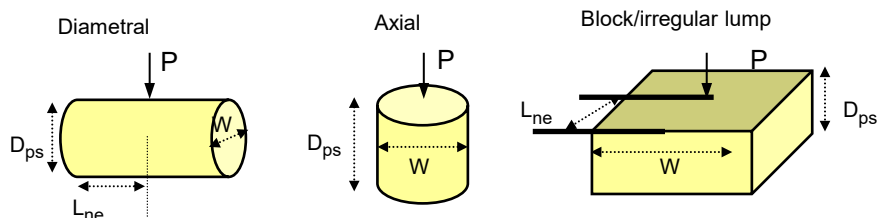
Dps' - at failure (see ISRM note 6)

Lne - Length from platens to nearest free end

W - Width of shortest dimension perpendicular to load, P

Size factor, $F = (De/50)0.45$ for all tests.

Detailed legend for test and dimensions, based on ISRM


Method of Preparation: ISRM 2007 Suggested method for point load strength index (pages 125 - 132)

Method of Test: ISRM 2007 Suggested method for point load strength index (pages 125 - 132)



Final Test Report - 2280064 / 2

Site: Highover Farm, Hitchin

Job Number: 2280064

Originating Client: RSK

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Samples will be retained for 28 days from date of issue of the final test report before being disposed of, unless we receive written instruction to the contrary.

Report Issue Date: 19/12/2019



APPENDIX K GENERIC ASSESSMENT CRITERIA FOR HUMAN HEALTH

Generic assessment criteria for human health: residential scenario with home-grown produce

Background

RSK's generic assessment criteria (GAC) were initially prepared following the publication by the Environment Agency (EA) of soil guideline value (SGV) and toxicological (TOX) reports, and associated publications in 2009⁽¹⁾. RSK GAC were updated following the publication of GAC by LQM/CIEH in 2009⁽²⁾. RSK GAC are periodically revised when updated information on toxicological, land use or receptor parameters is published.

Updates to the RSK GAC

In 2014, the publication of Category 4 Screening Levels (C4SL)^(3,4), as part of the Defra-funded research project SP1010, included modifications to certain exposure assumptions documented within EA Science Report SC050221/SR3 (herein after referred to as SR3)⁽⁵⁾ used in the generation of SGVs.

C4SL were published for six substances (cadmium, arsenic, benzene, benzo(a)pyrene, chromium VI and lead) for a sandy loam soil type with 6% soil organic matter, based on a low level of toxicological concern (LLTC; see Section 2.3 of research project report SP1010⁽³⁾). Where a C4SL has been published, the RSK GAC duplicates the C4SL published values using all input parameters within the SP1010 final project report⁽³⁾ and associated appendices⁽⁶⁾, and adopts them as GAC for these six substances.

For all other substances the C4SL exposure modifications, with the exception of the "top two" produce type approach taken in the C4SL, have been applied to the current RSK GAC. These include alterations to daily inhalation rates for residential and commercial scenarios, reducing soil adherence factors in children (age classes 1 to 12 only) for residential land use, reducing exposure frequency for dermal contact outdoors for residential land use, and updated produce type consumption rates (90th percentile) based on recent data from the National Diet and Nutrition Survey.

The RSK GAC have also been revised with updated toxicology published by LQM/CIEH in 2015⁽⁷⁾ or by the USEPA⁽¹⁴⁾, where a C4SL has not been published.

RSK GAC derivation for metals and organic compounds

Model selection

Soil assessment criteria (SAC) were calculated using the Contaminated Land Exposure Assessment (CLEA) tool v1.071, supporting EA guidance^(5,8,9) and revised exposure scenarios published for the C4SL⁽³⁾. The SAC are also termed GAC.

Conceptual model

In accordance with SR3⁽⁵⁾, the residential with home-grown produce scenario considers risks to a female child between the ages of 0 and 6 years old as the highest risk scenario. In accordance with Box 3.1 of SR3⁽⁵⁾, the pathways considered for production of the SAC in the residential with home-grown produce scenario are

- direct soil and dust ingestion

- consumption of home-grown produce
- consumption of soil attached to home-grown produce
- dermal contact with soil and indoor dust
- inhalation of indoor and outdoor dust and vapours.

Figure 1 is a conceptual model illustrating these linkages.

In line with guidance in the EA SGV report for cadmium⁽¹⁾, the RSK GAC for cadmium has been derived based on estimates representative of lifetime exposure. Although young children are generally more likely to have higher exposures to soil contaminants, the renal toxicity of cadmium, and the derivation of the TDI_{oral} and TDI_{inh} , are based on considerations of the kidney burden accumulated over 50 years or so. It is therefore reasonable to consider exposure not just in childhood but averaged over a longer period.

With respect to volatilisation, the CLEA model assumes a simple linear partitioning of a chemical in the soil between the sorbed, dissolved and vapour phase⁽⁹⁾. The upper boundaries of this partitioning are represented by the maximum aqueous solubility and pure saturated vapour concentration of the chemical. The CLEA model estimates saturated soil concentrations where these limits are reached⁽⁹⁾. The CLEA software uses a traffic light system to identify when individual and/or combined assessment criteria exceed the lower of either the aqueous- or vapour-based soil saturation limits. Model output cells are flagged red where the saturated soil concentration has been exceeded and the contribution of the indoor and outdoor vapour pathway to total exposure is greater than 10%. In this case, further consideration of the following is required⁽⁹⁾:

- Free phase contamination may be present.
- Exposure from the vapour pathways will be over-predicted by the model, as in reality the vapour phase concentration will not increase at concentrations above saturation limits
- Where the vapour pathway contribution is greater than 90%, it is unlikely the relevant health criteria value (HCV) will be exceeded at soil concentrations at least a factor of ten higher than the relevant HCV.

Where the vapour pathway is the predominant pathway (contributes greater than 90% of exposure) or the only exposure route considered and the cell is highlighted red (SAC exceeds saturation limit), the risk based on the assumed conceptual model is likely to be negligible as the vapour risk is assumed to be tolerable at maximum possible soil concentrations. In such circumstances, the vapour pathway exposure should be considered based on the presence of free phase or non-aqueous phase liquid sources and the measured concentrations of volatile organic compounds (VOC) in the vapour phase. Screening could be considered based on setting the SAC as the modelled soil saturation limits. However, as stated within the CLEA handbook⁽⁹⁾, this is likely to not be practical in many cases because of the very low saturation limits and, in any case, is highly conservative.

It should also be noted that for mixtures of compounds, free phase may be present where soil (or groundwater) concentrations are well below saturation limits for individual compounds.

Where the vapour pathway is only one of the exposure pathways considered, an additional approach can then be utilised as detailed within Section 4.12 of the CLEA model handbook⁽⁹⁾, which explains how to calculate an effective assessment criterion manually.

SR3⁽⁵⁾ states that, as a general rule of thumb, it is recognised that estimating vapour phase concentrations from dissolved and sorbed phase contamination by petroleum hydrocarbons are

at least a factor of ten higher than those likely to be measured on-site. RSK has therefore applied an empirical subsurface to indoor air correction factor of 10 into the CLEA model chemical database for all petroleum hydrocarbon fractions (including BTEX, trimethylbenzenes and the polycyclic aromatic hydrocarbons (PAH) naphthalene, acenaphthene and acenaphthylene) to reduce this conservatism.

Input selection

The most up-to-date published chemical and toxicological data was obtained from EA Report SC050021/SR7⁽¹⁰⁾, the EA TOX⁽¹⁾ reports, the C4SL SP1010 project report and associated appendices^(3,6), the 2015 LQM/CIEH report⁽⁷⁾ or the USEPA IRIS database⁽¹⁴⁾. Where a C4SL has been published, the RSK GAC have duplicated the C4SL published values using all input parameters within the SP1010 final project report⁽³⁾ and associated appendices⁽⁶⁾, and has adopted them as GAC for these six substances. Toxicological and specific chemical parameters for 1,2,4-trimethylbenzene, barium and methyl tertiary-butyl ether (MTBE) were obtained from the CL:AIRE Soil Generic Assessment Criteria report⁽¹¹⁾.

For TPH, aromatic hydrocarbons C₅–C₈ were not modelled, as this range comprises benzene (>EC5-EC7) and toluene (>EC7-EC8), which are modelled separately.

Physical parameters

For the residential with home-grown produce scenario, the CLEA default building is a small, two-storey terrace house with a concrete ground-bearing slab. The house is assumed to have a 100m² private garden consisting of lawn and flowerbeds, incorporating a 20m² plot for growing fruit and vegetables consumed by the residents. SR3⁽⁵⁾ notes this residential building type to be the most conservative in terms of potential for vapour intrusion. The building parameters used in the production of the RSK GACs are the default CLEA v1.06 inputs presented in Table 3.3 of SR3⁽³⁾, with a dust loading factor detailed in Section 9.3 of SR3⁽⁵⁾. The parameters for a sandy loam soil type were used in line with Table 4.4 of SR3⁽⁵⁾. This includes a value of 6% for the percentage of soil organic matter (SOM) within the soil. In RSK's experience, this is rather high for many sites. To avoid undertaking site-specific risk assessments for SOM, RSK has produced an additional set of GAC for SOM of 1% and 2.5% for all substances using the CLEA tool.

Summary of modifications to the default CLEA SR3⁽⁵⁾ input parameters for residential with home-grown produce land-use scenario

In summary, the RSK GAC were produced using the default input parameters for soil properties, the air dispersion model, building properties and the vapour model detailed in SR3⁽⁵⁾. Modifications to the default SR3⁽⁵⁾ exposure scenarios based on the C4SL exposure scenarios⁽³⁾ are presented in Tables 2 and 3 below.

The final selected GAC are presented by pathway in Table 4 and the combined GAC in Table 5.

Figure 1: Conceptual model for residential scenario with home-grown produce

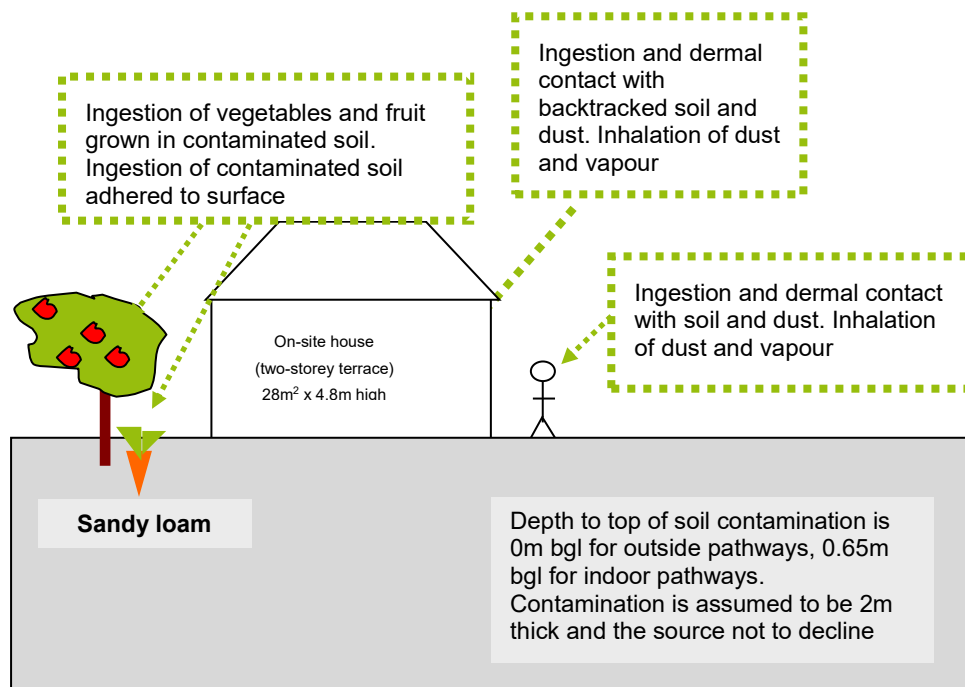


Table 1: Exposure assessment parameters for residential scenario with home-grown produce – inputs for CLEA model

Parameter	Value	Justification
Land use	Residential with homegrown produce	Chosen land use
Receptor	Female child age 1 to 6	Key generic assumption given in Box 3.1, SR3 ⁽⁵⁾
Building	Small terraced house	Key generic assumption given in Box 3.1, SR3. Small, two-storey terraced house chosen, as it is the most conservative residential building type in terms of protection from vapor intrusion (Section 3.4.6, SR3) ⁽⁵⁾
Soil type	Sandy Loam	Most common UK soil type (Section 4.3.1, from Table 3.1, SR3) ⁽⁵⁾
Start AC (age class)	1	Range of age classes corresponding to key generic assumption that the critical receptor is a young female child aged 0–6. From Box 3.1, SR3 ⁽⁵⁾
End AC (age class)	6	
SOM (%)	6	Representative of sandy loamy soil according to EA guidance note dated January 2009 entitled 'Changes We Have Made to the CLEA Framework Documents' ⁽¹³⁾
	1	To provide SAC for sites where SOM <6% as often observed by RSK
	2.5	
pH	7	Model default

Table 2: Residential with home-grown produce – modified home-grown produce data

Name	Consumption rate 90 th percentile (g FW kg ⁻¹ BW day ⁻¹) by age class						Dry weight conversion factor (g DW g ⁻¹ FW)	Home-grown fraction (average)	Home-grown fraction (high end)	Soil loading factor (g g ⁻¹ DW)	Preparation correction factor
	1	2	3	4	5	6					
Green vegetables	7.12	5.87	5.87	5.87	4.53	4.53	0.096	0.05	0.33	1.00E-03	2.00E-01
Root vegetables	10.7	2.83	2.83	2.83	2.14	2.14	0.103	0.06	0.4	1.00E-03	1.00E+00
Tuber vegetables	16	6.6	6.6	6.6	4.95	4.95	0.21	0.02	0.13	1.00E-03	1.00E+00
Herbaceous fruit	1.83	3.39	3.39	3.39	2.24	2.24	0.058	0.06	0.4	1.00E-03	6.00E-01
Shrub fruit	2.23	0.46	0.46	0.46	0.19	0.19	0.166	0.09	0.6	1.00E-03	6.00E-01
Tree fruit	3.82	10.3	10.3	10.3	5.16	5.16	0.157	0.04	0.27	1.00E-03	6.00E-01
Justification	Table 3.4, SP1010 ⁽³⁾						Table 6.3, SR3 ⁽⁵⁾	Table 4.19, SR3 ⁽⁵⁾		Table 6.3, SR3 ⁽⁵⁾	

Table 3: Residential with home-grown produce – modified use and receptor data

Parameter	Unit	Age class					
		1	2	3	4	5	6
EF (soil and dust ingestion)	day yr ⁻¹	180	365	365	365	365	365
EF (consumption of home-grown produce)	day yr ⁻¹	180	365	365	365	365	365
EF (skin contact, indoor)	day yr ⁻¹	180	365	365	365	365	365
EF (skin contact, outdoor)	day yr ⁻¹	170	170	170	170	170	170
EF (inhalation of dust and vapour, indoor)	day yr ⁻¹	365	365	365	365	365	365
EF (inhalation of dust and vapour, outdoor)	day yr ⁻¹	365	365	365	365	365	365
Justification		Table 3.5, SP1010 ⁽³⁾ ; Table 3.1, SR3 ⁽⁵⁾					
Soil to skin adherence factor (outdoor)	mg cm ⁻² day ⁻¹	0.1	0.1	0.1	0.1	0.1	0.1
Justification		Table 3.5, SP1010 ⁽³⁾					
Inhalation rate	m ³ day ⁻¹	5.4	8.0	8.9/f	10.1	10.1	10.1
Justification		Mean value USEPA, 2011 ⁽¹²⁾ ; Table 3.2, SP1010 ⁽³⁾					
Notes: For cadmium , the exposure assessment for a residential land use is based on estimates representative of lifetime exposure AC1-18. This is because the TDI _{oral} and TDI _{inh} are based on considerations of the kidney burden accumulated over 50 years. It is therefore reasonable to consider exposure not just in childhood but averaged over a longer period. See the Environment Agency Science Report SC05002/ TOX 3 ⁽¹⁾ , Science Report SC050021/Cadmium SGV ⁽¹⁾ and the project report SP1010 ⁽³⁾ for more information.							

