Analytical Report Number: 18-84041

Project / Site name: St Annes
Your Order No: CL1403

Lab Sample Number				953450	953451			
Sample Reference				HP03	HP04			
Sample Number				None Supplied	None Supplied			
Depth (m)				1.00-1.10	0.70-0.80			
Date Sampled				26/04/2018	26/04/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-			
Chloroethane	µg/kg	1	NONE	-	-			
Bromomethane	µg/kg	1	ISO 17025	-	-			
Vinyl Chloride	µg/kg	1	NONE	-	-			
Trichlorofluoromethane	µg/kg	1	NONE	-	-			
1,1-Dichloroethene	µg/kg	1	NONE	-	-			
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-			
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-			
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-			
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-			
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-			
Trichloromethane	µg/kg	1	MCERTS	-	-			
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-			
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-			
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-			
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-			
Benzene	µg/kg	1	MCERTS	-	-			
Tetrachloromethane	µg/kg	1	MCERTS	-	-			
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-			
Trichloroethene	µg/kg	1	MCERTS	-	-			
Dibromomethane	µg/kg	1	MCERTS	-	-			
Bromodichloromethane	µg/kg	1	MCERTS	-	-			
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-			
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-			
Toluene	µg/kg	1	MCERTS	-	-			
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-			
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-			
Dibromochloromethane	µg/kg	1	ISO 17025	-	-			
Tetrachloroethene	µg/kg	1	NONE	-	-			
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-			
Chlorobenzene	µg/kg	1	MCERTS	-	-			
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-			
Ethylbenzene	µg/kg	1	MCERTS	-	-			
p & m-Xylene	µg/kg	1	MCERTS	-	-			
Styrene	µg/kg	1	MCERTS	-	-			
Tribromomethane	µg/kg	1	NONE	-	-			
o-Xylene	µg/kg	1	MCERTS	-	-			
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-			
Isopropylbenzene	µg/kg	1	MCERTS	-	-			
Bromobenzene	µg/kg	1	MCERTS	-	-			
n-Propylbenzene	µg/kg	1	ISO 17025	-	-			
2-Chlorotoluene	µg/kg	1	MCERTS	-	-			
4-Chlorotoluene	µg/kg	1	MCERTS	-	-			
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-			
tert-Butylbenzene	µg/kg	1	MCERTS	-	-			
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-			
sec-Butylbenzene	µg/kg	1	MCERTS	-	-			
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-			
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-			
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-			
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-			
Butylbenzene	µg/kg	1	MCERTS	-	-			
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-			
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-			
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-			
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-			

Analytical Report Number: 18-84041

Project / Site name: St Annes
Your Order No: CL1403

Lab Sample Number				953450	953451			
Sample Reference				HP03	HP04			
Sample Number				None Supplied	None Supplied			
Depth (m)				1.00-1.10	0.70-0.80			
Date Sampled				26/04/2018	26/04/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-			
Phenol	mg/kg	0.2	ISO 17025	-	-			
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-			
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-			
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-			
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-			
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-			
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-			
2-Methylphenol	mg/kg	0.3	MCERTS	-	-			
Hexachloroethane	mg/kg	0.05	MCERTS	-	-			
Nitrobenzene	mg/kg	0.3	MCERTS	-	-			
4-Methylphenol	mg/kg	0.2	NONE	-	-			
Isophorone	mg/kg	0.2	MCERTS	-	-			
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-			
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-			
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-			
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-			
Naphthalene	mg/kg	0.05	MCERTS	-	-			
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-			
4-Chloroaniline	mg/kg	0.1	NONE	-	-			
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-			
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-			
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-			
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-			
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-			
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-			
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-			
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-			
Acenaphthylene	mg/kg	0.05	MCERTS	-	-			
Acenaphthene	mg/kg	0.05	MCERTS	-	-			
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-			
Dibenzofuran	mg/kg	0.2	MCERTS	-	-			
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-			
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-			
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-			
Fluorene	mg/kg	0.05	MCERTS	-	-			
Azobenzene	mg/kg	0.3	MCERTS	-	-			
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-			
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-			
Phenanthrene	mg/kg	0.05	MCERTS	-	-			
Anthracene	mg/kg	0.05	MCERTS	-	-			
Carbazole	mg/kg	0.3	MCERTS	-	-			
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-			
Anthraquinone	mg/kg	0.3	MCERTS	-	-			
Fluoranthene	mg/kg	0.05	MCERTS	-	-			
Pyrene	mg/kg	0.05	MCERTS	-	-			
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-			
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-			
Chrysene	mg/kg	0.05	MCERTS	-	-			
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-			
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-			
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-			
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-			
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-			

Analytical Report Number: 18-84041

Project / Site name: St Annes
Your Order No: CL1403

Lab Sample Number				953450	953451			
Sample Reference				HP03	HP04			
Sample Number				None Supplied	None Supplied			
Depth (m)				1.00-1.10	0.70-0.80			
Date Sampled				26/04/2018	26/04/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs								
PCB Congener 077	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 081	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 105	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 114	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 118	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 123	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 126	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 156	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 157	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 167	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 169	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 189	mg/kg	0.001	NONE	< 0.001	< 0.001			
Total PCBs	mg/kg	0.012	NONE	< 0.012	< 0.012			

Analytical Report Number: 18-84041
Project / Site name: St Annes
Your Order No: CL1403

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
953445	BH2B	1.90-2.00	109	Loose Fibres	**Chrysotile**	0.002	**0.002**
953449	HP03	0.20-0.30	149	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**
953451	HP04	0.70-0.80	161	Loose Fibrous Debris	**Amosite**	0.001	**0.001**

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

Analytical Report Number : 18-84041

Project / Site name: St Annes

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
953445	BH2B	None Supplied	1.90-2.00	Light grey sand with gravel and rubble.
953446	BH2B	None Supplied	4.90-5.00	Brown sand with gravel and brick.
953447	HP01	None Supplied	0.7-0.80	Brown sand with gravel and stones.
953448	HP02	None Supplied	0.20-0.30	Brown sand with gravel and brick.
953449	HP03	None Supplied	0.20-0.30	Brown loam and clay with gravel.
953450	HP03	None Supplied	1.00-1.10	Brown sand with gravel.
953451	HP04	None Supplied	0.70-0.80	Brown sand with gravel.

Analytical Report Number : 18-84041

Project / Site name: St Annes

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
PCBs WHO 12 in soil	Determination of PCBs (WHO-12 Congeners) by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding.	L076-PL	D	NONE

Analytical Report Number : 18-84041

Project / Site name: St Annes

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L088/76-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

The results included within the report are representative of the samples submitted for analysis.

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Analytical Report Number : 18-84043

Project / Site name:	St Annes	**Samples received on:**	01/05/2018
Your job number:	18-3106	**Samples instructed on:**	02/05/2018
Your order number:	CL1403	**Analysis completed by:**	09/05/2018
Report Issue Number:	1	**Report issued on:**	09/05/2018
Samples Analysed:	7 10:1 WAC leachate samples		

Signed: _____

Rexona Rahman
Head of Customer Services
For & on behalf of i2 Analytical Ltd.

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

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

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Waste Acceptance Criteria Analytical Results

Report No:	**18-84043**						
					Client:	**CONCEPT**	
Location	**St Annes**						
Lab Reference (Sample Number)	953453				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	27/04/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	BH2B						
Depth (m)	1.90-2.00						
Solid Waste Analysis							
TOC (%)**	-				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg) **	-				6000	--	--
Sum of PCBs (mg/kg) **	-				1	--	--
Mineral Oil (mg/kg)	-				500	--	--
Total PAH (WAC-17) (mg/kg)	-				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.0011			< 0.0110	0.5	2	25
Barium *	0.0842			0.564	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.026			0.17	0.5	10	70
Copper *	0.0037			0.025	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0028			0.0185	0.5	10	30
Nickel *	< 0.0003			< 0.0030	0.4	10	40
Lead *	< 0.0010			< 0.010	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	< 0.0004			< 0.0040	4	50	200
Chloride *	13			90	800	4000	25000
Fluoride	0.10			0.70	10	150	500
Sulphate *	33			220	1000	20000	50000
TDS*	720			4800	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	6.45			43.2	500	800	1000
Leach Test Information							
Stone Content (%)	-						
Sample Mass (kg)	-						
Dry Matter (%)	-						
Moisture (%)	-						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation

*= UKAS accredited (liquid eluate analysis only)
** = MCERTS accredited

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Waste Acceptance Criteria Analytical Results

Report No:	**18-84043**						
					Client: CONCEPT		
Location	**St Annes**						
Lab Reference (Sample Number)	953454				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	27/04/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	BH2B						
Depth (m)	4.90-5.00						
Solid Waste Analysis							
TOC (%)**	-				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg) **	-				6000	--	--
Sum of PCBs (mg/kg) **	-				1	--	--
Mineral Oil (mg/kg)	-				500	--	--
Total PAH (WAC-17) (mg/kg)	-				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
	mg/l			mg/kg			
Arsenic *	0.0033			0.0262	0.5	2	25
Barium *	0.0153			0.122	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0007			0.0054	0.5	10	70
Copper *	0.0021			0.017	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0028			0.0225	0.5	10	30
Nickel *	< 0.0003			< 0.0030	0.4	10	40
Lead *	0.0016			0.013	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.015			0.12	4	50	200
Chloride *	2.4			19	800	4000	25000
Fluoride	0.38			3.0	10	150	500
Sulphate *	35			280	1000	20000	50000
TDS*	92			740	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	4.05			32.5	500	800	1000
Leach Test Information							
Stone Content (%)	-						
Sample Mass (kg)	-						
Dry Matter (%)	-						
Moisture (%)	-						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.
*= UKAS accredited (liquid eluate analysis only)
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** = MCERTS accrediited

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Waste Acceptance Criteria Analytical Results

Report No:	**18-84043**						
					Client:	**CONCEPT**	
Location	**St Annes**						
Lab Reference (Sample Number)	953455				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	26/04/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	HP01						
Depth (m)	0.70-0.80						
Solid Waste Analysis							
TOC (%)**	-				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg) **	-				6000	--	--
Sum of PCBs (mg/kg) **	-				1	--	--
Mineral Oil (mg/kg)	-				500	--	--
Total PAH (WAC-17) (mg/kg)	-				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0095			0.0806	0.5	2	25
Barium *	0.0056			0.0475	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0040			0.034	0.5	10	70
Copper *	0.014			0.12	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0008			0.0069	0.5	10	30
Nickel *	0.0045			0.038	0.4	10	40
Lead *	0.013			0.11	0.5	10	50
Antimony *	0.0061			0.051	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0057			0.048	4	50	200
Chloride *	1.2			11	800	4000	25000
Fluoride	0.31			2.6	10	150	500
Sulphate *	8.9			76	1000	20000	50000
TDS*	61			510	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	4.51			38.2	500	800	1000
Leach Test Information							
Stone Content (%)	-						
Sample Mass (kg)	-						
Dry Matter (%)	-						
Moisture (%)	-						

Results are expressed on a dry weight basis, after correction for moisture content where applicable. *= UKAS accredited (liquid eluate analysis only)

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Waste Acceptance Criteria Analytical Results

Report No:	**18-84043**						
					Client:	**CONCEPT**	
Location	**St Annes**						
Lab Reference (Sample Number)	953456				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	26/04/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	HP02						
Depth (m)	0.20-0.30						
Solid Waste Analysis							
TOC (%)**	-				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg) **	-				6000	--	--
Sum of PCBs (mg/kg) **	-				1	--	--
Mineral Oil (mg/kg)	-				500	--	--
Total PAH (WAC-17) (mg/kg)	-				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0170			0.136	0.5	2	25
Barium *	0.0448			0.359	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.016			0.13	0.5	10	70
Copper *	0.0087			0.070	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0010			0.0082	0.5	10	30
Nickel *	< 0.0003			< 0.0030	0.4	10	40
Lead *	0.047			0.38	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0068			0.055	4	50	200
Chloride *	1.2			9.9	800	4000	25000
Fluoride	0.45			3.6	10	150	500
Sulphate *	35			280	1000	20000	50000
TDS*	95			760	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	4.99			40.0	500	800	1000
Leach Test Information							
Stone Content (%)	-						
Sample Mass (kg)	-						
Dry Matter (%)	-						
Moisture (%)	-						

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Waste Acceptance Criteria Analytical Results

Report No:	**18-84043**						
					Client:	**CONCEPT**	
Location	**St Annes**						
Lab Reference (Sample Number)	953457				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	26/04/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	HP03						
Depth (m)	0.20-0.30						
Solid Waste Analysis							
TOC (%)**	-				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg) **	-				6000	--	--
Sum of PCBs (mg/kg) **	-				1	--	--
Mineral Oil (mg/kg)	-				500	--	--
Total PAH (WAC-17) (mg/kg)	-				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0066			0.0528	0.5	2	25
Barium *	0.0059			0.0473	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0015			0.012	0.5	10	70
Copper *	0.012			0.092	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0016			0.0128	0.5	10	30
Nickel *	0.0019			0.015	0.4	10	40
Lead *	0.014			0.11	0.5	10	50
Antimony *	0.0026			0.020	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0076			0.060	4	50	200
Chloride *	1.6			13	800	4000	25000
Fluoride	0.41			3.2	10	150	500
Sulphate *	13			100	1000	20000	50000
TDS*	68			540	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	5.64			44.8	500	800	1000
Leach Test Information							
Stone Content (%)	-						
Sample Mass (kg)	-						
Dry Matter (%)	-						
Moisture (%)	-						

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Waste Acceptance Criteria Analytical Results

Report No:	**18-84043**						
					Client:	**CONCEPT**	
Location	**St Annes**						
Lab Reference (Sample Number)	953458				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	26/04/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	HP03						
Depth (m)	1.00-1.10						
Solid Waste Analysis							
TOC (%)**	-				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg) **	-				6000	--	--
Sum of PCBs (mg/kg) **	-				1	--	--
Mineral Oil (mg/kg)	-				500	--	--
Total PAH (WAC-17) (mg/kg)	-				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0026			0.0222	0.5	2	25
Barium *	0.0195			0.167	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.021			0.18	0.5	10	70
Copper *	0.0066			0.057	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0011			0.0092	0.5	10	30
Nickel *	< 0.0003			< 0.0030	0.4	10	40
Lead *	0.010			0.088	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0052			0.045	4	50	200
Chloride *	1.4			12	800	4000	25000
Fluoride	0.50			4.3	10	150	500
Sulphate *	22			190	1000	20000	50000
TDS*	95			810	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	4.57			39.1	500	800	1000
Leach Test Information							
Stone Content (%)	-						
Sample Mass (kg)	-						
Dry Matter (%)	-						
Moisture (%)	-						

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Waste Acceptance Criteria Analytical Results

Report No:	**18-84043**						
					Client:	**CONCEPT**	
Location	**St Annes**						
Lab Reference (Sample Number)	953459				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	26/04/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	HP04						
Depth (m)	0.70-0.80						
Solid Waste Analysis							
TOC (%)**	-				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg) **	-				6000	--	--
Sum of PCBs (mg/kg) **	-				1	--	--
Mineral Oil (mg/kg)	-				500	--	--
Total PAH (WAC-17) (mg/kg)	-				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0081			0.0663	0.5	2	25
Barium *	0.0191			0.157	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0072			0.059	0.5	10	70
Copper *	0.0075			0.062	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0005			0.0044	0.5	10	30
Nickel *	0.0003			< 0.0030	0.4	10	40
Lead *	0.019			0.16	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0096			0.079	4	50	200
Chloride *	5.6			46	800	4000	25000
Fluoride	0.28			2.3	10	150	500
Sulphate *	20			170	1000	20000	50000
TDS*	80			660	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	5.66			46.3	500	800	1000
Leach Test Information							
Stone Content (%)	-						
Sample Mass (kg)	-						
Dry Matter (%)	-						
Moisture (%)	-						

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Analytical Report Number : 18-84043

Project / Site name: St Annes

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Combined Report Nos : 18-85340 & 18-86014

Project / Site name:	St Annes	**Samples received on:**	08/05/2018
Your job number:	18-3106	**Samples instructed on:**	14/05/2018
Your order number:	CL1425	**Analysis completed by:**	21/05/2018
Report Issue Number:	1	**Report issued on:**	25/05/2018
Samples Analysed:	7 soil samples		

Signed:

Jordan Hill
Reporting Manager
For & on behalf of i2 Analytical Ltd.

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

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

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Combined Report Nos : 18-85340 & 18-86014

Project / Site name: St Annes
Your Order No: CL1425

Lab Sample Number				960334	960335	960336	960337	960338
Sample Reference				BH2B	BH01	BH01	BH01	BH01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				6.90-7.00	0.20-0.25	1.10-1.20	3.00-3.10	5.00-5.10
Date Sampled				02/05/2018	02/05/2018	02/05/2018	02/05/2018	02/05/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	28	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	5.6	11	6.1	14	9.4
Total mass of sample received	kg	0.001	NONE	1.5	1.6	2.0	1.4	1.9
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	9.3	10.2	11.1	10.9	6.6
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1	< 1
Total Organic Carbon (TOC)	%	0.1	MCERTS	< 0.1	0.7	0.3	0.9	< 0.1
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	0.63	< 0.05	0.31	-
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.12	< 0.05	< 0.05	-
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	1.7	< 0.05	0.24	-
Pyrene	mg/kg	0.05	MCERTS	< 0.05	1.5	< 0.05	0.21	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.78	< 0.05	< 0.05	-
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.97	< 0.05	< 0.05	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	1.1	< 0.05	< 0.05	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.36	< 0.05	< 0.05	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.47	< 0.05	< 0.05	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	-
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	7.59	< 0.80	< 0.80	-
Heavy Metals / Metalloids								
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	2.6	1.7	1.5	< 1.0
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	4.6	32	11	10	5.2
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.28	0.79	0.36	2.5	0.20
Boron (water soluble)	mg/kg	0.2	MCERTS	0.5	1.6	1.0	2.4	0.5
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	14	29	22	15	10
Copper (aqua regia extractable)	mg/kg	1	MCERTS	9.7	66	19	42	6.2
Lead (aqua regia extractable)	mg/kg	1	MCERTS	26	840	58	120	6.4
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	1.1	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	12	17	15	22	9.9
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	1.5	< 1.0	1.1	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	12	52	23	31	17
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	33	380	100	86	15

Combined Report Nos : 18-85340 & 18-86014

Project / Site name: St Annes
Your Order No: CL1425

Lab Sample Number				960334	960335	960336	960337	960338
Sample Reference				BH2B	BH01	BH01	BH01	BH01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				6.90-7.00	0.20-0.25	1.10-1.20	3.00-3.10	5.00-5.10
Date Sampled				02/05/2018	02/05/2018	02/05/2018	02/05/2018	02/05/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	6.7	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	23	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	34	11	< 8.0	< 8.0
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	< 8.4	< 8.4	< 8.4	< 8.4
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	65	18	< 10	< 10
TPH-CWG - Aliphatic (EC5 - EC44)	mg/kg	10	NONE	< 10	65	18	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	21	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	77	< 10	< 10	< 10
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	< 8.4	< 8.4	< 8.4	< 8.4
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	98	< 10	11	< 10
TPH-CWG - Aromatic (EC5 - EC44)	mg/kg	10	NONE	< 10	98	< 10	11	< 10

Combined Report Nos : 18-85340 & 18-86014

Project / Site name: St Annes
Your Order No: CL1425

Lab Sample Number				960334	960335	960336	960337	960338
Sample Reference				BH2B	BH01	BH01	BH01	BH01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				6.90-7.00	0.20-0.25	1.10-1.20	3.00-3.10	5.00-5.10
Date Sampled				02/05/2018	02/05/2018	02/05/2018	02/05/2018	02/05/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Chloroethane	µg/kg	1	NONE	-	-	-	-	< 1.0
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	< 1.0
Benzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Toluene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Styrene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Tribromomethane	µg/kg	1	NONE	-	-	-	-	< 1.0
o-Xylene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-	< 1.0

Combined Report Nos : 18-85340 & 18-86014

Project / Site name: St Annes
Your Order No: CL1425

Lab Sample Number				960334	960335	960336	960337	960338
Sample Reference				BH2B	BH01	BH01	BH01	BH01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				6.90-7.00	0.20-0.25	1.10-1.20	3.00-3.10	5.00-5.10
Date Sampled				02/05/2018	02/05/2018	02/05/2018	02/05/2018	02/05/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-	-	-	< 0.1
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-	< 0.2
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-	< 0.05

Combined Report Nos : 18-85340 & 18-86014

Project / Site name: St Annes
Your Order No: CL1425

Lab Sample Number				960334	960335	960336	960337	960338
Sample Reference				BH2B	BH01	BH01	BH01	BH01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				6.90-7.00	0.20-0.25	1.10-1.20	3.00-3.10	5.00-5.10
Date Sampled				02/05/2018	02/05/2018	02/05/2018	02/05/2018	02/05/2018
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs								
PCB Congener 077	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 081	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 105	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 114	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 118	mg/kg	0.001	NONE	< 0.001	< 0.001	0.011	< 0.001	< 0.001
PCB Congener 123	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 126	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 156	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 157	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 167	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 169	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB Congener 189	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Total PCBs	mg/kg	0.012	NONE	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012

Combined Report Nos : 18-85340 & 18-86014

Project / Site name: St Annes
Your Order No: CL1425

Lab Sample Number				960339	963956			
Sample Reference				BH01	BH2B			
Sample Number				None Supplied	None Supplied			
Depth (m)				17.00-17.10	10.90-11.00			
Date Sampled				04/05/2018	02/05/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1			
Moisture Content	%	N/A	NONE	17	13			
Total mass of sample received	kg	0.001	NONE	1.3	0.97			
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected			
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	8.6	7.1			
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1			
Total Organic Carbon (TOC)	%	0.1	MCERTS	0.9	0.8			
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0			
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80			
Heavy Metals / Metalloids								
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	< 1.0			
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	14	11			
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.4	0.86			
Boron (water soluble)	mg/kg	0.2	MCERTS	5.5	3.4			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	46	33			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	40	22			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	16	9.0			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	44	28			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.6	< 1.0			
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	70	42			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	80	57			

Combined Report Nos : 18-85340 & 18-86014

Project / Site name: St Annes
Your Order No: CL1425

Lab Sample Number				960339	963956			
Sample Reference				BH01	BH2B			
Sample Number				None Supplied	None Supplied			
Depth (m)				17.00-17.10	10.90-11.00			
Date Sampled				04/05/2018	02/05/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0			
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0			
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0			
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0			
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0			
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0			
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0			
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0			
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0			
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	< 8.4			
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10			
TPH-CWG - Aliphatic (EC5 - EC44)	mg/kg	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0			
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0			
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10			
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10			
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	< 8.4			
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10			
TPH-CWG - Aromatic (EC5 - EC44)	mg/kg	10	NONE	< 10	< 10			

Combined Report Nos : 18-85340 & 18-86014

Project / Site name: St Annes
Your Order No: CL1425

Lab Sample Number				960339	963956			
Sample Reference				BH01	BH2B			
Sample Number				None Supplied	None Supplied			
Depth (m)				17.00-17.10	10.90-11.00			
Date Sampled				04/05/2018	02/05/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	-	-			
Chloroethane	µg/kg	1	NONE	-	-			
Bromomethane	µg/kg	1	ISO 17025	-	-			
Vinyl Chloride	µg/kg	1	NONE	-	-			
Trichlorofluoromethane	µg/kg	1	NONE	-	-			
1,1-Dichloroethene	µg/kg	1	NONE	-	-			
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-			
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-			
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-			
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-			
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-			
Trichloromethane	µg/kg	1	MCERTS	-	-			
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-			
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-			
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-			
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-			
Benzene	µg/kg	1	MCERTS	-	-			
Tetrachloromethane	µg/kg	1	MCERTS	-	-			
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-			
Trichloroethene	µg/kg	1	MCERTS	-	-			
Dibromomethane	µg/kg	1	MCERTS	-	-			
Bromodichloromethane	µg/kg	1	MCERTS	-	-			
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-			
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-			
Toluene	µg/kg	1	MCERTS	-	-			
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-			
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-			
Dibromochloromethane	µg/kg	1	ISO 17025	-	-			
Tetrachloroethene	µg/kg	1	NONE	-	-			
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-			
Chlorobenzene	µg/kg	1	MCERTS	-	-			
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-			
Ethylbenzene	µg/kg	1	MCERTS	-	-			
p & m-Xylene	µg/kg	1	MCERTS	-	-			
Styrene	µg/kg	1	MCERTS	-	-			
Tribromomethane	µg/kg	1	NONE	-	-			
o-Xylene	µg/kg	1	MCERTS	-	-			
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-			
Isopropylbenzene	µg/kg	1	MCERTS	-	-			
Bromobenzene	µg/kg	1	MCERTS	-	-			
n-Propylbenzene	µg/kg	1	ISO 17025	-	-			
2-Chlorotoluene	µg/kg	1	MCERTS	-	-			
4-Chlorotoluene	µg/kg	1	MCERTS	-	-			
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-			
tert-Butylbenzene	µg/kg	1	MCERTS	-	-			
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-			
sec-Butylbenzene	µg/kg	1	MCERTS	-	-			
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-			
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-			
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-			
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-			
Butylbenzene	µg/kg	1	MCERTS	-	-			
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-			
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-			
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-			
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-			

