



0001

Determination of Moisture Content and Atterberg Limits

Client:	Soiltechnics Limited	Report No:	51027140/16/01
Client Address:	Cedar Barn, White Lodge Walgrave	Batch Number:	DAM0063267
Postcode:	NN6 9PY	Client Reference:	STN3703G
Contact:	Andy Keeler	Sampled by:	Client
		Date Sampled:	16.09.16
		Date Received:	22.09.16
Site:	Keyline Havant Harts Farmway, Havant	Tested From:	27.09.16-29.09.16
		Sample Type:	Disturbed

Test Results:

Laboratory Reference	Location	Depth (m)	Description	Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Passing 425µm (Estimated)
45295844	DTS06	1.50	Grey brown slightly sandy gravelly CLAY	19	54	24	30	21*
45295845	DTS07	1.10	Brown very gravelly CLAY	12	47	23	24	31*
45295846	TP01	1.00	Brown slightly chalky CLAY with gravel	19	39	19	20	62
45295848	TP04	1.50	Black brown sandy CLAY with gravel	47	74	38	36	77
45295850	TP06	0.70	Olive grey sandy CLAY with silt and gravel	22	54	21	33	88

Sample Preparation: As Received
* As Received, Coarse particles removed by hand prior to test
** Estimated % passing 425µm BS Test Sieve

Certified that the laboratory testing was carried out in accordance with BS 1377-2: 1990: Method 3.2, 4.4 and 5

Signed

[] M. Carr - Section Manager
[✓] D. Berrill - Laboratory Manager

For and on behalf of Environmental Scientifics Group

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0001

Determination of Particle Size Distribution

Client: Soiltechnics Limited

Client Address: Cedar Barn,
White Lodge
Walgrave

Postcode: NN6 9PY

Contact: Andy Keeler

Site: Keyline Havant Harts Farmway, Havant

Report No: 51027140/16/02

Batch Number: DAM0063267

Lab Ref: 45295847

Client Ref: STN3703G

Location: TP02

Depth (m): 2.00

Date Sampled: 16.09.16

Date Received: 22.09.16

Date Tested: 03.10.16

Sample Type: Bulk

Sample Mass (kg): 9.7

Sampled by: Client

Sampled from: Site

Supplier: Client

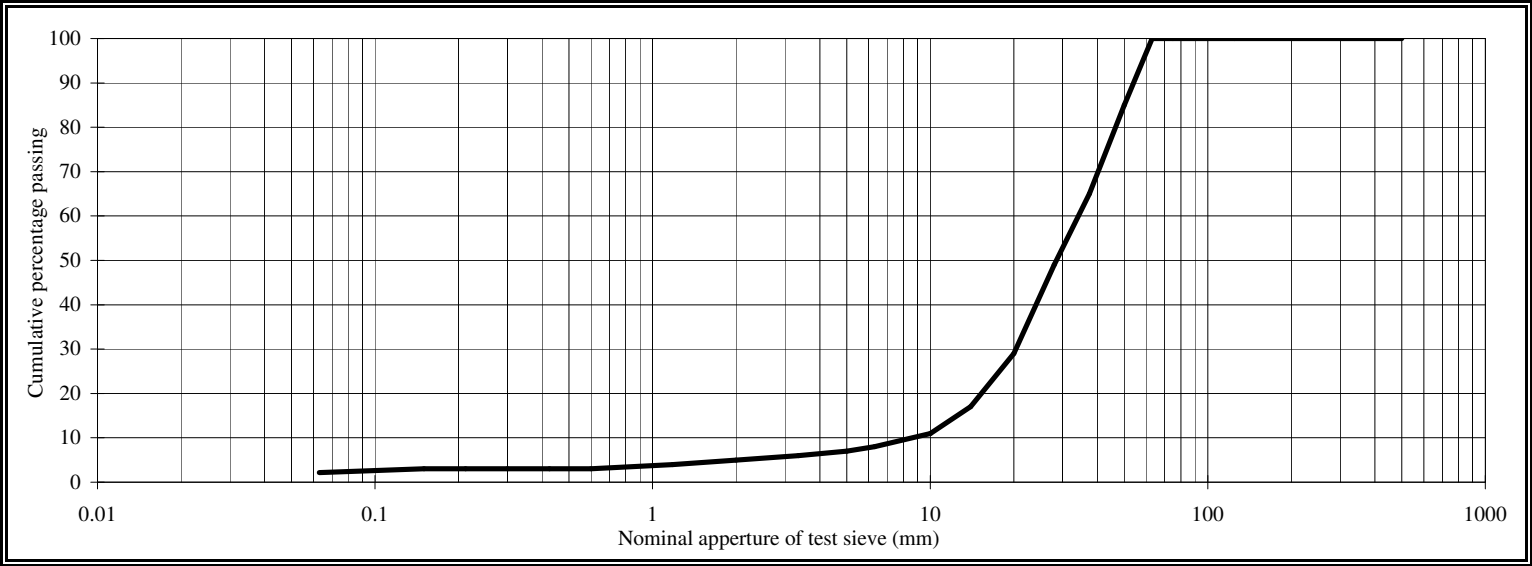
Source: Site

Description: Crushed Rock

Specification: Not Required

Comments:

SIEVE ANALYSIS		
BS Sieve (mm)	Passing (%)	Material Specification
500	100	
300	100	
125	100	
100	100	
90	100	
75	100	
63	100	
50	85	
37.5	65	
28	49	
20	29	
14	17	
10	11	
6.3	8	
5	7	
3.35	6	
2	5	
1.18	4	
0.600	3	
0.425	3	
0.300	3	
0.212	3	
0.150	3	
0.063	2.2	



Certified that the Particle Size Distribution was determined in accordance with BS 1377 - 2 : 1990, Method 9.2. Washing & Dry Sieving
Method of Preparation: BS 1377 - 1 & 2 : 1990

Signed:

[] M. Carr - Section Manager

[✓] D. Berrill - Laboratory Manager

For and on behalf of Environmental Scientifics Group

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0001

Determination of Particle Size Distribution

Client: Soiltechnics Limited
Client Address: Cedar Barn,
White Lodge
Walgrave
Postcode: NN6 9PY
Contact: Andy Keeler
Site: Keyline Havant Harts Farmway, Havant

Report No: 51027140/16/03
Batch Number: DAM0063267
Lab Ref: 45295849
Client Ref: STN3703G
Location: TP05
Depth (m): 2.50
Date Sampled: 16.09.16
Date Received: 22.09.16
Date Tested: 03.10.16
Sample Type: Bulk
Sample Mass (kg): 7.8

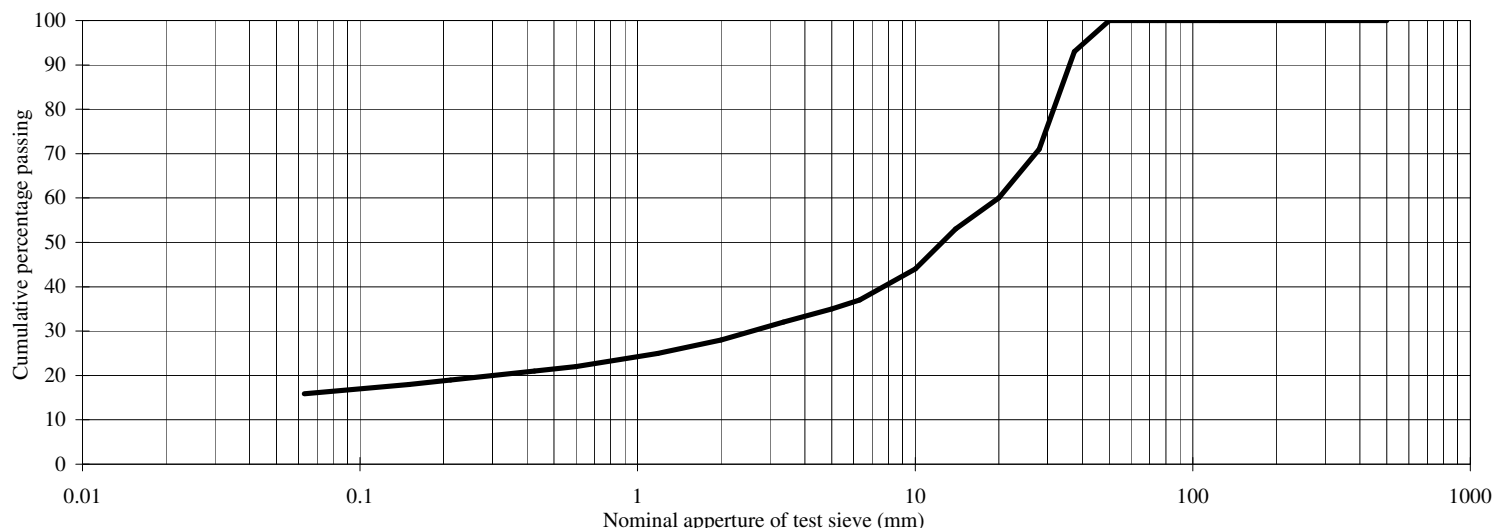
Sampled by: Client
Sampled from: Site
Supplier: Client
Source: Site