References

1. Environment Agency (2009), 'Science Reports SC050021 - SGV and TOX reports for: benzene, toluene, ethylbenzene, xylene, mercury, selenium, nickel, arsenic, cadmium, phenol, dioxins, furans and dioxin-like PCBs'; 'Supplementary information for the derivation of SGV for: benzene, toluene, ethylbenzene, xylene, mercury, selenium, nickel, arsenic, cadmium, phenol, dioxins, furans and dioxin-like PCBs', and 'Contaminants in soil: updated collation of toxicological data and intake values for humans: benzene, toluene, ethylbenzene, xylene, mercury, selenium, nickel, arsenic, cadmium, phenol, dioxins, furans and dioxin-like PCBs'. Available at: <https://www.gov.uk/government/publications/contaminants-in-soil-updated-collation-of-toxicological-data-and-intake-values-for-humans> and <https://www.gov.uk/government/publications/land-contamination-soil-guideline-values-sgvs> (accessed 4 February 2015)
2. Nathanial, C. P., McCaffrey, C., Ashmore, M., Cheng, Y., Gillet, A. G., Ogden, R. C. and Scott, D. (2009), *LQM/CIEH Generic Assessment Criteria for Human Health Risk Assessment*, second edition (Nottingham: Land Quality Press).
3. Contaminated Land: Applications in Real Environment (CL:AIRE) (2014). 'Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination', Revision 2, DEFRA research project SP1010.
4. Department for Environment, Food and Rural Affairs (Defra) (2014), 'SP1010: Development of Category 4 Screening Levels for assessment of land affected by contamination – Policy Companion Document', Revision 2.
5. Environment Agency (2009), *Science Report – SC050021/SR3. Updated technical background to the CLEA model* (Bristol: Environment Agency).
6. Contaminated Land: Applications in Real Environment (CL:AIRE) (2014). 'Appendices C to H). DEFRA research project SP1010'.
7. Nathanial, C. P., McCaffrey, C., Gillet, A. G., Ogden, R. C. and Nathanial, J. F. (2015), *The LQM/CIEH S4ULs for Human Health Risk Assessment* (Nottingham: Land Quality Press).
8. Environment Agency (2009), *Human health toxicological assessment of contaminants in soil. Science Report – Final SC050021/SR2* (Bristol: Environment Agency).
9. Environment Agency (2009), *Science Report – SC050021/SR4 CLEA Software (version 1.05) Handbook* (Bristol: Environment Agency).
10. Environment Agency (2008), *Science Report SC050021/SR7. Compilation of Data for Priority Organic Pollutants for Derivation of Soil Guideline Values* (Bristol: Environment Agency).
11. CL:AIRE (2010), *Soil Generic Assessment Criteria for Human Health Risk Assessment* (London: CL:AIRE).
12. USEPA (2011), *Exposure factors handbook*, EPA/600/R-090/052F (Washington, DC: Office of Research and Development).
13. Environment Agency (2009), 'Changes made to the CLEA framework documents after the three-month evaluation period in 2008', released January 2009.
14. USEPA (2010). Hydrogen cyanide and cyanide salts. Integrated Risk Information Systems (IRIS) Chemical Assessment Summary. September 2010. <https://www.epa.gov/iris> (accessed 9 December 2015)

GENERIC ASSESSMENT CRITERIA FOR HUMAN HEALTH - RESIDENTIAL WITH HOME-GROWN PRODUCE



Table 4
Human Health Generic Assessment Criteria by Pathway for Residential With Home-Grown Produce Scenario

Compound	Notes	SAC Appropriate to Pathway SOM 1% (mg/kg)			Soil Saturation Limit (mg/kg)	SAC Appropriate to Pathway SOM 2.5% (mg/kg)			Soil Saturation Limit (mg/kg)	SAC Appropriate to Pathway SOM 6% (mg/kg)			Soil Saturation Limit (mg/kg)
		Oral	Inhalation	Combined		Oral	Inhalation	Combined		Oral	Inhalation	Combined	
Metals													
Arsenic	(a,b)	3.71E+01	5.26E+02	NR	NR	3.71E+01	5.26E+02	NR	NR	3.71E+01	5.26E+02	NR	NR
Barium	(b)	1.34E+03	NR	NR	NR	1.34E+03	NR	NR	NR	1.34E+03	NR	NR	NR
Beryllium		1.13E+02	1.72E+00	NR	NR	1.13E+02	1.72E+00	NR	NR	1.13E+02	1.72E+00	NR	NR
Boron		3.00E+02	5.20E+06	NR	NR	3.00E+02	5.20E+06	NR	NR	3.00E+02	5.20E+06	NR	NR
Cadmium	(a)	2.30E+01	4.88E+02	2.21E+01	NR	2.30E+01	4.88E+02	2.21E+01	NR	2.30E+01	4.88E+02	2.21E+01	NR
Chromium (III) - trivalent	(c)	1.84E+04	9.07E+02	NR	NR	1.84E+04	9.07E+02	NR	NR	1.84E+04	9.07E+02	NR	NR
Chromium (VI) - hexavalent	(a,d)	5.85E+01	2.06E+01	NR	NR	5.85E+01	2.06E+01	NR	NR	5.85E+01	2.06E+01	NR	NR
Copper		2.72E+03	1.41E+04	2.47E+03	NR	2.72E+03	1.41E+04	2.47E+03	NR	2.72E+03	1.41E+04	2.47E+03	NR
Lead	(a)	2.01E+02	NR	NR	NR	2.01E+02	NR	NR	NR	2.01E+02	NR	NR	NR
Elemental Mercury (Hg ⁰)	(d)	NR	2.35E-01	NR	4.31E+00	NR	5.60E-01	NR	1.07E+01	NR	1.22E+00	NR	2.58E+01
Inorganic Mercury (Hg ²⁺)		3.95E+01	3.63E+03	3.91E+01	NR	3.95E+01	3.63E+03	3.91E+01	NR	3.95E+01	3.63E+03	3.91E+01	NR
Methyl Mercury (Hg ⁴⁺)		1.26E+01	1.87E+01	7.52E+00	7.33E+01	1.26E+01	3.62E+01	9.34E+00	1.42E+02	1.26E+01	7.68E+01	1.08E+01	3.04E+02
Nickel	(d)	1.27E+02	1.81E+02	NR	NR	1.27E+02	1.81E+02	NR	NR	1.27E+02	1.81E+02	NR	NR
Selenium	(b)	2.58E+02	NR	NR	NR	2.58E+02	NR	NR	NR	2.58E+02	NR	NR	NR
Vanadium		4.13E+02	1.46E+03	NR	NR	4.13E+02	1.46E+03	NR	NR	4.13E+02	1.46E+03	NR	NR
Zinc	(b)	3.86E+03	3.63E+07	NR	NR	3.86E+03	3.63E+07	NR	NR	3.86E+03	3.63E+07	NR	NR
Cyanide (free)		1.37E+00	1.37E+04	1.37E+00	NR	1.37E+00	1.37E+04	1.37E+00	NR	1.37E+00	1.37E+04	1.37E+00	NR
Volatile Organic Compounds													
Benzene	(a)	2.62E-01	9.01E-01	2.03E-01	1.22E+03	5.39E-01	1.68E+00	4.08E-01	2.26E+03	1.16E+00	3.48E+00	8.72E-01	4.71E+03
Toluene		1.53E+02	9.08E+02	1.31E+02	8.69E+02	3.49E+02	2.00E+03	2.97E+02	1.92E+03	7.95E+02	4.55E+03	6.77E+02	4.36E+03
Ethylbenzene		1.10E+02	8.34E+01	4.74E+01	5.18E+02	2.61E+02	1.96E+02	1.12E+02	1.22E+03	6.00E+02	4.58E+02	2.60E+02	2.84E+03
Xylene - m		2.10E+02	8.25E+01	5.92E+01	6.25E+02	5.01E+02	1.95E+02	1.40E+02	1.47E+03	1.15E+03	4.56E+02	3.27E+02	3.46E+03
Xylene - o		1.92E+02	8.87E+01	6.07E+01	4.78E+02	4.56E+02	2.08E+02	1.43E+02	1.12E+03	1.05E+03	4.86E+02	3.32E+02	2.62E+03
Xylene - p		1.98E+02	7.93E+01	5.66E+01	5.76E+02	4.70E+02	1.86E+02	1.33E+02	1.35E+03	1.08E+03	4.36E+02	3.10E+02	3.17E+03
Total xylene		1.92E+02	7.93E+01	5.66E+01	6.25E+02	4.56E+02	1.86E+02	1.33E+02	1.47E+03	1.05E+03	4.36E+02	3.10E+02	3.46E+03
Methyl tertiary-Butyl ether (MTBE)		1.54E+02	1.04E+02	6.22E+01	2.04E+04	2.97E+02	1.69E+02	1.08E+02	3.31E+04	6.03E+02	3.21E+02	2.10E+02	6.27E+04
1,1,1,2-Tetrachloroethane		5.39E+00	1.54E+00	1.20E+00	2.60E+03	1.27E+01	3.56E+00	2.78E+00	6.02E+03	2.92E+01	8.29E+00	6.46E+00	1.40E+04
1,1,2,2-Tetrachloroethane		2.81E+00	3.92E+00	1.64E+00	2.67E+03	6.10E+00	8.04E+00	3.47E+00	5.46E+03	1.36E+01	1.76E+01	7.67E+00	1.20E+04
1,1,1-Trichloroethane		3.33E+02	9.01E+00	8.77E+00	1.43E+03	7.26E+02	1.84E+01	1.80E+01	2.92E+03	1.62E+03	4.04E+01	3.94E+01	6.39E+03
1,1,2 Trichloroethane		1.95E+00	1.25E+00	7.62E-01	4.03E+03	4.21E+00	2.55E+00	1.59E+00	8.21E+03	9.35E+00	5.59E+00	3.50E+00	1.80E+04
1,1-Dichloroethene		1.93E+01	3.29E-01	3.23E-01	2.23E+03	3.85E+01	5.82E-01	5.74E-01	3.94E+03	8.15E+01	1.17E+00	1.16E+00	7.94E+03
1,2-Dichloroethane		3.17E-02	9.20E-03	7.13E-03	3.41E+03	5.73E-02	1.33E-02	1.08E-02	4.91E+03	1.09E-01	2.28E-02	1.88E-02	8.43E+03
1,2,4-Trimethylbenzene		NR	1.76E+00	NR	4.74E+02	NR	4.26E+00	NR	1.16E+03	NR	9.72E+00	NR	2.76E+03
1,3,5-Trimethylbenzene	(e)	NR	NR	NR	2.30E+02	NR	NR	NR	5.52E+02	NR	NR	NR	1.30E+03
1,2-Dichloropropane		4.28E+00	3.40E-02	3.37E-02	1.19E+03	8.44E+00	6.00E-02	5.96E-02	2.11E+03	1.77E+01	1.21E-01	1.20E-01	4.24E+03
Carbon Tetrachloride (tetrachloromethane)		3.10E+00	2.58E-02	2.57E-02	1.52E+03	7.11E+00	5.65E-02	5.62E-02	3.32E+03	1.62E+01	1.28E-01	1.27E-01	7.54E+03
Chloroethane		NR	1.17E+01	NR	2.61E+03	NR	1.59E+01	NR	3.54E+03	NR	2.57E+01	NR	5.71E+03
Chloromethane		NR	1.17E-02	NR	1.91E+03	NR	1.38E-02	NR	2.24E+03	NR	1.85E-02	NR	2.99E+03
Cis 1,2 Dichloroethene		1.56E-01	NR	NR	3.94E+03	2.66E-01	NR	NR	6.61E+03	5.18E-01	NR	NR	1.29E+04
Dichloromethane		7.04E-01	3.05E+00	6.24E-01	7.27E+03	1.27E+00	4.06E+00	1.08E+00	9.68E+03	2.33E+00	6.42E+00	1.92E+00	1.53E+04
Tetrachloroethene		4.49E+00	1.79E-01	1.76E-01	4.24E+02	1.04E+01	4.02E-01	3.94E-01	9.51E+02	2.38E+01	9.21E-01	9.04E-01	2.18E+03
Trans 1,2 Dichloroethene		6.45E+00	2.76E-01	NR	3.42E+03	1.29E+01	4.99E-01	NR	6.17E+03	2.74E+01	1.02E+00	NR	1.26E+04
Trichloroethene		2.83E-01	1.72E-02	1.62E-02	1.54E+03	6.26E-01	3.59E-02	3.40E-02	3.22E+03	1.41E+00	7.98E-02	7.55E-02	7.14E+03
Vinyl Chloride (chloroethene)		3.82E-03	7.73E-04	6.43E-04	1.36E+03	6.87E-03	1.00E-03	8.73E-04	1.76E+03	1.25E-02	1.53E-03	1.36E-03	2.69E+03
Semi-Volatile Organic Compounds													
2-Chloronaphthalene		2.76E+02	5.39E+00	5.29E+00	1.14E+02	6.59E+02	1.33E+01	1.30E+01	2.80E+02	1.45E+03	3.17E+01	3.10E+01	6.69E+02
Acenaphthene		2.27E+02	4.86E+04	2.26E+02	5.70E+01	5.41E+02	1.18E+05	5.38E+02	1.41E+02	1.18E+03	2.68E+05	1.17E+03	3.36E+02
Acenaphthylene		1.85E+02	4.59E+04	1.84E+02	8.61E+01	4.42E+02	1.11E+05	4.40E+02	2.12E+02	9.78E+02	2.53E+05	9.74E+02	5.06E+02
Anthracene		2.43E+03	1.53E+05	2.39E+03	1.17E+00	5.53E+03	3.77E+05	5.45E+03	2.91E+00	1.10E+04	8.76E+05	1.09E+04	6.96E+00

GENERIC ASSESSMENT CRITERIA FOR HUMAN HEALTH - RESIDENTIAL WITH HOME-GROWN PRODUCE



Table 4

Human Health Generic Assessment Criteria by Pathway for Residential With Home-Grown Produce Scenario

Compound	Notes	SAC Appropriate to Pathway SOM 1% (mg/kg)				Soil Saturation Limit (mg/kg)	SAC Appropriate to Pathway SOM 2.5% (mg/kg)				Soil Saturation Limit (mg/kg)	SAC Appropriate to Pathway SOM 6% (mg/kg)				Soil Saturation Limit (mg/kg)
		Oral	Inhalation	Combined			Oral	Inhalation	Combined			Oral	Inhalation	Combined		
Benzo(a)anthracene		1.01E+01	2.47E+01	7.18E+00	1.71E+00	1.42E+01	4.37E+01	1.07E+01	4.28E+00	1.69E+01	6.26E+01	1.33E+01		1.03E+01		
Benzo(a)pyrene	(a)	4.96E+00	3.51E+01	NR	9.11E-01	4.96E+00	3.77E+01	NR	2.28E+00	4.96E+00	3.89E+01	NR		5.46E+00		
Benzo(b)fluoranthene		2.96E+00	1.93E+01	2.56E+00	1.22E+00	3.89E+00	2.13E+01	3.29E+00	3.04E+00	4.43E+00	2.22E+01	3.69E+00		7.29E+00		
Benzo(g,h,i)perylene		3.77E+02	1.87E+03	3.14E+02	1.54E-02	4.09E+02	1.94E+03	3.38E+02	3.85E-02	4.23E+02	1.97E+03	3.48E+02		9.23E-02		
Benzo(k)fluoranthene		8.92E+01	5.41E+02	7.66E+01	6.87E-01	1.10E+02	5.76E+02	9.22E+01	1.72E+00	1.21E+02	5.91E+02	1.00E+02		4.12E+00		
Chrysene		1.66E+01	1.19E+02	1.46E+01	4.40E-01	2.54E+01	1.49E+02	2.17E+01	1.10E+00	3.19E+01	1.66E+02	2.67E+01		2.64E+00		
Dibenzo(a,h)anthracene		2.90E-01	1.45E+00	2.41E-01	3.93E-03	3.43E-01	1.64E+00	2.84E-01	9.82E-03	3.69E-01	1.74E+00	3.04E-01		2.36E-02		
Fluoranthene		2.87E+02	3.83E+04	2.85E+02	1.89E+01	5.63E+02	8.87E+04	5.60E+02	4.73E+01	9.00E+02	1.83E+05	8.96E+02		1.13E+02		
Fluorene		1.77E+02	6.20E+03	1.72E+02	3.09E+01	4.19E+02	1.53E+04	4.07E+02	7.65E+01	8.98E+02	3.62E+04	8.77E+02		1.83E+02		
Hexachloroethane		2.68E-01	NR	NR	8.17E+00	6.57E-01	NR	NR	2.01E+01	1.55E+00	NR	NR		4.81E+01		
Indeno(1,2,3-cd)pyrene		3.09E+01	2.12E+02	2.70E+01	6.13E-02	4.22E+01	2.38E+02	3.59E+01	1.53E-01	4.92E+01	2.50E+02	4.11E+01		3.68E-01		
Naphthalene		2.78E+01	2.33E+01	1.27E+01	7.64E+01	6.66E+01	5.58E+01	3.04E+01	1.83E+02	1.53E+02	1.31E+02	7.06E+01		4.32E+02		
Phenanthrene		9.85E+01	7.17E+03	9.72E+01	3.60E+01	2.24E+02	1.76E+04	2.22E+02	8.96E+01	4.48E+02	4.07E+04	4.43E+02		2.14E+02		
Pyrene		6.25E+02	8.79E+04	6.20E+02	2.20E+00	1.25E+03	2.04E+05	1.24E+03	5.49E+00	2.05E+03	4.23E+05	2.04E+03		1.32E+01		
Phenol		1.60E+02	4.58E+02	1.20E+02	2.42E+04	2.96E+02	6.95E+02	2.09E+02	3.81E+04	5.86E+02	1.19E+03	3.93E+02		7.03E+04		
Total Petroleum Hydrocarbons																
Aliphatic hydrocarbons EC ₅ -EC ₆		4.99E+03	4.24E+01	4.23E+01	3.04E+02	1.13E+04	7.79E+01	7.78E+01	5.58E+02	2.50E+04	1.61E+02	1.60E+02		1.15E+03		
Aliphatic hydrocarbons >EC ₅ -EC ₆		1.49E+04	1.04E+02	1.03E+02	1.44E+02	3.43E+04	2.31E+02	2.31E+02	3.22E+02	7.11E+04	5.29E+02	5.28E+02		7.36E+02		
Aliphatic hydrocarbons >EC ₅ -EC ₁₀		1.61E+03	2.68E+01	2.67E+01	7.77E+01	2.91E+03	6.55E+01	6.51E+01	1.90E+02	4.26E+03	1.56E+02	1.54E+02		4.51E+02		
Aliphatic hydrocarbons >EC ₁₀ -EC ₁₂		4.57E+03	1.33E+02	1.32E+02	4.75E+01	5.51E+03	3.31E+02	3.26E+02	1.18E+02	5.98E+03	7.93E+02	7.65E+02		2.83E+02		
Aliphatic hydrocarbons >EC ₁₂ -EC ₁₆		6.27E+03	1.11E+03	1.06E+03	2.37E+01	6.34E+03	2.78E+03	2.41E+03	5.91E+01	6.36E+03	6.67E+03	4.34E+03		1.42E+02		
Aliphatic hydrocarbons >EC ₁₆ -EC ₃₅	(b)	6.46E+04	NR	NR	8.48E+00	9.17E+04	NR	NR	2.12E+01	1.10E+05	NR	NR		5.09E+01		
Aliphatic hydrocarbons >EC ₃₅ -EC ₄₄	(b)	6.46E+04	NR	NR	8.48E+00	9.17E+04	NR	NR	2.12E+01	1.10E+05	NR	NR		5.09E+01		
Aromatic hydrocarbons >EC ₈ -EC ₁₀		5.76E+01	4.74E+01	3.45E+01	6.13E+02	1.38E+02	1.16E+02	8.38E+01	1.50E+03	3.07E+02	2.77E+02	1.94E+02		3.58E+02		
Aromatic hydrocarbons >EC ₁₀ -EC ₁₂		8.29E+01	2.58E+02	7.52E+01	3.64E+02	1.96E+02	6.39E+02	1.79E+02	8.99E+02	4.25E+02	1.52E+03	3.91E+02		2.15E+03		
Aromatic hydrocarbons >EC ₁₂ -EC ₁₆		1.47E+02	2.85E+03	1.45E+02	1.69E+02	3.36E+02	7.07E+03	3.32E+02	4.19E+02	6.81E+02	1.68E+04	6.74E+02		1.00E+03		
Aromatic hydrocarbons >EC ₁₆ -EC ₂₁	(b)	2.63E+02	NR	NR	5.37E+01	5.45E+02	NR	NR	1.34E+02	9.34E+02	NR	NR		3.21E+02		
Aromatic hydrocarbons >EC ₂₁ -EC ₃₅	(b)	1.09E+03	NR	NR	4.83E+00	1.47E+03	NR	NR	1.21E+01	1.70E+03	NR	NR		2.90E+01		
Aromatic hydrocarbons >EC ₃₅ -EC ₄₄	(b)	1.09E+03	NR	NR	4.83E+00	1.47E+03	NR	NR	1.21E+01	1.70E+03	NR	NR		2.90E+01		

Notes:

EC - equivalent carbon. SAC - soil assessment criteria.