Combined Report Nos : 18-85340 & 18-86014

Project / Site name: St Annes
Your Order No: CL1425

Lab Sample Number				960339	963956			
Sample Reference				BH01	BH2B			
Sample Number				None Supplied	None Supplied			
Depth (m)				17.00-17.10	10.90-11.00			
Date Sampled				04/05/2018	02/05/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	-	-			
Phenol	mg/kg	0.2	ISO 17025	-	-			
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-			
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-			
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-			
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-			
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-			
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-			
2-Methylphenol	mg/kg	0.3	MCERTS	-	-			
Hexachloroethane	mg/kg	0.05	MCERTS	-	-			
Nitrobenzene	mg/kg	0.3	MCERTS	-	-			
4-Methylphenol	mg/kg	0.2	NONE	-	-			
Isophorone	mg/kg	0.2	MCERTS	-	-			
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-			
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-			
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-			
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-			
Naphthalene	mg/kg	0.05	MCERTS	-	-			
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-			
4-Chloroaniline	mg/kg	0.1	NONE	-	-			
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-			
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-			
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-			
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-			
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-			
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-			
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-			
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-			
Acenaphthylene	mg/kg	0.05	MCERTS	-	-			
Acenaphthene	mg/kg	0.05	MCERTS	-	-			
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-			
Dibenzofuran	mg/kg	0.2	MCERTS	-	-			
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-			
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-			
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-			
Fluorene	mg/kg	0.05	MCERTS	-	-			
Azobenzene	mg/kg	0.3	MCERTS	-	-			
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-			
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-			
Phenanthrene	mg/kg	0.05	MCERTS	-	-			
Anthracene	mg/kg	0.05	MCERTS	-	-			
Carbazole	mg/kg	0.3	MCERTS	-	-			
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-			
Anthraquinone	mg/kg	0.3	MCERTS	-	-			
Fluoranthene	mg/kg	0.05	MCERTS	-	-			
Pyrene	mg/kg	0.05	MCERTS	-	-			
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-			
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-			
Chrysene	mg/kg	0.05	MCERTS	-	-			
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-			
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-			
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-			
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-			
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-			

Combined Report Nos : 18-85340 & 18-86014

Project / Site name: St Annes
Your Order No: CL1425

Lab Sample Number				960339	963956			
Sample Reference				BH01	BH2B			
Sample Number				None Supplied	None Supplied			
Depth (m)				17.00-17.10	10.90-11.00			
Date Sampled				04/05/2018	02/05/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs								
PCB Congener 077	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 081	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 105	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 114	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 118	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 123	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 126	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 156	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 157	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 167	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 169	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 189	mg/kg	0.001	NONE	< 0.001	< 0.001			
Total PCBs	mg/kg	0.012	NONE	< 0.012	< 0.012			

Combined Report Nos : 18-85340 & 18-86014

Project / Site name: St Annes

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
960334	BH2B	None Supplied	6.90-7.00	Beige sand with gravel and stones.
960335	BH01	None Supplied	0.20-0.25	Brown gravelly sand with rubble.
960336	BH01	None Supplied	1.10-1.20	Brown sandy loam with gravel.
960337	BH01	None Supplied	3.00-3.10	Grey sand with gravel.
960338	BH01	None Supplied	5.00-5.10	Light brown sand with gravel.
960339	BH01	None Supplied	17.00-17.10	Brown clay.
963956	BH2B	None Supplied	10.90-11.00	Grey clay.

Combined Report Nos : 18-85340 & 18-86014

Project / Site name: St Annes

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
PCBs WHO 12 in soil	Determination of PCBs (WHO-12 Congeners) by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding.	L076-PL	D	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L088/76-PL	W	MCERTS

Combined Report Nos : 18-85340 & 18-86014

Project / Site name: St Annes

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

The results included within the report are representative of the samples submitted for analysis.

Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
BH01		S	18-85340	960335	c	Total cyanide in soil	L080-PL	c
BH01		S	18-85340	960336	c	Total cyanide in soil	L080-PL	c
BH01		S	18-85340	960337	c	Total cyanide in soil	L080-PL	c
BH01		S	18-85340	960338	c	Total cyanide in soil	L080-PL	c
BH01		S	18-85340	960339	c	Total cyanide in soil	L080-PL	c
BH2B		S	18-85340	960334	c	Total cyanide in soil	L080-PL	c

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

Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
BH2B		S	18-86014	963956	c	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	c
BH2B		S	18-86014	963956	c	Total cyanide in soil	L080-PL	c
BH2B		S	18-86014	963956	c	Total organic carbon (Automated) in soil	L009-PL	c

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

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Analytical Report Number : 18-85343

Project / Site name:	St Annes	**Samples received on:**	08/05/2018
Your job number:	18-3106	**Samples instructed on:**	14/05/2018
Your order number:	CL1425	**Analysis completed by:**	21/05/2018
Report Issue Number:	1	**Report issued on:**	21/05/2018
Samples Analysed:	6 leachate samples		

Signed:

Jordan Hill
Reporting Manager
For & on behalf of i2 Analytical Ltd.

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

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

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Waste Acceptance Criteria Analytical Results

Report No:	**18-85343**						
					Client:	**CONCEPT**	
Location	**St Annes**						
Lab Reference (Sample Number)	960349				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	02/05/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	BH2B						
Depth (m)	6.90-7.00						
Solid Waste Analysis							
TOC (%)**	-				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg) **	-				6000	--	--
Sum of PCBs (mg/kg) **	-				1	--	--
Mineral Oil (mg/kg)	-				500	--	--
Total PAH (WAC-17) (mg/kg)	-				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0031			0.0265	0.5	2	25
Barium *	0.0060			0.0507	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0050			0.042	0.5	10	70
Copper *	0.0073			0.061	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0005			0.0044	0.5	10	30
Nickel *	0.0021			0.017	0.4	10	40
Lead *	0.0046			0.039	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.014			0.12	4	50	200
Chloride *	0.88			7.4	800	4000	25000
Fluoride	< 0.050			< 0.50	10	150	500
Sulphate *	1.9			16	1000	20000	50000
TDS*	11			89	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	5.03			42.2	500	800	1000
Leach Test Information							
Stone Content (%)	-						
Sample Mass (kg)	-						
Dry Matter (%)	-						
Moisture (%)	-						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation

*= UKAS accredited (liquid eluate analysis only)
** = MCERTS accredited

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Waste Acceptance Criteria Analytical Results

Report No:	**18-85343**						
					Client:	**CONCEPT**	
Location	**St Annes**						
Lab Reference (Sample Number)	960350				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	02/05/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	BH01						
Depth (m)	0.20-0.25						
Solid Waste Analysis							
TOC (%)**	-				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg) **	-				6000	--	--
Sum of PCBs (mg/kg) **	-				1	--	--
Mineral Oil (mg/kg)	-				500	--	--
Total PAH (WAC-17) (mg/kg)	-				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
	mg/l			mg/kg			
Arsenic *	0.0109			0.0850	0.5	2	25
Barium *	0.0376			0.294	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.016			0.13	0.5	10	70
Copper *	0.031			0.24	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0055			0.0432	0.5	10	30
Nickel *	0.0010			0.0082	0.4	10	40
Lead *	0.025			0.19	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.013			0.10	4	50	200
Chloride *	1.0			7.9	800	4000	25000
Fluoride	0.38			2.9	10	150	500
Sulphate *	10			80	1000	20000	50000
TDS*	120			970	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	7.27			56.8	500	800	1000
Leach Test Information							
Stone Content (%)	-						
Sample Mass (kg)	-						
Dry Matter (%)	-						
Moisture (%)	-						

Results are expressed on a dry weight basis, after correction for moisture content where applicable.
*= UKAS accredited (liquid eluate analysis only)
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** = MCERTS accrediited

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Waste Acceptance Criteria Analytical Results

Report No:	**18-85343**						
					Client:	**CONCEPT**	
Location	**St Annes**						
Lab Reference (Sample Number)	960351				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	02/05/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	BH01						
Depth (m)	1.10-1.20						
Solid Waste Analysis							
TOC (%)**	-				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg) **	-				6000	--	--
Sum of PCBs (mg/kg) **	-				1	--	--
Mineral Oil (mg/kg)	-				500	--	--
Total PAH (WAC-17) (mg/kg)	-				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0069			0.0559	0.5	2	25
Barium *	0.0176			0.143	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.014			0.11	0.5	10	70
Copper *	0.014			0.11	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0021			0.0171	0.5	10	30
Nickel *	0.0009			0.0076	0.4	10	40
Lead *	0.0074			0.061	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0091			0.074	4	50	200
Chloride *	1.4			11	800	4000	25000
Fluoride	0.26			2.1	10	150	500
Sulphate *	34			280	1000	20000	50000
TDS*	160			1300	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	5.73			46.8	500	800	1000
Leach Test Information							
Stone Content (%)	-						
Sample Mass (kg)	-						
Dry Matter (%)	-						
Moisture (%)	-						

Results are expressed on a dry weight basis, after correction for moisture content where applicable. *= UKAS accredited (liquid eluate analysis only)

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Waste Acceptance Criteria Analytical Results

Report No:	**18-85343**						
					Client:	**CONCEPT**	
Location	**St Annes**						
Lab Reference (Sample Number)	960352				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	02/05/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	BH01						
Depth (m)	3.00-3.10						
Solid Waste Analysis							
TOC (%)**	-				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg) **	-				6000	--	--
Sum of PCBs (mg/kg) **	-				1	--	--
Mineral Oil (mg/kg)	-				500	--	--
Total PAH (WAC-17) (mg/kg)	-				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0061			0.0485	0.5	2	25
Barium *	0.0073			0.0581	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0014			0.011	0.5	10	70
Copper *	0.020			0.16	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0070			0.0557	0.5	10	30
Nickel *	0.0008			0.0061	0.4	10	40
Lead *	0.0043			0.035	0.5	10	50
Antimony *	0.0085			0.068	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.010			0.082	4	50	200
Chloride *	1.8			15	800	4000	25000
Fluoride	0.31			2.5	10	150	500
Sulphate *	380			3000	1000	20000	50000
TDS*	410			3300	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	5.45			43.6	500	800	1000
Leach Test Information							
Stone Content (%)	-						
Sample Mass (kg)	-						
Dry Matter (%)	-						
Moisture (%)	-						

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Waste Acceptance Criteria Analytical Results

Report No:	**18-85343**						
					Client:	**CONCEPT**	
Location	**St Annes**						
Lab Reference (Sample Number)	960353				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	02/05/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	BH01						
Depth (m)	5.00-5.10						
Solid Waste Analysis							
TOC (%)**	-				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg) **	-				6000	--	--
Sum of PCBs (mg/kg) **	-				1	--	--
Mineral Oil (mg/kg)	-				500	--	--
Total PAH (WAC-17) (mg/kg)	-				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0018			0.0150	0.5	2	25
Barium *	0.0062			0.0529	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0025			0.021	0.5	10	70
Copper *	0.0086			0.073	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0008			0.0069	0.5	10	30
Nickel *	0.0020			0.017	0.4	10	40
Lead *	0.0045			0.039	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.011			0.095	4	50	200
Chloride *	1.0			8.5	800	4000	25000
Fluoride	0.31			2.6	10	150	500
Sulphate *	5.7			49	1000	20000	50000
TDS*	21			180	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	5.20			44.2	500	800	1000
Leach Test Information							
Stone Content (%)	-						
Sample Mass (kg)	-						
Dry Matter (%)	-						
Moisture (%)	-						

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Waste Acceptance Criteria Analytical Results

Report No:	**18-85343**						
					Client:	**CONCEPT**	
Location	**St Annes**						
Lab Reference (Sample Number)	960354				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	02/05/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	BH01						
Depth (m)	17.00-17.10						
Solid Waste Analysis							
TOC (%)**	-				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg) **	-				6000	--	--
Sum of PCBs (mg/kg) **	-				1	--	--
Mineral Oil (mg/kg)	-				500	--	--
Total PAH (WAC-17) (mg/kg)	-				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0035			0.0223	0.5	2	25
Barium *	0.0183			0.115	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0020			0.012	0.5	10	70
Copper *	0.017			0.11	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0160			0.101	0.5	10	30
Nickel *	0.0027			0.017	0.4	10	40
Lead *	0.0057			0.036	0.5	10	50
Antimony *	0.0051			0.032	0.06	0.7	5
Selenium *	0.043			0.27	0.1	0.5	7
Zinc *	0.0051			0.032	4	50	200
Chloride *	15			96	800	4000	25000
Fluoride	0.89			5.6	10	150	500
Sulphate *	68			430	1000	20000	50000
TDS*	130			830	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	5.74			36.2	500	800	1000
Leach Test Information							
Stone Content (%)	-						
Sample Mass (kg)	-						
Dry Matter (%)	-						
Moisture (%)	-						

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Analytical Report Number : 18-85343

Project / Site name: St Annes

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Analytical Report Number : 18-86015

Project / Site name:	St Annes	**Samples received on:**	18/05/2018
Your job number:	18-3106	**Samples instructed on:**	18/05/2018
Your order number:	CL1425	**Analysis completed by:**	25/05/2018
Report Issue Number:	1	**Report issued on:**	25/05/2018
Samples Analysed:	1 10:1 WAC leachate sample		

Signed:

Jordan Hill
Reporting Manager
For & on behalf of i2 Analytical Ltd.

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

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

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Waste Acceptance Criteria Analytical Results

Report No:	**18-86015**						
					Client:	**CONCEPT**	
Location	**St Annes**						
Lab Reference (Sample Number)	963957				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	02/05/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	BH2B						
Depth (m)	10.90-11.00						
Solid Waste Analysis							
TOC (%)**	-				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg) **	-				6000	--	--
Sum of PCBs (mg/kg) **	-				1	--	--
Mineral Oil (mg/kg)	-				500	--	--
Total PAH (WAC-17) (mg/kg)	-				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1 mg/l			10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.0011			< 0.0110	0.5	2	25
Barium *	0.0231			0.169	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0041			0.030	0.5	10	70
Copper *	0.0099			0.073	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0057			0.0414	0.5	10	30
Nickel *	0.0032			0.023	0.4	10	40
Lead *	0.0096			0.070	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	0.040			0.29	0.1	0.5	7
Zinc *	0.0036			0.026	4	50	200
Chloride *	17			120	800	4000	25000
Fluoride	0.69			5.0	10	150	500
Sulphate *	120			880	1000	20000	50000
TDS*	160			1200	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	4.00			29.2	500	800	1000
Leach Test Information							
Stone Content (%)	-						
Sample Mass (kg)	-						
Dry Matter (%)	-						
Moisture (%)	-						

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** = MCERTS accredited

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Analytical Report Number : 18-86015

Project / Site name: St Annes

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025

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Analytical Report Number : 18-87114

Project / Site name:	St Annes	**Samples received on:**	30/05/2018
Your job number:	18-3106	**Samples instructed on:**	30/05/2018
Your order number:	CL1453	**Analysis completed by:**	05/06/2018
Report Issue Number:	1	**Report issued on:**	06/06/2018
Samples Analysed:	1 gases sample - 2 water samples		

Signed:

Dr Claire Stone
Quality Manager
For & on behalf of i2 Analytical Ltd.

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

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

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Analytical Report Number: 18-87114

Project / Site name: St Annes

Your Order No: CL1453

Lab Sample Number				970601	970602			
Sample Reference				BH2B	BH01			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				29/05/2018	29/05/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.0	7.2			
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10			
Chloride	mg/l	0.15	ISO 17025	95	98			
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	< 15	17			
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	7.81	8.69			
Hardness - Total	mgCaCO3/l	1	ISO 17025	519	503			
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10			
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	-	< 0.01			
Acenaphthylene	µg/l	0.01	ISO 17025	-	< 0.01			
Acenaphthene	µg/l	0.01	ISO 17025	-	< 0.01			
Fluorene	µg/l	0.01	ISO 17025	-	< 0.01			
Phenanthrene	µg/l	0.01	ISO 17025	-	< 0.01			
Anthracene	µg/l	0.01	ISO 17025	-	< 0.01			
Fluoranthene	µg/l	0.01	ISO 17025	-	< 0.01			
Pyrene	µg/l	0.01	ISO 17025	-	< 0.01			
Benzo(a)anthracene	µg/l	0.01	ISO 17025	-	< 0.01			
Chrysene	µg/l	0.01	ISO 17025	-	< 0.01			
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	-	< 0.01			
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	-	< 0.01			
Benzo(a)pyrene	µg/l	0.01	ISO 17025	-	< 0.01			
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	-	< 0.01			
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	-	< 0.01			
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	-	< 0.01			
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	-	< 0.16			

Analytical Report Number: 18-87114

Project / Site name: St Annes

Your Order No: CL1453

Lab Sample Number				970601	970602			
Sample Reference				BH2B	BH01			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				29/05/2018	29/05/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Antimony (dissolved)	µg/l	0.4	ISO 17025	0.9	0.9			
Arsenic (dissolved)	µg/l	0.15	ISO 17025	4.34	1.52			
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1			
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.04	0.02			
Calcium (dissolved)	mg/l	0.012	ISO 17025	190	180			
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.3	0.3			
Copper (dissolved)	µg/l	0.5	ISO 17025	3.6	2.9			
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2			
Magnesium (dissolved)	mg/l	0.005	ISO 17025	12	12			
Manganese (dissolved)	µg/l	0.05	ISO 17025	95	18			
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05			
Nickel (dissolved)	µg/l	0.5	ISO 17025	4.8	2.7			
Selenium (dissolved)	µg/l	0.6	ISO 17025	12	10			
Vanadium (dissolved)	µg/l	0.2	ISO 17025	5.1	4.2			
Zinc (dissolved)	µg/l	0.5	ISO 17025	15	4.2			
Monoaromatics								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0			
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C35 - C44	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic (C5 - C44)	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C35 - C44	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic (C5 - C44)	µg/l	10	NONE	< 10	< 10			

Analytical Report Number: 18-87114

Project / Site name: St Annes

Your Order No: CL1453

Lab Sample Number				970601	970602			
Sample Reference				BH2B	BH01			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				29/05/2018	29/05/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	ISO 17025	< 1.0	-			
Chloroethane	µg/l	1	ISO 17025	< 1.0	-			
Bromomethane	µg/l	1	ISO 17025	< 1.0	-			
Vinyl Chloride	µg/l	1	NONE	< 1.0	-			
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	-			
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	-			
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	-			
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	-			
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	-			
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	-			
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	-			
Trichloromethane	µg/l	1	ISO 17025	< 1.0	-			
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	-			
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	-			
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	-			
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	-			
Benzene	µg/l	1	ISO 17025	< 1.0	-			
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	-			
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	-			
Trichloroethene	µg/l	1	ISO 17025	< 1.0	-			
Dibromomethane	µg/l	1	ISO 17025	< 1.0	-			
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	-			
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	-			
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	-			
Toluene	µg/l	1	ISO 17025	< 1.0	-			
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	-			
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	-			
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	-			
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	-			
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	-			
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	-			
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	-			
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	-			
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	-			
Styrene	µg/l	1	ISO 17025	< 1.0	-			
Tribromomethane	µg/l	1	ISO 17025	< 1.0	-			
o-Xylene	µg/l	1	ISO 17025	< 1.0	-			
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	-			
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	-			
Bromobenzene	µg/l	1	ISO 17025	< 1.0	-			
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	-			
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	-			
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	-			
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	-			
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	-			
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	-			
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	-			
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	-			
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	-			
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	-			
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	-			
Butylbenzene	µg/l	1	ISO 17025	< 1.0	-			
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	-			
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	-			
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	-			
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	-			

Analytical Report Number: 18-87114

Project / Site name: St Annes

Your Order No: CL1453

Lab Sample Number				970601	970602			
Sample Reference				BH2B	BH01			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				29/05/2018	29/05/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	-			
Phenol	µg/l	0.05	NONE	< 0.05	-			
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	-			
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	-			
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	-			
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	-			
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	-			
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	-			
2-Methylphenol	µg/l	0.05	NONE	< 0.05	-			
Hexachloroethane	µg/l	0.05	NONE	< 0.05	-			
Nitrobenzene	µg/l	0.05	NONE	< 0.05	-			
4-Methylphenol	µg/l	0.05	NONE	< 0.05	-			
Isophorone	µg/l	0.05	NONE	< 0.05	-			
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	-			
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	-			
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	-			
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	-			
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	-			
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	-			
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	-			
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	-			
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	-			
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	-			
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	-			
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	-			
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	-			
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	-			
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	-			
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	-			
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	-			
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	-			
Dibenzofuran	µg/l	0.05	NONE	< 0.05	-			
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	-			
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	-			
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	-			
Fluorene	µg/l	0.01	ISO 17025	< 0.01	-			
Azobenzene	µg/l	0.05	NONE	< 0.05	-			
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	-			
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	-			
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	-			
Anthracene	µg/l	0.01	ISO 17025	< 0.01	-			
Carbazole	µg/l	0.05	NONE	< 0.05	-			
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	-			
Anthraquinone	µg/l	0.05	NONE	< 0.05	-			
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	-			
Pyrene	µg/l	0.01	ISO 17025	< 0.01	-			
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	-			
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	-			
Chrysene	µg/l	0.01	ISO 17025	< 0.01	-			
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	-			
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	-			
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	-			
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	-			
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	-			
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	-			

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 18-87114

Project / Site name: St Annes

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Gas Subcon to SAL	Subcontracted.	Subcontracted analysis		W	NONE
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	W	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
TPH in (Water)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding.	L070-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Analytical Report Number : 18-88468

Project / Site name:	St Annes	**Samples received on:**	08/05/2018
Your job number:	18-3106	**Samples instructed on:**	11/06/2018
Your order number:	CL1467	**Analysis completed by:**	15/06/2018
Report Issue Number:	1	**Report issued on:**	15/06/2018
Samples Analysed:	2 soil samples		

Signed:

Dr Claire Stone
Quality Manager
For & on behalf of i2 Analytical Ltd.