Description: Crushed Rock

Specification: Not Required

Comments:

SIEVE ANALYSIS		
BS Sieve (mm)	Passing (%)	Material Specification
500	100	
300	100	
125	100	
100	100	
90	100	
75	100	
63	100	
50	100	
37.5	93	
28	71	
20	60	
14	53	
10	44	
6.3	37	
5	35	
3.35	32	
2	28	
1.18	25	
0.600	22	
0.425	21	
0.300	20	
0.212	19	
0.150	18	
0.063	15.9	



Certified that the Particle Size Distribution was determined in accordance with BS 1377 - 2 : 1990, Method 9.2. Washing & Dry Sieving
Method of Preparation: BS 1377 - 1 & 2 : 1990

Signed:

[] M. Carr - Section Manager
[✓] D. Berrill - Laboratory Manager

For and on behalf of Environmental Scientifics Group

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Final Report

Report No.: 16-22592-1

Initial Date of Issue: 28-Sep-2016

Client Soiltechnics Limited

Client Address: Cedar Barn
White Lodge
Walgrave
Northampton
Northamptonshire
NN6 9PY

Contact(s): Rachel Brown

Project STN3703G Keyline Havant Harts Farm
Way, Havant

Quotation No.: **Date Received:** 20-Sep-2016

Order No.: 22325 **Date Instructed:** 20-Sep-2016

No. of Samples: 11

Turnaround (Wkdays): 5 **Results Due:** 26-Sep-2016

Date Approved: 28-Sep-2016

Approved By:



Details: Robert Monk, Technical Development
Chemist

Project: STN3703G Keyline Havant Harts Farm Way, Havant

Client: Soiltechnics Limited	Chemtest Job No.:				16-22592	16-22592	16-22592
Quotation No.:	Chemtest Sample ID.:				353403	353408	353409
Order No.: 22325	Client Sample Ref.:				TP01	TP03	TP04
	Client Sample ID.:				1-045	1-074	1-062
	Sample Type:				SOIL	SOIL	SOIL
	Top Depth (m):				0.20	0.30	0.60
	Date Sampled:				16-Sep-2016	16-Sep-2016	16-Sep-2016
Determinand	Accred.	SOP	Units	LOD			
pH	U	1010		N/A	9.1	8.3	8.5
Nitrate	U	1220	mg/l	0.50	< 0.50	2.0	0.94
Sulphate	U	1220	mg/l	1.0	5.3	< 1.0	7.5
Cyanide (Total)	U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050
Cyanide (Free)	U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050
Cyanide (Complex)	U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050
Sulphide	U	1325	mg/l	0.050	0.057	0.060	0.061
Arsenic (Dissolved)	U	1450	µg/l	1.0	5.2	3.3	6.2
Boron (Dissolved)	U	1450	µg/l	20	45	26	< 20
Beryllium (Dissolved)	U	1450	µg/l	1.0	< 1.0	< 1.0	< 1.0
Cadmium (Dissolved)	U	1450	µg/l	0.080	< 0.080	0.12	0.13
Chromium (Dissolved)	U	1450	µg/l	1.0	< 1.0	< 1.0	< 1.0
Copper (Dissolved)	U	1450	µg/l	1.0	< 1.0	8.7	5.0
Mercury (Dissolved)	U	1450	µg/l	0.50	< 0.50	< 0.50	< 0.50
Nickel (Dissolved)	U	1450	µg/l	1.0	< 1.0	1.7	1.4
Lead (Dissolved)	U	1450	µg/l	1.0	< 1.0	2.1	4.5
Selenium (Dissolved)	U	1450	µg/l	1.0	< 1.0	< 1.0	2.5
Vanadium (Dissolved)	U	1450	µg/l	1.0	5.0	5.0	9.9
Zinc (Dissolved)	U	1450	µg/l	1.0	< 1.0	5.1	2.4
Naphthalene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Fluorene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Anthracene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Pyrene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Chrysene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	U	1800	µg/l	2.0	< 2.0	< 2.0	< 2.0
Total Phenols	U	1920	mg/l	0.030	< 0.030	< 0.030	< 0.030

Project: STN3703G Keyline Havant Harts Farm Way, Havant

Client: Soiltechnics Limited	Chemtest Job No.:				16-22592	16-22592	16-22592	16-22592	16-22592	16-22592	16-22592	16-22592
Quotation No.:	Chemtest Sample ID.:				353400	353401	353402	353403	353404	353405	353406	353407
Order No.: 22325	Client Sample Ref.:				DTS07	DTS07	DTS08	TP01	TP01	TP02	TP02	TP02
	Client Sample ID.:				1-037	1-038	1-040	1-045	1-047	1-050	1-052	1-054
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.60	1.50	0.10	0.20	0.50	0.20	2.00	0.60
	Bottom Depth (m):				0.90	1.60						
	Date Sampled:				16-Sep-2016	16-Sep-2016	16-Sep-2016	16-Sep-2016	16-Sep-2016	16-Sep-2016	16-Sep-2016	16-Sep-2016
	Asbestos Lab:						COVENTRY	COVENTRY		COVENTRY		
Determinand	Accred.	SOP	Units	LOD								
ACM Type	U	2192		N/A			-	-		-		
Asbestos Identification	U	2192	%	0.001			No Asbestos Detected	No Asbestos Detected		No Asbestos Detected		
Moisture	N	2030	%	0.020	17	12	16	10	23	12	14	20
Soil Colour	N	2040		N/A	Grey	Brown	Brown	Brown		Brown	Beige	White
Other Material	N	2040		N/A	Stones	Stones	Stones, Brick, Roots, Wood	Stones		Stones, Roots	Stones	Stones
Soil Texture	N	2040		N/A	Chalk, Sand, Chalk,	Sand, Chalk,	Sand, Chalk,	Sand, Chalk,		Sand, Chalk,	Sand, Chalk	Chalk
pH	M	2010		N/A	8.4	8.9	10.0	8.8		8.0	8.3	8.5
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40			0.59	< 0.40		< 0.40		< 0.40
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.19	0.049					0.019	
Total Sulphur	M	2175	%	0.010	0.050	0.020					0.012	
Cyanide (Complex)	M	2300	mg/kg	0.50			< 0.50	< 0.50		2.5		< 0.50
Cyanide (Free)	M	2300	mg/kg	0.50			< 0.50	< 0.50		< 0.50		< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50			< 0.50	< 0.50		2.5		< 0.50
Sulphate (Acid Soluble)	M	2430	%	0.010	0.067	0.038					0.022	
Arsenic	M	2450	mg/kg	1.0			9.4	3.3		9.5		14
Beryllium	U	2450	mg/kg	1.0			< 1.0	< 1.0		< 1.0		< 1.0
Cadmium	M	2450	mg/kg	0.10			0.36	< 0.10		1.7		0.61
Chromium	M	2450	mg/kg	1.0			10	11		21		< 1.0
Copper	M	2450	mg/kg	0.50			12	4.8		32		1.6
Mercury	M	2450	mg/kg	0.10			< 0.10	< 0.10		0.18		< 0.10
Nickel	M	2450	mg/kg	0.50			10	12		18		3.4
Lead	M	2450	mg/kg	0.50			35	4.5		67		1.9
Selenium	M	2450	mg/kg	0.20			< 0.20	< 0.20		< 0.20		< 0.20
Vanadium	U	2450	mg/kg	5.0			10	11		23		< 5.0
Zinc	M	2450	mg/kg	0.50			45	18		140		12
Chromium (Hexavalent)	N	2490	mg/kg	0.50			< 0.50	< 0.50		< 0.50		< 0.50
Organic Matter	M	2625	%	0.40			3.6	0.47	0.41	7.4		5.0
Total Organic Carbon	M	2625	%	0.20					0.24			
Aliphatic TPH >C5-C6	N	2680	mg/kg	0.010					< 0.010			
Aliphatic TPH >C6-C8	N	2680	mg/kg	0.010					< 0.010			
Aliphatic TPH >C8-C10	N	2680	mg/kg	0.10					10			
Aliphatic TPH >C10-C12	N	2680	mg/kg	0.10					160			
Aliphatic TPH >C12-C16	N	2680	mg/kg	0.10					990			