The CLEA model output is colour coded depending upon whether the soil saturation limit has been exceeded.

	Calculated SAC exceeds soil saturation limit and may significantly affect the interpretation of any exceedances as the contribution of the indoor and outdoor vapour pathway to total exposure is >10%.
	Calculated SAC exceeds soil saturation limit but the exceedance will not affect the SAC significantly as the contribution of the indoor and outdoor vapour pathway to total exposure is <10%.
	Calculated SAC does not exceed the soil saturation limit.

The SAC for organic compounds are dependant upon soil organic matter (SOM) (%) content. To obtain SOM from total organic carbon (TOC) (%) divide by 0.58. 1% SOM is 0.58% TOC. DL Rowell Soil Science: Methods and Applications, Longmans, 1994.

SAC for TPH fractions, PAHs naphthalene, acenaphthene and acenaphthylene, BTEX and trimethylbenzene compounds were produced using an attenuation factor for the indoor air inhalation pathway of 10 to reduce conservatism associated with the vapour inhalation pathway (Section 10.1.1, SR3)

(a) SAC for arsenic, benzene, benzo(a)pyrene, cadmium, chromium VI and lead are derived using the C4SL toxicology data.

(b) SAC for boron and selenium should not include the inhalation pathway as no expert group HCV has been derived; aliphatic and aromatic hydrocarbons >EC16 should not include inhalation pathway due to their non-volatile nature and inhalation exposure being minimal (oral, dermal and inhalation exposure is compared to the oral HCV); arsenic should only be based on oral contribution (rather than combined) owing to the relative small contribution from inhalation in accordance with the SGV report. The Oral SAC should be adopted for zinc and benzo(a)pyrene.

(c) SAC for CrIII should be based on the lower of the oral and inhalation SAC (see LQM/CIEH 2015 Section 6.8)

(d) SAC for elemental mercury, chromium VI and nickel should be based on the inhalation pathway only.

(e) SAC for 1,3,5-trimethylbenzene is not recorded owing to the lack of toxicological data, SAC for 1,2,4 trimethylbenzene may be used.

GENERIC ASSESSMENT CRITERIA FOR HUMAN HEALTH - RESIDENTIAL WITH HOME-GROWN PRODUCE



Table 5
Human Health Generic Assessment Criteria for Residential with home-grown produce

Compound	SAC for Soil SOM 1% (mg/kg)	SAC for Soil SOM 2.5% (mg/kg)	SAC for Soil SOM 6% (mg/kg)
Metals			
Arsenic	37	37	37
Barium	1,300	1,300	1,300
Beryllium	1.7	1.7	1.7
Boron	300	300	300
Cadmium	22	22	22
Chromium (III) - trivalent	910	910	910
Chromium (VI) - hexavalent	21	21	21
Copper	2,500	2,500	2,500
Lead	200	200	200
Elemental Mercury (Hg ⁰)	0.2	0.6	1.2
Inorganic Mercury (Hg ²⁺)	39	39	39
Methyl Mercury (Hg ⁴⁺)	10	10	10
Nickel	130	130	130
Selenium	258	258	258
Vanadium	410	410	410
Zinc	3,900	3,900	3,900
Cyanide (free)	1.4	1.4	1.4
Volatile Organic Compounds			
Benzene	0.20	0.41	0.87
Toluene	130	300	680
Ethylbenzene	50	110	260
Xylene - m	59	140	327
Xylene - o	61	143	332
Xylene - p	57	133	310
Total xylene	57	133	310
Methyl tertiary-Butyl ether (MTBE)	60	110	210
1,1,1,2-Tetrachloroethane	1.20	2.78	6.46
1,1,2,2-Tetrachloroethane	1.6	3.5	7.7
1,1,1-Trichloroethane	9	18	39
1,1,2-Trichloroethane	0.8	1.6	3.5
1,1-Dichloroethene	0.32	0.57	1.16
1,2-Dichloroethane	0.007	0.011	0.019
1,2,4-Trimethylbenzene	1.8	4.3	9.7
1,3,5-Trimethylbenzene	NR	NR	NR
1,2-Dichloropropane	0.034	0.060	0.120
Carbon Tetrachloride (tetrachloromethane)	0.026	0.056	0.127
Chloroethane	11.7	15.9	25.7
Chloromethane	0.012	0.014	0.019
Cis 1,2 Dichloroethene	0.16	0.27	0.52
Dichloromethane	0.62	1.08	1.92
Tetrachloroethene	0.2	0.4	0.9
Trans 1,2 Dichloroethene	0.28	0.50	1.02
Trichloroethene	0.02	0.03	0.08
Vinyl Chloride (chloroethene)	0.0006	0.0009	0.0014
Semi-Volatile Organic Compounds			
2-Chloronaphthalene	5	13	31
Acenaphthene	230	540	1,170
Acenaphthylene	180	440	970
Anthracene	2,400	5,500	10,900
Benzo(a)anthracene	7	11	13
Benzo(a)pyrene	5	5	5
Benzo(b)fluoranthene	2.6	3.3	3.7
Benzo(g,h,i)perylene	310	340	350
Benzo(k)fluoranthene	77	92	100
Chrysene	15	22	27
Dibenzo(a,h)anthracene	0.24	0.28	0.30
Fluoranthene	290	560	900
Fluorene	170	410	880
Hexachloroethane	0.27	0.66	1.55
Indeno(1,2,3-cd)pyrene	27	36	41
Naphthalene	13	30	71
Phenanthrene	100	220	440
Pyrene	620	1,240	2,040
Phenol	120	210	390
Total Petroleum Hydrocarbons			
Aliphatic hydrocarbons EC ₅ -EC ₆	42	78	160
Aliphatic hydrocarbons >EC ₆ -EC ₈	100	230	530
Aliphatic hydrocarbons >EC ₈ -EC ₁₀	27	65	154
Aliphatic hydrocarbons >EC ₁₀ -EC ₁₂	130 (48)	330 (118)	760 (283)
Aliphatic hydrocarbons >EC ₁₂ -EC ₁₆	1,100 (24)	2,400 (59)	4,300 (142)
Aliphatic hydrocarbons >EC ₁₆ -EC ₃₅	65,000 (8)	92,000 (21)	110,000
Aliphatic hydrocarbons >EC ₃₅ -EC ₄₄	65,000 (8)	92,000 (21)	110,000
Aromatic hydrocarbons >EC ₈ -EC ₁₀	30	80	190
Aromatic hydrocarbons >EC ₁₀ -EC ₁₂	80	180	390
Aromatic hydrocarbons >EC ₁₂ -EC ₁₆	140	330	670
Aromatic hydrocarbons >EC ₁₆ -EC ₂₁	260	540	930
Aromatic hydrocarbons >EC ₂₁ -EC ₃₅	1,100	1,500	1,700
Aromatic hydrocarbons >EC ₃₅ -EC ₄₄	1,100	1,500	1,700
Minerals			
Asbestos	Stage 1 test – No asbestos detected with ID; Stage 2 test - <0.001% dry weight (exceedance of either equates to an exceedance of the GAC) ¹		
Notes: ¹ - Generic assessment criteria not calculated owing to low volatility of substance and therefore no pathway, or an absence of toxicological data. NR - SAC for 1,3,5-trimethylbenzene is not recorded owing to the lack of toxicological data, SAC for 1,2,4 trimethylbenzene may be used EC - equivalent carbon. SAC - soil assessment criteria. ² LOD for weight of asbestos per unit weight of soil calculated on a dry weight basis using PLM, handpicking and gravimetry.			
The SAC for organic compounds are dependent on Soil Organic Matter (SOM) (%) content. To obtain SOM from total organic carbon (TOC) (%) divide by 0.58. 1% SOM is 0.58% TOC. DL Rowell Soil Science: Methods and Applications, Longmans, 1994.			
SAC for TPH fractions, PAHs naphthalene, acenaphthene and acenaphthylene, BTEX and trimethylbenzene compounds were produced using an attenuation factor for the indoor air inhalation pathway of 10 to reduce conservatism associated with the vapour inhalation pathway, section 10.1.1, SR3.			
(VALUE IN BRACKETS)			
RSK has adopted an approach for petroleum hydrocarbons in accordance with LQM/CIEH whereby the concentration modelled for each petroleum hydrocarbon fraction has been tabulated as the SAC with the corresponding solubility or vapour saturation limits given in brackets.			

APPENDIX L

GENERIC ASSESSMENT CRITERIA FOR PHYTOTOXIC EFFECTS

APPENDIX L

GENERIC ASSESSMENT CRITERIA FOR PHYTOTOXIC EFFECTS

Several compounds can inhibit plant growth; hence it is important to have generic assessment criteria (GAC) to promote healthy plant growth. In the absence of other published GAC, the GAC have been obtained from legislation (UK and European) and guidance related to the use of sewage sludge on agricultural fields.

The Council of European Communities Sewage Sludge Directive (86/278/EEC) dated 1986, has been transposed into UK law by Statutory Instrument No. 1263, The Sludge (use in Agriculture) Regulations 1989 (Public Health England, Wales and Scotland), as amended in 1990 and The Sludge (use in Agriculture) Regulations (Northern Ireland) SR No, 245, 1990. In addition the Department of Environment (DoE) produced a Code of Practice (CoP) (Updated 2nd Edition) in 2006 which provided guidance on the application of sewage sludge on agricultural land (however the status of this document is unclear as it is on the archive section of the Defra website).

The directive seeks to encourage the use of sewage sludge in agriculture and to regulate its use in such a way as to “**prevent harmful effects on soil, vegetation, animals and man**”. To this end, it prohibits the use of untreated sludge on agricultural land unless it is injected or incorporated into the soil. Treated sludge is defined as having undergone “biological, chemical or heat treatment, long-term storage or any other appropriate process so as significantly to reduce its fermentability and the health hazards resulting from its use”. To provide protection against potential health risks from residual pathogens, sludge must not be applied to soil in which fruit and vegetable crops are growing, or less than ten months before fruit and vegetable crops are to be harvested. Grazing animals must not be allowed access to grassland or forage land less than three weeks after the application of sludge.

The specified limits of concentrations of selected elements in soil are presented in Table 4 of the updated 2nd Edition of the DoE Code of Practice and are designed to protect plant growth. It is noted that these values are more stringent than the values set in current UK regulations. However since they were amended following recommendations from the Independent Scientific Committee in 1993. (MAFF/DOE 1993). The GAC are presented in Table 1.

Table 1: Generic assessment criteria

Determinant	Generic assessment criteria (mg/kg)			
	pH 5.0 < 5.5	pH 5.5 < 6.0	pH 6.0 < 7.0	pH >7.0
Zinc	200	200	200	300
Copper	80	100	135	200
Nickel	50	60	75	110
Lead	300	300	300	300
Cadmium	3	3	3	3
Mercury	1	1	1	1
Note: Only compounds with assessment criteria documented within the Directive 86/278/EEC have been included, although criteria for 5 additional compounds have been presented within the 2006 CoP.				

APPENDIX M

GENERIC ASSESSMENT CRITERIA FOR POTABLE WATER SUPPLY PIPES

A range of pipe materials is available and careful selection, design and installation is required to ensure that water supply pipes are satisfactorily installed and meet the requirements of the Water Supply (Water Fittings) Regulations 1999 in England and Wales, the Byelaws 2000 in Scotland and the Northern Ireland Water Regulations. The regulations include a requirement to use only suitable materials when laying water pipes and laying water pipes without protection is not permitted at contaminated sites. The water supply company has a statutory duty to enforce the regulations.

Contaminants in the ground can pose a risk to human health by permeating potable water supply pipes. To fulfil their statutory obligation, UK water supply companies require robust evidence from developers to demonstrate either that the ground in which new plastic supply pipes will be laid is free from specific contaminants, or that the proposed remedial strategy will mitigate any existing risk. If these requirements cannot be demonstrated to the satisfaction of the relevant water company, it becomes necessary to specify an alternative pipe material on the whole development or in specific zones.

In 2010, UK Water Industry Research (UKWIR) published *Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites* (Report Ref. No. 10/WM/03/21). This report reviewed previously published industry guidelines and threshold concentrations adopted by individual water supply companies.

The focus of the UKWIR research project was to develop clear and concise procedures, which provide consistency in the pipe selection decision process. It was intended to provide guidance that can be used to ensure compliance with current regulations and to prevent water supply pipe failing prematurely due to the presence of contamination.

The report concluded that in most circumstances only organic contaminants pose a potential risk to plastic pipe materials and Table 3.1 of the report provides threshold concentrations for polyethylene (PE) and polyvinyl chloride (PVC) pipes for the organic contaminants of concern. The report also makes recommendations for the procedures to be adopted in the design of site investigations and sampling strategies, and the assessment of data, to ensure that the ground through which water supply pipes will be laid is adequately characterised.

Risks to water supply pipes have therefore been assessed against the threshold concentrations for PE and PVC pipe specified in Table 3.1 of Report 10/WM/03/21, which have been adopted as the GAC for this linkage and are reproduced in Table A3 below.

Since water supply pipes are typically laid at a minimum depth of 0.75 m below finished ground levels, sample results from depths between 0.5 m and 1.5 m below finished level are generally considered suitable for assessing risks to water supply. Samples outside these depths can be used, providing the stratum is the same as that in which water supply pipes are likely to be located. The report specifies that sampling should characterise the ground conditions to a minimum of 0.5 m below the proposed depth of the pipe.

It should be noted that the assessment provided in this report is a guide and the method of assessment and recommendations should be checked with the relevant water supply company.

Table Q1: Generic assessment criteria for water supply pipes

		Pipe material	
		GAC (mg/kg)	
	Parameter group	PE	PVC
1	Extended VOC suite by purge and trap or head space and GC-MS with TIC (Not including compounds within group 1a)	0.5	0.125
1a	BTEX + MTBE	0.1	0.03
2	SVOCs TIC by purge and trap or head space and GC-MS with TIC (aliphatic and aromatic C ₅ –C ₁₀) (Not including compounds within group 2e and 2f)	2	1.4
2e	Phenols	2	0.4
2f	Cresols and chlorinated phenols	2	0.04
3	Mineral oil C ₁₁ –C ₂₀	10	Suitable
4	Mineral oil C ₂₁ –C ₄₀	500	Suitable
5	Corrosive (conductivity, redox and pH)	Suitable	Suitable
Specific suite identified as relevant following site investigation			
2a	Ethers	0.5	1
2b	Nitrobenzene	0.5	0.4
2c	Ketones	0.5	0.02
2d	Aldehydes	0.5	0.02
6	Amines	Not suitable	Suitable
Notes: where indicated as 'suitable', the material is considered resistant to permeation or degradation and no threshold concentration has been specified by UKWIR.			

APPENDIX N

GENERIC ASSESSMENT CRITERIA FOR CONTROLLED WATERS

GENERIC ASSESSMENT CRITERIA FOR CONTROLLED WATERS

Protection of the water environment

The water environment in the United Kingdom is protected under a number of regulatory regimes. The relevant environmental regulator is consulted where there may be a risk that pollution of 'controlled waters' may occur or may have occurred in the past.