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

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

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Analytical Report Number: 18-88468

Project / Site name: St Annes
Your Order No: CL1467

Lab Sample Number				978426	978427			
Sample Reference				TP03	TP04			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.50-0.60	0.25-0.35			
Date Sampled				03/05/2018	03/05/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	17			
Moisture Content	%	N/A	NONE	6.1	4.4			
Total mass of sample received	kg	0.001	NONE	1.9	2.0			
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	Chrysotile			
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected			
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.002	< 0.001			
Asbestos Quantification Total	%	0.001	ISO 17025	0.002	< 0.001			
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	9.2	10.7			
Total Cyanide	mg/kg	1	MCERTS	1	< 1			
Total Organic Carbon (TOC)	%	0.1	MCERTS	2.5	0.3			
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0			
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	-	< 0.05			
Acenaphthylene	mg/kg	0.05	MCERTS	-	< 0.05			
Acenaphthene	mg/kg	0.05	MCERTS	-	< 0.05			
Fluorene	mg/kg	0.05	MCERTS	-	< 0.05			
Phenanthrene	mg/kg	0.05	MCERTS	-	< 0.05			
Anthracene	mg/kg	0.05	MCERTS	-	< 0.05			
Fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05			
Pyrene	mg/kg	0.05	MCERTS	-	< 0.05			
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	< 0.05			
Chrysene	mg/kg	0.05	MCERTS	-	< 0.05			
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05			
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05			
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	< 0.05			
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	< 0.05			
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	< 0.05			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	< 0.05			
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	-	< 0.80			

Analytical Report Number: 18-88468

Project / Site name: St Annes
Your Order No: CL1467

Lab Sample Number				978426	978427			
Sample Reference				TP03	TP04			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.50-0.60	0.25-0.35			
Date Sampled				03/05/2018	03/05/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	12	1.4			
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	22	12			
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	2.1	0.38			
Boron (water soluble)	mg/kg	0.2	MCERTS	2.3	0.8			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	1.0	< 0.2			
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	33	16			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	200	21			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	490	58			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.8	< 0.3			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	28	16			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0			
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	64	18			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	570	73			
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0	< 1.0			
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0			
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0			
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0			
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0			
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0			
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0			
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0			
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	73	< 8.0			
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	74	< 10			
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0			
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	3.3	< 2.0			
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	68	< 10			
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	190	< 10			
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	260	< 10			

Analytical Report Number: 18-88468

Project / Site name: St Annes
Your Order No: CL1467

Lab Sample Number				978426	978427			
Sample Reference				TP03	TP04			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.50-0.60	0.25-0.35			
Date Sampled				03/05/2018	03/05/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	-			
Chloroethane	µg/kg	1	NONE	< 1.0	-			
Bromomethane	µg/kg	1	ISO 17025	< 1.0	-			
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-			
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	-			
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	-			
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	-			
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	-			
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-			
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-			
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-			
Trichloromethane	µg/kg	1	MCERTS	< 1.0	-			
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-			
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-			
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	-			
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-			
Benzene	µg/kg	1	MCERTS	< 1.0	-			
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	-			
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-			
Trichloroethene	µg/kg	1	MCERTS	< 1.0	-			
Dibromomethane	µg/kg	1	MCERTS	< 1.0	-			
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	-			
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-			
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-			
Toluene	µg/kg	1	MCERTS	< 1.0	-			
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-			
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	-			
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	-			
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-			
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	-			
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	-			
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-			
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-			
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	-			
Styrene	µg/kg	1	MCERTS	< 1.0	-			
Tribromomethane	µg/kg	1	NONE	< 1.0	-			
o-Xylene	µg/kg	1	MCERTS	< 1.0	-			
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-			
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	-			
Bromobenzene	µg/kg	1	MCERTS	< 1.0	-			
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	-			
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-			
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-			
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-			
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-			
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-			
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-			
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-			
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	-			
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-			
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-			
Butylbenzene	µg/kg	1	MCERTS	< 1.0	-			
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	-			
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	-			
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	-			
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-			

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Project / Site name: St Annes
Your Order No: CL1467

Lab Sample Number				978426	978427			
Sample Reference				TP03	TP04			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.50-0.60	0.25-0.35			
Date Sampled				03/05/2018	03/05/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	-			
Phenol	mg/kg	0.2	ISO 17025	< 0.2	-			
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	-			
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	-			
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-			
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	-			
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-			
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	-			
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	-			
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	-			
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	-			
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	-			
Isophorone	mg/kg	0.2	MCERTS	< 0.2	-			
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	-			
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	-			
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	-			
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-			
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-			
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	-			
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	-			
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	-			
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	-			
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	-			
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	-			
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	-			
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	-			
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	-			
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	-			
Acenaphthylene	mg/kg	0.05	MCERTS	0.73	-			
Acenaphthene	mg/kg	0.05	MCERTS	0.38	-			
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	-			
Dibenzofuran	mg/kg	0.2	MCERTS	0.3	-			
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	-			
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-			
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	-			
Fluorene	mg/kg	0.05	MCERTS	0.38	-			
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	-			
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	-			
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-			
Phenanthrene	mg/kg	0.05	MCERTS	7.5	-			
Anthracene	mg/kg	0.05	MCERTS	1.6	-			
Carbazole	mg/kg	0.3	MCERTS	0.7	-			
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-			
Anthraquinone	mg/kg	0.3	MCERTS	1.6	-			
Fluoranthene	mg/kg	0.05	MCERTS	14	-			
Pyrene	mg/kg	0.05	MCERTS	12	-			
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	-			
Benzo(a)anthracene	mg/kg	0.05	MCERTS	5.5	-			
Chrysene	mg/kg	0.05	MCERTS	5.9	-			
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	8.1	-			
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	3.5	-			
Benzo(a)pyrene	mg/kg	0.05	MCERTS	6.7	-			
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	3.3	-			
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.96	-			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	3.4	-			

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Project / Site name: St Annes
Your Order No: CL1467

Lab Sample Number				978426	978427			
Sample Reference				TP03	TP04			
Sample Number				None Supplied	None Supplied			
Depth (m)				0.50-0.60	0.25-0.35			
Date Sampled				03/05/2018	03/05/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs								
PCB Congener 077	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 081	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 105	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 114	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 118	mg/kg	0.001	NONE	0.004	0.006			
PCB Congener 123	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 126	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 156	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 157	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 167	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 169	mg/kg	0.001	NONE	< 0.001	< 0.001			
PCB Congener 189	mg/kg	0.001	NONE	< 0.001	< 0.001			
Total PCBs	mg/kg	0.012	NONE	< 0.012	< 0.012			

Analytical Report Number: 18-88468
Project / Site name: St Annes
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Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006 based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
978426	TP03	0.50-0.60	134	Loose Fibres & Loose Fibrous Debris	**Chrysotile**	0.002	**0.002**
978427	TP04	0.25-0.35	142	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
978426	TP03	None Supplied	0.50-0.60	Brown sandy loam with gravel and glass.
978427	TP04	None Supplied	0.25-0.35	Light brown sand with gravel and stones.

Analytical Report Number : 18-88468

Project / Site name: St Annes

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
PCBs WHO 12 in soil	Determination of PCBs (WHO-12 Congeners) by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L088/76-PL	W	MCERTS

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Project / Site name: St Annes

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

The results included within the report are representative of the samples submitted for analysis.

Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
TP03		S	18-88468	978426	c	Hexavalent chromium in soil	L080-PL	c
TP03		S	18-88468	978426	c	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	c
TP03		S	18-88468	978426	c	Monohydric phenols in soil	L080-PL	c
TP03		S	18-88468	978426	c	Organic matter (Automated) in soil	L009-PL	c
TP03		S	18-88468	978426	c	PCBs WHO 12 in soil	L027-PL	c
TP03		S	18-88468	978426	c	Semi-volatile organic compounds in soil	L064-PL	c
TP03		S	18-88468	978426	c	TPHCWG (Soil)	L088/76-PL	c
TP03		S	18-88468	978426	c	Total cyanide in soil	L080-PL	c
TP03		S	18-88468	978426	c	Total organic carbon (Automated) in soil	L009-PL	c
TP03		S	18-88468	978426	c	Volatile organic compounds in soil	L073B-PL	c
TP03		S	18-88468	978426	c	pH in soil (automated)	L099-PL	c
TP04		S	18-88468	978427	c	Hexavalent chromium in soil	L080-PL	c
TP04		S	18-88468	978427	c	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	c
TP04		S	18-88468	978427	c	Monohydric phenols in soil	L080-PL	c
TP04		S	18-88468	978427	c	Organic matter (Automated) in soil	L009-PL	c
TP04		S	18-88468	978427	c	PCBs WHO 12 in soil	L027-PL	c
TP04		S	18-88468	978427	c	Speciated EPA-16 PAHs in soil	L064-PL	c
TP04		S	18-88468	978427	c	TPHCWG (Soil)	L088/76-PL	c
TP04		S	18-88468	978427	c	Total cyanide in soil	L080-PL	c
TP04		S	18-88468	978427	c	Total organic carbon (Automated) in soil	L009-PL	c
TP04		S	18-88468	978427	c	pH in soil (automated)	L099-PL	c

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

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Analytical Report Number : 18-88469

Project / Site name:	St Annes	**Samples received on:**	08/05/2018
Your job number:	18-3106	**Samples instructed on:**	11/06/2018
Your order number:	CL1467	**Analysis completed by:**	15/06/2018
Report Issue Number:	1	**Report issued on:**	15/06/2018
Samples Analysed:	2 leachate samples		

Signed:

Dr Claire Stone
Quality Manager
For & on behalf of i2 Analytical Ltd.

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

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

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Waste Acceptance Criteria Analytical Results

Report No:	**18-88469**						
					Client:	**CONCEPT**	
Location	**St Annes**						
Lab Reference (Sample Number)	978428				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	03/05/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	TP03						
Depth (m)	0.50-0.60						
Solid Waste Analysis							
TOC (%)**	-				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg) **	-				6000	--	--
Sum of PCBs (mg/kg) **	-				1	--	--
Mineral Oil (mg/kg)	-				500	--	--
Total PAH (WAC-17) (mg/kg)	-				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0034			0.0243	0.5	2	25
Barium *	0.0095			0.0687	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0021			0.015	0.5	10	70
Copper *	0.019			0.14	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0035			0.0251	0.5	10	30
Nickel *	0.0019			0.013	0.4	10	40
Lead *	0.015			0.11	0.5	10	50
Antimony *	0.0079			0.057	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.018			0.13	4	50	200
Chloride *	1.9			14	800	4000	25000
Fluoride	0.28			2.0	10	150	500
Sulphate *	26			180	1000	20000	50000
TDS*	80			580	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	7.47			54.0	500	800	1000
Leach Test Information							
Stone Content (%)	-						
Sample Mass (kg)	-						
Dry Matter (%)	-						
Moisture (%)	-						

Results are expressed on a dry weight basis, after correction for moisture content where applicable. *= UKAS accredited (liquid eluate analysis only)

Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation ** = MCERTS accredited

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Waste Acceptance Criteria Analytical Results

Report No:	**18-88469**						
					Client:	**CONCEPT**	
Location	**St Annes**						
Lab Reference (Sample Number)	978429				**Landfill Waste Acceptance Criteria Limits**		
Sampling Date	03/05/2018				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	TP04						
Depth (m)	0.25-0.35						
Solid Waste Analysis							
TOC (%)**	-				3%	5%	6%
Loss on Ignition (%) **	-				--	--	10%
BTEX (µg/kg) **	-				6000	--	--
Sum of PCBs (mg/kg) **	-				1	--	--
Mineral Oil (mg/kg)	-				500	--	--
Total PAH (WAC-17) (mg/kg)	-				100	--	--
pH (units)**	-				--	>6	--
Acid Neutralisation Capacity (mol / kg)	-				--	To be evaluated	To be evaluated
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0060			0.0519	0.5	2	25
Barium *	0.0182			0.157	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.017			0.15	0.5	10	70
Copper *	0.0090			0.078	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0041			0.0352	0.5	10	30
Nickel *	0.0006			0.0052	0.4	10	40
Lead *	0.0082			0.071	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0078			0.068	4	50	200
Chloride *	1.0			9.1	800	4000	25000
Fluoride	0.14			1.2	10	150	500
Sulphate *	31			270	1000	20000	50000
TDS*	120			1000	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	4.33			37.5	500	800	1000
Leach Test Information							
Stone Content (%)	-						
Sample Mass (kg)	-						
Dry Matter (%)	-						
Moisture (%)	-						

Results are expressed on a dry weight basis, after correction for moisture content where applicable. *= UKAS accredited (liquid eluate analysis only)

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Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Analytical Report Number : 18-88469

Project / Site name: St Annes

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Analytical Report Number : 18-88970

Project / Site name:	St Annes	**Samples received on:**	13/06/2018
Your job number:	18-3106	**Samples instructed on:**	13/06/2018
Your order number:	CL1467	**Analysis completed by:**	20/06/2018
Report Issue Number:	1	**Report issued on:**	20/06/2018
Samples Analysed:	1 soil sample		

Signed:

Jordan Hill
Reporting Manager
For & on behalf of i2 Analytical Ltd.

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

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

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Analytical Report Number: 18-88970

Project / Site name: St Annes
Your Order No: CL1467

Lab Sample Number				981449				
Sample Reference				TP05				
Sample Number				None Supplied				
Depth (m)				0.20-0.30				
Date Sampled				03/05/2018				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	9.8				
Total mass of sample received	kg	0.001	NONE	1.8				
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected				
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	10.5				
Total Cyanide	mg/kg	1	MCERTS	< 1				
Total Organic Carbon (TOC)	%	0.1	MCERTS	0.4				
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0				
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05				
Fluorene	mg/kg	0.05	MCERTS	< 0.05				
Phenanthrene	mg/kg	0.05	MCERTS	1.3				
Anthracene	mg/kg	0.05	MCERTS	0.17				
Fluoranthene	mg/kg	0.05	MCERTS	2.1				
Pyrene	mg/kg	0.05	MCERTS	1.8				
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.98				
Chrysene	mg/kg	0.05	MCERTS	0.78				
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	1.2				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.40				
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.92				
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.45				
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05				
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.54				
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	10.6				
Heavy Metals / Metalloids								
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	2.8				
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	12				
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.0				
Boron (water soluble)	mg/kg	0.2	MCERTS	2.4				
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2				
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0				
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	30				
Copper (aqua regia extractable)	mg/kg	1	MCERTS	32				
Lead (aqua regia extractable)	mg/kg	1	MCERTS	230				
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.7				
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	28				
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0				
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	50				
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	130				

Analytical Report Number: 18-88970

Project / Site name: St Annes
Your Order No: CL1467

Lab Sample Number				981449				
Sample Reference				TP05				
Sample Number				None Supplied				
Depth (m)				0.20-0.30				
Date Sampled				03/05/2018				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	ug/kg	1	MCERTS	< 1.0				
Toluene	µg/kg	1	MCERTS	< 1.0				
Ethylbenzene	µg/kg	1	MCERTS	< 1.0				
p & m-xylene	µg/kg	1	MCERTS	< 1.0				
o-xylene	µg/kg	1	MCERTS	< 1.0				
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0				
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0				
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0				
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0				
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	27				
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	11				
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	33				
TPH-CWG - Aliphatic (EC5 - EC44)	mg/kg	10	NONE	43				
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0				
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0				
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	16				
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	47				
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	19				
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	64				
TPH-CWG - Aromatic (EC5 - EC44)	mg/kg	10	NONE	83				

Analytical Report Number: 18-88970

Project / Site name: St Annes
Your Order No: CL1467

Lab Sample Number				981449				
Sample Reference				TP05				
Sample Number				None Supplied				
Depth (m)				0.20-0.30				
Date Sampled				03/05/2018				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
PCBs								
PCB Congener 077	mg/kg	0.001	NONE	< 0.001				
PCB Congener 081	mg/kg	0.001	NONE	< 0.001				
PCB Congener 105	mg/kg	0.001	NONE	< 0.001				
PCB Congener 114	mg/kg	0.001	NONE	< 0.001				
PCB Congener 118	mg/kg	0.001	NONE	< 0.001				
PCB Congener 123	mg/kg	0.001	NONE	< 0.001				
PCB Congener 126	mg/kg	0.001	NONE	< 0.001				
PCB Congener 156	mg/kg	0.001	NONE	< 0.001				
PCB Congener 157	mg/kg	0.001	NONE	< 0.001				
PCB Congener 167	mg/kg	0.001	NONE	< 0.001				
PCB Congener 169	mg/kg	0.001	NONE	< 0.001				
PCB Congener 189	mg/kg	0.001	NONE	< 0.001				
Total PCBs	mg/kg	0.012	NONE	< 0.012				

Analytical Report Number : 18-88970

Project / Site name: St Annes

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
981449	TP05	None Supplied	0.20-0.30	Brown loam and clay with vegetation.

Analytical Report Number : 18-88970

Project / Site name: St Annes

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
PCBs WHO 12 in soil	Determination of PCBs (WHO-12 Congeners) by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests""	L009-PL	D	MCERTS
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding.	L076-PL	D	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L088/76-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
TP05		S	18-88970	981449	c	Hexavalent chromium in soil	L080-PL	c
TP05		S	18-88970	981449	c	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	c
TP05		S	18-88970	981449	c	Monohydric phenols in soil	L080-PL	c
TP05		S	18-88970	981449	c	Organic matter (Automated) in soil	L009-PL	c
TP05		S	18-88970	981449	c	PCBs WHO 12 in soil	L027-PL	c
TP05		S	18-88970	981449	c	Speciated EPA-16 PAHs in soil	L064-PL	c
TP05		S	18-88970	981449	c	TPH in (Soil)	L076-PL	c
TP05		S	18-88970	981449	c	TPHCWG (Soil)	L088/76-PL	c
TP05		S	18-88970	981449	c	Total cyanide in soil	L080-PL	c
TP05		S	18-88970	981449	c	Total organic carbon (Automated) in soil	L009-PL	c
TP05		S	18-88970	981449	c	pH in soil (automated)	L099-PL	c

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

1931

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Client: Mr. Ivo Penchev

Associate Director, Concept Engineering Consultants Ltd

Unit 8

Warple Mews

Warple

London, W3 0RF

Results of Bulk Sampling & Asbestos Identification

St Anne's Church NW1 3PT

Report Number:	4RS-JP-180074-R621626
4-RAIL Services (4RS) reference number(s):	180074/030518/01
Date of sampling:	3rd May 2018
Date sample(s) received:	4th May 2018
Date(s) of examination(s):	4th May 2018
Issue date:	8th May 2018

Sampling Strategy

Sampling for asbestos containing materials was carried out in accordance with the procedures described in HSE Document *HSG264 Asbestos, The Survey Guide* and in-house inspection procedure 4R-E200.

Test Method

Samples were examined in accordance with the methods described in the HSE Document *HSG 248 Asbestos: The analysts' guide for sampling, analysis and clearance procedures* and in-house test procedure 4R-E220.

The results relate only to the items submitted for testing. Where samples have been taken by others, 4-RAIL Services do not accept any responsibility for the sampling.

4RS Sample No	Sample Description*	Asbestos Type(s) Detected
180074/030518/01	Cement within trial pit 60cm depth (quantity unknown) in Trial Pit TP2 at St Ann's Church	Chrysotile

*The sample description is outside the scope of UKAS accreditation.

Samples examined will be retained by 4-RAIL Services for a period of 6 months, unless otherwise specified by the Client.

Analysed by:.....M. Chauhan.....Mrs. M. Chauhan, Technologist

Prepared by:.....Mrs. J. Patel, Delivery Support Administrator

Certified by:.....Mr. D. Rice, Consultant

Additional comments

The opinions and interpretations expressed herein are outside the scope of the UKAS Accreditation

4-RAIL Services Limited were requested by Mr. Ivo Penchev, Associate Director, Concept Engineering Consultants Ltd, Unit 8, to attend site and undertake sampling of materials suspected to contain asbestos from St Ann's Church NW1 3PT.

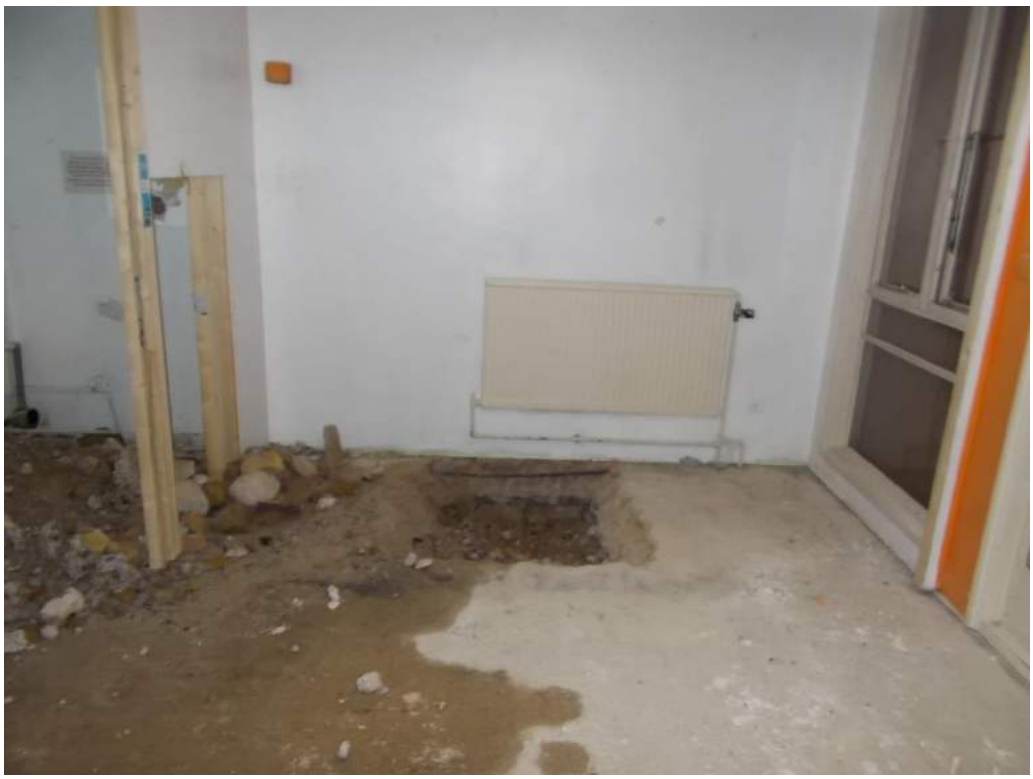
Sampling was undertaken during traffic hours on 3rd May 2018 by Miss. A. Popa of 4-RAIL Services Limited.

One sample was taken for analysis and it **was found to contain asbestos.**

Figure 1 below shows cement within trial pit 60cm depth (quantity unknown) in Trial Pit TP2 at St Ann's Church.

The sample was found to contain Chrysotile.

Sample Ref. 180074/030518/01



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Analytical Report Number : 18-88972

Project / Site name:	St Annes	**Samples received on:**	13/06/2018
Your job number:	18-3106	**Samples instructed on:**	13/06/2018
Your order number:	CL1467	**Analysis completed by:**	20/06/2018
Report Issue Number:	1	**Report issued on:**	20/06/2018
Samples Analysed:	1 leachate sample		

Signed:

Jordan Hill
Reporting Manager
For & on behalf of i2 Analytical Ltd.

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

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

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Analytical Report Number: 18-88972

Project / Site name: St Annes

Your Order No: CL1467

Lab Sample Number				981453				
Sample Reference				TP05				
Sample Number				None Supplied				
Depth (m)				0.20-0.30				
Date Sampled				03/05/2018				
Time Taken				None Supplied				
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
10:1 WAC Leachate								
Arsenic	mg/l	0.0011	ISO 17025	0.0087				
Barium	mg/l	0.00005	ISO 17025	0.0276				
Cadmium	mg/l	0.00008	ISO 17025	< 0.0001				
Chromium	mg/l	0.0004	ISO 17025	0.0058				
Copper	mg/l	0.0007	ISO 17025	0.014				
Mercury	mg/l	0.0005	ISO 17025	< 0.0005				
Molybdenum	mg/l	0.0004	ISO 17025	0.0035				
Nickel	mg/l	0.0003	ISO 17025	0.0048				
Lead	mg/l	0.001	ISO 17025	0.0058				
Antimony	mg/l	0.0017	ISO 17025	0.0072				
Selenium	mg/l	0.004	ISO 17025	< 0.0040				
Zinc	mg/l	0.0004	ISO 17025	0.013				
Chloride	mg/l	0.15	ISO 17025	1.1				
Fluoride	mg/l	0.05	ISO 17025	0.91				
Sulphate	mg/l	0.1	ISO 17025	57				
Total dissolved solids	mg/l	4	ISO 17025	130				
Total monohydric phenols	mg/l	0.01	ISO 17025	< 0.010				
Dissolved organic carbon	mg/l	0.1	NONE	4.94				
10:1 WAC Leachate								
Arsenic	mg/kg	0.011	NONE	0.0701				
Barium	mg/kg	0.0005	NONE	0.223				
Cadmium	mg/kg	0.0008	NONE	< 0.0008				
Chromium	mg/kg	0.004	NONE	0.047				
Copper	mg/kg	0.007	NONE	0.11				
Mercury	mg/kg	0.005	NONE	< 0.0050				
Molybdenum	mg/kg	0.004	NONE	0.0282				
Nickel	mg/kg	0.003	NONE	0.039				
Lead	mg/kg	0.01	NONE	0.047				
Antimony	mg/kg	0.017	NONE	0.058				
Selenium	mg/kg	0.04	NONE	< 0.040				
Zinc	mg/kg	0.004	NONE	0.10				
Chloride	mg/kg	1.5	NONE	8.9				
Fluoride	mg/kg	0.5	NONE	7.3				
Sulphate	mg/kg	1	NONE	460				
Total dissolved solids	mg/kg	40	NONE	1100				
Total monohydric phenols	mg/kg	0.1	NONE	< 0.10				
Dissolved organic carbon	mg/kg	1	NONE	39.8				

Analytical Report Number : 18-88972

Project / Site name: St Annes

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Analytical Report Number : 18-89032

Project / Site name:	St Annes	**Samples received on:**	14/06/2018
Your job number:	18-3106	**Samples instructed on:**	15/06/2018
Your order number:	CL1478	**Analysis completed by:**	25/06/2018
Report Issue Number:	1	**Report issued on:**	25/06/2018
Samples Analysed:	1 gases sample - 2 water samples		

Signed:

Jordan Hill
Reporting Manager
For & on behalf of i2 Analytical Ltd.