Project: STN3703G Keyline Havant Harts Farm Way, Havant

Client: Soiltechnics Limited	Chemtest Job No.:				16-22592	16-22592	16-22592	16-22592	16-22592	16-22592	16-22592	16-22592
Quotation No.:	Chemtest Sample ID.:				353400	353401	353402	353403	353404	353405	353406	353407
Order No.: 22325	Client Sample Ref.:				DTS07	DTS07	DTS08	TP01	TP01	TP02	TP02	TP02
	Client Sample ID.:				1-037	1-038	1-040	1-045	1-047	1-050	1-052	1-054
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.60	1.50	0.10	0.20	0.50	0.20	2.00	0.60
	Bottom Depth (m):				0.90	1.60						
	Date Sampled:				16-Sep-2016	16-Sep-2016	16-Sep-2016	16-Sep-2016	16-Sep-2016	16-Sep-2016	16-Sep-2016	16-Sep-2016
	Asbestos Lab:						COVENTRY	COVENTRY		COVENTRY		
Determinand	Accred.	SOP	Units	LOD								
Aliphatic TPH >C16-C21	N	2680	mg/kg	0.10					970			
Aliphatic TPH >C21-C35	N	2680	mg/kg	0.10					140			
Aliphatic TPH >C35-C44	N	2680	mg/kg	0.10					< 0.10			
Total Aliphatic Hydrocarbons	N	2680	mg/kg	1.0					2300			
Aromatic TPH >C5-C7	N	2680	mg/kg	0.010					< 0.010			
Aromatic TPH >C7-C8	N	2680	mg/kg	0.010					< 0.010			
Aromatic TPH >C8-C10	N	2680	mg/kg	0.10					2.3			
Aromatic TPH >C10-C12	N	2680	mg/kg	0.10					4.5			
Aromatic TPH >C12-C16	N	2680	mg/kg	0.10					140			
Aromatic TPH >C16-C21	N	2680	mg/kg	0.10					88			
Aromatic TPH >C21-C35	N	2680	mg/kg	0.10					58			
Aromatic TPH >C35-C44	N	2680	mg/kg	0.10					< 0.10			
Total Aromatic Hydrocarbons	N	2680	mg/kg	1.0					290			
Total Petroleum Hydrocarbons	N	2680	mg/kg	2.0					2600			
Benzene	M	2760	µg/kg	1.0					< 1.0			
Toluene	M	2760	µg/kg	1.0					< 1.0			
Ethylbenzene	M	2760	µg/kg	1.0					< 1.0			
m & p-Xylene	M	2760	µg/kg	1.0					< 1.0			
o-Xylene	M	2760	µg/kg	1.0					< 1.0			
Naphthalene	M	2800	mg/kg	0.10			< 0.10	< 0.10		< 0.10		< 0.10
Acenaphthylene	N	2800	mg/kg	0.10			< 0.10	< 0.10		< 0.10		< 0.10
Acenaphthene	M	2800	mg/kg	0.10			0.10	< 0.10		< 0.10		< 0.10
Fluorene	M	2800	mg/kg	0.10			0.15	< 0.10		0.20		< 0.10
Phenanthrene	M	2800	mg/kg	0.10			2.4	< 0.10		2.8		< 0.10
Anthracene	M	2800	mg/kg	0.10			0.32	< 0.10		0.49		< 0.10
Fluoranthene	M	2800	mg/kg	0.10			3.5	< 0.10		5.0		< 0.10
Pyrene	M	2800	mg/kg	0.10			2.7	< 0.10		3.8		< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.10			0.76	< 0.10		1.5		< 0.10
Chrysene	M	2800	mg/kg	0.10			1.1	< 0.10		2.0		< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10			1.7	< 0.10		4.1		< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10			0.36	< 0.10		1.2		< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10			0.84	< 0.10		2.4		< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10			0.79	< 0.10		3.4		< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10			< 0.10	< 0.10		0.28		< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10			0.78	< 0.10		3.1		< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0			16	< 2.0		30		< 2.0

Results - Soil

Project: STN3703G Keyline Havant Harts Farm Way, Havant

Client: Soiltechnics Limited	Chemtest Job No.:				16-22592	16-22592	16-22592	16-22592	16-22592	16-22592	16-22592	16-22592
Quotation No.:	Chemtest Sample ID.:				353400	353401	353402	353403	353404	353405	353406	353407
Order No.: 22325	Client Sample Ref.:				DTS07	DTS07	DTS08	TP01	TP01	TP02	TP02	TP02
	Client Sample ID.:				1-037	1-038	1-040	1-045	1-047	1-050	1-052	1-054
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.60	1.50	0.10	0.20	0.50	0.20	2.00	0.60
	Bottom Depth (m):				0.90	1.60						
	Date Sampled:				16-Sep-2016	16-Sep-2016	16-Sep-2016	16-Sep-2016	16-Sep-2016	16-Sep-2016	16-Sep-2016	16-Sep-2016
	Asbestos Lab:						COVENTRY	COVENTRY		COVENTRY		
Determinand	Accred.	SOP	Units	LOD								
Total Phenols	M	2920	mg/kg	0.30			< 0.30	< 0.30		< 0.30		< 0.30

Project: STN3703G Keyline Havant Harts Farm Way, Havant

Client: Soiltechnics Limited	Chemtest Job No.:				16-22592	16-22592	16-22592
Quotation No.:	Chemtest Sample ID.:				353408	353409	353410
Order No.: 22325	Client Sample Ref.:				TP03	TP04	TP06
	Client Sample ID.:				1-074	1-062	1-068
	Sample Type:				SOIL	SOIL	SOIL
	Top Depth (m):				0.30	0.60	0.30
	Bottom Depth (m):						
	Date Sampled:				16-Sep-2016	16-Sep-2016	16-Sep-2016
	Asbestos Lab:				COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD			
ACM Type	U	2192		N/A	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	10	13	12
Soil Colour	N	2040		N/A	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones,	Stones	Stones, Brick
Soil Texture	N	2040		N/A	Sand, Chalk,	Sand, Chalk	Sand, Chalk
pH	M	2010		N/A	8.0	8.1	8.0
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	< 0.40	0.51
Sulphate (2:1 Water Soluble) as SO ₄	M	2120	g/l	0.010			
Total Sulphur	M	2175	%	0.010			
Cyanide (Complex)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Sulphate (Acid Soluble)	M	2430	%	0.010			
Arsenic	M	2450	mg/kg	1.0	13	16	23
Beryllium	U	2450	mg/kg	1.0	< 1.0	< 1.0	1.0
Cadmium	M	2450	mg/kg	0.10	2.6	0.60	16
Chromium	M	2450	mg/kg	1.0	20	18	61
Copper	M	2450	mg/kg	0.50	37	23	1700
Mercury	M	2450	mg/kg	0.10	0.25	0.13	0.74
Nickel	M	2450	mg/kg	0.50	10	14	74
Lead	M	2450	mg/kg	0.50	50	46	2300
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	11	31	19
Zinc	M	2450	mg/kg	0.50	96	63	2000
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Organic Matter	M	2625	%	0.40	2.8	2.1	2.4
Total Organic Carbon	M	2625	%	0.20			
Aliphatic TPH >C5-C6	N	2680	mg/kg	0.010			
Aliphatic TPH >C6-C8	N	2680	mg/kg	0.010			
Aliphatic TPH >C8-C10	N	2680	mg/kg	0.10			
Aliphatic TPH >C10-C12	N	2680	mg/kg	0.10			
Aliphatic TPH >C12-C16	N	2680	mg/kg	0.10			