The term 'controlled waters' refers to coastal waters, inland freshwaters and groundwater. The EU Water Framework Directive (WFD) (2000/60/EC) is implemented via domestic regulations and guidance, covering aspects of groundwater and surface water protection as well as drinking water supply policy. Domestic legislation and guidance will vary across the United Kingdom. Therefore, the relevant legislation for England, Wales, Northern Ireland and Scotland should be reviewed, alongside guidance provided by the Environment Agency (EA), Natural Resource Wales (NRW), the Scottish Environmental Protection Agency (SEPA) or the Northern Ireland Environment Agency (NIEA), as appropriate.

The main objectives of the protection and remediation of groundwater under threat from land contamination are set out within "The Environment Agency's approach to groundwater protection", version 1.0 (March 2017)⁽¹⁾ and the associated guidance "Land contamination groundwater compliance points: quantitative risk assessments (March 2017)^(1a) that have replaced the previous guidance document "Groundwater Principles and Practice (GP3)". When assessing risks to groundwater, the following need to be considered:

- Where pollutants have not yet entered groundwater, all necessary and reasonable measures must be taken to:
 - **prevent** the input of **hazardous** substances into groundwater (see description of hazardous substances below)
 - **limit** the entry of other (non-hazardous) pollutants into groundwater to avoid pollution, deterioration in the status of groundwater bodies and to prevent sustained, upward trends in pollutant concentrations in groundwater.
- Where pollutants have already entered groundwater, the priority is to take all necessary and reasonable measures to:
 - **minimise** further entry of "contaminants" where there is a defined source
 - **limit the pollution** of groundwater or any effect on the status of the groundwater body from the future expansion of the 'plume', if necessary, by actively reducing its extent.

Within the context of groundwater risk assessments on sites affected by land contamination, "reasonable" means feasible without involving disproportionate costs. What costs are "disproportionate" depends on site-specific circumstances, which may include:

- Considerations of technical feasibility such as identified by the remedial options appraisal, this may be due to the distribution or nature of the contamination and the available remedial methods to treat the identified contamination;
- Sustainability considerations.

DEFINITIONS AND SUBSTANCE CLASSIFICATIONS

Risks to surface waters:

When assessing risks to surface waters, the following list of definitions should be understood:

Priority substances (PS) are harmful substances originally identified under the Water Framework Directive (WFD) 2000/60/EC as substances ‘presenting a significant risk to or via the aquatic environment’ at a European level. Member States are required to incorporate the identified **PS** into their country-wide monitoring programmes. There are currently 33 **PS** defined within the Priority Substances Directive (2013/39/EU; Annex 1), with a further 12 additional substances due to come into force from 22 December 2018. Directive 2013/39/EU has been transposed into domestic legislation for England and Wales by The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.

Under the umbrella of **PS**, there is a sub-set of substances identified as being “hazardous”, and these are referred to as **Priority hazardous substances (PHS)**. The list of **PHS** is defined at EU level within the Priority Substances Directive (2013/39/EU). The WFD defines hazardous substances as ‘substances (or groups of substances) that are toxic, persistent and liable to bio-accumulate, and other substances or groups of substances that give rise to an equivalent level of concern.’ There are currently 15 **PHS**, with a further 6 additional substances due to come into force from 22 December 2018.

There is also another group of substances defined at EU level and which are referred to as **other pollutants (OP)** in Directive 2013/39/EU. These are additional substances which although not **priority substances**, have EQS which are identical to those laid down in the legislation which applied prior to 13 January 2009 (Directive 2008/105/EU). The **OP** are listed along with the **priority substance (PS)** within the Priority Substances Directive (2013/39/EU), and their associated EQS are also listed therein. There are 6 **OP** defined within the Priority Substances Directive (2013/39/EU).

In addition to the EU level substances, there are also a group of pollutants defined at a Member State level, referred to as **Specific pollutants (SP)**. These substances are pollutants which are released in significant quantities into water bodies in each of the individual European Member States. Under the WFD, Member States are required to set their own EQS for these substances. An indicative list of **SP** is given in Annex VIII of the WFD. Many of the substances categorised as **SP** in the UK were formerly List 2 substances under the old Groundwater Directive (80/68/EEC). The **SP** are defined within Part 2 (Table 1) of The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.

Risks to groundwater:

When assessing risks to groundwater, the following definitions should be understood:

Under the requirements of the Groundwater Daughter Directive (2006/118/EU), the UK has published a list of substances it considers to be **hazardous substances** with respect to groundwater. In their advisory capacity to the government, this list has been derived by the UK Joint Agencies Groundwater Directive Advisory Group (JAGDAG), of which the Environment Agency is a member. The JAGDAG list of **hazardous substances** was published in January 2017 and the Environment Agency will use the updated list of hazardous substances from this date for all new activities that may lead to the discharge of hazardous substances to groundwater. The list is extensive and can be found in full at:

<https://www.wfduk.org/stakeholders/jagdag>

Selecting the appropriate assessment criteria

When assessing the risks to controlled waters, various assessment criteria apply, depending on the nature of the assessment and the conceptual site model.

Where a surface water body is involved, then Environmental Quality Standards (EQS) are the relevant assessment criteria as they are designed to be protective of surface water ecology.

Where a public water supply or a Principal aquifer is involved, then the standards defined in The Water Supply (Water Quality) Regulations⁽²⁾ are the primary source of assessment criteria. The Private Water Supplies Regulations⁽³⁾ may also be applicable in some cases. For instances where there are no UK assessment criteria, then the World Health Organisation (WHO) drinking water guidelines⁽⁴⁾ may be used.

This appendix presents the generic assessment criteria (GAC) that RSK considers suitable for assessing risks to controlled waters for our most commonly encountered determinants. A full list of EQS for England and Wales are included in The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.

The RSK GAC for controlled waters are presented in **Table 1** and **Table 2**. In line with the Environment Agency's Remedial Targets Methodology, the GAC for controlled waters are termed 'target concentrations'.

The appropriate target concentrations should be selected with consideration to:

- the site conceptual model (i.e. the receptor at potential risk);
- whether the substance is already present in groundwater at the site;
- whether or not the substance is classified as a priority hazardous substance under the Priority Substances Directive (2013/39/EC) (see above), or as a hazardous substance according to the current list of JAGDAG determinations⁽⁵⁾; and
- background concentrations in the aquifer (if applicable).

It is important to remember that the WFD and Environment Agency guidance^(1 & 1a) support a sustainable, risk-based approach be applied to groundwater contamination. Exceedance of any target concentration does not necessarily imply that an unacceptable risk exists or that remediation is inevitably required.

Target concentrations shaded in green are <u>statutory values</u>	Target concentrations shaded in orange are <u>non-statutory values</u>
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Note: Units µg/l throughout (unless otherwise stated)

Table 1: Target concentrations for controlled waters (excluding TPH CWG fractions)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Metals & other inorganics						
Hazardous substance	Specific pollutant	Arsenic	-	10 ⁽²⁾	50 ^(6a)	25 ^(6a)
Non-hazardous pollutant	Priority substance	Cadmium	0.1 ⁽⁷⁾	5 ⁽²⁾	≤0.08, 0.08, 0.09, 0.15, 0.25 ^(6b)	0.2 ^(6a)
(Not determined)	-	Chromium (total)	-	50 ⁽²⁾	8.1 Sum values for chromium III and VI	-
(None	Specific pollutant	Chromium (III)	-	Use value for total chromium	4.7 ^(6a)	-
Hazardous substance	Specific pollutant	Chromium (VI)			3.4 ^(6a)	0.6 ^(6a)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
(Not determined)	Specific pollutant	Copper	-	2,000 ⁽²⁾	1 bioavailable ^(6a)	3.76 dissolved, where DOC ≤1mg/l ^(6a)
						3.76µg/l + (2.677µg/l x ((DOC/2) – 0.5µg/l)) dissolved, where DOC >1mg/l ^(6a)
Hazardous substance	Priority substance	Lead	-	10 ⁽²⁾	1.2 bioavailable ^(6a)	1.3 ^(6a)
Hazardous substance	Priority hazardous substance	Mercury	0.01 ⁽⁷⁾	1 ⁽²⁾	0.07 ^(6c)	0.07 ^(6c)
Non-hazardous pollutant	Priority substance	Nickel	-	20 ⁽²⁾	4.0 bioavailable ^(6a)	8.6 ^(6a)
Non-hazardous pollutant	-	Selenium	-	10 ⁽²⁾	-	-
Non-hazardous pollutant	Specific pollutant	Zinc	-	3,000 ⁽⁸⁾	10.9 bioavailable ^(6a)	6.8 dissolved ^(6a)
None	Specific pollutant	Iron	-	200 ⁽²⁾	1000 ^(6a) *1	1000 ^(6a))*1
None	Specific pollutant	Manganese	-	50 ⁽²⁾ (0.05mg/l)	123 bioavailable ^(6a) (0.123mg/l)	-
(Not determined)	-	Aluminium	-	200 ⁽²⁾	-	-

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Hazardous substance	Priority hazardous substance	Tributyltin compounds (Tributyltin-cation)	0.001 ⁽⁷⁾	-	0.0002 ^(6a)	0.0002 ^(6a)
(Not determined)	-	Sodium	-	200,000 ⁽²⁾ (200 mg/l)	-	-
Non-hazardous pollutant	Specific pollutant	Cyanide (Hydrogen cyanide)	-	50 ⁽²⁾ (0.05 mg/l)	1 ^(6a) (0.001 mg/l)	1 ^(6a) (0.001 mg/l)
Non-hazardous pollutant	-	Total ammoniacal nitrogen ^s	-	500 ⁽²⁾ (0.5 mg/l) as NH ₄ (472 expressed as NH ₃ ; 389 expressed as N)	300 ^(6f) (0.3 mg/l) as N (364 expressed as NH ₃ ; 386 expressed as NH ₄)	-
Non-hazardous pollutant	Specific pollutant	Ammonia un-ionised (equilibrium ratio calculated) (NH ₃)	-	-	-	21 ^(6a) (0.021 mg/l)
Non-hazardous pollutant	Specific pollutant	Chlorine	-	-	2 ^(6a) (0.002 mg/l)	10 ^(6d) (0.01 mg/l)
(Not determined)	-	Chloride	-	250,000 ⁽²⁾ (250 mg/l)	-	-
(Not determined)	-	Sulphate	-	250,000 ⁽²⁾ (250 mg/l)	-	-
(Not determined)	-	Nitrate (as NO ₃)	-	50,000 ⁽²⁾ (50 mg/l)	-	-

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
(Not determined)	-	Nitrite (as NO ₂)	-	500 ⁽²⁾ (0.5 mg/l)	10 ⁽⁹⁾ (0.01 mg/l)	-
Volatile organic compounds (VOC)						
Non-hazardous pollutant	Other pollutant	Tetrachloroethene (tetrachloroethylene; PCE)	0.1 ⁽⁷⁾	10 ⁽²⁾ sum of TCE and PCE	10 ^(6a)	10 ^(6a)
Hazardous substance	Other pollutant	Trichloroethene (trichloroethylene; TCE)	0.1 ⁽⁷⁾		10 ^(6a)	10 ^(6a)
None	Specific pollutant	Tetrachloroethane	-	-	140 ^(6a)	-
Hazardous substance	Other pollutant	Carbon tetrachloride (tetrachloromethane)	0.1 ⁽⁷⁾	3.0 ⁽²⁾	12 ^(6a)	12 ^(6a)
Non-hazardous pollutant	Priority substance	1,2-Dichloroethane	1.0 ⁽⁷⁾	3.0 ⁽²⁾	10 ^(6a)	10 ^(6a)
Non-hazardous pollutant	-	1.2-Dichloroethene (DCE) sum of cis and trans	-	50.0 ⁽⁴⁾	-	-
Hazardous substance	-	Vinyl chloride (chloroethene)	-	0.5 ⁽²⁾	-	-
Non-hazardous pollutant	Priority substance	Dichloromethane	-	20 ⁽⁴⁾	20 ^(6a)	20 ^(6a)
Non-hazardous pollutant	Priority substance	Trichlorobenzenes	0.01 ⁽⁷⁾	-	0.4 ^(6a)	0.4 ^(6a)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Hazardous substance	Priority substance	Trichloromethane (Chloroform)	0.1 ⁽⁷⁾	100 ^(2a) (sum of trihalomethanes – chloroform, bromform, dibromochloromethane, bromodichloromethane)	2.5 ^(6a)	2.5 ^(6a)
(Not determined)	-	Bromoform	-		-	-
(Not determined)	-	Dibromochloromethane	-		-	-
(Not determined)	-	Bromodichloromethane	-		-	-
Non-hazardous pollutant	Priority hazardous substance	Di(2-ethylhexyl) phthalate (bis(2-ethylhexyl) phthalate, DEHP)	-	8 ⁽⁴⁾	1.3 ^(6a)	1.3 ^(6a)
None	Specific pollutant	Benzyl butyl phthalate	-	-	7.5 ^(6a)	0.75 ^(6e)
Hazardous substance	Priority hazardous substance	Hexachlorobutadiene (as a pesticide, but reported in a VOC suite)	0.005 ⁽⁷⁾	0.1 ⁽²⁾	0.6 ^(6c)	0.6 ^(6c)
Semi-volatile organic compounds (SVOC)						
(Not determined)	-	Acenaphthylene (Aro EC12-EC16)	-	-	5.8 ⁽¹⁰⁾	
Hazardous substance	Priority hazardous substance	Anthracene (Aro EC16-EC21)	-	-	0.1 ^(6a)	0.1 ^(6a)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Non-hazardous pollutant	Priority substance	Naphthalene (Aro EC10-EC12)	-	-	2 ^(6a)	2 ^(6a)
Hazardous substance	Priority substance	Fluoranthene (Aro EC21-EC35) not used as an indicator for this EC band	-	-	0.0063 ^(6a)	0.0063 ^(6a)
Hazardous substance(s)	Priority hazardous substance(s)	Benzo(a)pyrene (Aro EC21-EC35)	-	0.01 ⁽²⁾	0.00017 ^(6a)	0.00017 ^(6a)
		Benzo(b)fluoranthene (Aro EC21-EC35)	-	0.1 ⁽²⁾ sum of the concentration of the four specified compounds	No EQS for these substances. B(a)P should be used as the indicator compound instead.	
		Benzo(k)fluoranthene (Aro EC21-EC35)	-			
		Benzo(g,h,i)perylene (Aro EC21-EC35)	-			
		Indeno(1,2,3-cd) pyrene (Aro EC21-EC35)	-			
Non-hazardous pollutant	Specific pollutant	Phenol	-	-	7.7 ^(6a)	7.7 ^(6a)
Hazardous substance	Specific pollutant	2,4-Dichlorophenol	0.1 ⁽⁷⁾	-	4.2 ^(6a)	0.42 ^(6a)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Hazardous substance	Priority substance	Pentachloro-phenol (PCP) (as a pesticide, but reported in an SVOC suite)	0.1 ⁽⁷⁾	0.1 ⁽²⁾	0.4 ^(6a)	0.4 ^(6a)
Petroleum hydrocarbons						
Hazardous substance	-	Total petroleum hydrocarbons	-	See Table 2 for individual (non-statutory) TPH CWG fractions with respect to drinking water receptors	See individual risk driving compounds (i.e. BTEX and PAH) for specific EQS	
Hazardous substance	Priority substance	Benzene (Aro EC5-EC7)	1 ⁽⁷⁾	1 ⁽²⁾	10 ^(6a)	8 ^(6a)
Hazardous substance	Specific pollutant	Toluene (Aro EC7-EC8)	4 ⁽⁷⁾	700 ⁽⁴⁾	74 ^(6a)	74 ^(6a)
Hazardous substance	-	Ethylbenzene (Aro EC8-EC10)	-	300 ⁽⁴⁾	300 ⁽¹¹⁾	-
(Not determined)	-	Xylenes (Aro EC8-EC10)	3 ⁽⁷⁾	500 ⁽⁴⁾	30 ⁽¹¹⁾	-
Non-hazardous pollutant	-	Methyl tertiary butyl ether (MTBE)	-	15 ⁽¹²⁾	-	

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Pesticides, fungicides, insecticides and herbicides						
(Not determined) – assume to be Hazardous Substance	-	Total pesticides	-	0.5 ⁽²⁾	-	-
(Not determined) - assume to be Hazardous Substance	-	Other individual pesticides (unless otherwise detailed below)	-	0.1 ⁽²⁾	-	-
Hazardous substance(s)	Other pollutant (Cyclodiene pesticides)	Aldrin	0.003 ⁽⁷⁾	0.03 ⁽²⁾	0.01 ^(6a) (sum of all four)	0.005 ^(6a) (sum of all four)
		Dieldrin	0.003 ⁽⁷⁾	0.03 ⁽²⁾		
		Endrin	0.003 ⁽⁷⁾	0.1 ^(2b) ('other individual pesticide')		
		Isodrin*2	0.003 ⁽⁷⁾	0.1 ^(2b) ('other individual pesticide')		
Hazardous substance	Other pollutant	DDT (total)	0.002 ⁽⁷⁾	0.1 ⁽²⁾ ('other individual pesticide')	0.025 ^(6a)	0.025 ^(6a)
Hazardous substance	Specific pollutant	Carbendazim	-	0.1 ⁽²⁾ ('other individual pesticide')	0.15 ^(6a)	-