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

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

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Analytical Report Number: 18-89032

Project / Site name: St Annes

Your Order No: CL1478

Lab Sample Number				981928	981929			
Sample Reference				BH01A	BH02B			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				13/06/2018	13/06/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.1	7.2			
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10			
Chloride	mg/l	0.15	ISO 17025	110	110			
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	24	< 15			
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	8.16	6.80			
Hardness - Total	mgCaCO3/l	1	ISO 17025	486	460			
Total Phenols								
Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10			
Speciated PAHs								
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01			
Total PAH								
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16			
Heavy Metals / Metalloids								
Antimony (dissolved)	µg/l	0.4	ISO 17025	0.6	0.5			
Arsenic (dissolved)	µg/l	0.15	ISO 17025	1.72	3.69			
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1			
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.07	0.05			
Calcium (dissolved)	mg/l	0.012	ISO 17025	180	170			
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.3	1.8			
Copper (dissolved)	µg/l	0.5	ISO 17025	4.9	7.8			
Lead (dissolved)	µg/l	0.2	ISO 17025	0.2	1.6			
Magnesium (dissolved)	mg/l	0.005	ISO 17025	11	11			
Manganese (dissolved)	µg/l	0.05	ISO 17025	93	130			
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	0.08			
Nickel (dissolved)	µg/l	0.5	ISO 17025	2.2	7.5			
Selenium (dissolved)	µg/l	0.6	ISO 17025	10	6.7			
Vanadium (dissolved)	µg/l	0.2	ISO 17025	5.0	6.1			
Zinc (dissolved)	µg/l	0.5	ISO 17025	1.9	32			

Analytical Report Number: 18-89032

Project / Site name: St Annes

Your Order No: CL1478

Lab Sample Number				981928	981929			
Sample Reference				BH01A	BH02B			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				13/06/2018	13/06/2018			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Monoaromatics								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0			
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0			
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0			
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic >C35 - C44	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aliphatic (C5 - C44)	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0			
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic >C35 - C44	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10			
TPH-CWG - Aromatic (C5 - C44)	µg/l	10	NONE	< 10	< 10			
PCBs by GC-MS								
PCB Congener 28	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 52	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 101	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 118	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 138	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 153	µg/l	0.02	NONE	< 0.02	< 0.02			
PCB Congener 180	µg/l	0.02	NONE	< 0.02	< 0.02			
PCBs by GC-MS								
Total PCBs	µg/l	0.14	NONE	< 0.14	< 0.14			

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 18-89032

Project / Site name: St Annes
Your Order No: CL1478

Lab Sample Number				981930				
Sample Reference				BH02B				
Sample Number				(Gas)				
Depth (m)				None Supplied				
Date Sampled				13/06/2018				
Time Taken				None Supplied				
Analytical Parameter	**Units**	**Limit of detection**	**Accreditation Status**					
Gas (subcontracted)	N/A	N/A	NONE	See Attached				

Analytical Report Number : 18-89032

Project / Site name: St Annes

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Gas Subcon to SAL	Subcontracted.	Subcontracted analysis		W	NONE
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
PCB's By GC-MS in water	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L028-PL	W	NONE
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L099-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
TPH in (Water)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding.	L070-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

CONCEPT LIFE SCIENCES
DELIVERING SCIENCE

Concept Life Sciences is a trading name of Concept Life Sciences Analytical & Development Services Limited registered in England and Wales (No 2514788)

Concept Life Sciences

Certificate of Analysis

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Fax : 0161 874 2404

Report Number: 741258-1

Date of Report: 06-Jun-2018

Customer: i2 Analytical Ltd
7 Woodshots Meadow
Croxley Green Business Park
Croxley Green
Hertfordshire
WD18 8YS

Customer Contact: Project Management

Customer Job Reference: 18-87114
Customer Purchase Order: 9941, 18-87114
Customer Site Reference: (ST ANNES)
Date Job Received at Concept: 01-Jun-2018
Date Analysis Started: 01-Jun-2018
Date Analysis Completed: 06-Jun-2018

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual

Report checked
and authorised by :
Lauren Clarke
Customer Service Advisor

Issued by :
Lauren Clarke
Customer Service Advisor

Concept Reference: 741258
Project Site: (ST ANNES)
Customer Reference: 18-87114

Gas Bag Analysed as Gas Bag
Bulk Gas

Concept Reference	**741258 001**
Customer Sample Reference	**970603 (BH2B)**
Test Sample	**AR**
Date Sampled	**29-MAY-2018**

Determinand	Method	LOD	Units	Symbol	
Methane	GC/TCD	0.02	%	N	<0.02
Carbon Dioxide	GC/TCD	0.01	%	N	**2.25**
Oxygen	GC/TCD	0.01	%	N	**18.4**
Nitrogen	GC/TCD	0.01	%	N	**79.3**
Hydrogen	GC/TCD	0.01	%	N	<0.01
Carbon Monoxide	GC/TCD	0.01	%	N	<0.01

Concept Reference: 741258
Project Site: (ST ANNES)
Customer Reference: 18-87114

Gas Bag Analysed as Gas Bag
H2S

Concept Reference	**741258 001**
Customer Sample Reference	**970603 (BH2B)**
Test Sample	**AR**
Date Sampled	**29-MAY-2018**

Determinand	Method	LOD	Units	Symbol	
Hydrogen sulphide	GC/MS (DI)	10	ppm	N	<10

Index to symbols used in 741258-1

Value	Description
AR	As Received
N	Analysis is not UKAS accredited

CONCEPT LIFE SCIENCES
DELIVERING SCIENCE

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Concept Life Sciences

Certificate of Analysis

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Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2404

Report Number: Supplement to 745340-1

Date of Report: 26-Jun-2018

Customer: i2 Analytical Ltd
7 Woodshots Meadow
Croxley Green Business Park
Croxley Green
Hertfordshire
WD18 8YS

Customer Contact: Project Management

Customer Job Reference: 18-89032
Customer Purchase Order: 9988, 18-89032
Customer Site Reference: St Annes
Date Job Received at Concept: 18-Jun-2018
Date Analysis Started: 20-Jun-2018
Date Analysis Completed: 25-Jun-2018

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual

Report checked
and authorised by :
Kayleigh McCann
Sales Support Manager

Issued by :
Kathryn Gleaves
Customer Service Advisor

Concept Reference: 745340
Project Site: St Annes
Customer Reference: 18-89032

Gas Bag Analysed as Gas Bag
H2S

Concept Reference	**745340 001**
Customer Sample Reference	**BH02B**
Test Sample	**AR**
Date Sampled	**13-JUN-2018**

Determinand	Method	LOD	Units	Symbol	
Hydrogen sulphide	GC/MS (DI)	10	ppm	N	<10

Concept Reference: 745340
Project Site: St Annes
Customer Reference: 18-89032

Gas Bag Analysed as Gas Bag
Bulk Gas Screen

Concept Reference	**745340 001**
Customer Sample Reference	**BH02B**
Test Sample	**AR**
Date Sampled	**13-JUN-2018**

Determinand	Method	LOD	Units	Symbol	
Carbon Dioxide	GC/TCD	0.01	%	N	**0.77**
Carbon Monoxide	GC/TCD	0.01	%	N	<0.01
Hydrogen	GC/TCD	0.01	%	N	<0.01
Methane	GC/TCD	0.02	%	N	<0.02
Nitrogen	GC/TCD	0.01	%	N	**79.2**
Oxygen	GC/TCD	0.01	%	N	**20.1**

Index to symbols used in Supplement to 745340-1

Value	Description
AR	As Received
N	Analysis is not UKAS accredited

Notes

Supplement to 745340: Report issued to change sample 001 reference from BH02 to BH02B, at the customer's request.

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Concept Life Sciences

Certificate of Analysis

Hadfield House
Hadfield Street
Cornbrook
Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2404

Report Number: 747137-1

Date of Report: 27-Jun-2018

Customer: i2 Analytical Ltd
7 Woodshots Meadow
Croxley Green Business Park
Croxley Green
Hertfordshire
WD18 8YS

Customer Contact: Project Management

Customer Job Reference: 18-89869
Customer Purchase Order: 10013, 18-89869
Customer Site Reference: ST ANNES
Date Job Received at Concept: 25-Jun-2018
Date Analysis Started: 25-Jun-2018
Date Analysis Completed: 26-Jun-2018

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

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Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual

Report checked
and authorised by :
Kathryn Gleaves
Customer Service Advisor

Issued by :
Kathryn Gleaves
Customer Service Advisor

Concept Reference: 747137
Project Site: ST ANNES
Customer Reference: 18-89869

Gas Bag Analysed as Gas Bag
H2S

Concept Reference	**747137 001**
Customer Sample Reference	**986830 (BH02B)**
Test Sample	**AR**
Date Sampled	**20-JUN-2018**

Determinand	Method	LOD	Units	Symbol	
Hydrogen sulphide	GC/MS (DI)	10	ppm	N	<10

Concept Reference: 747137
Project Site: ST ANNES
Customer Reference: 18-89869

Gas Bag Analysed as Gas Bag
Bulk Gas Screen

Concept Reference	**747137 001**
Customer Sample Reference	**986830 (BH02B)**
Test Sample	**AR**
Date Sampled	**20-JUN-2018**

Determinand	Method	LOD	Units	Symbol	
Carbon Dioxide	GC/TCD	0.01	%	N	**1.44**
Carbon Monoxide	GC/TCD	0.01	%	N	<0.01
Hydrogen	GC/TCD	0.01	%	N	<0.01
Methane	GC/TCD	0.02	%	N	<0.02
Nitrogen	GC/TCD	0.01	%	N	**81.5**
Oxygen	GC/TCD	0.01	%	N	**17.1**

Index to symbols used in 747137-1

Value	Description
AR	As Received
N	Analysis is not UKAS accredited

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Certificate of Analysis

Hadfield House
Hadfield Street
Cornbrook
Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2404

Report Number: 750271-1

Date of Report: 16-Jul-2018

Customer: i2 Analytical Ltd
7 Woodshots Meadow
Croxley Green Business Park
Croxley Green
Hertfordshire
WD18 8YS

Customer Contact: Project Management

Customer Job Reference: 18-91269
Customer Purchase Order: 10067, 18-91269
Customer Site Reference: St Annes
Date Job Received at Concept: 09-Jul-2018
Date Analysis Started: 09-Jul-2018
Date Analysis Completed: 16-Jul-2018

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual

Report checked
and authorised by :
Kathryn Gleaves
Customer Service Advisor

Issued by :
Kathryn Gleaves
Customer Service Advisor

Concept Reference: 750271
Project Site: St Annes
Customer Reference: 18-91269

Gas Bag Analysed as Gas Bag
H2S

Concept Reference	**750271 001**
Customer Sample Reference	**994216 (BH02B)**
Test Sample	**AR**
Date Sampled	**02-JUL-2018**

Determinand	Method	LOD	Units	Symbol	
Hydrogen sulphide	GC/MS (DI)	10	ppm	N	<10

Concept Reference: 750271
Project Site: St Annes
Customer Reference: 18-91269

Gas Bag Analysed as Gas Bag
Bulk Gas Screen

Concept Reference	**750271 001**
Customer Sample Reference	**994216 (BH02B)**
Test Sample	**AR**
Date Sampled	**02-JUL-2018**

Determinand	Method	LOD	Units	Symbol	
Carbon Dioxide	GC/TCD	0.01	%	N	**0.65**
Carbon Monoxide	GC/TCD	0.01	%	N	<0.01
Hydrogen	GC/TCD	0.01	%	N	<0.01
Methane	GC/TCD	0.02	%	N	<0.02
Nitrogen	GC/TCD	0.01	%	N	**79.1**
Oxygen	GC/TCD	0.01	%	N	**20.3**

Index to symbols used in 750271-1

Value	Description
AR	As Received
N	Analysis is not UKAS accredited

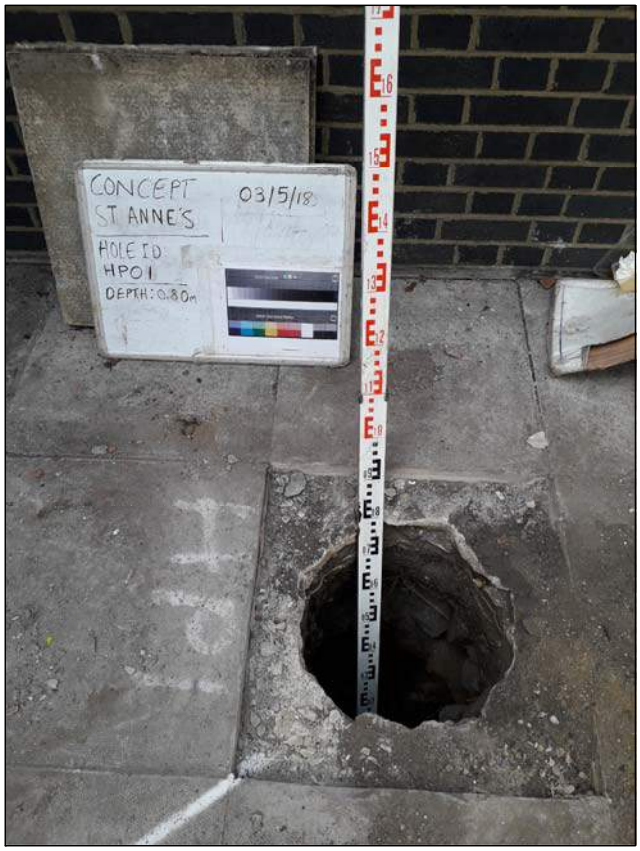
13. PHOTOGRAPHS

Unit 8, Warple Mews
Warple Way
London W3 0RF

CONCEPT SITE INVESTIGATIONS

Tel: 020 8811 2880
Fax: 020 8811 2881
email: si@conceptconsultants.co.uk

Site Name	1 Triton Square - St Anne's	Job No.	18/3106	HOLE	HP01
Carried out for	British Land	Date		Photograph	01 & 02



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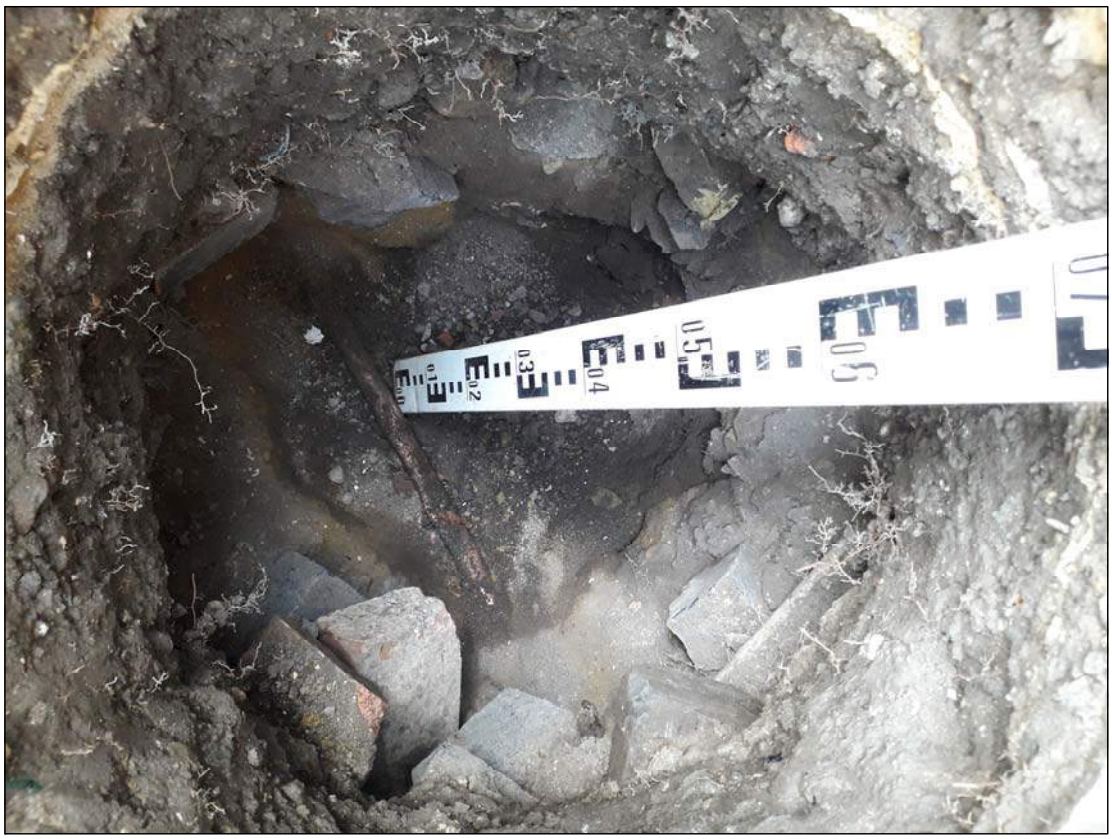

Photograph No 02

Unit 8, Warple Mews
Warple Way
London W3 0RF

CONCEPT SITE INVESTIGATIONS

Tel: 020 8811 2880
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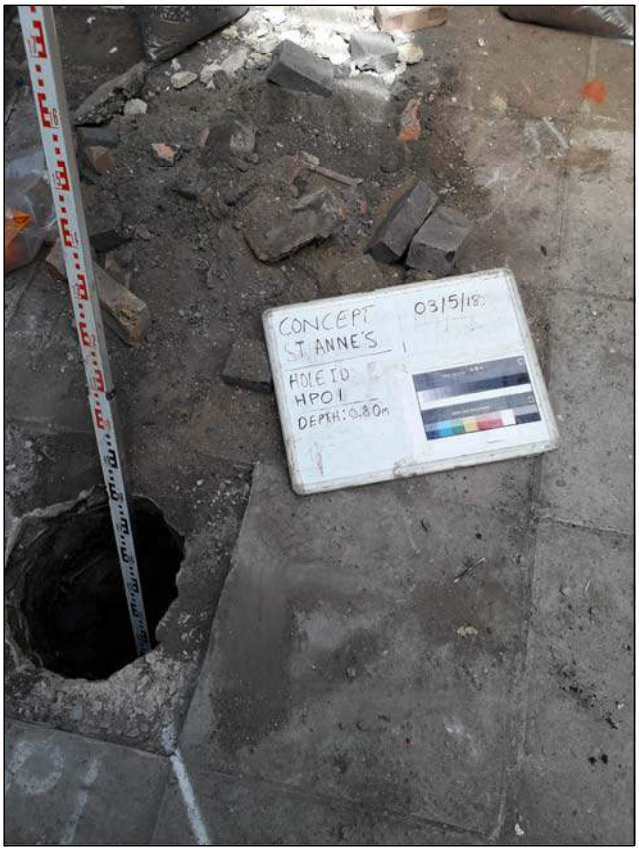
Site Name	1 Triton Square - St Anne's	Job No.	18/3106	HOLE	HP01-02
Carried out for	British Land	Date		Photograph	03 & 04



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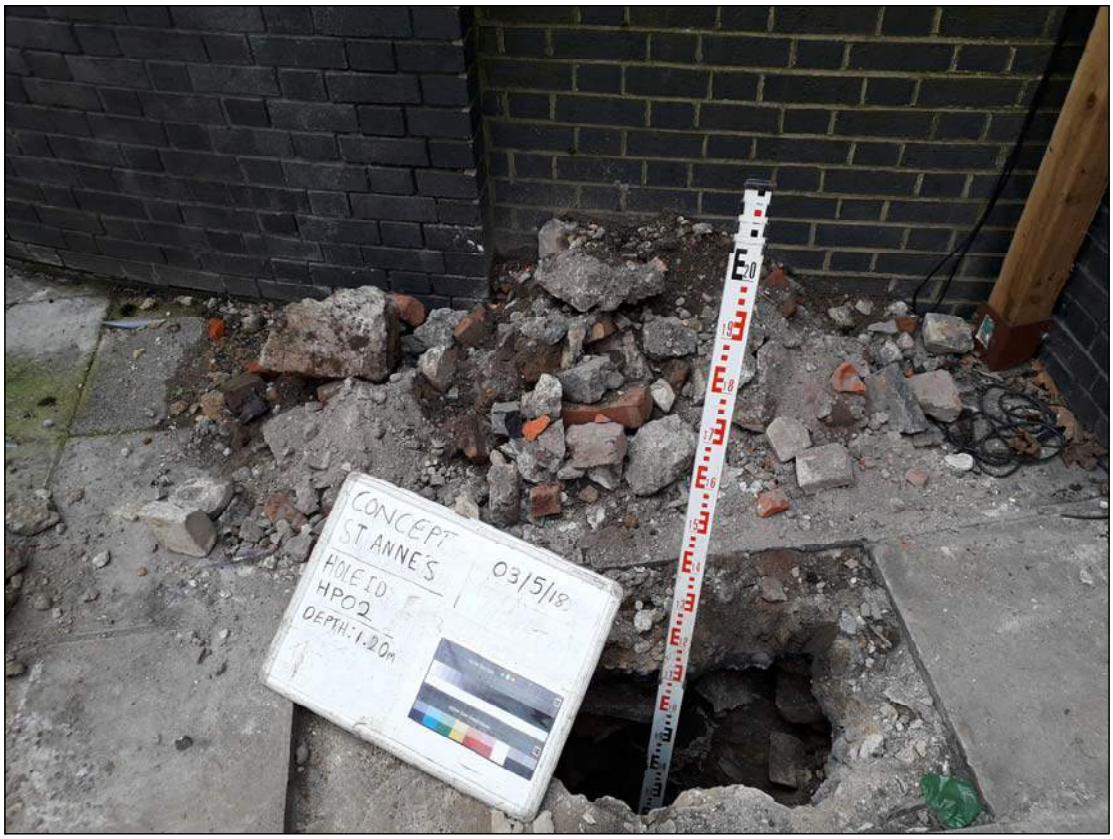

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London W3 0RF

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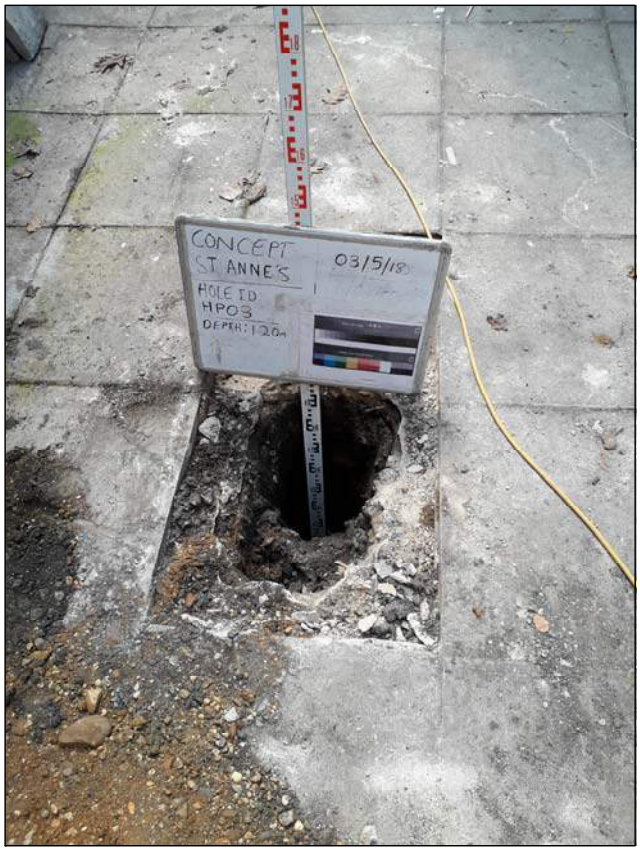
Site Name	1 Triton Square - St Anne's	Job No.	18/3106	HOLE	HP03
Carried out for	British Land	Date		Photograph	05 & 06