Project: STN3703G Keyline Havant Harts Farm Way, Havant

Client: Soiltechnics Limited	Chemtest Job No.:				16-22592	16-22592	16-22592
Quotation No.:	Chemtest Sample ID.:				353408	353409	353410
Order No.: 22325	Client Sample Ref.:				TP03	TP04	TP06
	Client Sample ID.:				1-074	1-062	1-068
	Sample Type:				SOIL	SOIL	SOIL
	Top Depth (m):				0.30	0.60	0.30
	Bottom Depth (m):						
	Date Sampled:				16-Sep-2016	16-Sep-2016	16-Sep-2016
	Asbestos Lab:				COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD			
Aliphatic TPH >C16-C21	N	2680	mg/kg	0.10			
Aliphatic TPH >C21-C35	N	2680	mg/kg	0.10			
Aliphatic TPH >C35-C44	N	2680	mg/kg	0.10			
Total Aliphatic Hydrocarbons	N	2680	mg/kg	1.0			
Aromatic TPH >C5-C7	N	2680	mg/kg	0.010			
Aromatic TPH >C7-C8	N	2680	mg/kg	0.010			
Aromatic TPH >C8-C10	N	2680	mg/kg	0.10			
Aromatic TPH >C10-C12	N	2680	mg/kg	0.10			
Aromatic TPH >C12-C16	N	2680	mg/kg	0.10			
Aromatic TPH >C16-C21	N	2680	mg/kg	0.10			
Aromatic TPH >C21-C35	N	2680	mg/kg	0.10			
Aromatic TPH >C35-C44	N	2680	mg/kg	0.10			
Total Aromatic Hydrocarbons	N	2680	mg/kg	1.0			
Total Petroleum Hydrocarbons	N	2680	mg/kg	2.0			
Benzene	M	2760	µg/kg	1.0			
Toluene	M	2760	µg/kg	1.0			
Ethylbenzene	M	2760	µg/kg	1.0			
m & p-Xylene	M	2760	µg/kg	1.0			
o-Xylene	M	2760	µg/kg	1.0			
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	0.22	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	0.22	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	0.14	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.66	2.1	< 0.10
Anthracene	M	2800	mg/kg	0.10	< 0.10	0.65	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	1.5	5.0	< 0.10
Pyrene	M	2800	mg/kg	0.10	1.3	4.6	< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.24	1.9	< 0.10
Chrysene	M	2800	mg/kg	0.10	0.32	2.1	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.11	3.0	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.13	0.93	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.28	2.3	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.36	1.8	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	0.23	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.41	1.7	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	5.3	27	< 2.0

Project: STN3703G Keyline Havant Harts Farm Way, Havant

Client: Soiltechnics Limited	Chemtest Job No.:				16-22592	16-22592	16-22592
Quotation No.:	Chemtest Sample ID.:				353408	353409	353410
Order No.: 22325	Client Sample Ref.:				TP03	TP04	TP06
	Client Sample ID.:				1-074	1-062	1-068
	Sample Type:				SOIL	SOIL	SOIL
	Top Depth (m):				0.30	0.60	0.30
	Bottom Depth (m):						
	Date Sampled:				16-Sep-2016	16-Sep-2016	16-Sep-2016
	Asbestos Lab:				COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD			
Total Phenols	M	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30

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Sample Retention and Disposal

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All water samples will be retained for 14 days from the date of receipt

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customerservices@chemtest.co.uk



2183

Final Report

Report No.: 16-22598-1

Initial Date of Issue: 28-Sep-2016

Client Soiltechnics Limited

Client Address: Cedar Barn
White Lodge
Walgrave
Northampton
Northamptonshire
NN6 9PY

Contact(s): Rachel Brown

Project STN3703G Keyline Havant Harts Farm
Way, Havant

Quotation No.: **Date Received:** 20-Sep-2016

Order No.: 22327 **Date Instructed:** 20-Sep-2016

No. of Samples: 1

Turnaround (Wkdays): 7 **Results Due:** 28-Sep-2016

Date Approved: 28-Sep-2016

Approved By:



Details: Martin Dyer, Laboratory Manager

Results - 2 Stage WAC

Project: STN3703G Keyline Havant Harts Farm Way, Havant

Chemtest Job No: 16-22598 Chemtest Sample ID: 353437 Sample Ref: WAC 1 Sample ID: 2-001 Top Depth(m): Bottom Depth(m): Sampling Date: 15-Sep-2016							Landfill Waste Acceptance Criteria Limits		
							Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Determinand	SOP	Accred.	Units						
Total Organic Carbon	2625	U	%				3	5	6
Loss On Ignition	2610	U	%				--	--	10
Total BTEX	2760	U	mg/kg				6	--	--
Total PCBs (7 Congeners)	2815	U	mg/kg				1	--	--
TPH Total WAC (Mineral Oil)	2670	U	mg/kg				500	--	--
Total (Of 17) PAH's	2700	N	mg/kg				100	--	--
pH	2010	U					--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg				--	To evaluate	To evaluate
Eluate Analysis			2:1 mg/l	8:1 mg/l	2:1 mg/kg	Cumulative mg/kg 10:1	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
Arsenic	1450	U	0.0083	0.0055	< 0.050	0.059	0.5	2	25
Barium	1450	U	0.085	0.023	< 0.50	< 0.50	20	100	300
Cadmium	1450	U	0.00018	< 0.00010	< 0.010	< 0.010	0.04	1	5
Chromium	1450	U	0.020	0.0084	< 0.050	0.10	0.5	10	70
Copper	1450	U	0.022	0.013	< 0.050	< 0.050	2	50	100
Mercury	1450	U	0.00055	< 0.00050	0.0011	< 0.0050	0.01	0.2	2
Molybdenum	1450	U	0.064	0.0081	0.13	0.16	0.5	10	30
Nickel	1450	U	0.0015	< 0.0010	< 0.050	< 0.050	0.4	10	40
Lead	1450	U	< 0.0010	0.0036	< 0.010	0.031	0.5	10	50
Antimony	1450	U	0.019	0.0081	0.038	0.096	0.06	0.7	5
Selenium	1450	U	0.0047	0.0022	< 0.010	0.025	0.1	0.5	7
Zinc	1450	U	0.0076	0.0049	< 0.50	< 0.50	4	50	200
Chloride	1220	U	1300	150	2600	3100	800	15000	25000
Fluoride	1220	U	0.64	0.57	1.3	5.8	10	150	500
Sulphate	1220	U	400	54	800	1000	1000	20000	50000
Total Dissolved Solids	1020	N	2700	360	5400	6900	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.030	< 0.30	< 0.50	1	-	-
Dissolved Organic Carbon	1610	U	16	7.1	< 50	83	500	800	1000

Soild Information

Dry mass of test portion/kg	0.175
Moisture (%)	12

Leachate Test Information

Leachant volume 1st extract/l	0.326
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.245

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2183

Final Report

Report No.: 16-24159-1

Initial Date of Issue: 12-Oct-2016

Client Soiltechnics Limited

Client Address: Cedar Barn
White Lodge
Walgrave
Northampton
Northamptonshire
NN6 9PY