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Hazardous substance	Specific pollutant	Chlorothalonil	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.035 ^(6a)	-
Hazardous substance	Specific pollutant (until 22/12/18, after which it becomes a Priority substance)	Cypermethrin	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.0001 ^(6a) From 22/12/18: 8.0E ^{-5(6a)}	0.0001 ^(6a) From 22/12/18: 8.0E ^{-6(6a)}
Hazardous substance	Specific pollutant	Dimethoate	0.01 ⁽⁷⁾	0.1 ⁽²⁾ (‘other individual pesticide’)	0.48 ^(6a)	0.48 ^(6a)
(Not determined)	Specific pollutant	Glyphosate	-	0.1 ⁽²⁾ (‘other individual pesticide’)	196 ^(6a)	196 ^(6a)
Hazardous substance	Specific pollutant	Linuron	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.5 ^(6a)	0.5 ^(6a)
Non-hazardous pollutant	Specific pollutant	Mecoprop	0.04 ⁽⁷⁾	0.1 ⁽²⁾ (‘other individual pesticide’)	18 ^(6a)	18 ^(6a)
Non-hazardous pollutant	Specific pollutant	Methiocarb	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.01 ^(6a)	-
Non-hazardous pollutant	Specific pollutant	Pendimethalin	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.3 ^(6a)	-

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Hazardous substance	Specific pollutant	Permethrin	0.001 ⁽⁷⁾	0.1 ⁽²⁾ (‘other individual pesticide’)	0.001 ^(6a)	0.0002 ^(6a)
Hazardous substance	Priority substance	Alachlor	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.3 ^(6a)	0.3 ^(6a)
Hazardous substance	Priority substance	Atrazine	0.03 ⁽⁷⁾	100 ⁽⁴⁾ (‘other individual pesticide’)	0.6 ^(6a)	0.6 ^(6a)
Hazardous substance	Priority substance	Diuron	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.2 ^(6a)	0.2 ^(6a)
Hazardous substance	Priority hazardous substance	Endosulphan	0.005 ⁽⁷⁾	0.1 ⁽²⁾ (‘other individual pesticide’)	0.005 ^(6a)	0.0005 ^(6a)
Non-hazardous pollutant	Priority substance	Isoproturon	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.3 ^(6a)	0.3 ^(6a)
Hazardous substance	Priority substance	Simazine	0.03 ⁽⁷⁾	0.1 ⁽²⁾ (‘other individual pesticide’)	1 ^(6a)	1 ^(6a)
Hazardous substance	Priority hazardous substance	Trifluralin	0.01 ⁽⁷⁾	0.1 ⁽²⁾ (‘other individual pesticide’)	0.03 ^(6a)	0.03 ^(6a)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
(Not determined)	From 22/12/18: Priority substance	Dichlorvos	-	0.1 ⁽²⁾ (‘other individual pesticide’)	From 22/12/18: 6.0E ^{-4(6a)}	From 22/12/18: 6.0E ^{-5(6a)}
Hazardous substance	From 22/12/18: Priority substance	Heptachlor and heptachlor epoxide	-	0.03 ⁽²⁾	From 22/12/18: 2.0E ^{-7(6a)}	From 22/12/18: 1.0E ^{-08(6a)}
Miscellaneous						
None	Specific pollutant	Triclosan (antibacterial agent)	-	-	0.1 ^(6a)	0.1 ^(6a)
Hazardous substance	From 22/12/18: Priority hazardous substance	Perfluoro-octane sulfonic acid (and its derivatives) (PFOS)	-	-	From 22/12/18: 6.5E ^{-4(6a)}	From 22/12/18: 1.3E ^{-4(6a)}
Hazardous substance	From 22/12/18: Priority hazardous substance	Hexabromo cyclododecane (HBCDD)	-	-	From 22/12/18: 0.0016 ^(6a)	From 22/12/18: 0.0008 ^(6a)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters

Notes:

‘-’ A target concentration is not available.

\$Please note that total ammonia (NH_4^+ and NH_3) is equivalent to ammoniacal nitrogen in laboratory reports

*¹ Please note that although iron is listed in the 2015 Direction as 1.000 µg/l, the EQS remains at 1mg/l in Scotland and it is assumed this is an error and should read either 1,000 or 1000µg/l.

*² Please note that although Isodrin is not listed in name within the group of “Cyclodiene pesticides” in Table 1 of Schedule 3 Part 3 of the 2015 Direction⁽⁶⁾, the CAS number for Isodrin (465-73-6) is listed and therefore it is assumed that it has been missed off the named list of substances.

*³ Total petroleum hydrocarbons is used for consistency, but is an analytical method-defined measurement for a mixture of hydrocarbons subject to environmental analysis¹¹.

“Bioavailable” in relation to copper, zinc, nickel and manganese (but not lead) is the generic EQSbioavailable^(6a) derived from the Metal Bioavailability Assessment Tool (M-BAT) developed by the Water Framework Directive UK Technical Advisory Group (WFDTAG). Exceedance of this value should prompt a site-specific assessment using the M-BAT with pH, DOC and Ca to derive a site-specific EQS termed the PNEC_{dissolved}.
<http://www.wfduk.org/resources/rivers-lakes-metal-bioavailability-assessment-tool-m-bat>.

For zinc, if there is an exceedance of the EQSbioavailable in an initial GQRA, Tier 2 required that the EQS for zinc should also have the ambient background concentration of zinc added as well

Table 2: World Health Organization (WHO) guide values for TPH CWG fractions in drinking water⁽¹³⁾ (as referenced in CL:AIRE, 2017⁽¹¹⁾)

TPH CWG fraction	WHO guide value for drinking water ⁽¹³⁾ (µg/l)
Aliphatic fractions:	
Aliphatic EC5-EC6	15,000
Aliphatic >EC6-EC8	15,000
Aliphatic >EC8-EC10	300
Aliphatic >EC10-EC12	300
Aliphatic >EC12-EC16	300
Aliphatic >EC16-EC21	-
Aliphatic >EC21-EC35	-
Aromatic fractions:	
Aromatic EC5-EC6	10 (benzene)
Aromatic >EC6-EC8	700 (toluene)
Aromatic >EC8-EC10	300 (ethyl benzene) 500 (xylenes)
Aromatic >EC10-EC12	90
Aromatic >EC12-EC16	90
Aromatic >EC16-EC21	90
Aromatic >EC21-EC35	90
Reference: World Health Organisation (WHO), 2008. Petroleum products in drinking-water. Background document for development of WHO guidelines for drinking water quality. WHO/SDE/WSH/05.08/123. World Health Organisation, Geneva ⁽¹³⁾ .	

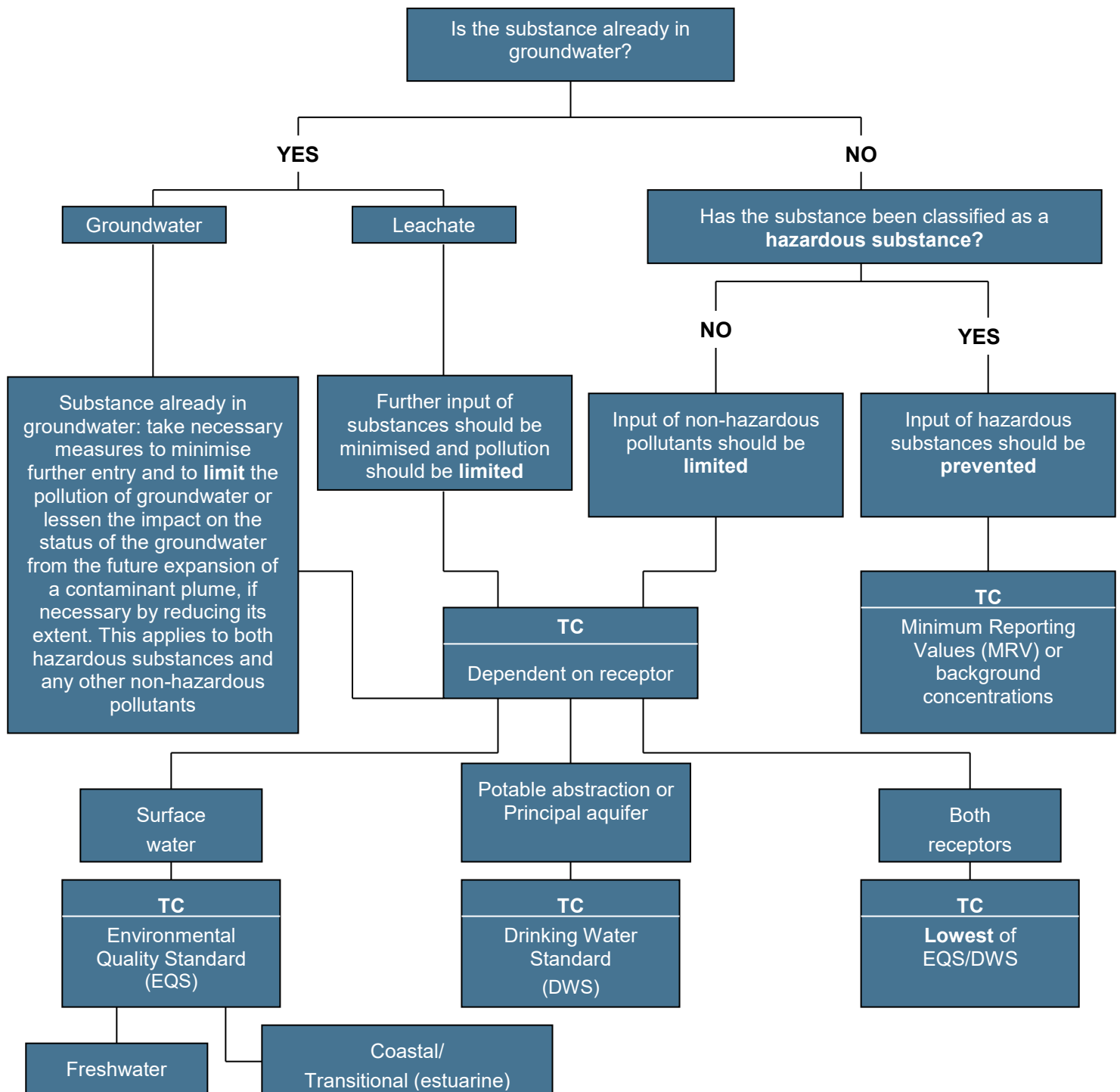
References

1. Environment Agency (2017), 'The Environment Agency's approach to groundwater protection', version 1.0, March 2017 (formerly contained within GP3) [accessed 29 March 2017].
<https://www.gov.uk/government/collections/groundwater-protection>
- 1a. Environment Agency (2017), 'Land contamination groundwater compliance points: quantitative risk assessments', March 2017 (formerly contained within GP3) [accessed 29 March 2017].
<https://www.gov.uk/government/collections/groundwater-protection>
2. The Water Supply (Water Quality) Regulations 2016 (SI 2016/619)
 - 2a. Sum of chloroform, bromoform, dibromochloromethane and bromodichloromethane
 - 2b. Standard applies to individual pesticides except aldrin, dieldrin, heptachlor and heptachlor epoxide, for which a separate standard is defined.
3. The Private Water Supplies (England) Regulations 2016. SI 2016 / 618
4. WHO (2011), *Guidelines for drinking-water quality*, 4th edn
5. JAGDAG hazard substance determinations: This list contains substances that are determined to be hazardous substances or non-hazardous pollutants for the purposes of the groundwater directive 2006/118/EC. The absence of an assessment or substance from the list means an assessment has not been done yet and is presented as 'Not yet determined'; if a substance has been assessed but does not fall into either category it is presented as 'None'. For further details on how substances are assessed, see the Joint Agencies Groundwater Directive Advisory Group (JAGDAG) 'Methodology for the determination of hazardous substances in groundwater for the purposes of the groundwater directive 2006/118/EC' which is available from the JAGDAG website. The methodology is a UK –wide framework that sets criteria for how to assess whether a substance is a hazardous substances in groundwater. The list of substances can be found at:
<https://www.wfduk.org/stakeholders/jagdag>
6. The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.
 - 6a. The EQS for these substances are based on a "long term mean" or an "annual average (AA)" EQS.
 - 6b. For cadmium and its compounds the EQS values vary depending on the hardness of the water as specified in five class categories (Class 1: < 40 mg CaCO₃/l, Class 2: 40 to < 50 mg CaCO₃/l, Class 3: 50 to < 100 mg CaCO₃/l, Class 4: 100 to < 200 mg CaCO₃/l and Class 5: ≥ 200 mg CaCO₃/l).
 - 6c. The EQS for Mercury and hexachlorobutadiene are based on a "maximum acceptable concentration (MAC)" EQS in absence of an "annual average (AA)" EQS.
 - 6d. The EQS for chlorine in saltwater is based on the 95th percentile concentration of total residual oxidant, which refers to the sum of all oxidising agents existing in water, expressed as available chlorine.
 - 6e. The recommended saltwater standard is derived using a safety factor of 100. Where the standard is failed, it is recommended that supporting evidence of ecological damage should be obtained before committing to expensive action.
 - 6f. EQS for total ammonia is as per Schedule 3, Part 1, Table 7 of of the above directions. EQS applies to river types 1, 2 and 4 and 6 (namely upland and low alkalinity). The EQS for a lowland and high alkalinity rivers (types 3, 5 and 7) is 600µg/l (0.6mg/l).

Additional information on the Metal Bioavailability Assessment Tool (M-BAT) is available at <http://www.wfduk.org/resources/rivers-lakes-metal-bioavailability-assessment-tool-m-bat>

7. Minimum reporting values listed at <https://www.gov.uk/government/publications/values-for-groundwater-risk-assessments/hazardous-substances-to-groundwater-minimum-reporting-values> (updated 13 January 2017; accessed 29 March 2017). Note target concentration for xylenes is 3 µg/l each for o-xylene and m/p xylene as it may not be possible to separate m- and p-xylene; 135 tcb, 124 tcb, 123 tcb each to 0.01 µg/l)
8. The Surface Waters (Abstraction for Drinking Water) (Classification) Regulations 1996 (as amended). SI 1996 / 3001
9. Council Directive on the Quality of Fresh Waters Needing Protection or Improvement in Order to Support Fish Life (Freshwater Fish Directive) (78/659/EEC)
10. WRc plc (2002), R&D Technical Report P45.
11. CL:AIRE, 2017. Petroleum Hydrocarbons in Groundwater: Guidance on assessing petroleum hydrocarbons using existing hydrogeological risk assessment methodologies. V1.1.
12. Drinking Water Inspectorate (London, UK). Environmental Information Request on MTBE in drinking water. Ref. DWI 1/10/18; dated 28 November 2006. Value is based on the odour threshold for MTBE, which is lower than a health-based guideline value
13. World Health Organisation (WHO), 2008. Petroleum products in drinking-water. Background document for development of WHO guidelines for drinking water quality. WHO/SDE/WSH/05.08/123. World Health Organisation, Geneva. [accessed 29 March 2017] http://www.who.int/water_sanitation_health/dwq/chemicals/petroleumproducts_2add_june2008.pdf

FLOW CHART TO ASSIST WITH SELECTION OF TARGET CONCENTRATIONS



TC = Target concentration

When leachate is being assessed the 'compliance point' is the groundwater body. Therefore dilution within the groundwater body may be applied with caution before comparing with the TC.

When directly assessing a receptor, e.g., a river, the appropriate TC should be selected.



APPENDIX O

GQRA DATA SCREENING TABLES – SOILS

Project name		Highover Farm, Hitchin		Notes		Dataset 1 - Agricultural Topsoil													
Project code		CV34 6AF																	
Client name		Gallagher Developments Group Ltd.																	
Address		Highover Farm																	
		Hitchin																	
		SG4 0QW																	
NGR		TL 20058 31175																	
Land use		Residential with home-grown produce																	
SOM		2.5%																	
GAC version		2019_00																	

										Lab sample ID	19/10711/1	19/10711/2	19/10711/3	19/10711/4	19/10711/5	19/10711/8	19/10711/10	19/10711/11	19/10711/12	19/10711/14
										Client sample ID	SA10	SA11	SA13	SA15	SA15	SA18	SA6	SA8	SA9	TP1
										Depth to top	0.15	0.15	0.2	0.15	0.4	0.2	0.2	0.2	0.15	0.15
										Depth to bottom										
										Date sampled	31/10/19	01/11/19	01/11/19	31/10/19	31/10/19	05/11/19	29/10/19	30/10/19	30/10/19	29/10/19
Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-detects												
Metals and Inorganics																				
Arsenic	mg/kg	37		22	4	26	26	0	4	8	10	7	6	12	7	9	8	5		
Cadmium	mg/kg	22		1.8	<0.5	26	25	1	<0.5	0.9	1.1	0.8	0.8	1.8	0.8	0.9	0.9	0.9		
Chromium	mg/kg	910	21	41	12	26	26	0	13	18	22	19	19	41	17	17	18	17		
Copper	mg/kg	2500		39	7	26	26	0	13	15	32	13	7	39	22	23	24	18		
Lead	mg/kg	200		48	9	26	26	0	18	27	48	20	9	34	28	28	28	26		
Mercury	mg/kg	39	0.6	1.17	<0.17	26	23	3	0.83	0.78	0.42	0.93	0.87	<0.17	0.98	0.83	0.84	0.87		
Nickel	mg/kg	130		39	11	26	26	0	11	14	18	16	16	39	17	15	16	16		
Selenium	mg/kg	258		2	<1	26	4	22	<1	<1	<1	<1	<1	2	<1	<1	<1	<1		
Zinc	mg/kg	3900		129	29	26	26	0	29	54	72	55	45	103	49	50	54	51		
Asbestos																				
Asbestos in soil						26	0	26	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD		
Petroleum Hydrocarbons																				
Ali >C5-C6	mg/kg	78			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Ali >C6-C8	mg/kg	230			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Ali >C8-C10	mg/kg	65			<1	26	0	26	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		
Ali >C10-C12	mg/kg	330	118		<1	26	0	26	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		
Ali >C12-C16	mg/kg	2400	59		<1	26	0	26	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		
Ali >C16-C21	mg/kg			2	<1	26	1	25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		
Ali >C21-C35	mg/kg			17	<1	26	24	2	3	6	6	2	<1	4	17	7	5	3		
Ali >C16-C35 calculated	mg/kg	92000	21	17	<1	26	24	2	3	6	6	2	<1	4	17	7	5	3		
Total Aliphatics	mg/kg			17	<1	26	24	2	3	6	6	2	<1	4	17	7	5	3		
Aro >C5-C7	mg/kg				<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Aro >C7-C8	mg/kg				<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Aro >C8-C10	mg/kg	80		1	<1	26	6	20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		
Aro >C10-C12	mg/kg	180			<1	26	0	26	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1		
Aro >C12-C16	mg/kg	330		2	<1	26	12	14	<1	<1	1	<1	<1	<1	1	<1	<1	<1		
Aro >C16-C21	mg/kg	540		4	<1	26	17	9	<1	1	3	<1	<1	<1	4	2	1	1		
Aro >C21-C35	mg/kg	1500		38	<1	26	25	1	7	11	38	3	<1	6	30	15	10	9		
Total Aromatics	mg/kg			43	<1	26	25	1	8	12	43	3	<1	6	34	17	11	10		
TPH (Ali & Aro)	mg/kg			52	<1	26	25	1	10	17	49	6	<1	10	52	24	15	14		
BTEX - Benzene	mg/kg	0.41			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
BTEX - Toluene	mg/kg	300			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
BTEX - Ethyl Benzene	mg/kg	110			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
BTEX - o Xylene	mg/kg	143			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
BTEX - m & p Xylene	mg/kg	133			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
MTBE	mg/kg	110			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Polycyclic aromatic hydrocarbons																				
Acenaphthene	mg/kg	540			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Acenaphthylene	mg/kg	440			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Anthracene	mg/kg	5500			<0.02	26	0	26	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		
Benzo(a)anthracene	mg/kg	11		0.08	<0.04	26	4	22	<0.04	<0.04	0.07	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04		
Benzo(a)pyrene	mg/kg	5		0.1	<0.04	26	7	19	<0.04	<0.04	0.08	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.06		
Benzo(b)fluoranthene	mg/kg	3.3		0.1	<0.05	26	5	21	<0.05	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		