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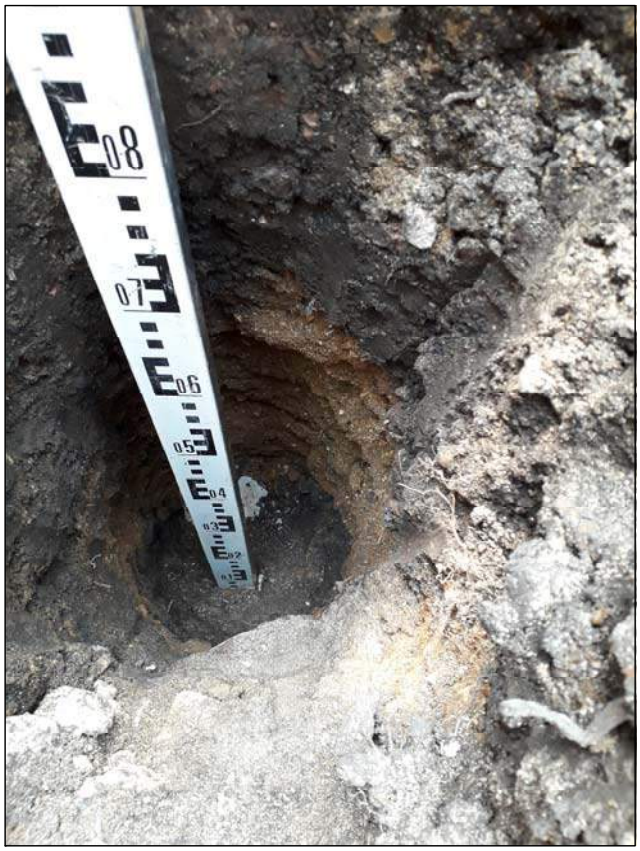

Photograph No 06

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Tel: 020 8811 2880
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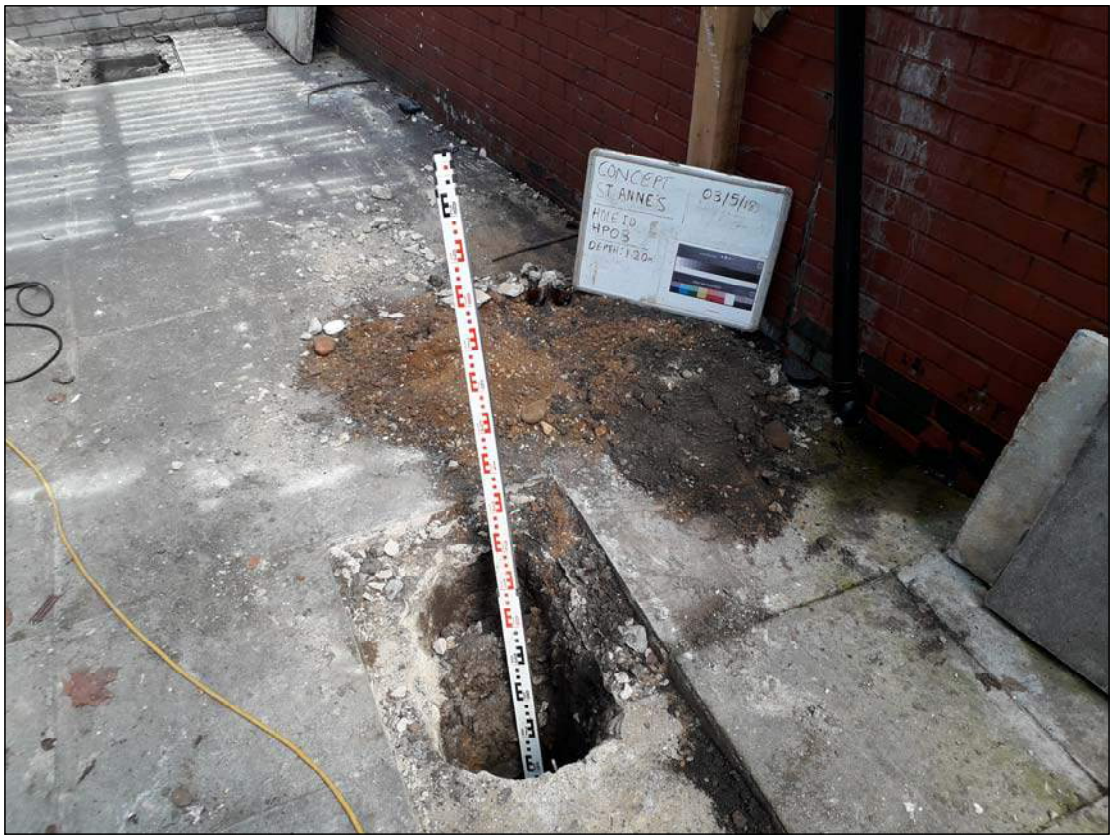
email: si@conceptconsultants.co.uk

Site Name	1 Triton Square - St Anne's	Job No.	18/3106	HOLE	HP03
Carried out for	British Land	Date		Photograph	07



Photograph No 07

Unit 8, Warple Mews
Warple Way
London W3 0RF

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Tel: 020 8811 2880
Fax: 020 8811 2881
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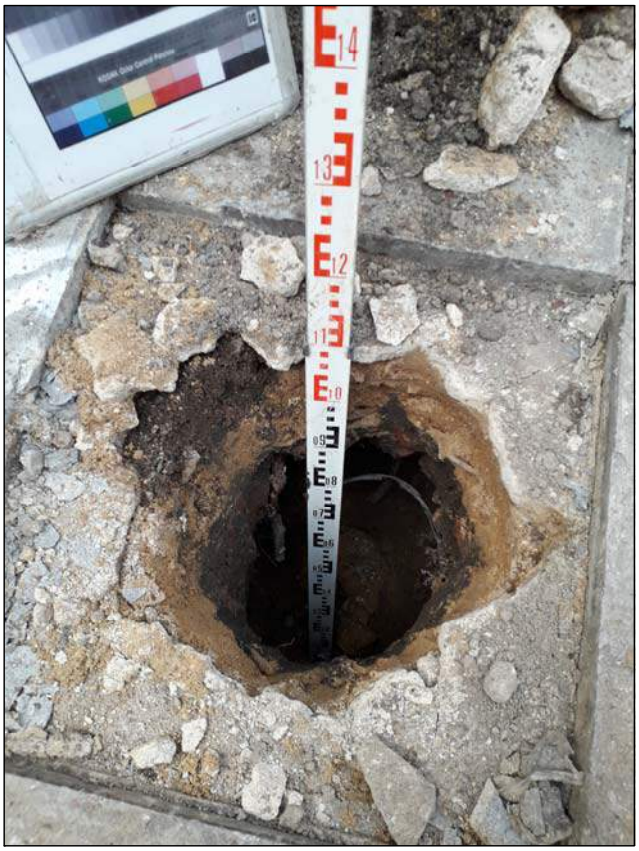
Site Name	1 Triton Square - St Anne's	Job No.	18/3106	HOLE	HP04
Carried out for	British Land	Date		Photograph	08 & 09

Photograph No 08



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Unit 8, Warple Mews
Warple Way
London W3 0RF

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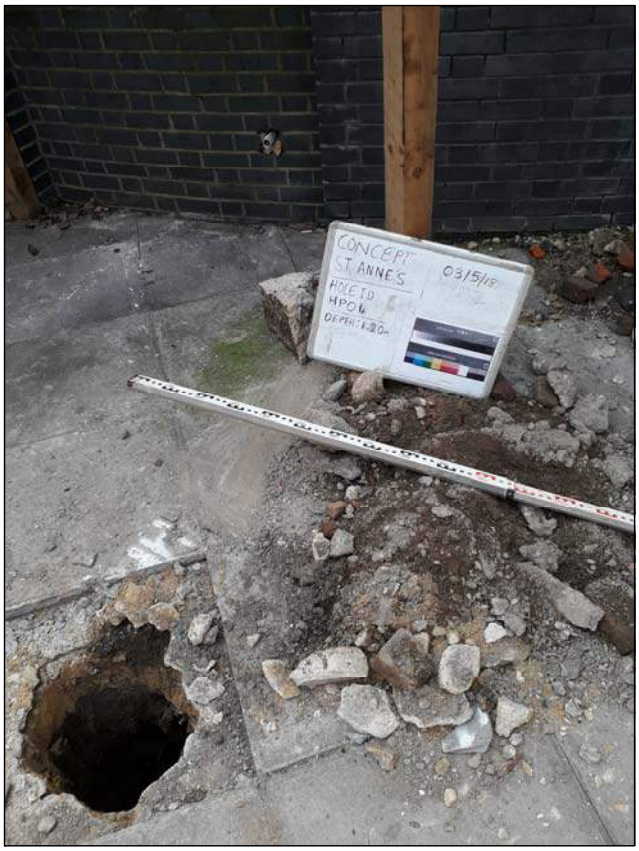
Tel: 020 8811 2880
Fax: 020 8811 2881
email: si@conceptconsultants.co.uk

Site Name	1 Triton Square - St Anne's	Job No.	18/3106	HOLE	HP04
Carried out for	British Land	Date		Photograph	10 & 11

Photograph No 10



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Warple Way
London W3 0RF

CONCEPT SITE INVESTIGATIONS

Tel: 020 8811 2880
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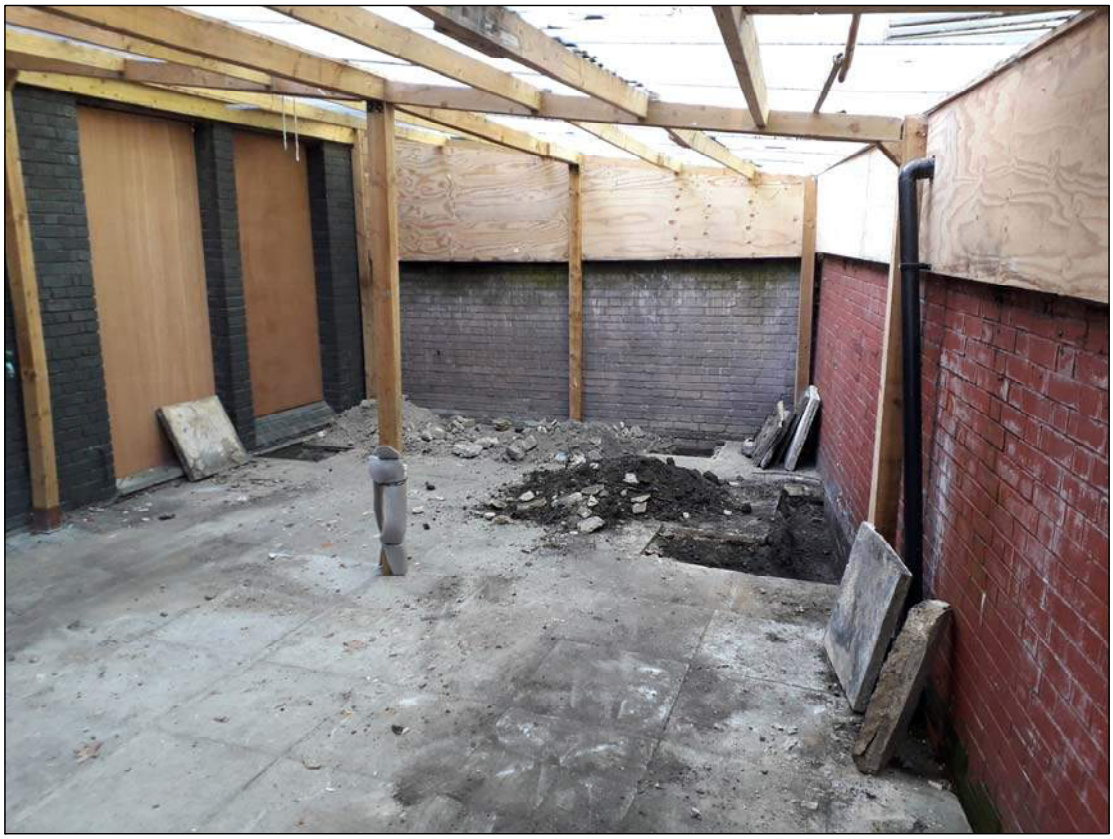
Site Name	1 Triton Square - St Anne's	Job No.	18/3106	HOLE	HP05
Carried out for	British Land	Date		Photograph	12 & 13



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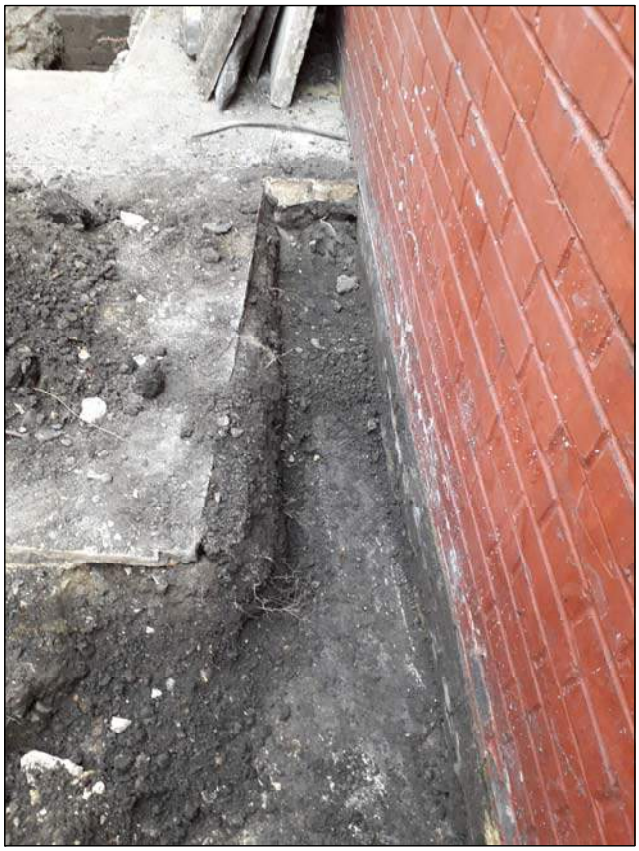

Photograph No 13

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London W3 0RF

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Tel: 020 8811 2880
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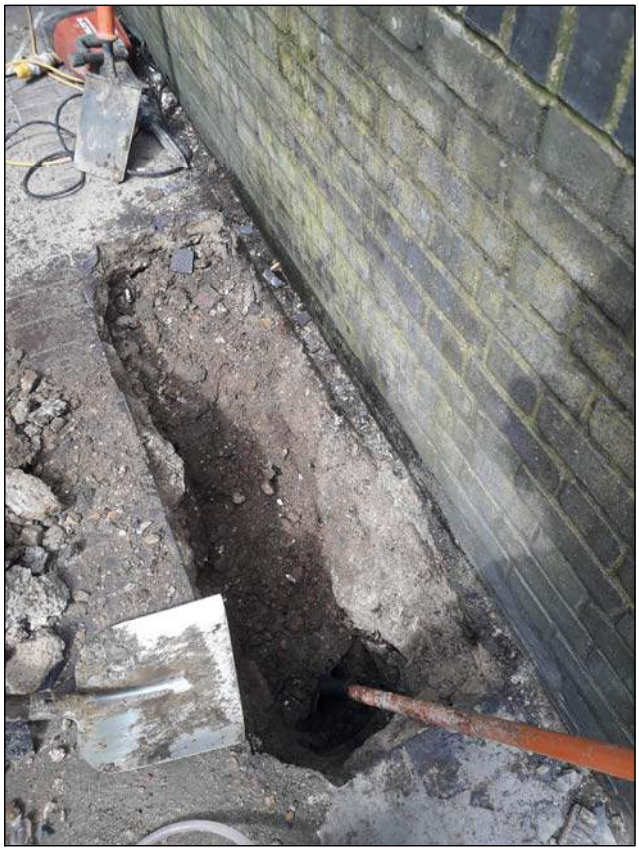
Site Name	1 Triton Square - St Anne's	Job No.	18/3106	HOLE	HP06
Carried out for	British Land	Date		Photograph	14 & 15



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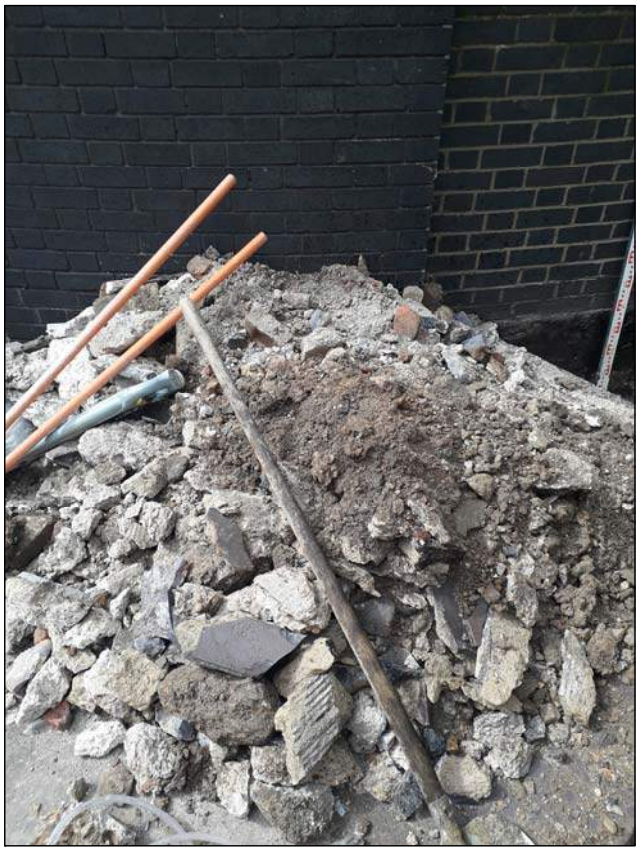

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Warple Way
London W3 0RF

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Tel: 020 8811 2880
Fax: 020 8811 2881
email: si@conceptconsultants.co.uk

Site Name	1 Triton Square - St Anne's	Job No.	18/3106	HOLE	TP01
Carried out for	British Land	Date		Photograph	16 & 17

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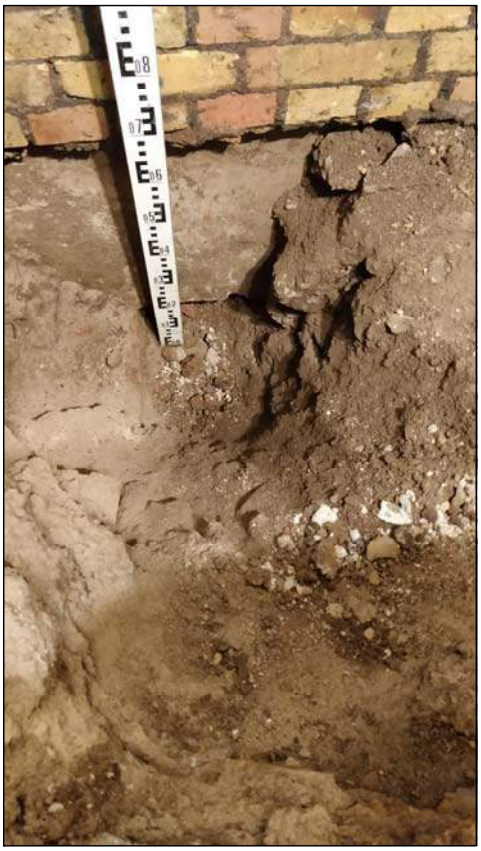

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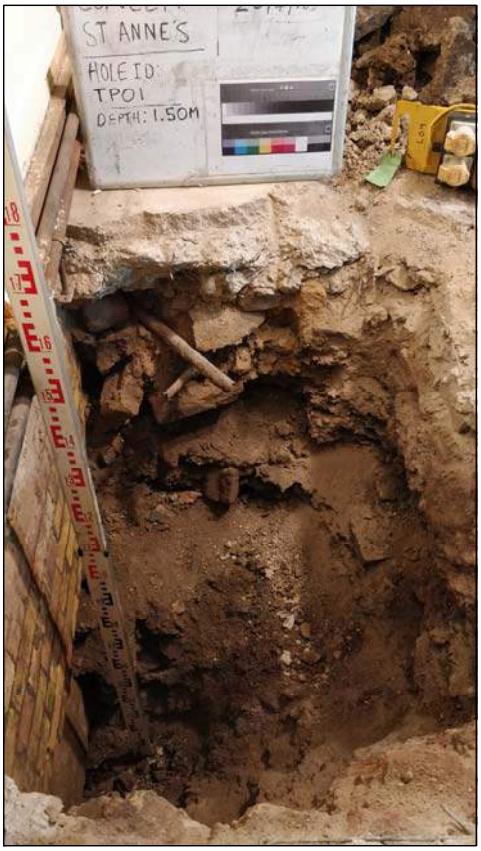
Unit 8, Warple Mews
Warple Way
London W3 0RF

CONCEPT SITE INVESTIGATIONS

Tel: 020 8811 2880
Fax: 020 8811 2881
email: si@conceptconsultants.co.uk

Site Name	1 Triton Square - St Anne's	Job No.	18/3106	HOLE	TP01
Carried out for	British Land	Date		Photograph	18 & 19



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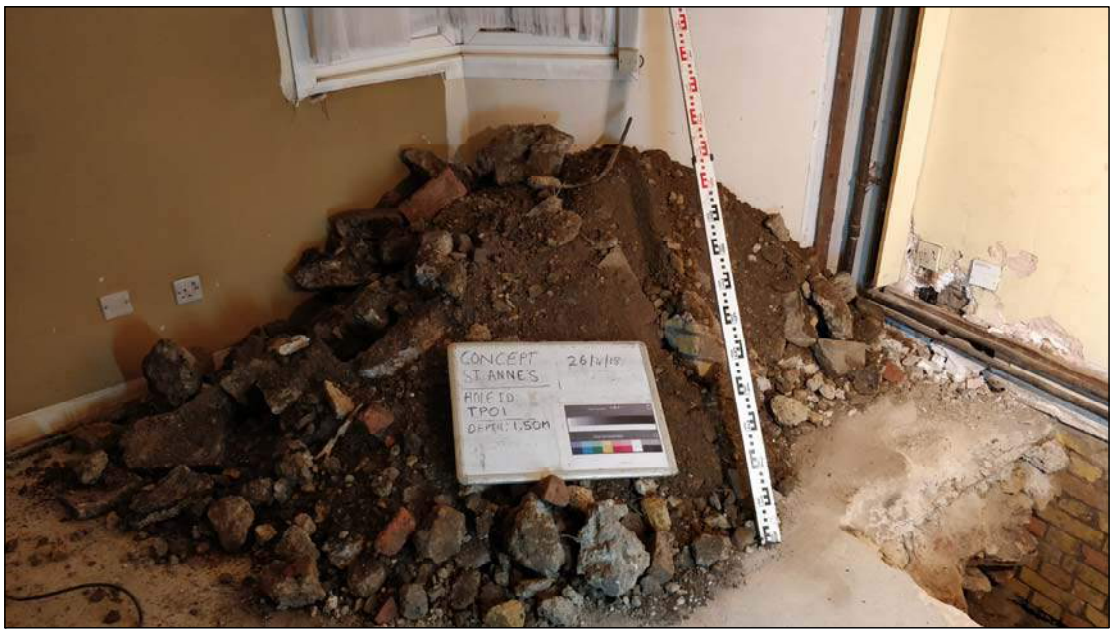