Contact(s): Rachel Brown

Project STN3703G - Keyline Havant, Herts
Farm Way, Havant

Quotation No.:

Order No.: 22484

No. of Samples: 2

Turnaround (Wkdays): 5

Date Approved: 12-Oct-2016

Date Received: 06-Oct-2016

Date Instructed: 06-Oct-2016

Results Due: 12-Oct-2016

Approved By:



Details: Keith Jones, Technical Manager

Project: STN3703G - Keyline Havant, Herts Farm Way, Havant

Client: Soiltechnics Limited	Chemtest Job No.:				16-24159	16-24159
Quotation No.:	Chemtest Sample ID.:				361494	361495
Order No.: 22484	Client Sample Ref.:				DTS07	DTS08
	Client Sample ID.:				2-002	2-003
	Sample Type:				WATER	WATER
	Top Depth (m):				1.05	0.69
	Date Sampled:				16-Sep-2016	16-Sep-2016
Determinand	Accred.	SOP	Units	LOD		
pH	U	1010		N/A	[B] 8.5	[B] 8.3
Ammoniacal Nitrogen	U	1220	mg/l	0.010		[B] 0.51
Nitrate	U	1220	mg/l	0.50	[B] < 0.50	[B] 5.2
Sulphate	U	1220	mg/l	1.0	[B] 180	[B] 14
Cyanide (Total)	U	1300	mg/l	0.050	[B] < 0.050	[B] < 0.050
Cyanide (Free)	U	1300	mg/l	0.050	[B] < 0.050	[B] < 0.050
Cyanide (Complex)	U	1300	mg/l	0.050	[B] < 0.050	[B] < 0.050
Sulphide	U	1325	mg/l	0.050	[B] < 0.050	[B] < 0.050
Magnesium	U	1415	mg/l	0.50		[B] 2.7
Arsenic (Dissolved)	U	1450	µg/l	1.0	[B] 3.2	[B] 1.0
Boron (Dissolved)	U	1450	µg/l	20	[B] 170	[B] 24
Beryllium (Dissolved)	U	1450	µg/l	1.0	[B] < 1.0	[B] < 1.0
Cadmium (Dissolved)	U	1450	µg/l	0.080	[B] < 0.080	[B] < 0.080
Chromium (Dissolved)	U	1450	µg/l	1.0	[B] < 1.0	[B] < 1.0
Copper (Dissolved)	U	1450	µg/l	1.0	[B] 35	[B] 12
Mercury (Dissolved)	U	1450	µg/l	0.50	[B] 0.65	[B] < 0.50
Nickel (Dissolved)	U	1450	µg/l	1.0	[B] 8.5	[B] 2.5
Lead (Dissolved)	U	1450	µg/l	1.0	[B] < 1.0	[B] < 1.0
Selenium (Dissolved)	U	1450	µg/l	1.0	[B] 7.5	[B] 1.6
Vanadium (Dissolved)	U	1450	µg/l	1.0	[B] < 1.0	[B] < 1.0
Zinc (Dissolved)	U	1450	µg/l	1.0	[B] 160	[B] 99
Naphthalene	U	1800	µg/l	0.10	[B] < 0.10	[B] < 0.10
Acenaphthylene	U	1800	µg/l	0.10	[B] < 0.10	[B] < 0.10
Acenaphthene	U	1800	µg/l	0.10	[B] < 0.10	[B] < 0.10
Fluorene	U	1800	µg/l	0.10	[B] < 0.10	[B] < 0.10
Phenanthrene	U	1800	µg/l	0.10	[B] < 0.10	[B] < 0.10
Anthracene	U	1800	µg/l	0.10	[B] < 0.10	[B] < 0.10
Fluoranthene	U	1800	µg/l	0.10	[B] < 0.10	[B] < 0.10
Pyrene	U	1800	µg/l	0.10	[B] < 0.10	[B] < 0.10
Benzo[a]anthracene	U	1800	µg/l	0.10	[B] < 0.10	[B] < 0.10
Chrysene	U	1800	µg/l	0.10	[B] < 0.10	[B] < 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.10	[B] < 0.10	[B] < 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.10	[B] < 0.10	[B] < 0.10
Benzo[a]pyrene	U	1800	µg/l	0.10	[B] < 0.10	[B] < 0.10
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.10	[B] < 0.10	[B] < 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.10	[B] < 0.10	[B] < 0.10
Benzo[g,h,i]perylene	U	1800	µg/l	0.10	[B] < 0.10	[B] < 0.10
Total Of 16 PAH's	U	1800	µg/l	2.0	[B] < 2.0	[B] < 2.0

Project: STN3703G - Keyline Havant, Herts Farm Way, Havant

Client: Soiltechnics Limited	Chemtest Job No.:		16-24159	16-24159
Quotation No.:	Chemtest Sample ID.:		361494	361495
Order No.: 22484	Client Sample Ref.:		DTS07	DTS08
	Client Sample ID.:		2-002	2-003
	Sample Type:		WATER	WATER
	Top Depth (m):		1.05	0.69
	Date Sampled:		16-Sep-2016	16-Sep-2016
Determinand	Accred.	SOP	Units	LOD
Total Phenols	U	1920	mg/l	0.030
				[B] < 0.030
				[B] < 0.030

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample ID:	Sample Ref:	Sample ID:	Sampled Date:	Deviation Code(s):	Containers Received:
361494	DTS07	2-002	16-Sep-2016	B	Coloured Winchester 1000ml
361494	DTS07	2-002	16-Sep-2016	B	Plastic Bottle 1000ml
361495	DTS08	2-003	16-Sep-2016	B	Coloured Winchester 1000ml
361495	DTS08	2-003	16-Sep-2016	B	Plastic Bottle 1000ml

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Analysis of test data in relation to concentrations of inorganic chemical contaminants

Adopted Model: Industrial/Commercial
Receptor: Construction operative

Test procedure		Summary of test data						Initial comparison	Outlier test				Normality test			UCL		
Contaminant	Guideline source	Guideline value	No. of tests	Min.	Max.	Mean	No. of tests above guideline value	Initial screening	Pass outlier test?	Number of outliers	Location of outlier	Depth	Concentration	Shapiro-Wilk Normality test	Probability plot test	Data normally distributed?	95% UCL of mean	Contaminant
		mg/kg			mg/kg	mg/kg							mg/kg	mg/kg				
Arsenic	S4UL	640	7	3.3	23.0	12.6	0	Mean value below guideline	y	0				normal	normal	n	22.8	Arsenic
Beryllium	S4UL	12	7	1.0	1.0	1.0	0	Mean value below guideline	y	0				not normal	not normal	n	1.0	Beryllium
Boron	S4UL	240000	7	0.4	0.6	0.4	0	Mean value below guideline	y	0				not normal	not normal	n	0.6	Boron
Cadmium	S4UL	190	7	0.1	16.0	3.1	0	Mean value below guideline	n	0				not normal	not normal	n	12.6	Cadmium
Chromium (III)	S4UL	33	7	1.0	61.0	20.3	1	Mean value below guideline	n	1	TP06	0.3	61					Chromium (III)
Chromium (III)	S4UL	33	6	1.0	21.0	13.5	0	Mean value below guideline	y	0				not normal	not normal	n	27.1	Chromium (III)
Copper	S4UL	68000	7	1.6	1700.0	258.6	0	Mean value below guideline	n	0				not normal	not normal	n	1306.3	Copper
Cyanide (total)	ATK	34	7	0.5	2.5	0.8	0	Mean value below guideline	n	0				not normal	not normal	n	2.0	Cyanide (total)
Lead	C4SL (I)	1100	7	1.9	2300.0	357.8	1	Mean value below guideline	n	1	TP06	0.3	2300					Lead
Lead	C4SL (I)	1100	6	1.9	67.0	34.1	0	Mean value below guideline	y	0				not normal	not normal	n	80.4	Lead
Mercury#	S4UL	58	7	0.1	0.7	0.2	0	Mean value below guideline	n	0				not normal	not normal	n	0.6	Mercury#
Nickel	S4UL	980	7	3.4	74.0	20.2	0	Mean value below guideline	n	0				not normal	normal	n	60.0	Nickel
Selenium	S4UL	12000	7	0.2	0.2	0.2	0	Mean value below guideline	y	0				not normal	normal	n	0.2	Selenium
Vanadium	S4UL	9000	7	5.0	31.0	15.7	0	Mean value below guideline	y	0				normal	normal	n	30.6	Vanadium
Zinc	S4UL	730000	7	12.0	2000.0	339.1	0	Mean value below guideline	n	1				not normal	normal	n	1548.3	Zinc