Project name Project code Client name Address NGR Land use SOM GAC version	Highover Farm, Hitchin	
	CV34 6AF	
	Gallagher Developments Group Ltd.	
	Highover Farm Hitchin SG4 0QW	
	TL 20058 31175	
	Residential with home-grown produce	
	2.5%	
2019_00		

									Lab sample ID	19/10711/16	19/10711/18	19/10711/23	19/10711/25	19/10711/26	19/10711/28	19/10711/34	19/10711/6	19/10711/13	19/10711/15
									Client sample ID	TP14	TP15	TP2	TP22	TP23	TP24	TP8	SA16	TP03	TP10
									Depth to top	0.2	0.2	0.2	0.2	0.2	0.15	0.15	0.2	0.2	0.15
									Depth to bottom										
									Date sampled	31/10/19	04/11/19	29/10/19	05/11/19	04/11/19	31/10/19	30/10/19	05/11/19	28/10/19	30/10/19
Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-dete											
Metals and Inorganics																			
Arsenic	mg/kg	37		22		4	26	26	0	8	10	4	8	10	7	7	11	5	8
Cadmium	mg/kg	22		1.8	<0.5		26	25	1	0.9	0.9	0.8	0.9	1.1	1	0.9	1.6	0.7	1
Chromium	mg/kg	910	21	41		12	26	26	0	20	16	14	22	21	21	18	32	15	19
Copper	mg/kg	2500		39		7	26	26	0	14	18	17	10	18	16	22	36	13	19
Lead	mg/kg	200		48		9	26	26	0	25	32	23	12	30	24	29	42	17	25
Mercury	mg/kg	39	0.6	1.17	<0.17		26	23	3	0.62	1.08	0.92	0.6	0.28	0.77	0.73	0.51	1.02	0.29
Nickel	mg/kg	130		39		11	26	26	0	17	15	14	23	22	18	18	30	14	19
Selenium	mg/kg	258		2	<1		26	4	22	<1	<1	<1	<1	<1	<1	<1	1	1	<1
Zinc	mg/kg	3900		129		29	26	26	0	56	58	42	55	68	60	52	129	38	58
Asbestos																			
Asbestos in soil							26	0	26	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Petroleum Hydrocarbons																			
Ali >C5-C6	mg/kg	78			<0.01		26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ali >C6-C8	mg/kg	230			<0.01		26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ali >C8-C10	mg/kg	65			<1		26	0	26	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ali >C10-C12	mg/kg	330	118		<1		26	0	26	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ali >C12-C16	mg/kg	2400	59		<1		26	0	26	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ali >C16-C21	mg/kg			2	<1		26	1	25	<1	<1	<1	2	<1	<1	<1	<1	<1	<1
Ali >C21-C35	mg/kg			17	<1		26	24	2	<1		4	7	7	5	5	9	10	2
Ali >C16-C35 calculated	mg/kg	92000	21	17	<1		26	24	2	<1		4	7	9	5	5	9	10	2
Total Aliphatics	mg/kg			17	<1		26	24	2	<1		4	7	9	5	5	9	10	2
Aro >C5-C7	mg/kg				<0.01		26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aro >C7-C8	mg/kg				<0.01		26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aro >C8-C10	mg/kg	80		1	<1		26	6	20	<1	<1	<1	1	<1	<1	1	<1	<1	<1
Aro >C10-C12	mg/kg	180			<1		26	0	26	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aro >C12-C16	mg/kg	330		2	<1		26	12	14	<1	<1	1	1	1	1	1	1	<1	<1
Aro >C16-C21	mg/kg	540		4	<1		26	17	9	<1	<1	1	1	1	1	1	3	<1	<1
Aro >C21-C35	mg/kg	1500		38	<1		26	25	1	2	8	16	17	13	13	21	25	6	10
Total Aromatics	mg/kg			43	<1		26	25	1	2	8	18	21	16	15	26	29	6	10
TPH (Ali & Aro)	mg/kg			52	<1		26	25	1	2	12	25	30	20	20	35	39	8	16
BTEX - Benzene	mg/kg	0.41			<0.01		26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BTEX - Toluene	mg/kg	300			<0.01		26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BTEX - Ethyl Benzene	mg/kg	110			<0.01		26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BTEX - o Xylene	mg/kg	143			<0.01		26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BTEX - m & p Xylene	mg/kg	133			<0.01		26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MTBE	mg/kg	110			<0.01		26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Polycyclic aromatic hydrocarbons																			
Acenaphthene	mg/kg	540			<0.01		26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Acenaphthylene	mg/kg	440			<0.01		26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Anthracene	mg/kg	5500			<0.02		26	0	26	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(a)anthracene	mg/kg	11		0.08	<0.04		26	4	22	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.08	<0.04	<0.04
Benzo(a)pyrene	mg/kg	5		0.1	<0.04		26	7	19	<0.04	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	0.1	<0.04	<0.04
Benzo(b)fluoranthene	mg/kg	3.3		0.1	<0.05		26	5	21	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.1	<0.05	<0.05

Project name	Highover Farm, Hitchin															
Project code	CV34 6AF															
Client name	Gallagher Developments Group Ltd.															
Address	Highover Farm Hitchin SG4 0QW															
NGR	TL 20058 31175															
Land use	Residential with home-grown produce															
SOM	2.5%															
GAC version	2019_00															
										Lab sample ID	19/10711/20	19/10711/22	19/10711/29	19/10711/30	19/10711/31	19/10711/32
										Client sample ID	TP16	TP17	TP28	TP30	TP5	TP6
										Depth to top	0.2	0.15	0.2	0.2	0.15	0.2
										Depth to bottom						
										Date sampled	30/10/19	30/10/19	05/11/19	04/11/19	30/10/19	30/10/19
Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-dete								
Metals and Inorganics																
Arsenic	mg/kg	37		22	4	26	26	0	9	22	11	15	4	4		
Cadmium	mg/kg	22		1.8	<0.5	26	25	1	0.9	1.6	1.5	1.4	0.7	0.7		
Chromium	mg/kg	910	21	41	12	26	26	0	20	30	34	29	13	12		
Copper	mg/kg	2500		39	7	26	26	0	21	26	25	20	14	14		
Lead	mg/kg	200		48	9	26	26	0	34	35	29	33	21	21		
Mercury	mg/kg	39	0.6	1.17	<0.17	26	23	3	0.46	<0.17	<0.17	0.3	1.17	1.09		
Nickel	mg/kg	130		39	11	26	26	0	20	31	33	29	14	12		
Selenium	mg/kg	258		2	<1	26	4	22	<1	<1	1	<1	<1	<1		
Zinc	mg/kg	3900		129	29	26	26	0	66	95	92	80	41	37		
Asbestos																
Asbestos in soil						26	0	26	NAD	NAD	NAD	NAD	NAD	NAD		
Petroleum Hydrocarbons																
Ali >C5-C6	mg/kg	78			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Ali >C6-C8	mg/kg	230			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Ali >C8-C10	mg/kg	65			<1	26	0	26	<1	<1	<1	<1	<1	<1		
Ali >C10-C12	mg/kg	330	118		<1	26	0	26	<1	<1	<1	<1	<1	<1		
Ali >C12-C16	mg/kg	2400	59		<1	26	0	26	<1	<1	<1	<1	<1	<1		
Ali >C16-C21	mg/kg			2	<1	26	1	25	<1	<1	<1	<1	<1	<1		
Ali >C21-C35	mg/kg			17	<1	26	24	2	8	9	5	5	2	5		
Ali >C16-C35 calculated	mg/kg	92000	21	17	<1	26	24	2	8	9	5	5	2	5		
Total Aliphatics	mg/kg			17	<1	26	24	2	8	9	5	5	2	5		
Aro >C5-C7	mg/kg				<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Aro >C7-C8	mg/kg				<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Aro >C8-C10	mg/kg	80		1	<1	26	6	20	1	1	<1	1	<1	1		
Aro >C10-C12	mg/kg	180			<1	26	0	26	<1	<1	<1	<1	<1	<1		
Aro >C12-C16	mg/kg	330		2	<1	26	12	14	1	2	1	1	<1	<1		
Aro >C16-C21	mg/kg	540		4	<1	26	17	9	2	4	1	1	<1	1		
Aro >C21-C35	mg/kg	1500		38	<1	26	25	1	19	28	13	16	6	12		
Total Aromatics	mg/kg			43	<1	26	25	1	24	36	15	21	6	14		
TPH (Ali & Aro)	mg/kg			52	<1	26	25	1	32	45	20	25	8	19		
BTEX - Benzene	mg/kg	0.41			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
BTEX - Toluene	mg/kg	300			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
BTEX - Ethyl Benzene	mg/kg	110			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
BTEX - o Xylene	mg/kg	143			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
BTEX - m & p Xylene	mg/kg	133			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
MTBE	mg/kg	110			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Polycyclic aromatic hydrocarbons																
Acenaphthene	mg/kg	540			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Acenaphthylene	mg/kg	440			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
Anthracene	mg/kg	5500			<0.02	26	0	26	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		
Benzo(a)anthracene	mg/kg	11		0.08	<0.04	26	4	22	<0.04	0.07	<0.04	<0.04	0.05	<0.04		
Benzo(a)pyrene	mg/kg	5		0.1	<0.04	26	7	19	0.06	0.08	<0.04	<0.04	0.07	<0.04		
Benzo(b)fluoranthene	mg/kg	3.3		0.1	<0.05	26	5	21	0.06	0.09	<0.05	<0.05	0.07	<0.05		

Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-detects	Lab sample ID	19/10711/1	19/10711/2	19/10711/3	19/10711/4	19/10711/5	19/10711/8	19/10711/10	19/10711/11	19/10711/12	19/10711/14
									Client sample ID	SA10	SA11	SA13	SA15	SA15	SA18	SA6	SA8	SA9	TP1
									Depth to top	0.15	0.15	0.2	0.15	0.4	0.2	0.2	0.2	0.15	0.15
									Depth to bottom										
									Date sampled	31/10/19	01/11/19	01/11/19	31/10/19	31/10/19	05/11/19	29/10/19	30/10/19	30/10/19	29/10/19
Benzo(ghi)perylene	mg/kg		340		<0.05	26	0	26	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	mg/kg		92		<0.07	26	0	26	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07
Chrysene	mg/kg		22	0.12	<0.06	26	4	22	<0.06	<0.06		0.09	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
Dibenzo(ah)anthracene	mg/kg		0.28		<0.04	26	0	26	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Fluoranthene	mg/kg		560	0.18	<0.08	26	4	22	<0.08	<0.08		0.14	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	0.1
Fluorene	mg/kg		410		<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(123-cd)pyrene	mg/kg		36	0.07	<0.03	26	7	19	<0.03	<0.03		0.06	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.05
Naphthalene	mg/kg		30		<0.03	26	0	26	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Phenanthrene	mg/kg		220	0.07	<0.03	26	6	20	0.03	<0.03		0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.05
Pyrene	mg/kg		1240	0.17	<0.07	26	4	22	<0.07	<0.07		0.13	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	0.09
Total PAH-16MS	mg/kg			0.89	<0.08	26	7	19	<0.08	<0.08		0.7	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	0.35
Other analytes																			
% Stones >10mm	% w/w			26.8	<0.1	26	15	11	26.8	4.2	2.8	1.5	<0.1	<0.1	<0.1		3.8	5	3.3
Aldrin	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Alkalinity (total) (leachable) Colorimetry	mg/l Ca CO3			99	77	10	10	0	93	85							93		91
alpha-Hexachlorocyclohexane (HCH)	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Atrazine	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Azinphos-ethyl	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Azinphos-methyl	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
beta-Hexachlorocyclohexane (HCH)	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Carbophenothion	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Chlorfenvinphos	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Chlorothalonil	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Chlorpyrifos	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Chlorpyrifos-methyl	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
cis-Chlordane (Alpha)	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Coumaphos	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
delta-Hexachlorocyclohexane (HCH)	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Demeton-O	mg/kg				<0.50	10	0	10					<0.50		<0.50			<0.50	<0.50
Demeton-S	mg/kg				<0.50	10	0	10					<0.50		<0.50			<0.50	<0.50
Diazinon (Dimpylate)	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Dichlobenil	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Dichlorvos	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Dieldrin	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Dimethoate	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Disulfoton	mg/kg				<0.10	10	0	10					<0.10		<0.10			<0.10	<0.10
Endosulphan I (Alpha)	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Endosulphan II (Beta)	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Endosulphan Sulphate	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Endrin	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Endrin Aldehyde	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Endrin Ketone	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Ethion	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Etrimphos	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Fenitrothion	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Fensulphothion	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Fenthion	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
gamma-Hexachlorocyclohexane (HCH)	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Heptachlor	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Heptachlor epoxide	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Hexachlorobenzene (HCB)	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Isodrin	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Malathion	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Methyl Parathion	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Mevinphos	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
o,p-DDD (2,4)	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01

Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-dete	Lab sample ID	19/10711/16	19/10711/18	19/10711/23	19/10711/25	19/10711/26	19/10711/28	19/10711/34	19/10711/6	19/10711/13	19/10711/15	
									Client sample ID	TP14	TP15	TP2	TP22	TP23	TP24	TP8	SA16	TP03	TP10	
									Depth to top	0.2	0.2	0.2	0.2	0.2	0.15	0.15	0.2	0.2	0.15	
									Depth to bottom											
									Date sampled	31/10/19	04/11/19	29/10/19	05/11/19	04/11/19	31/10/19	30/10/19	05/11/19	28/10/19	30/10/19	
Benzo(ghi)perylene	mg/kg	340			<0.05	26	0	26	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Benzo(k)fluoranthene	mg/kg	92			<0.07	26	0	26	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	
Chrysene	mg/kg	22		0.12	<0.06	26	4	22	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06		0.12	<0.06	<0.06	
Dibenzo(ah)anthracene	mg/kg	0.28			<0.04	26	0	26	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	
Fluoranthene	mg/kg	560		0.18	<0.08	26	4	22	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08		0.18	<0.08	<0.08	
Fluorene	mg/kg	410			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Indeno(123-cd)pyrene	mg/kg	36		0.07	<0.03	26	7	19	<0.03		0.05	<0.03	<0.03	<0.03	<0.03		0.07	<0.03	<0.03	
Naphthalene	mg/kg	30			<0.03	26	0	26	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	
Phenanthrene	mg/kg	220		0.07	<0.03	26	6	20	<0.03		0.04	<0.03	<0.03	<0.03	<0.03		0.07	<0.03	<0.03	
Pyrene	mg/kg	1240		0.17	<0.07	26	4	22	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07		0.17	<0.07	<0.07	
Total PAH-16MS	mg/kg			0.89	<0.08	26	7	19	<0.08		0.14	<0.08	<0.08	<0.08	<0.08		0.89	<0.08	<0.08	
Other analytes																				
% Stones >10mm	% w/w			26.8	<0.1	26	15	11	0.7	<0.1	<0.1		5.1	0.9	<0.1		1.7	<0.1	<0.1	6.3
Aldrin	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Alkalinity (total) (leachable) Colorimetry	mg/l Ca CO3			99	77	10	10	0	80			88			77	99			77	
alpha-Hexachlorocyclohexane (HCH)	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Atrazine	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Azinphos-ethyl	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Azinphos-methyl	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
beta-Hexachlorocyclohexane (HCH)	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Carbophenothion	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Chlorfenvinphos	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Chlorothalonil	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Chlorpyrifos	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Chlorpyrifos-methyl	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
cis-Chlordane (Alpha)	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Coumaphos	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
delta-Hexachlorocyclohexane (HCH)	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Demeton-O	mg/kg				<0.50	10	0	10		<0.50			<0.50			<0.50				
Demeton-S	mg/kg				<0.50	10	0	10		<0.50			<0.50			<0.50				
Diazinon (Dimpylate)	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Dichlobenil	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Dichlorvos	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Dieldrin	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Dimethoate	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Disulfoton	mg/kg				<0.10	10	0	10		<0.10			<0.10			<0.10				
Endosulphan I (Alpha)	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Endosulphan II (Beta)	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Endosulphan Sulphate	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Endrin	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Endrin Aldehyde	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Endrin Ketone	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Ethion	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Etrimphos	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Fenitrothion	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Fensulphothion	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Fenthion	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
gamma-Hexachlorocyclohexane (HCH)	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Heptachlor	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Heptachlor epoxide	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Hexachlorobenzene (HCB)	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Isodrin	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Malathion	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Methyl Parathion	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
Mevinphos	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				
o,p-DDD (2,4)	mg/kg				<0.01	10	0	10		<0.01			<0.01			<0.01				