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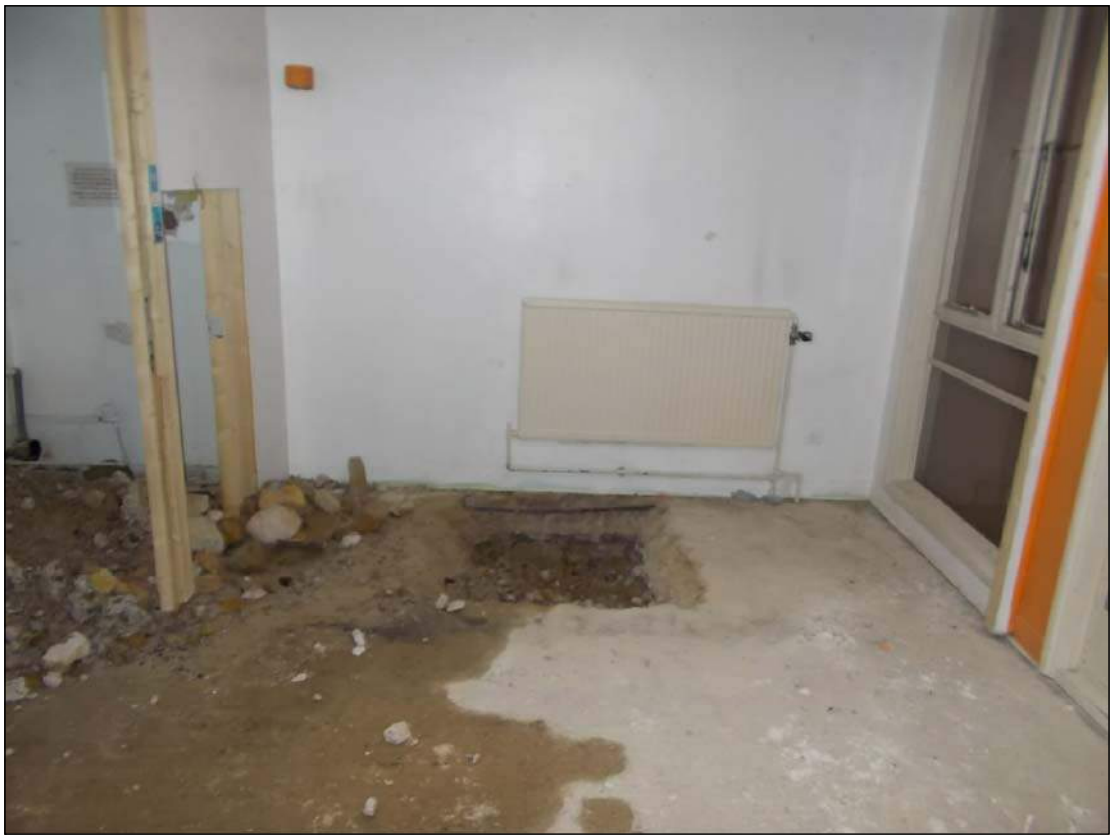
Warple Way
London W3 0RF

CONCEPT SITE INVESTIGATIONS

Tel: 020 8811 2880
Fax: 020 8811 2881
email: si@conceptconsultants.co.uk

Site Name	1 Triton Square - St Anne's	Job No.	18/3106	HOLE	TP02
Carried out for	British Land	Date		Photograph	19A



Photograph No 19A

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Warple Way
London W3 0RF

CONCEPT SITE INVESTIGATIONS

Tel: 020 8811 2880
Fax: 020 8811 2881
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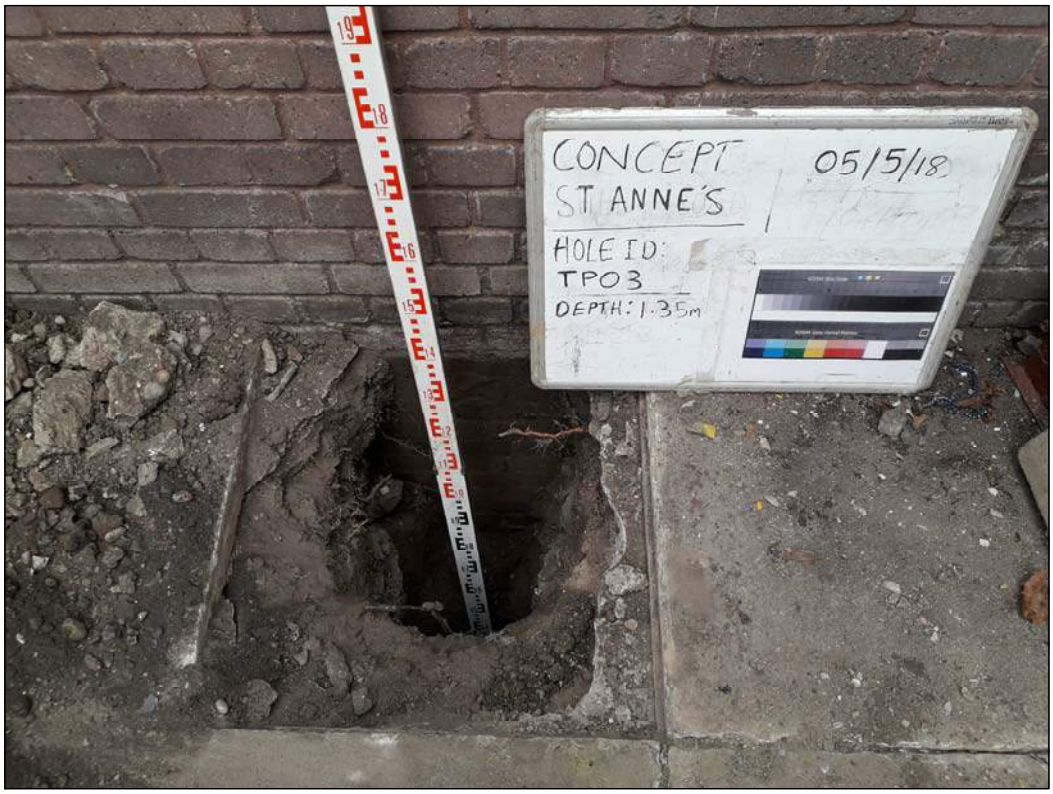
Site Name	1 Triton Square - St Anne's	Job No.	18/3106	HOLE	TP03
Carried out for	British Land	Date		Photograph	20 & 21



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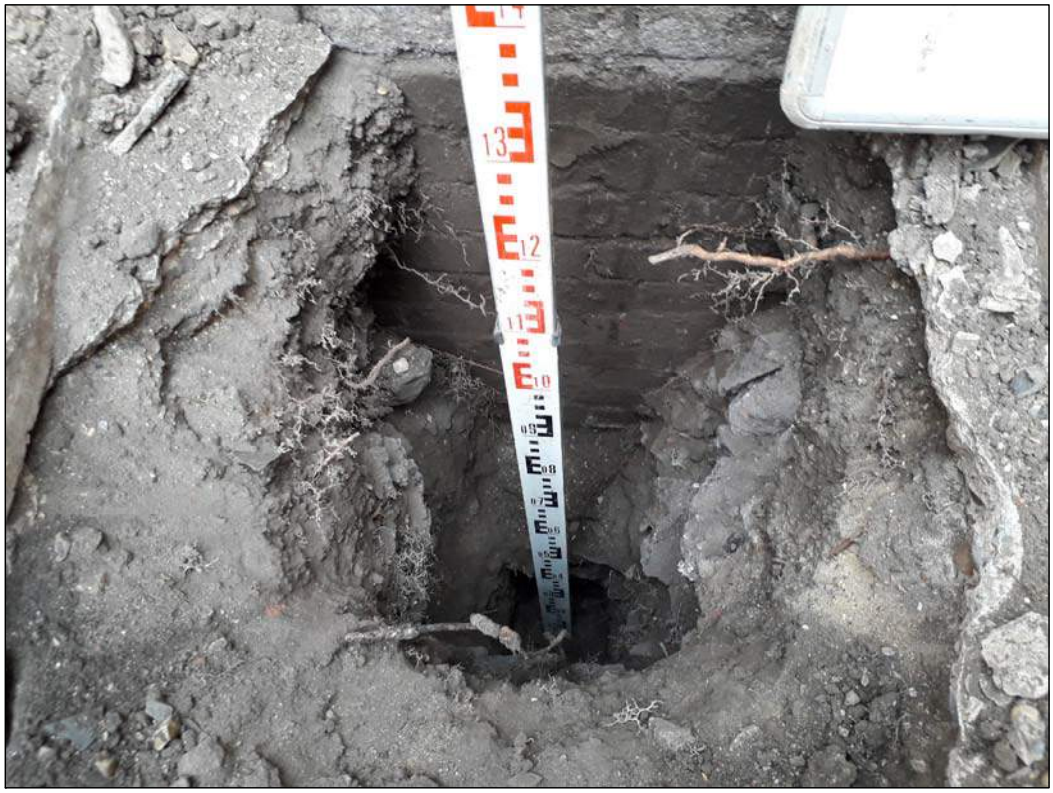

Photograph No 21

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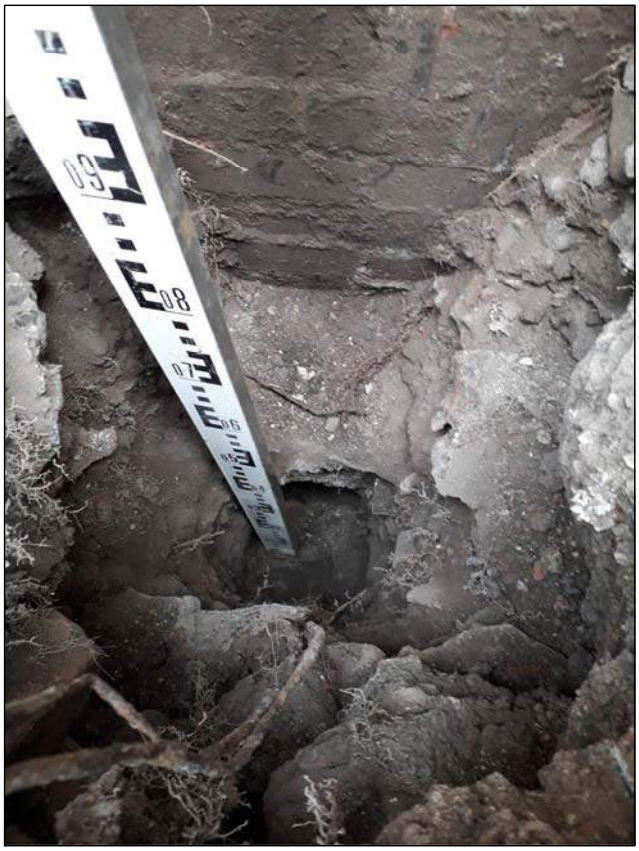
London W3 0RF

CONCEPT SITE INVESTIGATIONS

Tel: 020 8811 2880
Fax: 020 8811 2881
email: si@conceptconsultants.co.uk

Site Name	1 Triton Square - St Anne's	Job No.	18/3106	HOLE	TP03
Carried out for	British Land	Date		Photograph	22 & 23



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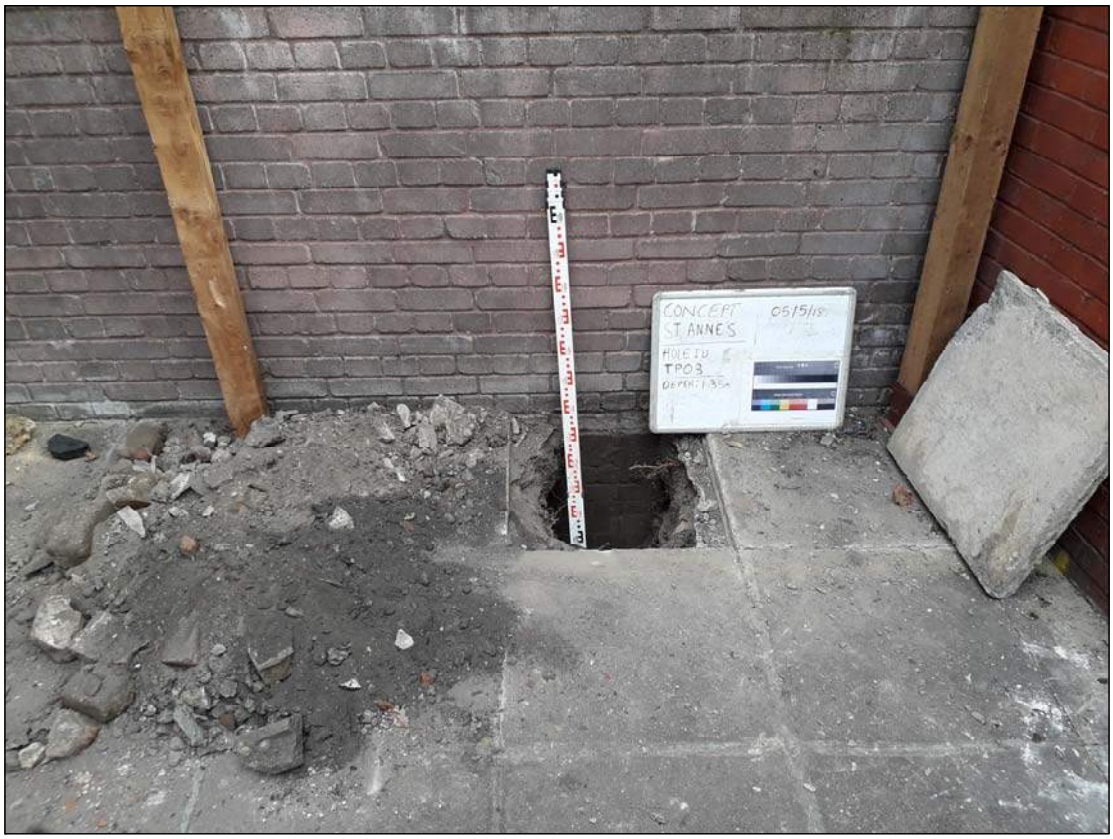


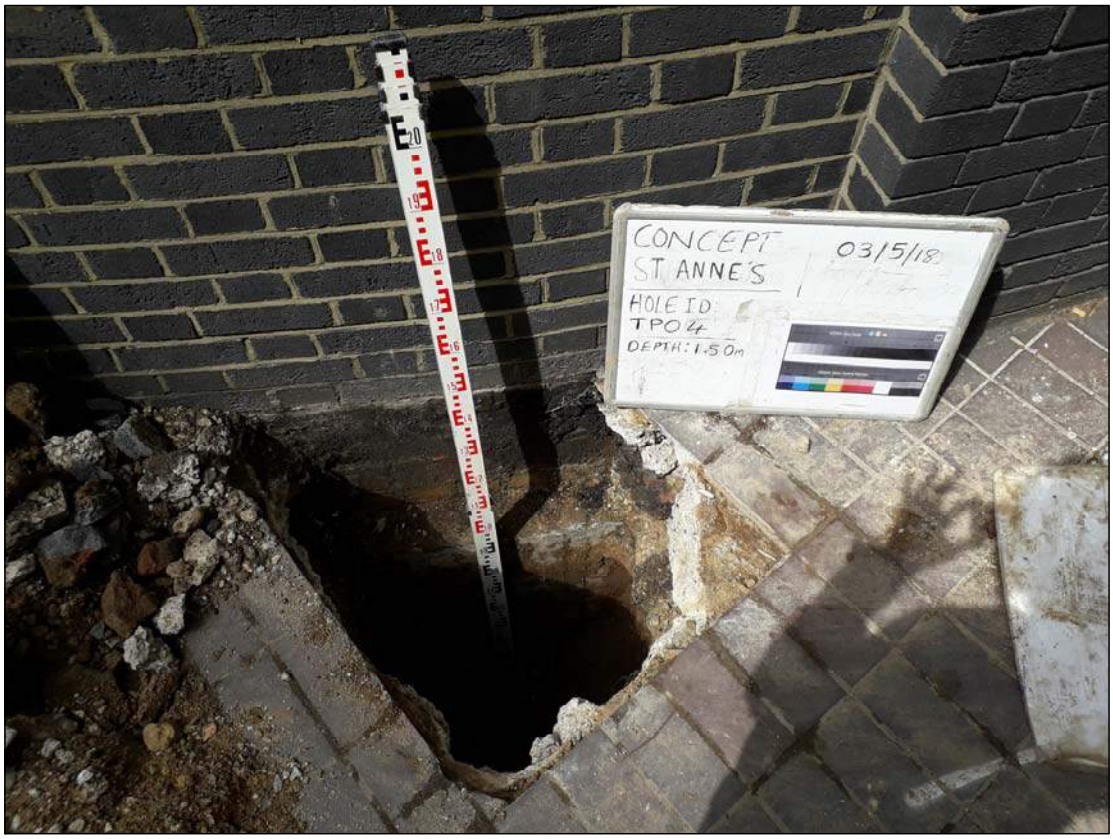
Photograph No 23

Unit 8, Warple Mews
Warple Way
London W3 0RF

CONCEPT SITE INVESTIGATIONS

Tel: 020 8811 2880
Fax: 020 8811 2881
email: si@conceptconsultants.co.uk

Site Name	1 Triton Square - St Anne's	Job No.	18/3106	HOLE	TP04
Carried out for	British Land	Date		Photograph	24 & 25



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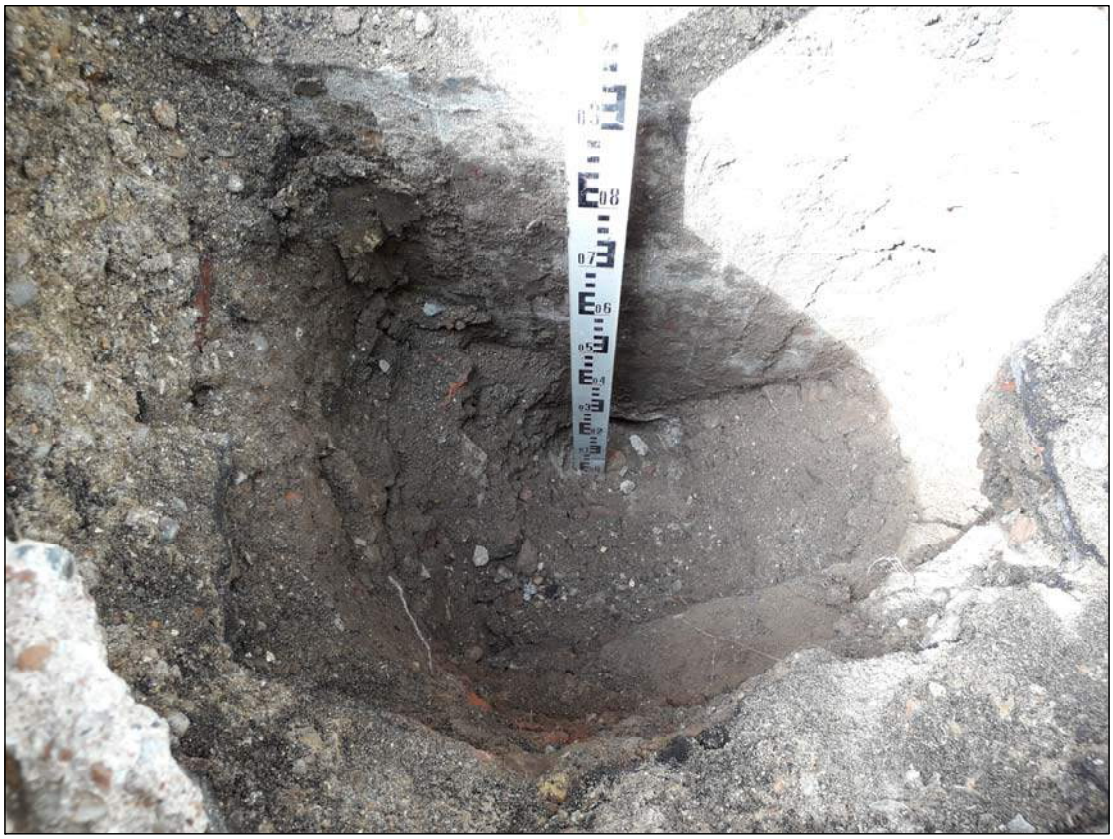


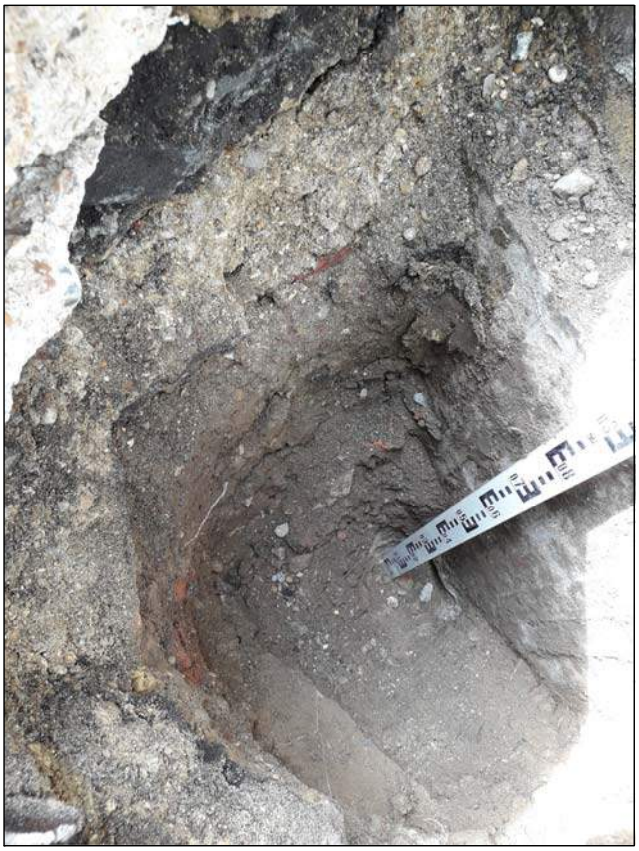
Photograph No 25

Unit 8, Warple Mews
Warple Way
London W3 0RF

CONCEPT SITE INVESTIGATIONS

Tel: 020 8811 2880
Fax: 020 8811 2881
email: si@conceptconsultants.co.uk

Site Name	1 Triton Square - St Anne's	Job No.	18/3106	HOLE	TP04
Carried out for	British Land	Date		Photograph	26 & 27



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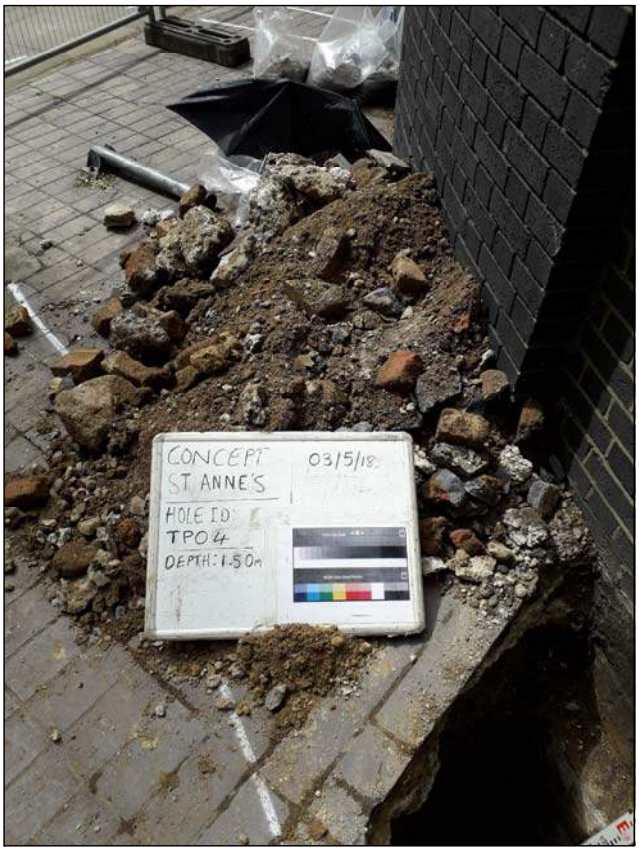

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Unit 8, Warple Mews
Warple Way
London W3 0RF

CONCEPT SITE INVESTIGATIONS

Tel: 020 8811 2880
Fax: 020 8811 2881
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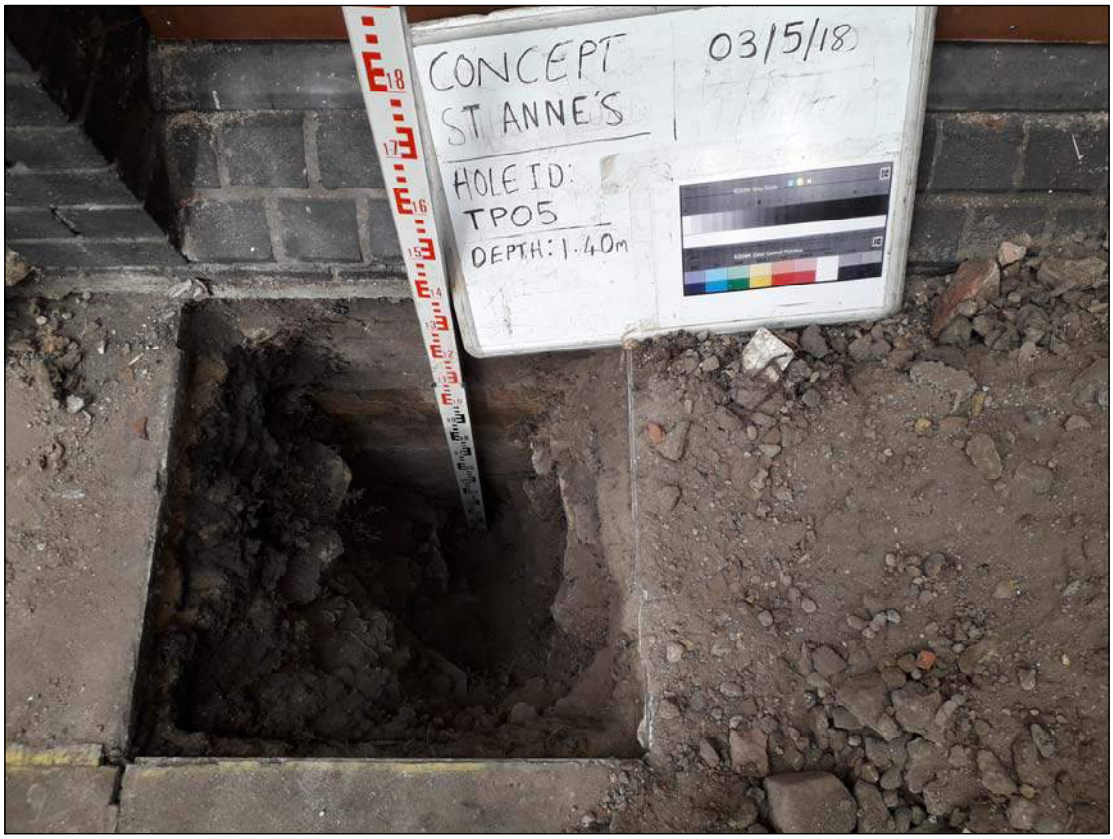
Site Name	1 Triton Square - St Anne's	Job No.	18/3106	HOLE	TP05
Carried out for	British Land	Date		Photograph	28 & 29