S4UL Suitable for Use Level as published by LQM/CIEH
C4SL Category 4 Screening Level
C4SL (lower) (upper) Category 4 Screening Level for Lead at lower or upper bound of range
ATK Soil Screening Value derived by Atkins
BPG5 Guideline from BPG Note 5 as published by Forest Research

Assumed to be elemental mercury as initial screening value

Analysis of test data in relation to concentrations of organic chemical contaminants

Adopted model: Industrial/Commercial and
Receptor: Construction operative and vegetation

Test procedure			Summary of test data				Initial Screening		Outlier test				Normality test				UCL	
Contaminant	Guideline source	Guideline value*	No. of tests	Min.	Max.	Mean	No. of tests above guideline value	Initial screening	Pass outlier test?	Number of outliers	Location of outlier	Depth	Concentration	Shapiro-Wilk Normality test	Probability plot test	Data normally distributed?	95% UCL of mean	Contaminant
		mg/kg		mg/kg	mg/kg	mg/kg		mg/kg										
Acenaphthene	S4UL	97000	7	0.1	0.2	0.1	0	Mean value below guideline	n	0				not normal	not normal	n	0.2	Acenaphthene
Acenaphthylene	S4UL	97000	7	0.1	0.2	0.1	0	Mean value below guideline	n	0				not normal	not normal	n	0.2	Acenaphthylene
Anthracene	S4UL	540000	7	0.1	0.7	0.3	0	Mean value below guideline	y	0				not normal	not normal	n	0.6	Anthracene
Benzo(a)anthracene	S4UL	170	7	0.1	1.9	0.7	0	Mean value below guideline	y	0				not normal	not normal	n	1.9	Benzo(a)anthracene
Benzo(a)pyrene	S4UL	35	7	0.1	2.4	0.9	0	Mean value below guideline	y	0				not normal	not normal	n	2.6	Benzo(a)pyrene
Benzo(b)fluoranthene	S4UL	44	7	0.1	4.1	1.3	0	Mean value below guideline	y	0				not normal	not normal	n	4.1	Benzo(b)fluoranthene
Benzo(g,h,i)perylene	S4UL	4000	7	0.1	3.1	0.9	0	Mean value below guideline	n	0				not normal	not normal	n	2.8	Benzo(g,h,i)perylene
Benzo(k)fluoranthene	S4UL	1200	7	0.1	1.2	0.4	0	Mean value below guideline	y	0				not normal	not normal	n	1.2	Benzo(k)fluoranthene
Chrysene	S4UL	350	7	0.1	2.1	0.8	0	Mean value below guideline	y	0				not normal	not normal	n	2.3	Chrysene
Dibenzo(a,h)anthracene	S4UL	3.6	7	0.1	0.3	0.1	0	Mean value below guideline	y	0				not normal	not normal	n	0.3	Dibenzo(a,h)anthracene
Fluoranthene	S4UL	23000	7	0.1	5.0	2.2	0	Mean value below guideline	y	0				normal	normal	n	5.9	Fluoranthene
Fluorene	S4UL	68000	7	0.1	0.2	0.1	0	Mean value below guideline	y	0				not normal	not normal	n	0.2	Fluorene
Indeno(1,2,3-cd)pyrene	S4UL	510	7	0.1	3.4	1.0	0	Mean value below guideline	n	0				not normal	not normal	n	3.0	Indeno(1,2,3-cd)pyrene
Naphthalene	S4UL	460	7	0.1	0.1	0.1	0	Mean value below guideline	y	0				not normal	not normal	n	0.1	Naphthalene
Phenanthrene	S4UL	22000	7	0.1	2.8	1.2	0	Mean value below guideline	y	0				normal	normal	n	3.2	Phenanthrene
Phenols	S4UL	1500	7	0.3	0.3	0.3	0	Mean value below guideline	y	0				not normal	not normal	n	0.3	Phenols
Pyrene	S4UL	54000	7	0.1	4.6	1.8	0	Mean value below guideline	y	0				not normal	not normal	n	4.9	Pyrene

Notes

S4UL Suitable for Use Level as published by LQM/CIEH
C4SL Category 4 Screening Level
SGV Soil Guideline Value as published by the Environment Agency 2009
SSV Soil Screening Value as derived by Soiltechnics
ATK Soil Screening Value derived by Atkins

* Assuming a SOM of 2.5%

Title Analysis of test data in relation to concentrations of organic chemical contaminants.	Table number 2
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Analysis of test data in relation to concentrations of inorganic chemical contaminants

Adopted Model: Industrial/Commercial and BPG5
Receptor: Vegetation

Test procedure			Summary of test data					Initial comparison	Outlier test				Normality test				UCL	
Contaminant	Guideline source	Guideline value	No. of tests	Min.	Max.	Mean	No. of tests above guideline value	Initial screening	Pass outlier test?	Number of outliers	Location of outlier	Depth	Concentration	Shapiro-Wilk Normality test	Probability plot test	Data normally distributed?	95% UCL of mean	Contaminant
		mg/kg			mg/kg	mg/kg		mg/kg						mg/kg			mg/kg	
Arsenic	S4UL	640	7	3.3	23.0	12.6	0	Mean value below guideline	y	0				normal	normal	y	17.1	Arsenic
Beryllium	S4UL	12	7	1.0	1.0	1.0	0	Mean value below guideline	y	0				not normal	not normal	n	1.0	Beryllium
Boron	S4UL	240000	7	0.4	0.6	0.4	0	Mean value below guideline	y	0				not normal	not normal	n	0.6	Boron
Cadmium	S4UL	190	7	0.1	16.0	3.1	0	Mean value below guideline	n	0				not normal	not normal	n	12.6	Cadmium
Chromium (III)	S4UL	33	7	1.0	61.0	20.3	1	Mean value below guideline	n	1	TP06	0.3	61					Chromium (III)
Chromium (III)	S4UL	33	6	1.0	21.0	13.5	0	Mean value below guideline	y	0				not normal	not normal	n	27.1	Chromium (III)
Copper	BPG5	130	7	1.6	1700.0	258.6	1	Mean value above guideline		1	TP06	0.3	1700					Copper
Copper	BPG5	130	6	1.6	37.0	18.4	0	Mean value below guideline	y	0				not normal	not normal	n	44.3	Copper
Cyanide (total)	ATK	34	7	0.5	2.5	0.8	0	Mean value below guideline	n	0				not normal	not normal	n	2.0	Cyanide (total)
Lead	C4SL (I)	1100	7	1.9	2300.0	357.8	1	Mean value below guideline	n	1	TP06	0.3	2300					Lead
Lead	C4SL (I)	1100	6	1.9	67.0	34.1	0	Mean value below guideline	y	0				not normal	not normal	n	80.4	Lead
Mercury#	S4UL	58	7	0.1	0.7	0.2	0	Mean value below guideline	n	0				not normal	normal	y	0.4	Mercury#
Nickel	S4UL	980	7	3.4	74.0	20.2	0	Mean value below guideline	n	0				not normal	normal	y	37.9	Nickel
Selenium	S4UL	12000	7	0.2	0.2	0.2	0	Mean value below guideline	y	0				not normal	normal	y	0.2	Selenium
Vanadium	S4UL	9000	7	5.0	31.0	15.7	0	Mean value below guideline	y	0				normal	normal	y	22.3	Vanadium
Zinc	BPG5	300	7	12.0	2000.0	339.1	1	Mean value above guideline		1	TP06	0.3	2000					Zinc
Zinc	BPG5	300	6	12.0	140.0	62.3	0	Mean value below guideline	y	1				not normal	normal	y	102.6	Zinc