									Lab sample ID	19/10711/20	19/10711/22	19/10711/29	19/10711/30	19/10711/31	19/10711/32
									Client sample ID	TP16	TP17	TP28	TP30	TP5	TP6
									Depth to top	0.2	0.15	0.2	0.2	0.15	0.2
									Depth to bottom						
									Date sampled	30/10/19	30/10/19	05/11/19	04/11/19	30/10/19	30/10/19
Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-dete							
Benzo(ghi)perylene	mg/kg	340			<0.05	26	0	26	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	mg/kg	92			<0.07	26	0	26	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07
Chrysene	mg/kg	22		0.12	<0.06	26	4	22	0.07	0.11	<0.06	<0.06	<0.06	<0.06	<0.06
Dibenzo(ah)anthracene	mg/kg	0.28			<0.04	26	0	26	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Fluoranthene	mg/kg	560		0.18	<0.08	26	4	22	<0.08	0.17	<0.08	<0.08	<0.08	<0.08	<0.08
Fluorene	mg/kg	410			<0.01	26	0	26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(123-cd)pyrene	mg/kg	36		0.07	<0.03	26	7	19	0.04	0.05	<0.03	<0.03		0.04	<0.03
Naphthalene	mg/kg	30			<0.03	26	0	26	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Phenanthrene	mg/kg	220		0.07	<0.03	26	6	20	<0.03	0.07	<0.03	<0.03	<0.03	<0.03	<0.03
Pyrene	mg/kg	1240		0.17	<0.07	26	4	22	<0.07	0.15	<0.07	<0.07	<0.07	<0.07	<0.07
Total PAH-16MS	mg/kg			0.89	<0.08	26	7	19	0.23	0.79	<0.08	<0.08		0.23	<0.08
Other analytes															
% Stones >10mm	% w/w			26.8	<0.1	26	15	11	1.4	1.7	<0.1	<0.1	<0.1		3.9
Aldrin	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Alkalinity (total) (leachable) Colorimetry	mg/l Ca CO3			99	77	10	10	0							87
alpha-Hexachlorocyclohexane (HCH)	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Atrazine	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Azinphos-ethyl	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Azinphos-methyl	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
beta-Hexachlorocyclohexane (HCH)	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Carbophenothion	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Chlorfenvinphos	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Chlorothalonil	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Chlorpyrifos	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Chlorpyrifos-methyl	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
cis-Chlordane (Alpha)	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Coumaphos	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
delta-Hexachlorocyclohexane (HCH)	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Demeton-O	mg/kg				<0.50	10	0	10		<0.50			<0.50	<0.50	
Demeton-S	mg/kg				<0.50	10	0	10		<0.50			<0.50	<0.50	
Diazinon (Dimpylate)	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Dichlobenil	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Dichlorvos	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Dieldrin	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Dimethoate	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Disulfoton	mg/kg				<0.10	10	0	10		<0.10			<0.10	<0.10	
Endosulphan I (Alpha)	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Endosulphan II (Beta)	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Endosulphan Sulphate	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Endrin	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Endrin Aldehyde	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Endrin Ketone	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Ethion	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Etrimphos	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Fenitrothion	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Fensulphothion	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Fenthion	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
gamma-Hexachlorocyclohexane (HCH)	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Heptachlor	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Heptachlor epoxide	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Hexachlorobenzene (HCB)	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Isodrin	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Malathion	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Methyl Parathion	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
Mevinphos	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	
o,p-DDD (2,4)	mg/kg				<0.01	10	0	10		<0.01			<0.01	<0.01	

Lab sample ID										19/10711/1	19/10711/2	19/10711/3	19/10711/4	19/10711/5	19/10711/8	19/10711/10	19/10711/11	19/10711/12	19/10711/14
Client sample ID										SA10	SA11	SA13	SA15	SA15	SA18	SA6	SA8	SA9	TP1
Depth to top										0.15	0.15	0.2	0.15	0.4	0.2	0.2	0.2	0.15	0.15
Depth to bottom																			
Date sampled										31/10/19	01/11/19	01/11/19	31/10/19	31/10/19	05/11/19	29/10/19	30/10/19	30/10/19	29/10/19
Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-detects											
o,p-DDE (2,4)	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
o,p-DDT (2,4)	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
o,p-Methoxychlor	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Organic matter	% w/w			8.7	1.3	26	26	0	2.1	2.8	4	2.7	1.4	4.5	3.9	3.2	3.2	3.2	3.2
p,p-DDD (4,4)	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
p,p-DDE (4,4)	mg/kg			0.02	<0.01	10	2	8					<0.01		<0.01			<0.01	0.01
p,p-DDT (4,4)	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
p,p-Methoxychlor	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Parathion (ethyl)	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Pendimethalin	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Permethrin I (cis)	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Permethrin II (trans)	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
pH	pH			8.3	7.57	26	26	0	8.13	8.06	8.16	8.14	8.3	7.64	8.04	8.08	8.05	8.15	8.15
pH (leachable)	pH			7.92	7.28	10	10	0	7.75	7.79							7.84		7.86
Phorate	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Phosalone	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Pirimiphos-methyl	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Propetamphos	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Prothiofos (Tokuthion)	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Quintozene (PCNB)	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Simazine	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Sulphate (water sol 2:1)	g/l			0.25	<0.01	10	1	9					<0.01		<0.01			<0.01	<0.01
Sulprofos	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Tecnazene	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Telodrin	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
trans-Chlordane (Gamma)	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Triadimefon	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Triallate	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Triazophos	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Trichloronate	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01
Trifluralin	mg/kg				<0.01	10	0	10					<0.01		<0.01			<0.01	<0.01

									Lab sample ID	19/10711/16	19/10711/18	19/10711/23	19/10711/25	19/10711/26	19/10711/28	19/10711/34	19/10711/6	19/10711/13	19/10711/15
									Client sample ID	TP14	TP15	TP2	TP22	TP23	TP24	TP8	SA16	TP03	TP10
									Depth to top	0.2	0.2	0.2	0.2	0.2	0.15	0.15	0.2	0.2	0.15
									Depth to bottom										
									Date sampled	31/10/19	04/11/19	29/10/19	05/11/19	04/11/19	31/10/19	30/10/19	05/11/19	28/10/19	30/10/19
Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-dete											
o,p-DDE (2,4)	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
o,p-DDT (2,4)	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
o,p-Methoxychlor	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
Organic matter	% w/w			8.7	1.3	26	26	0	2.9	3.2	3.7	1.3	3.9	3.6	3.3	8.7	2.4	3.2	
p,p-DDD (4,4)	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
p,p-DDE (4,4)	mg/kg			0.02	<0.01	10	2	8		<0.01		<0.01			0.02				
p,p-DDT (4,4)	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
p,p-Methoxychlor	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
Parathion (ethyl)	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
Pendimethalin	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
Permethrin I (cis)	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
Permethrin II (trans)	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
pH	pH			8.3	7.57	26	26	0	8.19	8.2	8.24	8.08	8.14	8.07	8.1	7.57	8.17	8.13	
pH (leachable)	pH			7.92	7.28	10	10	0	7.87		7.92			7.88	7.28			7.84	
Phorate	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
Phosalone	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
Pirimiphos-methyl	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
Propetamphos	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
Prothiofos (Tokuthion)	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
Quintozene (PCNB)	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
Simazine	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
Sulphate (water sol 2:1)	g/l			0.25	<0.01	10	1	9		<0.01		0.25			<0.01				
Sulprofos	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
Tecnazene	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
Telodrin	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
trans-Chlordane (Gamma)	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
Triadimefon	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
Triallate	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
Triazophos	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
Trichloronate	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				
Trifluralin	mg/kg				<0.01	10	0	10		<0.01		<0.01			<0.01				

										Lab sample ID	19/10711/20	19/10711/22	19/10711/29	19/10711/30	19/10711/31	19/10711/32
										Client sample ID	TP16	TP17	TP28	TP30	TP5	TP6
										Depth to top	0.2	0.15	0.2	0.2	0.15	0.2
										Depth to bottom						
										Date sampled	30/10/19	30/10/19	05/11/19	04/11/19	30/10/19	30/10/19
Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-dete								
o,p-DDE (2,4)	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
o,p-DDT (2,4)	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
o,p-Methoxychlor	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
Organic matter	% w/w			8.7	1.3	26	26	0	3.9	3.3	6.3	3.6	2.6	3.4		
p,p-DDD (4,4)	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
p,p-DDE (4,4)	mg/kg			0.02	<0.01	10	2	8			<0.01			<0.01	<0.01	
p,p-DDT (4,4)	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
p,p-Methoxychlor	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
Parathion (ethyl)	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
Pendimethalin	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
Permethrin I (cis)	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
Permethrin II (trans)	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
pH	pH			8.3	7.57	26	26	0	8.16	8.11	7.89	8.01	8.18	8.11		
pH (leachable)	pH			7.92	7.28	10	10	0							7.88	
Phorate	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
Phosalone	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
Pirimiphos-methyl	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
Propetamphos	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
Prothiofos (Tokuthion)	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
Quintozene (PCNB)	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
Simazine	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
Sulphate (water sol 2:1)	g/l			0.25	<0.01	10	1	9			<0.01			<0.01	<0.01	
Sulprofos	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
Tecnazene	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
Telodrin	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
trans-Chlordane (Gamma)	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
Triadimefon	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
Triallate	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
Triazophos	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
Trichloronate	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	
Trifluralin	mg/kg				<0.01	10	0	10			<0.01			<0.01	<0.01	

Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-detects	# exceeding		Max sample (ID and depth)
									GAC	T1	
Metals and Inorganics											
Chromium	mg/kg	910	21	41	12	26	26	0		9	SA18 - 0.2
Mercury	mg/kg	39	0.6	1.17	<0.17	26	23	3		17	TP5 - 0.15

Project name	Highover Farm, Hitchin	Notes	Dataset 2 - Lowestoft Formation	
Project code	CV34 6AF			
Client name	Gallagher Developments Group Ltd.			
Address	Highover Farm Hitchin SG4 0QW			
NGR	TL 20058 31175			
Land use	Residential with home-grown produce			
SOM	1%			
GAC version	2019_00			

										Lab sample ID	19/10711/7	19/10711/9	19/10711/27						
										Client sample ID	SA16	SA18	TP23						
										Depth to top	0.5	0.5	0.5						
										Depth to bottom									
										Date sampled	05/11/19	05/11/19	04/11/19						
Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-detects											
Metals and Inorganics																			
Arsenic	mg/kg	37		14	5	3	3	0	14	11	5								
Cadmium	mg/kg	22		1.6	0.7	3	3	0	1.4	1.6	0.7								
Chromium	mg/kg	910	21	35	14	3	3	0	33	35	14								
Copper	mg/kg	2500		18	7	3	3	0	16	18	7								
Lead	mg/kg	200		20	10	3	3	0	20	20	10								
Mercury	mg/kg	39	0.2	1.08	<0.17	3	2	1	0.41	<0.17	1.08								
Nickel	mg/kg	130		37	14	3	3	0	37	37	14								
Selenium	mg/kg	258			<1	3	0	3	<1	<1	<1								
Zinc	mg/kg	3900		85	34	3	3	0	85	80	34								
Asbestos																			
Asbestos in soil						3	0	3	NAD	NAD	NAD								
Petroleum Hydrocarbons																			
Ali >C5-C6	mg/kg	42			<0.01	3	0	3	<0.01	<0.01	<0.01								
Ali >C6-C8	mg/kg	100			<0.01	3	0	3	<0.01	<0.01	<0.01								
Ali >C8-C10	mg/kg	27			<1	3	0	3	<1	<1	<1								
Ali >C10-C12	mg/kg	130	48		<1	3	0	3	<1	<1	<1								
Ali >C12-C16	mg/kg	1100	24		<1	3	0	3	<1	<1	<1								
Ali >C16-C21	mg/kg				<1	3	0	3	<1	<1	<1								
Ali >C21-C35	mg/kg			2	<1	3	1	2	2	<1	<1								
Ali >C16-C35 calculated	mg/kg	65000	8		2	<1	3	1	2	<1	<1								
Total Aliphatics	mg/kg				2	<1	3	1	2	<1	<1								
Aro >C5-C7	mg/kg				<0.01	3	0	3	<0.01	<0.01	<0.01								
Aro >C7-C8	mg/kg				<0.01	3	0	3	<0.01	<0.01	<0.01								
Aro >C8-C10	mg/kg	30			<1	3	0	3	<1	<1	<1								
Aro >C10-C12	mg/kg	80			<1	3	0	3	<1	<1	<1								
Aro >C12-C16	mg/kg	140			<1	3	0	3	<1	<1	<1								
Aro >C16-C21	mg/kg	260			<1	3	0	3	<1	<1	<1								
Aro >C21-C35	mg/kg	1100		3	<1	3	2	1	3	2	<1								
Total Aromatics	mg/kg			3	<1	3	2	1	3	2	<1								
TPH (Ali & Aro)	mg/kg			6	<1	3	2	1	6	2	<1								
BTEX - Benzene	mg/kg	0.2			<0.01	3	0	3	<0.01	<0.01	<0.01								
BTEX - Toluene	mg/kg	130			<0.01	3	0	3	<0.01	<0.01	<0.01								
BTEX - Ethyl Benzene	mg/kg	50			<0.01	3	0	3	<0.01	<0.01	<0.01								
BTEX - o Xylene	mg/kg	61			<0.01	3	0	3	<0.01	<0.01	<0.01								
BTEX - m & p Xylene	mg/kg	57			<0.01	3	0	3	<0.01	<0.01	<0.01								
MTBE	mg/kg	60			<0.01	3	0	3	<0.01	<0.01	<0.01								
Polycyclic aromatic hydrocarbons																			
Acenaphthene	mg/kg	230			<0.01	3	0	3	<0.01	<0.01	<0.01								
Acenaphthylene	mg/kg	180			<0.01	3	0	3	<0.01	<0.01	<0.01								
Anthracene	mg/kg	2400			<0.02	3	0	3	<0.02	<0.02	<0.02								
Benzo(a)anthracene	mg/kg	7			<0.04	3	0	3	<0.04	<0.04	<0.04								
Benzo(a)pyrene	mg/kg	5			<0.04	3	0	3	<0.04	<0.04	<0.04								
Benzo(b)fluoranthene	mg/kg	2.6			<0.05	3	0	3	<0.05	<0.05	<0.05								

										Lab sample ID	19/10711/7	19/10711/9	19/10711/27						
										Client sample ID	SA16	SA18	TP23						
										Depth to top	0.5	0.5	0.5						
										Depth to bottom									
										Date sampled	05/11/19	05/11/19	04/11/19						
Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-detects											
Benzo(ghi)perylene	mg/kg	310			<0.05	3	0	3	<0.05	<0.05	<0.05								
Benzo(k)fluoranthene	mg/kg	77			<0.07	3	0	3	<0.07	<0.07	<0.07								
Chrysene	mg/kg	15			<0.06	3	0	3	<0.06	<0.06	<0.06								
Dibenzo(ah)anthracene	mg/kg	0.24			<0.04	3	0	3	<0.04	<0.04	<0.04								
Fluoranthene	mg/kg	290			<0.08	3	0	3	<0.08	<0.08	<0.08								
Fluorene	mg/kg	170			<0.01	3	0	3	<0.01	<0.01	<0.01								
Indeno(123-cd)pyrene	mg/kg	27			<0.03	3	0	3	<0.03	<0.03	<0.03								
Naphthalene	mg/kg	13			<0.03	3	0	3	<0.03	<0.03	<0.03								
Phenanthrene	mg/kg	100			<0.03	3	0	3	<0.03	<0.03	<0.03								
Pyrene	mg/kg	620			<0.07	3	0	3	<0.07	<0.07	<0.07								
Total PAH-16MS	mg/kg				<0.08	3	0	3	<0.08	<0.08	<0.08								
Other analytes																			
% Stones >10mm	% w/w			1.5	<0.1	3	1	2	<0.1	1.5	<0.1								
Aldrin	mg/kg					0	0	0											
Alkalinity (total) (leachable) Colorimetry	mg/l Ca CO3					0	0	0											
alpha-Hexachlorocyclohexane (HCH)	mg/kg					0	0	0											
Atrazine	mg/kg					0	0	0											
Azinphos-ethyl	mg/kg					0	0	0											
Azinphos-methyl	mg/kg					0	0	0											
beta-Hexachlorocyclohexane (HCH)	mg/kg					0	0	0											
Carbophenothion	mg/kg					0	0	0											
Chlorfenvinphos	mg/kg					0	0	0											
Chlorothalonil	mg/kg					0	0	0											
Chlorpyrifos	mg/kg					0	0	0											
Chlorpyrifos-methyl	mg/kg					0	0	0											
cis-Chlordane (Alpha)	mg/kg					0	0	0											
Coumaphos	mg/kg					0	0	0											
delta-Hexachlorocyclohexane (HCH)	mg/kg					0	0	0											
Demeton-O	mg/kg					0	0	0											
Demeton-S	mg/kg					0	0	0											
Diazinon (Dimpylate)	mg/kg					0	0	0											
Dichlobenil	mg/kg					0	0	0											
Dichlorvos	mg/kg					0	0	0											
Dieldrin	mg/kg					0	0	0											
Dimethoate	mg/kg					0	0	0											
Disulfoton	mg/kg					0	0	0											
Endosulphan I (Alpha)	mg/kg					0	0	0											
Endosulphan II (Beta)	mg/kg					0	0	0											
Endosulphan Sulphate	mg/kg					0	0	0											
Endrin	mg/kg					0	0	0											
Endrin Aldehyde	mg/kg					0	0	0											
Endrin Ketone	mg/kg					0	0	0											
Ethion	mg/kg					0	0	0											
Etrimphos	mg/kg					0	0	0											
Fenitrothion	mg/kg					0	0	0											
Fensulphothion	mg/kg					0	0	0											
Fenthion	mg/kg					0	0	0											
gamma-Hexachlorocyclohexane (HCH)	mg/kg					0	0	0											
Heptachlor	mg/kg					0	0	0											
Heptachlor epoxide	mg/kg					0	0	0											
Hexachlorobenzene (HCB)	mg/kg					0	0	0											
Isodrin	mg/kg					0	0	0											
Malathion	mg/kg					0	0	0											
Methyl Parathion	mg/kg					0	0	0											
Mevinphos	mg/kg					0	0	0											
o,p-DDD (2,4)	mg/kg					0	0	0											