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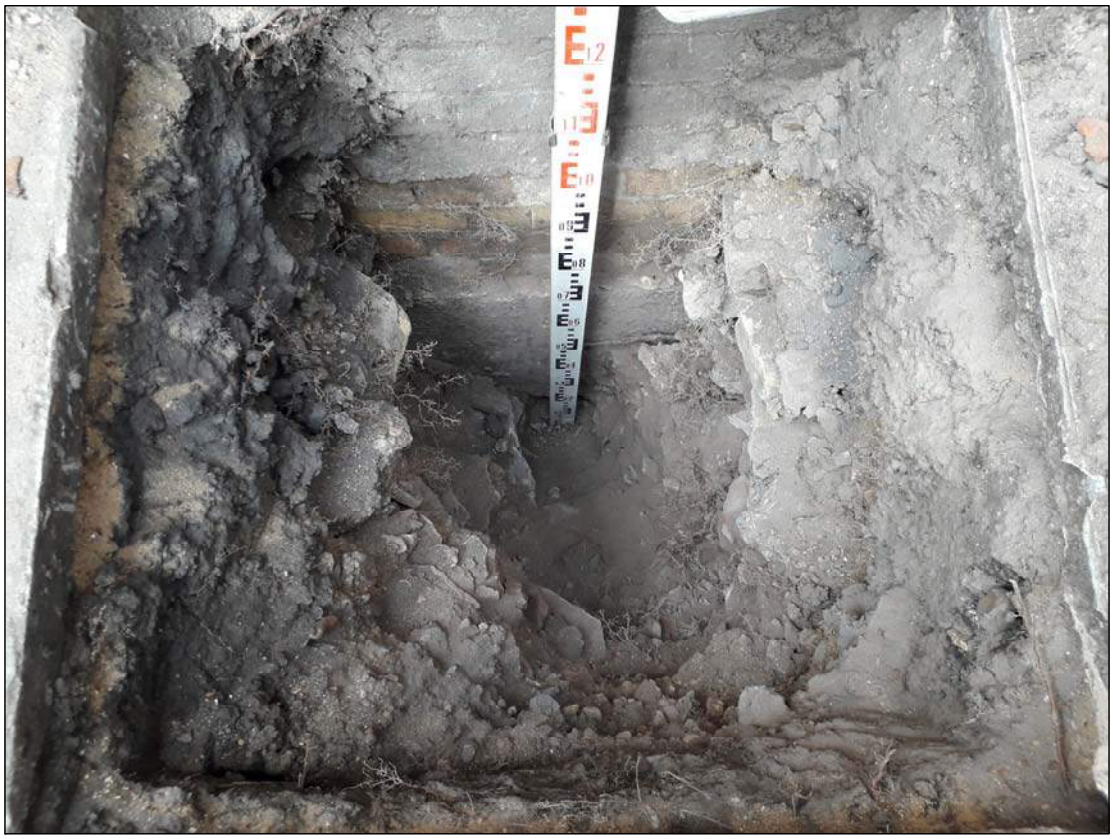

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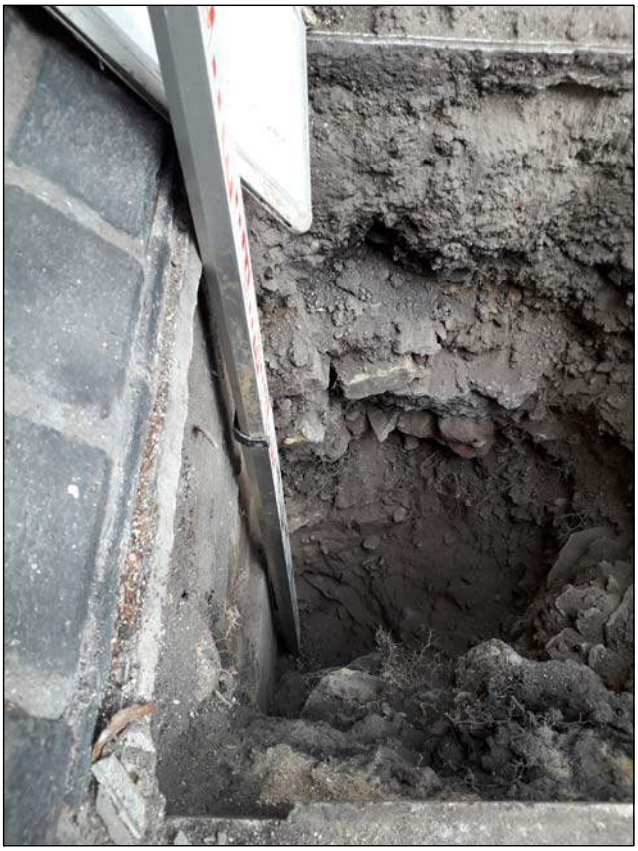
Warple Way
London W3 0RF

CONCEPT SITE INVESTIGATIONS

Tel: 020 8811 2880
Fax: 020 8811 2881
email: si@conceptconsultants.co.uk

Site Name	1 Triton Square - St Anne's	Job No.	18/3106	HOLE	TP05
Carried out for	British Land	Date		Photograph	30 & 31



Photograph No 30

Photograph No 31

Appendix B

Data assessment methodology

B1 Background

A generic quantitative assessment of the results of the ground investigation is provided in the report in accordance with the current UK guidance on the assessment of contaminated land and in particular the Contaminated Land Exposure Assessment (CLEA) framework.

B2 Human health

B2.1 Chemical contamination

B2.1.1 Generic assessment criteria

The UK statutory guidance suggests that generic soil quality guideline values may be used for an initial screening of soil contamination results in relation to human health risk assessment. Generic assessment criteria (GAC) provide an indication of concentrations in soil below which the long-term human health risks for various generic land-use scenarios are considered to be minimal. Concentrations above GAC do not necessarily indicate that significant contamination is present, but rather that further assessment or risk management measures may be warranted.

A generic residential with consumption of homegrown produce end use has been considered in the assessment to provide an initial appraisal of the results. The generic residential end use assumes a small two storey terraced house with a garden area, which could be used for growing fruit and vegetables. It is based on assessing risks to a 0 to six year old female child living at the property for 365 days a year and using the garden for an hour every day apart from in the first six months of life. The child is assumed to spend 23 hours a day indoors until they are five when they are at school for part of the day.

Category 4 Screening Levels (C4SLs), released by Defra for some determinands including lead, have been used in the first instance within this assessment. C4SLs are only available for six contaminants and consequently Arup has derived GAC using CLEA 1.07 which use C4SL exposure parameters but maintain the traditional minimal risk toxicological benchmarks. Input data for the toxicological effects, physical characteristics and contaminant fate and transport parameters for the determinands have been taken from sources published by the Environment Agency and other industry sources (including LQM/CIEH and the European Food Safety Authority (EFSA). Further details of the derivation of the Arup GACs including changes made to the default user chemical database and exposure assumptions are available on request.

B2.1.2 C4SLs

Defra has released a set of Category 4 Screening Levels (C4SLs) which, according to associated guidance may be applicable under the planning regime in some circumstances.

The Contaminated Land Statutory Guidance (2012) defines four ‘categories’ of land when considering human health and the water environment to assist in determining whether a site

might be “Contaminated Land” under Part 2A. Category 1 and 2 would indicate that the site would be determined; whereas in the case of both Category 3 and 4 it would not. Land that has been developed which is assessed to be within category 4 should be acceptable under planning. Defra recently confirmed in writing that C4SL (criteria developed to define the boundary between category 3 and category 4) could be used under the planning regime. It states that C4SL provide a simple test for deciding if land is “suitable for use” and definitely not contaminated. A developer may decide that in the cases where they are providing high quality new development that a higher level of protection may be preferred on a voluntary basis, for instance by using generic assessment criteria based on negligible levels of risk.

The conditions assumed in the C4SL calculations include sandy loam soil and 6% SOM. The detailed description of the Made Ground suggest that the soils could reasonable classified within the sandy loam to sandy clay range; the SOM is low, typically between 1% and 2%.

B2.1.3 Asbestos in soil

Work with asbestos in the UK is controlled by the Health and Safety Executive (HSE) and the Control of Asbestos Regulations (CAR) 2012. Certain activities, such as working with asbestos insulation, coatings, and insulting board require licensing and notification to the appropriate authority before work commences. All work with asbestos materials must be initially assessed by a competent person and various requirements arise from that assessment.

The HSE has published a Code of Practice for CAR 2012 which does not include specific guidance regulating asbestos in soils. In March 2014 CIRIA published C733 Asbestos in Soil and Made Ground: A guide to understanding and managing risks.

In order for asbestos found within soil to pose a risk to health, it has to be present in a form that can release fibres to air for inhalation (or may do after it has been disturbed). The potential for fibre release is likely to be relatively lower when asbestos is present in soil in the form of cements or other ‘bonded’ materials and higher when friable forms or unconsolidated forms such as ‘free fibres’ are present. However, even cemented and bonded ACM may eventually degrade and release fibres and can be disturbed and broken during construction for instance.

The release of fibres from the soil into the air can occur via wind-blown disturbance or physical disturbance either during site development (e.g. construction, remediation or earthworks) or during site use after development. The concentration of airborne fibres released is influenced by many factors including asbestos type, ACM type and condition/state, depth, distribution and concentration in soil, soil type, and soil moisture content. There is limited data on the release of airborne fibres from soils in real world environments, but soil moisture content has a particularly significant impact. In laboratory studies, the addition of 5% moisture to a dry soil reduced airborne fibre release by 80-95% and no airborne fibre were detected when the soil moisture content was greater than 15%.

There are currently no generic assessment criteria for asbestos in soils and C733 makes it clear that such criteria are unlikely in the near future due to uncertainties on the mechanisms for fibre release, calculating the likely exposure and the risk of harm at low levels of exposure. Instead the report recommends site specific assessment based on multiple lines of evidence.

In 2016 a guide was published by CL:AIRE referred to as 'Interpretation for managing and working with asbestos in soils CAR-SOIL™', which is currently the most authoritative guide on the topic and should be followed. CAR-SOIL™ confirms that all work with asbestos in soil should be carried out under a 'plan of work' and defines the contents of that plan.

Analysis has been performed to the lowest possible accredited detection limit routinely reported by laboratories (0.001%) and a robust strategy to sever plausible pollutant linkages will be adopted in the remediation strategy, to reduce exposure as low as reasonably practicable during development and prevent exposure after development.

B3 Controlled waters

The framework within which the Environment Agency can work with others to manage and protect groundwater is set out within 'Groundwater protection: Principal and practice (GP3), 2013. Groundwater and leachability results have been screened against Water Quality Standards (WQS), initially by comparison with the environmental quality standards (EQS) for inland surface water, or where unavailable freshwater EQS. Where EQS screening criteria are not available, the following guidelines and standards have been referred to in this hierarchy:

- UK Drinking Water Standards (DWS);
- Surface Water Abstraction Directive (SWAD); and
- The World Health Organisation (WHO) Guidelines for Drinking Water.

No criteria are available at all for certain other PAH and for TPH. In the absence of criteria for TPH the withdrawn DWS of 0.01mg/kg has been considered as an initial assessment.

B4 Ground gas

The following published guidance on the assessment of ground gas has been used in the assessment:

- CIRIA 2007 Report C665 Assessing risks posed by hazardous ground gases to buildings;
- BS 8485 (2015) Code of practice for the characterisation and remediation from ground gas in affected developments; and
- Card, Wilson and Haines (2009) Ground gas handbook.

The Ground gas handbook describes a process of deriving gas screening values (GSV) for hazardous ground gases (it summarises the guidance presented in reference 14 and 15 above). The method uses both gas concentrations and borehole flow rates to define a range of characteristic situations (CS1 to CS6) based on limiting borehole gas volume flow for methane and carbon dioxide. The GSV is calculated by multiplying the borehole flow rate (litres per hour) by the gas concentration

B5 Waste assessment methodology

B5.1 Framework

There are three types of permitted landfill (inert, non-hazardous and hazardous) and four principal types of waste, as outlined below:

- Inert; generally uncontaminated natural soils and certain clean construction materials such as crushed concrete. The material may be disposed of to an inert landfill without testing. If the natural soils are suspected as contaminated, then it may be classed as inert if it satisfies the inert waste acceptance criteria (WAC). Made Ground would typically be required to be tested and pass the WAC in order to be classed as inert. Inert materials may also be used as a construction material in other sites given appropriate waste management permitting;
- Hazardous; defined by the analysis of 'total' chemical parameters to assess the hazard properties. The classified waste may only be disposed of to a hazardous landfill (following treatment) if in addition it satisfies the TOC and leachability WAC;
- Stable non-reactive hazardous waste; defined in a similar manner to hazardous waste (i.e. classed as hazardous) but then satisfying a stricter set of WAC. Following treatment, it may be disposed of in specifically designed separate cells in non-hazardous landfills (if the operator has obtained a permit to operate these cells); and
- Non-hazardous waste; if the waste is not classified as inert or hazardous then it is non-hazardous. There is no WAC for non-hazardous waste.

B5.2 Hazardous waste classification

The following documents were used to carry out the initial waste classification and disposal assessment of Made Ground and natural soil arisings generated by the development:

- Environment Agency (2009), Hazardous Waste – August 2009 Update;
- Environment Agency (2015), Hazardous Waste, Technical guidance WM3;
- The Hazardous Waste (England and Wales) Regulations; and
- Table 3.2 of Annex VI to Regulation (EC) No. 1272/2008.

Metals may be classified as hazardous based on a number of potential hazardous properties including carcinogenic (H7 lowest threshold 1,000mg/kg), ecotoxic (H14 lowest threshold 2,500mg/kg), toxic for reproduction (H10 lowest threshold 5,000mg/kg), harmful (H5 lowest threshold 250,000mg/kg) and toxic (H6 lowest threshold 30,000mg/kg). With the exception of H7, the other classifications are additive i.e. the concentrations are converted to the worst case (for harm) compound and added together before comparison with the thresholds.

Hydrocarbons in contaminated soils are generally categorised against the hazardous properties carcinogenic (H7) and ecotoxic (H14). For H7, waste would be defined as hazardous if category 1 or 2 carcinogenic compounds (e.g. benzene) exceeded 0.1% (1,000mg/kg), or category 3 compounds (e.g. diesel) exceeded 1% (10,000mg/kg). TPH is an aggregate parameter that

includes a range of category 1, 2 and 3 compounds, along with other elements not classified as carcinogenic. In most circumstances TPH contaminated soil and stones should be assessed as 'unknown oil' (unless there is a specific documented record or a consistent hydrocarbon profile to indicate diesel or weathered diesel being the contaminating oil) and a worst case should be assumed.

For an unknown oil if the concentration of TPH is ≥ 0.1% the waste will be H7 Carcinogenic and H11 Mutagenic unless the concentration of benzo[a]pyrene is <0.01% of the TPH concentration. Substance specific thresholds have been set for specific PAHs.

The hazardous waste threshold for asbestos is 0.1% w/w. It is noted that the quantification weight percentage of asbestos is difficult to achieve as asbestos can be present in a wide range of forms. While it is likely that ACM, such as cemented asbestos, board or lagging, will exceed such a threshold, the quantity of ACM in a bulk sample will often be below this level. WM3 states that where a waste contains identifiable pieces of ACM (that can be identified as potentially being asbestos by a competent person if examined by the naked eye) then these pieces must be assessed separately. If the ACM cannot be segregated the waste is regarded as hazardous if the concentration of asbestos in the ACM pieces alone is greater than 0.1%

Appendix C

Data assessment

St Anne's (Triton Square) Human Health Assessment - Soils				Exploratory hole	BH01	BH01	BH01	BH2B	BH2B	BH2B	TP01	TP03	TP04	TP05	HP01	HP02	HP03	HP03	HP04	BH01	BH01	BH2B	BH2B
				Sample depth (m)	0.20-0.25	1.10-1.20	3.00-3.10	0.40-0.45	1.90-2.00	4.90-5.00	0.60-0.70	0.50-0.60	0.25-0.35	0.20-0.30	0.7-0.80	0.20-0.30	0.20-0.30	1.00-1.10	0.70-0.80	5.00-5.10	17.00-17.10	6.90-7.00	10.90-11.00
				Date sampled	02/05/2018	02/05/2018	02/05/2018	25/04/2018	27/04/2018	27/04/2018	26/04/2018	03/05/2018	03/05/2018	03/05/2018	26/04/2018	26/04/2018	26/04/2018	26/04/2018	26/04/2018	02/05/2018	04/05/2018	02/05/2018	02/05/2018
				Strata	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	RTD	LC	RTD	LC
Determinants	**Units**	**Criterion***	**Source**																				
Inorganics																							
pH		NC			10.2	11.1	10.9	10.8	11.7	9.1	10	9.2	10.7	10.5	11.1	8.5	8.5	8.1	9.3	6.6	8.6	9.3	7.1
Total cyanide	mg/kg				< 1	< 1	< 1	< 1	< 1	< 1	< 1	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Total organic carbon	%	NC			0.7	0.3	0.9	0.3	0.3	0.5	0.8	2.5	0.3	0.4	0.8	0.8	1.8	1	0.8	< 0.1	0.9	< 0.1	0.8
Soil organic matter	%	NC			1.21	0.52	1.55	0.52	0.52	0.86	1.38	4.31	0.52	0.69	1.38	1.38	3.10	1.72	1.38	0.00	1.55	0.00	1.38
Asbestos																							
Asbestos identification	Detect/ non detect	NC			-	-	-	Chrysotile & Amosite fibrous debris	Chrysotile fibres	-	-	Chrysotile fibres	Chrysotile fibres	-	-	-	Chrysotile fibres	-	Amosite fibrous debris	-	-	-	-
Asbestos quantification	%	NC			-	-	-	0.002	0.002	-	-	0.002	< 0.001	-	-	-	< 0.001	-	0.001	-	-	-	-
Heavy Metals / Metalloids																							
Antimony	mg/kg	322	a		2.6	1.7	1.5	4.9	< 1.0	1.7	7.5	12	1.4	2.8	2.7	4.1	2.7	2.5	4	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	mg/kg	37	b		32	11	10	17	30	14	20	22	12	12	14	26	15	16	13	5.2	14	4.6	11
Beryllium	mg/kg	1.7	b		0.79	0.36	2.5	0.64	0.53	0.97	1.2	2.1	0.38	1	0.76	0.74	0.77	0.65	0.48	0.2	1.4	0.28	0.86
Boron	mg/kg	290	b		1.6	1	2.4	2.6	1	0.9	3	2.3	0.8	2.4	1.7	1	1.9	0.8	0.8	0.5	5.5	0.5	3.4
Cadmium	mg/kg	14	b		< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	1	< 0.2	< 0.2	0.3	< 0.2	0.4	< 0.2	1	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	6	b		< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (trivalent)	mg/kg	907	b		29	22	15	22	21	24	31	33	16	30	22	22	23	20	19	10	46	14	33
Copper	mg/kg	2430	b		66	19	42	19	17	34	130	200	21	32	38	66	44	42	42	6.2	40	9.7	22
Lead	mg/kg	200	c		840	58	120	580	28	110	1200	490	58	230	400	850	280	320	400	6.4	16	26	9
Mercury inorganic	mg/kg	32	b		1.1	< 0.3	< 0.3	< 0.3	< 0.3	0.5	1	1.8	< 0.3	0.7	0.6	5.3	0.5	1.1	0.9	< 0.3	< 0.3	< 0.3	< 0.3
Nickel	mg/kg	126	b		17	15	22	18	16	25	24	28	16	28	15	14	19	18	15	9.9	44	12	28
Selenium	mg/kg	253	b		1.5	< 1.0	1.1	< 1.0	1.2	2.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.6	< 1.0	< 1.0	1.6	< 1.0	< 1.0
Vanadium (Pentavalent)	mg/kg	320	b		52	23	31	37	32	39	51	64	18	50	38	34	41	36	31	17	70	12	42
Zinc	mg/kg	3745	b		380	100	86	300	160	63	350	570	73	130	120	130	160	120	230	15	80	33	57
Speciated PAHs																							
Acenaphthene	mg/kg	212			< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.38	< 0.05	< 0.05	< 0.05	0.19	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	173			< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.73	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	2350			0.12	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.16	1.6	< 0.05	0.17	0.25	0.28	0.22	0.32	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	7			0.78	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	1.1	5.5	< 0.05	0.98	1.4	1.8	1.4	1.5	0.3	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	2			0.47	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	1.2	6.7	< 0.05	0.92	1.2	1.3	1.3	1.3	0.3	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	3			1.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	1.4	8.1	< 0.05	1.2	1.4	1.8	1.8	1.8	0.36	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(g,h,i)perylene	mg/kg	315			< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.74	3.4	< 0.05	0.54	0.7	0.7	0.95	0.99	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	77			0.36	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.72	3.5	< 0.05	0.4	0.64	0.8	0.82	0.77	0.22	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	15			0.97	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.9	5.9	< 0.05	0.78	1.2	1.4	1.2	1.2	0.27	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzo(a,h)anthracene	mg/kg	0.24			< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.14	0.96	< 0.05	< 0.05	< 0.05	0.18	0.23	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	284			1.7	< 0.05	0.24	< 0.05	0.37	0.82	1.8	14	< 0.05	2.1	3.5	4.1	2.3	3.3	0.54	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	168			< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.38	< 0.05	< 0.05	< 0.05	0.14	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	27			< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.62	3.3	< 0.05	0.45	0.61	0.63	0.83	0.85	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	mg/kg	2			< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	95			0.63	< 0.05	0.31	< 0.05	0.21	0.36	0.78	7.5	< 0.05	1.3	1.4	2.7	0.93	1.8	0.27	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	617			1.5	< 0.05	0.21	< 0.05	0.28	0.69	1.6	12	< 0.05	1.8	2.8	3	1.9	2.6	0.48	< 0.05	< 0.05	< 0.05	< 0.05
Total PAH (16)	mg/kg	#N/A			7.59	< 0.80	< 0.80	< 0.80	0.86	1.87	11.2	73.95	< 0.80	10.6	15.1	19.02	13.88	16.4	2.74	< 0.80	< 0.80	< 0.80	< 0.80
Phenols																							
Total Phenol	mg/kg	#N/A			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons																							
Aliphatic >C5-C6	mg/kg	42			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Aliphatic >C6-C8	mg/kg	103			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Aliphatic >C8-C10	mg/kg	27			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Aliphatic >C10-C12	mg/kg	132 (47.5)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.3	< 1.0	< 1.0	< 1.0	1.8	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic >C12-C16	mg/kg	1060 (23.7)			6.7	< 2.0	< 2.0	< 2.0	3.2	< 2.0	3.8	< 2.0	< 2.0	< 2.0	5.9	< 2.0	< 2.0	< 2.0	10	< 2.0	< 2.0	< 2.0	< 2.0
Aliphatic >C16-C21	mg/kg	#N/A			23	< 8.0	< 8.0	< 8.0	19	41	< 8.0	< 8.0	< 8.0	< 8.0	9.1	< 8.0	< 8.0	9	34	< 8.0	< 8.0	< 8.0	< 8.0
Aliphatic >C21-C35	mg/kg	#N/A			34	11	< 8.0	< 8.0	72	110	33	73	< 8.0	27	44	19	22	36	75	< 8.0	< 8.0	< 8.0	< 8.0
Aliphatic >C16-C35	mg/kg	11900 (8.5)			57	11	<16	<16	91	151	33	73	<16	27	53.1	19	22	45	109	<16	<16	<16	<16
Aliphatic >C35-C44	mg/kg	11900 (8.5)			< 8.4	< 8.4	< 8.4	< 8.4	9.9	< 8.4	20	-	-	11	24	< 8.4	< 8.4	< 8.4	28	< 8.4	< 8.4	< 8.4	< 8.4
Aliphatic >C5-C35	mg/kg	#N/A			65	18	< 10	< 10	95	150	44	74	< 10	33	61	26	25	45	120	< 10	< 10	< 10	< 10
Aliphatic >C5-C44	mg/kg	#N/A			65	18	< 10	< 10	100	150	65	-	-	43	85	26	25	45	150	< 10	< 10	< 10	< 10
Aromatic >C5-C7	mg/kg	0			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Aromatic >C7-C8	mg/kg	127			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Aromatic >C8-C10	mg/kg	34			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Aromatic >C10-C12	mg/kg	74			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic >C12-C16	mg/kg	142			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	5	3.3	< 2.0	< 2.0	< 2.0	< 2.0	4.5	< 2.0	3.6	< 2.0	< 2.0	< 2.0	< 2.0
Aromatic >C16-C21	mg/kg	251			21	< 10	< 10	< 10	16	16	20	68	< 10	16	20	19	16	11	15	< 10	< 10	< 10	< 10
Aromatic >C21-C35	mg/kg	1117			77	< 10	< 10	25	53	55	98	190	< 10	47	60	46	49	36	34	< 10	< 10	< 10	< 10
Aromatic >C35-C44	mg/kg	1117			< 8.4	< 8.4	< 8.4	< 8.4	11	12	61	-	-	19	31	8.9	26	< 8.4	< 8.4	< 8.4	< 8.4	< 8.4	< 8.4
Aromatic >C5-C35	mg/kg	#N/A			98	< 10	11	29	70	73	120	260	< 10	64	80	66	71	47	53	< 10	< 10	< 10	< 10
Aromatic >C5-C44	mg/kg	#N/A			98	< 10	11	29	81	85	180	-	-	83	110	75	97	47	53	< 10	< 10	< 10	< 10
TPH Ali/Aro Total	mg/kg	#N/A			163		11	29	181	235	245				195	101	122	92	203				
BTEX																							
Benzene	mg/kg	0			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	mg/kg	47			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	mg/kg	127			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Xylene	mg/kg	#N/A			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE	mg/kg	#N/A			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
PCBs					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
PCB 77	mg/kg	#N/A			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB 81	mg/kg	#N/A			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB 105	mg/kg	#N/A			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB 114	mg/kg	#N/A			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB 118	mg/kg	#N/A			< 0.001	0.011	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.004	0.006	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB 123	mg/kg	#N/A			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB 126	mg/kg	#N/A			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB 156	mg/kg	#N/A			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB 157	mg/kg	#N/A			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB 167	mg/kg	#N/A			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB 169	mg/kg	#N/A			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
PCB 189	mg/kg	#N/A			< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Total PCBs	mg/kg	#N/A			< 0.012	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012	< 0.012

Sample of possible ACM taken from TP02 and only tested for asbestos. Positively identified as chrysotile.