S4UL Suitable for Use Level as published by LQM/CIEH
C4SL Category 4 Screening Level
C4SL (lower) (upper) Category 4 Screening Level for Lead at lower or upper bound of range
ATK Soil Screening Value derived by Atkins
BPG5 Guideline from BPG Note 5 as published by Forest Research

Assumed to be elemental mercury as initial screening value

Title	Table number
Analysis of test data in relation to concentrations of inorganic chemical contaminants.	3

Summary of leachate test results

Receptor
Water type
Fish type
Water hardness

Groundwater
Freshwater
Salmonid
>250 mg/l

Contaminant	Guideline value (µg/l)	Guideline source	Location Depth (m)	TP01 0.2	TP03 0.3	TP04 0.6
Inorganics (µg/l)						
Arsenic	50	EQS (f)		5	3	6
Boron	2000	EQS (f)		45	26	< 20
Cadmium	5	EQS (f)		< 0.080	0	0
Chromium	50	EQS (f)		< 1.0	< 1.0	< 1.0
Copper	28	EQS (f)		< 1.0	9	5
Lead	20	EQS (f)		< 1.0	2	5
Mercury	1	EQS (f)		< 0.50	< 0.50	< 0.50
Nickel	200	EQS (f)		< 1.0	2	1
Selenium ¹	10	UKDWS		< 1.0	< 1.0	3
Vanadium ²	60	EQS (f)		5	5	10
Zinc	125	EQS (f)		< 1.0	5	2
Free Cyanide ¹	50	UKDWS		<50	<50	<50
Nitrate as N	50000	UKDWS	<500	2000	940	
Sulphate as SO4	400000	EQS(f)	5300	<10000	7500	
PAH (µg/l)						
Benzo(a)pyrene ^{1,4}	0.01	UKDWS		< 0.10	< 0.10	< 0.10
Naphthalene ²	10	EQS (f)		< 0.10	< 0.10	< 0.10
Sum of 4 PAH ¹	0.1	UKDWS		<0.1*	<0.1*	<0.1*

Notes

1 EQS values not available

2 UKDWS not available

3 Lower detectable limit above UKDWS. Concentrations below detectable limits are not considered further.

* Taken as lower detection limit

Taken as lower detection limit of a single compound

\$ Hardness data presented by the Environment Agency

UKDWS UK Drinking Water Standard Guideline taken from "The Water Supply (Water Quality) Regulations 2000"

EQS (f) Environmental Quality Standard for freshwater published by the Environment Agency

EQS (s) Environmental Quality Standard for saltwater published by the Environment Agency

Title

Comparison of measured concentrations with
guideline values for water receptors.

Table number

4

Summary of groundwater test results

Receptor
Water type
Fish type
Water hardness

Groundwater
Freshwater
Salmonid
>250 **mg/l**

Contaminant	Guideline value (µg/l)	Guideline source	Location Depth (m)	DTS07 1.05	DTS08 0.69
Inorganics (µg/l)					
Arsenic	50	EQS (f)		3	1
Boron	2000	EQS (f)		170	24
Cadmium	5	EQS (f)		< 0.080	< 0.080
Chromium	50	EQS (f)		< 1.0	< 1.0
Copper	28	EQS (f)		35	12
Lead	20	EQS (f)		< 1.0	< 1.0
Mercury	1	EQS (f)		1	< 0.50
Nickel	200	EQS (f)		9	3
Selenium ¹	10	UKDWS		8	2
Vanadium ²	60	EQS (f)		< 1.0	< 1.0
Zinc	125	EQS (f)		160	99
Free Cyanide ¹	50	UKDWS		<50	<50
Nitrate as N	50000	UKDWS		<500	5200
Sulphate as SO4	400000	EQS(f)		180000	14000
PAH (µg/l)					
Benzo(a)pyrene ^{1,4}	0.01	UKDWS		< 0.10	< 0.10
Naphthalene ²	10	EQS (f)		< 0.10	< 0.10
Sum of 4 PAH ¹	0.1	UKDWS		<0.1*	<0.1*

Notes

1 EQS values not available

2 UKDWS not available

3 Lower detectable limit above UKDWS. Concentrations below detectable limits are not considered further.

* Taken as lower detection limit

Taken as lower detection limit of a single compound

\$ Hardness data presented by the Environment Agency

UKDWS UK Drinking Water Standard Guideline taken from "The Water Supply (Water Quality) Regulations 2000"

EQS (f) Environmental Quality Standard for freshwater published by the Environment Agency

EQS (s) Environmental Quality Standard for saltwater published by the Environment Agency

Title

Comparison of measured concentrations with
guideline values for water receptors.

Table number

5

Summary of petroleum hydrocarbon test results

Model: Industrial/Commercial

BTEX (Red highlights indicate exceedance of guideline value)

Indicator	unit	S4UL (mg/kg)	Concentration TP01 0.50
Benzene	mg/kg	47	< 0.001
Toluene	mg/kg	110000	< 0.001
Ethylbenzene	mg/kg	13000	< 0.001
o-Xylene	mg/kg	15000	< 0.001
m,p-Xylene	mg/kg	14000	< 0.001

Hydrocarbon banding (Red highlights indicate exceedance of guideline value)

Fraction	unit	S4UL (mg/kg)	Concentration TP01 0.50
Aliphatic			
EC 5 - 6	mg/kg	5900	< 0.010
EC >6 - 8	mg/kg	17000	< 0.010
EC >8 - 10	mg/kg	4800	10
EC >10 - 12	mg/kg	23000	160
EC >12 - 16	mg/kg	82000	990
EC >16 - 35	mg/kg	1700000	1110
EC >35 - 44	mg/kg	1700000	< 0.10
Aromatic			
EC 5 - 7 (benzene)	mg/kg	46000	< 0.010
EC >7 - 8 (toluene)	mg/kg	110000	< 0.010
EC >8 - 10	mg/kg	8100	2.3
EC >10 - 12	mg/kg	28000	4.5
EC >12 - 16	mg/kg	37000	140
EC >16 - 21	mg/kg	28000	88
EC >21 - 35	mg/kg	28000	58
EC >35 - 44	mg/kg	28000	< 0.10

Title
Comparison of measured concentrations of
petroleum hydrocarbons with guideline values.

Table number
6

Initial Conceptual Model

Proposed site usecommercial/industrial

Source	Pathway										Receptor	Risk assessment to CIRIA C552		
	Humans						Vegetation	Water						
	Ingestion of air-borne dusts	Ingestion of soil	Ingestion of vegetables and soil attached to vegetables	Inhalation of air-borne dusts	Inhalation of vapours	Dermal contact with soil and dust	Root uptake, deposition to shoots and foliage contact	Percolation of water through contaminated soils	Near-surface water run-off through contaminated	Saturation of contaminated soils by flood waters				
Soils														
Made Ground	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Proposed site users	Adult	Mild	Low/moderate
	Likely	Likely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Moderate
	-	-	-	-	-	-	Likely	-	-	-	Vegetation (proposed)	-	Mild	Low/moderate
	-	-	-	-	-	-	-	-	Likely	Low likelihood	Low likelihood	Water (current and proposed)	-	Mild
Unknown former commercial use	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Proposed site users	Adult	Mild	Low/moderate
	Likely	Likely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Mild	Low/moderate
	-	-	-	-	-	-	Likely	-	-	-	Vegetation (proposed)	-	Mild	Low/moderate
	-	-	-	-	-	-	-	-	Likely	Low likelihood	Low likelihood	Water (current and proposed)	-	Medium
Former transport company usage	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Proposed site users	Adult	Medium	Moderate
	Likely	Likely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Mild	Low/moderate
	-	-	-	-	-	-	Likely	-	-	-	Vegetation (proposed)	-	Mild	Low/moderate
	-	-	-	-	-	-	-	-	Likely	Low likelihood	Low likelihood	Water (current and proposed)	-	Mild
Former commercial/transfer waste site activities	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Proposed site users	Adult	Mild	Low/moderate
	Likely	Likely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Mild	Low/moderate
	-	-	-	-	-	-	Likely	-	-	-	Vegetation (current)	-	Mild	Low/moderate
	-	-	-	-	-	-	-	-	Likely	Low likelihood	Low likelihood	Water (current and proposed)	-	Medium
Suspected former wash down area	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Proposed site users	Adult	Medium	Moderate
	Likely	Likely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Moderate
	-	-	-	-	-	-	Likely	-	-	-	Vegetation (proposed)	-	Mild	Low/moderate
	-	-	-	-	-	-	-	-	Likely	Low likelihood	Low likelihood	Water (current and proposed)	-	Medium