										Lab sample ID	19/10711/7	19/10711/9	19/10711/27						
										Client sample ID	SA16	SA18	TP23						
										Depth to top	0.5	0.5	0.5						
										Depth to bottom									
										Date sampled	05/11/19	05/11/19	04/11/19						
Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-detects											
o,p-DDE (2,4)	mg/kg					0	0	0											
o,p-DDT (2,4)	mg/kg					0	0	0											
o,p-Methoxychlor	mg/kg					0	0	0											
Organic matter	% w/w			1.9	1.2	3	3	0	1.9	1.9	1.2								
p,p-DDD (4,4)	mg/kg					0	0	0											
p,p-DDE (4,4)	mg/kg					0	0	0											
p,p-DDT (4,4)	mg/kg					0	0	0											
p,p-Methoxychlor	mg/kg					0	0	0											
Parathion (ethyl)	mg/kg					0	0	0											
Pendimethalin	mg/kg					0	0	0											
Permethrin I (cis)	mg/kg					0	0	0											
Permethrin II (trans)	mg/kg					0	0	0											
pH	pH			8.26	8.11	3	3	0	8.26	8.11	8.2								
pH (leachable)	pH					0	0	0											
Phorate	mg/kg					0	0	0											
Phosalone	mg/kg					0	0	0											
Pirimiphos-methyl	mg/kg					0	0	0											
Propetamphos	mg/kg					0	0	0											
Prothiofos (Tokuthion)	mg/kg					0	0	0											
Quintozene (PCNB)	mg/kg					0	0	0											
Simazine	mg/kg					0	0	0											
Sulphate (water sol 2:1)	g/l					0	0	0											
Sulprofos	mg/kg					0	0	0											
Tecnazene	mg/kg					0	0	0											
Telodrin	mg/kg					0	0	0											
trans-Chlordane (Gamma)	mg/kg					0	0	0											
Triadimefon	mg/kg					0	0	0											
Triallate	mg/kg					0	0	0											
Triazophos	mg/kg					0	0	0											
Trichloronate	mg/kg					0	0	0											
Trifluralin	mg/kg					0	0	0											

Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-detects	# exceeding		Max sample (ID and depth)
									GAC	T1	
Metals and Inorganics											
Chromium	mg/kg	910	21	35	14	3	3	0		2	SA18 - 0.5
Mercury	mg/kg	39	0.2	1.08	<0.17	3	2	1		2	TP23 - 0.5

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									Lab sample ID	19/10711/35	19/10711/33	19/10711/24	19/10711/21	19/10711/19	19/10711/17				
									Client sample ID	TP8	TP6	TP2	TP16	TP15	TP14				
									Depth to top	0.4	0.5	0.45	0.5	0.5	0.5				
									Depth to bottom										
									Date sampled	30/10/19	30/10/19	29/10/19	30/10/19	04/11/19	31/10/19				
Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-detects											
Benzo(ghi)perylene	mg/kg	310			<0.05	6	0	6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05				
Benzo(k)fluoranthene	mg/kg	77			<0.07	6	0	6	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07				
Chrysene	mg/kg	15			<0.06	6	0	6	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06				
Dibenzo(ah)anthracene	mg/kg	0.24			<0.04	6	0	6	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04				
Fluoranthene	mg/kg	290			<0.08	6	0	6	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08				
Fluorene	mg/kg	170			<0.01	6	0	6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01				
Indeno(123-cd)pyrene	mg/kg	27			<0.03	6	0	6	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03				
Naphthalene	mg/kg	13			<0.03	6	0	6	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03				
Phenanthrene	mg/kg	100			<0.03	6	0	6	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03				
Pyrene	mg/kg	620			<0.07	6	0	6	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07				
Total PAH-16MS	mg/kg				<0.08	6	0	6	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08				
Other analytes																			
% Stones >10mm	% w/w			4.1	<0.1	6	1	5	4.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1				
Aldrin	mg/kg					0	0	0											
Alkalinity (total) (leachable) Colorimetry	mg/l Ca CO3					0	0	0											
alpha-Hexachlorocyclohexane (HCH)	mg/kg					0	0	0											
Atrazine	mg/kg					0	0	0											
Azinphos-ethyl	mg/kg					0	0	0											
Azinphos-methyl	mg/kg					0	0	0											
beta-Hexachlorocyclohexane (HCH)	mg/kg					0	0	0											
Carbophenothion	mg/kg					0	0	0											
Chlorfenvinphos	mg/kg					0	0	0											
Chlorothalonil	mg/kg					0	0	0											
Chlorpyrifos	mg/kg					0	0	0											
Chlorpyrifos-methyl	mg/kg					0	0	0											
cis-Chlordane (Alpha)	mg/kg					0	0	0											
Coumaphos	mg/kg					0	0	0											
delta-Hexachlorocyclohexane (HCH)	mg/kg					0	0	0											
Demeton-O	mg/kg					0	0	0											
Demeton-S	mg/kg					0	0	0											
Diazinon (Dimpylate)	mg/kg					0	0	0											
Dichlobenil	mg/kg					0	0	0											
Dichlorvos	mg/kg					0	0	0											
Dieldrin	mg/kg					0	0	0											
Dimethoate	mg/kg					0	0	0											
Disulfoton	mg/kg					0	0	0											
Endosulphan I (Alpha)	mg/kg					0	0	0											
Endosulphan II (Beta)	mg/kg					0	0	0											
Endosulphan Sulphate	mg/kg					0	0	0											
Endrin	mg/kg					0	0	0											
Endrin Aldehyde	mg/kg					0	0	0											
Endrin Ketone	mg/kg					0	0	0											
Ethion	mg/kg					0	0	0											
Etrimphos	mg/kg					0	0	0											
Fenitrothion	mg/kg					0	0	0											
Fensulphothion	mg/kg					0	0	0											
Fenthion	mg/kg					0	0	0											
gamma-Hexachlorocyclohexane (HCH)	mg/kg					0	0	0											
Heptachlor	mg/kg					0	0	0											
Heptachlor epoxide	mg/kg					0	0	0											
Hexachlorobenzene (HCB)	mg/kg					0	0	0											
Isodrin	mg/kg					0	0	0											
Malathion	mg/kg					0	0	0											
Methyl Parathion	mg/kg					0	0	0											
Mevinphos	mg/kg					0	0	0											
o,p-DDD (2,4)	mg/kg					0	0	0											

										Lab sample ID	19/10711/35	19/10711/33	19/10711/24	19/10711/21	19/10711/19	19/10711/17				
										Client sample ID	TP8	TP6	TP2	TP16	TP15	TP14				
										Depth to top	0.4	0.5	0.45	0.5	0.5	0.5				
										Depth to bottom										
										Date sampled	30/10/19	30/10/19	29/10/19	30/10/19	04/11/19	31/10/19				
Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-detects												
o,p-DDE (2,4)	mg/kg					0	0	0												
o,p-DDT (2,4)	mg/kg					0	0	0												
o,p-Methoxychlor	mg/kg					0	0	0												
Organic matter	% w/w			6.8	1.3	6	6	0	2.9	1.4	6.8	1.3	5.2	2.3						
p,p-DDD (4,4)	mg/kg					0	0	0												
p,p-DDE (4,4)	mg/kg					0	0	0												
p,p-DDT (4,4)	mg/kg					0	0	0												
p,p-Methoxychlor	mg/kg					0	0	0												
Parathion (ethyl)	mg/kg					0	0	0												
Pendimethalin	mg/kg					0	0	0												
Permethrin I (cis)	mg/kg					0	0	0												
Permethrin II (trans)	mg/kg					0	0	0												
pH	pH			8.59	8.17	6	6	0	8.17	8.31	8.59	8.27	8.41	8.49						
pH (leachable)	pH					0	0	0												
Phorate	mg/kg					0	0	0												
Phosalone	mg/kg					0	0	0												
Pirimiphos-methyl	mg/kg					0	0	0												
Propetamphos	mg/kg					0	0	0												
Prothiofos (Tokuthion)	mg/kg					0	0	0												
Quintozene (PCNB)	mg/kg					0	0	0												
Simazine	mg/kg					0	0	0												
Sulphate (water sol 2:1)	g/l					0	0	0												
Sulprofos	mg/kg					0	0	0												
Tecnazene	mg/kg					0	0	0												
Telodrin	mg/kg					0	0	0												
trans-Chlordane (Gamma)	mg/kg					0	0	0												
Triadimefon	mg/kg					0	0	0												
Triallate	mg/kg					0	0	0												
Triazophos	mg/kg					0	0	0												
Trichloronate	mg/kg					0	0	0												
Trifluralin	mg/kg					0	0	0												

Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-detects	# exceeding		Max sample (ID and depth)
									GAC	T1	
Metals and Inorganics											
Mercury	mg/kg	39	0.2	1.56	0.88	6	6	0		6	TP2 - 0.45

APPENDIX P

GQRA DATA SCREENING TABLES –

LEACHATE

Project name	Highover Farm, Hitchin	Notes	
Project code	340110		
Client name	Gallagher Developments Group Ltd.		
Address			
NGR			
Output type	Interpretive Controlled Waters		
Scenario	EQS freshwater, England, Wales and Northern Ireland		
GAC version	Rev14		

									Lab sample ID	19/10711/11	19/10711/1	19/10711/2	19/10711/14	19/10711/23	19/10711/32	19/10711/34	19/10711/15	19/10711/16	19/10711/28
									Client sample ID	SA8	SA10	SA11	TP1	TP2	TP6	TP8	TP10	TP14	TP24
									Depth to top	0.2	0.15	0.15	0.15	0.2	0.2	0.15	0.15	0.2	0.15
									Depth to bottom										
									Date sampled	30/10/2019	31/10/2019	01/11/2019	29/10/2019	29/10/2019	30/10/2019	30/10/2019	30/10/2019	31/10/2019	31/10/2019
Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-detects											
Metals and Inorganics (leachable)																			
Alkalinity (total) (leachable) Colorimetry	mg/l Ca CO3					10			93	93	85	91	88	87	99	77	80	77	
Arsenic (leachable)	µg/l	50		1	<1	10	3	7	1	1	<1	<1	<1	<1	1	<1	<1	<1	<1
Cadmium (leachable)	µg/l	0.25	0.08	<1	<1	10	0	10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium (leachable)	µg/l	8.1	3.4	<1	<1	10	0	10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Copper (leachable)	µg/l	1		7	4	10	10	0	7	6	6	6	5	6	7	6	4	6	6
Lead (leachable)	µg/l	1.2		2	<1	10	7	3	1	2	2	<1	<1	<1	1	1	1	1	1
Mercury (leachable)	µg/l	0.07		<0.1	<0.1	10	0	10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel (leachable)	µg/l	4		2	<1	10	7	3	1	1	1	<1	<1	2	2	1	<1	1	1
pH (leachable)	pH					10			7.84	7.75	7.79	7.86	7.92	7.88	7.28	7.84	7.87	7.88	
Selenium (leachable)	µg/l			<1	<1	10	0	10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Zinc (leachable)	µg/l	10.9		7	3	10	10	0	6	4	5	4	4	7	5	3	5	5	5
Methods																			
Leachate Prep BS EN 12457-1 (2:1) (1 no)						10			*	*	*	*	*	*	*	*	*	*	*

Notes for GQRA (water) Screening Tool Output	
Details of the GAC used in the GQRA and the GAC version are displayed at the top of the output screening sheet.	
Full details of the GAC derivation are included in a separate appendix document	
Any laboratory results that are shown as appended (e.g. Tentatively Identified Compounds, certain subcontracted results e.g. Hg etc.) are not screened against the GAC in the report output. These results will be included in an appendix to the main report.	
Certain groups of analytes are summed within the tool (these results are shown as the analyte names with the pre-fix "SUM", for example 'SUM - chromium trivalent plus hexavalent'), which is required to enable a comparison of laboratory results to the GAC, which is a sum of certain analytes.	
Where analytes have been summed, any concentration reported as below the laboratory method detection limited is treated as zero.	
Certain GACs are calculated (e.g. ammoniacal nitrogen reported as N, NH ₃ or NH ₄) from the primary GAC. The GAC is therefore the same, but expressed as a different molecular weight. These are shown in italics.	
Relevant laboratory methods (e.g. leachate dilutions) are included in the section entitled 'Methods'.	
Analyte groupings are based on the Envirolab laboratory reporting groups.	
* denotes a non-statutory GACs (e.g. <i>ethylbenzene</i> *).	
Shading of cells (individual results and the GAC/T1) has the following meaning:	
GAC	GAC <u>definitely</u> exceeded
GAC	GAC <u>may</u> be exceeded (e.g. lab results include a < or > symbol)
T1	First level screening threshold <u>definitely</u> exceeded
T1	First level screening threshold <u>may</u> be exceeded (e.g. lab results include a < or > symbol)
T1	First level screening threshold, equating to:
	GrAC: Result compared to the theoretical aqueous solubility limit.
<i>Comment</i>	Applicable across all GrACs. Where the GrAC has been set at the theoretical aqueous solubility for the analyte, which is below the modelled assessment criteria.
	EQS Cadmium: Compared to lowest EQS for Class 1 <40mg/l CaCO ₃ /l.
<i>Comment</i>	Freshwater EQS for cadmium is hardness dependent.
	EQS Copper: Compared to EWS for the lowest Dissolved Organic Carbon (DOC) of <1mg/l.
<i>Comment</i>	Transitional waters EQS for copper is DOC dependent, compared to lowest Dissolved Organic Carbon (DOC) of <1mg/l.
	EQS Aluminium (Scotland only): Compared to EQS for pH >6.5.
<i>Comment</i>	Freshwater EQS for aluminium (Scotland) is pH dependent and only applicable at a pH >6.5.
	DWS/RPV Aro EC8-10: Total compared to DWS/RPV for ethylbenzene (conservative assessment).
<i>Comment</i>	Aro EC8-10 fraction contains xylenes, ethylbenzene and trimethylbenzene.
	DWS/RPV chromium total: Total is compared to CrVI (conservative assessment) for either freshwater or for transitional waters.
<i>Comment</i>	Freshwater and transitional EQS are a sum of the individual EQS for CrVI and CrIII (8.1ug/l).
grey font	Where individual reported concentrations are presented in grey (not black) font, the result was below the laboratory method detection limit.
	Where cells are shaded grey, <u>all</u> results for that analyte are below the laboratory method detection limit

Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-detects	# exceeding GAC	# exceeding T1	Max sample (ID and depth)
Metals and Inorganics (leachable)											
Cadmium (leachable)	µg/l	0.25	0.08	<1	<1	10	0	10	10	10	
Copper (leachable)	µg/l	1		7	4	10	10	0	10		SA8 - 0.2
Lead (leachable)	µg/l	1.2		2	<1	10	7	3	2		TP8 - 0.15 SA10 - 0.15 SA11 - 0.15
Mercury (leachable)	µg/l	0.07		<0.1	<0.1	10	0	10	10		



APPENDIX Q

WM3 ASSESSMENT

[illegible]

Please enter available data in the rows associated with the test (grey) cells. Calculation cells initially display either "0.0000" or "DIV/0".
If any calculation cells below state "0.00000", testing has NOT been undertaken that contributes to that Hazardous Property.

[illegible]

Identifiable places of residence are present: [identifiable place of residence](#) and the whole set sample is identified as a residential area and/or commercial center containing buildings T-30. If all identifiable places need to be removed based only three (or more) places, with an Abundance <Competition in Soil index of 0.5, for the soil to be so-called non-hazardous waste.

Identifiable places of residence are absent: [no identifiable place of residence](#), but the whole set sample is identified as a residential area and/or commercial center containing buildings T-30. If all identifiable places need to be removed based only three (or more) places, with an Abundance <Competition in Soil index of 0.5, for the soil to be so-called non-hazardous waste.

[illegible][illegible]