St Anne's (Triton Square) Human Health Assessment- Groundwater				Exploratory hole	BH01	BH2B	BH01	BH2B
				Sample round	1	1	2	2
				Date sampled	43249	43249	43264	43264
Determinants	**Units**	**Criterion***	**Source**					
General Inorganics								
pH	pH Units	NC			7.2	7	7.1	7.2
Total Cyanide	µg/l	NC			< 10	< 10	< 10	< 10
Chloride	mg/l	250	DWS		98	95	110	110
Ammoniacal Nitrogen as N	µg/l	NC			17	< 15	24	< 15
Dissolved Organic Carbon (DOC)	mg/l	NC			8.69	7.81	8.16	6.8
Hardness - Total	mgCaCO3/l	NC			503	519	486	460
Total Phenols								
Total Phenols (monohydric)	µg/l	1000	UK 1989		< 10	< 10	< 10	< 10
Speciated PAHs								
Naphthalene	µg/l	2.0	EQS		< 0.01		< 0.01	< 0.01
Acenaphthylene	µg/l	NC			< 0.01		< 0.01	< 0.01
Acenaphthene	µg/l	NC			< 0.01		< 0.01	< 0.01
Fluorene	µg/l	NC			< 0.01		< 0.01	< 0.01
Phenanthrene	µg/l	NC			< 0.01		< 0.01	< 0.01
Anthracene	µg/l	NC			< 0.01		< 0.01	< 0.01
Fluoranthene	µg/l	NC			< 0.01		< 0.01	< 0.01
Pyrene	µg/l	NC			< 0.01		< 0.01	< 0.01
Benzo(a)anthracene	µg/l	NC			< 0.01		< 0.01	< 0.01
Chrysene	µg/l	NC			< 0.01		< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.10	DWS		< 0.01		< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.10	DWS		< 0.01		< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	DWS		< 0.01		< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.10	DWS		< 0.01		< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	NC			< 0.01		< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.10	DWS		< 0.01		< 0.01	< 0.01
Total PAH								
Total EPA-16 PAHs	µg/l	NC			< 0.16		< 0.16	< 0.16
Heavy Metals / Metalloids								
Antimony (dissolved)	µg/l	5	DWS		0.9	0.9	0.6	0.5
Arsenic (dissolved)	µg/l	10	DWS		1.52	4.34	1.72	3.69
Beryllium (dissolved)	µg/l	NC			< 0.1	< 0.1	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	5	DWS		0.02	0.04	0.07	0.05
Calcium (dissolved)	mg/l	250	UK 1989		180	190	180	170
Chromium (dissolved)	µg/l	50	DWS		0.3	0.3	0.3	1.8
Copper (dissolved)	µg/l	2000	DWS		2.9	3.6	4.9	7.8
Lead (dissolved)	µg/l	10	DWS		< 0.2	< 0.2	0.2	1.6
Magnesium (dissolved)	mg/l	50	UK 1989		12	12	11	11
Manganese (dissolved)	µg/l	100	EQS		18	95	93	130
Mercury (dissolved)	µg/l	1	DWS		< 0.05	< 0.05	< 0.05	0.08
Nickel (dissolved)	µg/l	20	DWS		2.7	4.8	2.2	7.5
Selenium (dissolved)	µg/l	10	EQS		10	12	10	6.7
Vanadium (dissolved)	µg/l	20	EQS		4.2	5.1	5	6.1
Zinc (dissolved)	µg/l	500	EQS		4.2	15	1.9	32
Monoaromatics								
Benzene	µg/l	1	DWS		< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	50	DWS		< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	20	EQS		< 1.0	< 1.0	< 1.0	< 1.0

St Anne's (Triton Square) Human Health Assessment- Groundwater				Exploratory hole	BH01	BH2B	BH01	BH2B
				Sample round	1	1	2	2
				Date sampled	43249	43249	43264	43264
p & m-xylene	µg/l	30	EQS		< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	30	EQS		< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	NC			< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	15000	WHO		< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	15000	WHO		< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	300	WHO		< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	300	WHO		< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	300	WHO		< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	NC			< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	NC			< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C35 - C44	µg/l	NC			< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	NC			< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C44)	µg/l	NC			< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	10	WHO		< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	700	WHO		< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	300	WHO		< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	90	WHO		< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	90	WHO		< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	90	WHO		< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	90	WHO		< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C35 - C44	µg/l	NC			< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	NC			< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C44)	µg/l	NC			< 10	< 10	< 10	< 10
PCBs by GC-MS								
PCB Congener 28	µg/l	NC					< 0.02	< 0.02
PCB Congener 52	µg/l	NC					< 0.02	< 0.02
PCB Congener 101	µg/l	NC					< 0.02	< 0.02
PCB Congener 118	µg/l	NC					< 0.02	< 0.02
PCB Congener 138	µg/l	NC					< 0.02	< 0.02
PCB Congener 153	µg/l	NC					< 0.02	< 0.02
PCB Congener 180	µg/l	NC					< 0.02	< 0.02
PCBs by GC-MS								
Total PCBs	µg/l	NC					< 0.14	< 0.14

St Anne's (Triton Square) Human Health Assessment- Groundwater				Exploratory hole	BH01	BH2B	BH01	BH2B
				Sample round	1	1	2	2
				Date sampled	43249	43249	43264	43264
VOCs								
Chloromethane	µg/l	NC				< 1.0		
Chloroethane	µg/l	NC				< 1.0		
Bromomethane	µg/l	NC				< 1.0		
Vinyl Chloride	µg/l	NC				< 1.0		
Trichlorofluoromethane	µg/l	NC				< 1.0		
1,1-Dichloroethene	µg/l	NC				< 1.0		
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	NC				< 1.0		
Cis-1,2-dichloroethene	µg/l	NC				< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/l	NC				< 1.0		
1,1-Dichloroethane	µg/l	NC				< 1.0		
2,2-Dichloropropane	µg/l	NC				< 1.0		
Trichloromethane	µg/l	NC				< 1.0		
1,1,1-Trichloroethane	µg/l	NC				< 1.0		
1,2-Dichloroethane	µg/l	NC				< 1.0		
1,1-Dichloropropene	µg/l	NC				< 1.0		
Trans-1,2-dichloroethene	µg/l	NC				< 1.0		
Benzene	µg/l	1	DWS			< 1.0		
Tetrachloromethane	µg/l	NC				< 1.0		
1,2-Dichloropropane	µg/l	NC				< 1.0		
Trichloroethene	µg/l	NC				< 1.0		
Dibromomethane	µg/l	NC				< 1.0		
Bromodichloromethane	µg/l	NC				< 1.0		
Cis-1,3-dichloropropene	µg/l	NC				< 1.0		
Trans-1,3-dichloropropene	µg/l	NC				< 1.0		
Toluene	µg/l	50	DWS			< 1.0		
1,1,2-Trichloroethane	µg/l	NC				< 1.0		
1,3-Dichloropropane	µg/l	NC				< 1.0		
Dibromochloromethane	µg/l	NC				< 1.0		
Tetrachloroethene	µg/l	NC				< 1.0		
1,2-Dibromoethane	µg/l	NC				< 1.0		
Chlorobenzene	µg/l	NC				< 1.0		
1,1,1,2-Tetrachloroethane	µg/l	NC				< 1.0		
Ethylbenzene	µg/l	20	EQS			< 1.0		
p & m-Xylene	µg/l	30	EQS			< 1.0		
Styrene	µg/l	NC				< 1.0		
Tribromomethane	µg/l	NC				< 1.0		
o-Xylene	µg/l	30	EQS			< 1.0		
1,1,2,2-Tetrachloroethane	µg/l	NC				< 1.0		
Isopropylbenzene	µg/l	NC				< 1.0		
Bromobenzene	µg/l	NC				< 1.0		
n-Propylbenzene	µg/l	NC				< 1.0		
2-Chlorotoluene	µg/l	NC				< 1.0		
4-Chlorotoluene	µg/l	NC				< 1.0		
1,3,5-Trimethylbenzene	µg/l	NC				< 1.0		
tert-Butylbenzene	µg/l	NC				< 1.0		
1,2,4-Trimethylbenzene	µg/l	NC				< 1.0		
sec-Butylbenzene	µg/l	NC				< 1.0		
1,3-Dichlorobenzene	µg/l	NC				< 1.0		
p-Isopropyltoluene	µg/l	NC				< 1.0		
1,2-Dichlorobenzene	µg/l	NC				< 1.0		
1,4-Dichlorobenzene	µg/l	NC				< 1.0		
Butylbenzene	µg/l	NC				< 1.0		
1,2-Dibromo-3-chloropropane	µg/l	NC				< 1.0		
1,2,4-Trichlorobenzene	µg/l	NC				< 1.0		
Hexachlorobutadiene	µg/l	NC				< 1.0		

St Anne's (Triton Square) Human Health Assessment- Groundwater				Exploratory hole	BH01	BH2B	BH01	BH2B
				Sample round	1	1	2	2
				Date sampled	43249	43249	43264	43264
1,2,3-Trichlorobenzene	µg/l	NC				< 1.0		
SVOCs								
Aniline	µg/l	NC				< 0.05		
Phenol	µg/l	NC				< 0.05		
2-Chlorophenol	µg/l	NC				< 0.05		
Bis(2-chloroethyl)ether	µg/l	NC				< 0.05		
1,3-Dichlorobenzene	µg/l	NC				< 0.05		
1,2-Dichlorobenzene	µg/l	NC				< 0.05		
1,4-Dichlorobenzene	µg/l	NC				< 0.05		
Bis(2-chloroisopropyl)ether	µg/l	NC				< 0.05		
2-Methylphenol	µg/l	NC				< 0.05		
Hexachloroethane	µg/l	NC				< 0.05		
Nitrobenzene	µg/l	NC				< 0.05		
4-Methylphenol	µg/l	NC				< 0.05		
Isophorone	µg/l	NC				< 0.05		
2-Nitrophenol	µg/l	NC				< 0.05		
2,4-Dimethylphenol	µg/l	NC				< 0.05		
Bis(2-chloroethoxy)methane	µg/l	NC				< 0.05		
1,2,4-Trichlorobenzene	µg/l	NC				< 0.05		
Naphthalene	µg/l	2	EQS			< 0.01		

St Anne's (Triton Square)				Exploratory hole	BH01	BH01	BH01	BH2B	BH2B	BH2B	TP01	TP03	TP04	TP05	HP01	HP02	HP03	HP03	HP04	BH01	BH01	BH2B	BH2B
Controlled Waters				Sample depth (m)	0.20-0.25	1.10-1.20	3.00-3.10	0.40-0.45	1.90-2.00	4.90-5.00	0.60-0.70	0.50-0.60	0.25-0.35	0.20-0.30	0.7-0.80	0.20-0.30	0.20-0.30	1.00-1.10	0.70-0.80	5.00-5.10	17.00-17.10	6.90-7.00	10.90-11.00
Assessment - Soil Leachate				Date sampled	02/05/2018	02/05/2018	02/05/2018	25/04/2018	27/04/2018	27/04/2018	26/04/2018	43223	43223	43223	26/04/2018	26/04/2018	26/04/2018	26/04/2018	26/04/2018	02/05/2018	02/05/2018	02/05/2018	02/05/2018
					MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	RTD	LC	RTD	LC
Determinants	Units	Criterion	Source																				
Arsenic	mg/l	0.05	EQS		0.0109	0.0069	0.0061	< 0.0011	< 0.0011	0.0033	0.002	0.0034	0.006	0.0087	0.0095	0.017	0.0066	0.0026	0.0081	0.0018	0.0035	0.0031	< 0.0011
Barium	mg/l	0.1	EQS		0.0376	0.0176	0.0073	0.0427	0.0842	0.0153	0.0121	0.0095	0.0182	0.0276	0.0056	0.0448	0.0059	0.0195	0.0191	0.0062	0.0183	0.006	0.0231
Cadmium	mg/l	0.005	EQS		< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Chromium	mg/l	0.05	EQS		0.016	0.014	0.0014	0.032	0.026	0.0007	0.0096	0.0021	0.017	0.0058	0.004	0.016	0.0015	0.021	0.0072	0.0025	0.002	0.005	0.0041
Copper	mg/l	2	UK DWS 2000		0.031	0.014	0.02	0.012	0.0037	0.0021	0.004	0.019	0.009	0.014	0.014	0.0087	0.012	0.0066	0.0075	0.0086	0.017	0.0073	0.0099
Mercury	mg/l	0.001	EQS		< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Molybdenum	mg/l	0.1	WHO 2004		0.0055	0.0021	0.007	0.0096	0.0028	0.0028	0.0102	0.0035	0.0041	0.0035	0.0008	0.001	0.0016	0.0011	0.0005	0.0008	0.016	0.0005	0.0057
Nickel	mg/l	0.05	UK DWS 1989		0.001	0.0009	0.0008	0.0007	< 0.0003	< 0.0003	< 0.0003	0.0019	0.0006	0.0048	0.0045	< 0.0003	0.0019	< 0.0003	0.0003	0.002	0.0027	0.0021	0.0032
Lead	mg/l	0.05	EQS		0.025	0.0074	0.0043	0.011	< 0.0010	0.0016	< 0.0010	0.015	0.0082	0.0058	0.013	0.047	0.014	0.01	0.019	0.0045	0.0057	0.0046	0.0096
Antimony	mg/l	0.01	UK DWS 1989		< 0.0017	< 0.0017	0.0085	0.01	< 0.0017	< 0.0017	< 0.0017	0.0079	< 0.0017	0.0072	0.0061	< 0.0017	0.0026	< 0.0017	< 0.0017	< 0.0017	0.0051	< 0.0017	< 0.0017
Selenium	mg/l	0.01	EQS		< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.043	< 0.0040	0.04
Zinc	mg/l	5	UK DWS 1989		0.013	0.0091	0.01	0.0024	< 0.0004	0.015	0.0015	0.018	0.0078	0.013	0.0057	0.0068	0.0076	0.0052	0.0096	0.011	0.0051	0.014	0.0036
Chloride	mg/l	NC			1	1.4	1.8	4.1	13	2.4	4.9	1.9	1	1.1	1.2	1.2	1.6	1.4	5.6	1	15	0.88	17
Fluoride	mg/l	1.5	UK DWS 2000		0.38	0.26	0.31	0.25	0.1	0.38	0.22	0.28	0.14	0.91	0.31	0.45	0.41	0.5	0.28	0.31	0.89	< 0.050	0.69
Sulphate	mg/l	250	UK DWS		10	34	380	520	33	35	150	26	31	57	8.9	35	13	22	20	5.7	68	1.9	120
Total Dissolved Solids	mg/l	NC			120	160	410	510	720	92	240	80	120	130	61	95	68	95	80	21	130	11	160
Phenol Index	mg/l	0.5	DWS		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Dissolved Organic Carbon	mg/l	NC			7.27	5.73	5.45	4.88	6.45	4.05	5.16	7.47	4.33	4.94	4.51	4.99	5.64	4.57	5.66	5.2	5.74	5.03	4

St Anne's (Triton Square) Controlled Waters Assessment- Soil Leachate		Exploratory hole	BH01	BH01	BH01	BH2B	BH2B	BH2B	TP01	TP03	TP04	TP05	HP01	HP02	HP03	HP03	HP04	BH01	BH01	BH2B	BH2B
		Sample depth (m)	0.20-0.25	1.10-1.20	3.00-3.10	0.40-0.45	1.90-2.00	4.90-5.00	0.60-0.70	0.50-0.60	0.25-0.35	0.20-0.30	0.7-0.80	0.20-0.30	0.20-0.30	1.00-1.10	0.70-0.80	5.00-5.10	17.00-17.10	6.90-7.00	10.90-11.00
		Date sampled	02/05/2018	02/05/2018	02/05/2018	25/04/2018	27/04/2018	27/04/2018	26/04/2018	03/05/2018	03/05.2018	03/05/2018	26/04/2018	26/04/2018	26/04/2018	26/04/2018	26/04/2018	02/05/2018	02/05/2018	02/05/2018	02/05/2018
		Strata	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	RTD	LC	RTD	LC
Determinants	**Units**	**Inert WAC**																			
Arsenic	mg/kg	0.5	0.085	0.0559	0.0485	< 0.0110	< 0.0110	0.0262	0.0151	0.0243	0.0519	0.0701	0.0806	0.136	0.0528	0.0222	0.0663	0.015	0.0223	0.0265	< 0.0110
Barium	mg/kg	20	0.294	0.143	0.0581	0.36	0.564	0.122	0.0913	0.0687	0.157	0.223	0.0475	0.359	0.0473	0.167	0.157	0.0529	0.115	0.0507	0.169
Cadmium	mg/kg	0.04	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
Chromium	mg/kg	0.5	0.13	0.11	0.011	0.27	0.17	0.0054	0.073	0.015	0.15	0.047	0.034	0.13	0.012	0.18	0.059	0.021	0.012	0.042	0.03
Copper	mg/kg	2	0.24	0.11	0.16	0.1	0.025	0.017	0.03	0.14	0.078	0.11	0.12	0.07	0.092	0.057	0.062	0.073	0.11	0.061	0.073
Mercury	mg/kg	0.01	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Molybdenum	mg/kg	0.5	0.0432	0.0171	0.0557	0.0811	0.0185	0.0225	0.0769	0.0251	0.0352	0.0282	0.0069	0.0082	0.0128	0.0092	0.0044	0.0069	0.101	0.0044	0.0414
Nickel	mg/kg	0.4	0.0082	0.0076	0.0061	0.0061	< 0.0030	< 0.0030	< 0.0030	0.013	0.0052	0.039	0.038	< 0.0030	0.015	< 0.0030	< 0.0030	0.017	0.017	0.017	0.023
Lead	mg/kg	0.5	0.19	0.061	0.035	0.094	< 0.010	0.013	< 0.010	0.11	0.071	0.047	0.11	0.38	0.11	0.088	0.16	0.039	0.036	0.039	0.07
Antimony	mg/kg	0.06	< 0.017	< 0.017	0.068	0.087	< 0.017	< 0.017	< 0.017	0.057	< 0.017	0.058	0.051	< 0.017	0.02	< 0.017	< 0.017	< 0.017	0.032	< 0.017	< 0.017
Selenium	mg/kg	0.1	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	0.27	< 0.040	0.29
Zinc	mg/kg	4	0.1	0.074	0.082	0.021	< 0.0040	0.12	0.011	0.13	0.068	0.1	0.048	0.055	0.06	0.045	0.079	0.095	0.032	0.12	0.026
Chloride	mg/kg	800	7.9	11	15	34	90	19	37	14	9.1	8.9	11	9.9	13	12	46	8.5	96	7.4	120
Fluoride	mg/kg	10	2.9	2.1	2.5	2.1	0.7	3	1.6	2	1.2	7.3	2.6	3.6	3.2	4.3	2.3	2.6	5.6	< 0.50	5
Sulphate	mg/kg	1000	80	280	3000	4300	220	280	1100	180	270	460	76	280	100	190	170	49	430	16	880
Total Dissolved Solids	mg/kg	4000	970	1300	3300	4300	4800	740	1800	580	1000	1100	510	760	540	810	660	180	830	89	1200
Phenol Index	mg/kg	1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dissolved Organic Carbon	mg/kg	500	56.8	46.8	43.6	41.1	43.2	32.5	39	54	37.5	39.8	38.2	40	44.8	39.1	46.3	44.2	36.2	42.2	29.2
TOC	%	3%																			

St Anne's (Triton Square)
Ground gas monitoring

Round	BH	Date	Atm pressure	Depth to GW (m)	Flow rate	Methane	Carbon dioxide	Hydrogen Sulfide	Oxygen	GSV Methane	GSV Carbon dioxide	CS
1	BH01	18.05.2018	1022	3.42	0.1	0	0.8	0	18.9	0	0.0008	CS1
1	BH2B	18.05.2018	1024	DRY	0.1	0	4.2	0	13.4	0	0.0042	CS1
2	BH01	29.05.2018	1013	DRY	0.1	0	0.2	0	20.3	0	0.0002	CS1
2	BH2B	29.05.2018	1014	6.58	0.1	0	2.6	0	16.7	0	0.0026	CS1
3	BH01	06.06.2018	1012	DRY	0.1	0	0.7	0	18.8	0	0.0007	CS1
3	BH2B	06.06.2018	1012	DRY	0.1	0	3.2	0	15.7	0	0.0032	CS1
4	BH01	13.06.2018	1015	3.49	0.1	0	1.2	0	18.1	0	0.0012	CS1
4	BH2B	13.06.2018	1016	DRY	0.1	0	0.4	0	16.4	0	0.0004	CS1
5	BH01	20.06.2018	1017	DRY	0.1	0	0.6	0	17.8	0	0.0006	CS1
5	BH2B	20.06.2018	1018	DRY	0.1	0	4.3	0	11.7	0	0.0043	CS1
6	BH01	27.06.2018	1024	DRY	0.1	0	0.4	0	19.5	0	0.0004	CS1
6	BH2B	02.07.2018	1011	DRY	0.1	0	2.4	0	16	0	0.0024	CS1