Title	Table number
Initial Conceptual Site Model	1

Updated Conceptual Model

Proposed site usecommercial/industrial

Source	Pathway										Receptor	Risk assessment to CIRIA C552		
	Humans						Vegetation	Water				Consequence of risk occurring via most likely pathway	Risk	
	Ingestion of air-borne dusts	Ingestion of soil	Ingestion of vegetables and soil attached to vegetables	Inhalation of air-borne dusts	Inhalation of vapours	Dermal contact with soil and dust	Root uptake, deposition to shoots and foliage contact	Percolation of water through contaminated soils	Near-surface water run-off through contaminated	Saturation of contaminated soils by flood waters				
Soils														
Made Ground	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Proposed site users	Adult	Minor	Low
	Likely	Likely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Mild	Low
	-	-	-	-	-	-	-	Unlikely	Low likelihood	Low likelihood	Water (current and proposed)	-	Minor	Very low
Unknown former commercial use	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Proposed site users	Adult	Minor	Low
	Likely	Likely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Minor	Very low
	-	-	-	-	-	-	-	Unlikely	Low likelihood	Low likelihood	Water (current and proposed)	-	Minor	Very low
Former transport company usage	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Proposed site users	Adult	Minor	Low
	Likely	Likely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Minor	Very low
	-	-	-	-	-	-	-	Unlikely	Low likelihood	Low likelihood	Water (current and proposed)	-	Minor	Very low
Former commercial/recycling sites/transfer waste activities	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Proposed site users	Adult	Minor	Low
	Likely	Likely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	0	-	-	-	Vegetation (current)	-	Minor	Very low
	-	-	-	-	-	-	-	Unlikely	Low likelihood	Low likelihood	Water (current and proposed)	-	Minor	Very low
Suspected former wash down area	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Proposed site users	Adult	Minor	Low
	Likely	Likely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Low likelihood	-	-	-	Vegetation (proposed)	-	Minor	Very low
	-	-	-	-	-	-	-	Unlikely	Low likelihood	Low likelihood	Water (current and proposed)	-	Minor	Very low

Title	Table number
Updated Conceptual Site Model	2

Record of in-situ gas and water level monitoring results

Date / Time		Instrument Used	Location	Atmospheric pressure (mB)	Temperature (°C)	Methane, CH ₄ (%v/v) Chg		Carbon Dioxide, CO ₂ (%v/v) Chg		Oxygen, O ₂ (%v/v)		Balance (%v/v)	Lower Explosive Limit (% LEL)	Gas Flow (q) (l/Hr)	Peak hazardous gas flow rate Qhgs		Steady hazardous gas flow rate Qhgs		Characteristic gas situation	Potentially Explosive	Water Level (m)
						Peak	Steady	Peak	Steady	Minimum	Average				CH ₄	CO ₂	CH ₄	CO ₂			
30/09/2016	10:18	GA5000	DTS03	1014	0.0	0.0	0.0	1.4	0.9	16.4	17.6	81.5	0.0	0.0	0.00	0.00	0.00	0.00	ONE	NO	1.88
30/09/2016	10:55	GA5000	DTS02	1014	15.0	0.0	0.0	4.5	3.6	16.8	17.5	78.9	0.0	0.0	0.00	0.00	0.00	0.00	ONE	NO	1.93
30/09/2016	11:35	GA5000	DTS07	1015	16.0	0.0	0.0	2.0	1.7	19.4	19.5	78.8	0.0	0.0	0.00	0.00	0.00	0.00	ONE	NO	1.05
30/09/2016	12:05	GA5000	DTS08	1014	16.0	0.0	0.0	0.4	0.4	20.5	20.5	79.1	0.0	0.0	0.00	0.00	0.00	0.00	ONE	NO	0.69
10/10/2016	13:18	GA5000	DTS03	1026	18.0	0.0	0.0	1.5	1.5	18.6	18.6	79.9	0.0	0.0	0.00	0.00	0.00	0.00	ONE	NO	1.98
10/10/2016	13:04	GA5000	DTS02	1027	18.0	0.0	0.0	4.9	4.7	16.1	16.1	79.2	0.0	0.0	0.00	0.00	0.00	0.00	ONE	NO	2.05
10/10/2016	12:47	GA5000	DTS07	1026	16.0	0.0	0.0	4.1	3.3	14.8	15.2	81.5	0.0	0.0	0.00	0.00	0.00	0.00	ONE	NO	1.08
10/10/2016	12:33	GA5000	DTS08	1026	16.0	0.0	0.0	0.5	0.3	20.5	20.5	79.2	0.0	0.0	0.00	0.00	0.00	0.00	ONE	NO	0.73
28/10/2016	08:15	GA5000	DTS02	1034	13.0	0.1	0.1	1.6	1.5	19.8	19.8	78.6	2.0	0.3	0.00	0.00	0.00	0.00	ONE	NO	1.56
28/10/2016	08:33	GA5000	DTS03	1035	13.0	0.1	0.1	3.5	3.4	17.4	17.4	79.1	2.0	0.3	0.00	0.01	0.00	0.01	ONE	NO	1.34
28/10/2016	09:03	GA5000	DTS07	1035	13.0	0.1	0.1	1.9	1.9	17.3	17.3	80.7	2.0	0.2	0.00	0.00	0.00	0.00	ONE	NO	2.65
28/10/2016	08:49	GA5000	DTS08	1035	13.0	0.1	0.1	5.2	5.2	16.0	16.0	78.7	2.0	0.3	0.00	0.02	0.00	0.02	TWO	NO	2.94

0.1	0.1	5.2	5.2	14.8	15.2	81.5	2.0	0.30	0.00	0.02	0.00	0.02	TWO	Worst case scenario
0.0	0.0	2.6	2.4	17.8	18.0	79.6	0.7	0.16	0.00	0.00	0.00	0.00	ONE	Average site scenario

Additonal considerations:

Notes:

- 1) Gas Screening Value (GSV) derived by multiplying the peak gas concentration (%) by the peak flow rate (l/h).
- 2) The gas analyser is capable of measuring flow to an accuracy of 0.1l/h. Below this value the analyser records zero flow. Adopting a precautionary approach we have used a flow rate of 0.1l/h when the analyser records zero with this flow rate used to determine the gas screening value.

Title	Revision
Record of in-situ gas monitoring results	Final

Table comparing cumulative compound concentrations with hazardous waste threshold values

Category of danger		Irritant	Harmful	Toxic	Carcinogenic		Corrosive	Toxic for reproduction		Mutagenic		Ecotoxic		
												ΣN : R50-53/0.25	ΣN : 50-53	ΣN : 50-53
												+ΣN : R51-53/2.5	+ΣN : R50	+ΣN : 51-53
												+ΣN : R52-53/25	+ΣN : 52-53	
Risk Phrase		Xi	Xn	T+	T	Carc Cat 1		Repr Cat 1 or		Muta Cat 2		Muta Cat 3		
Contaminant	Highest concentration	H4 (%)	H5 (%)	H6 (%)	H6 (%)	H7 (%)	H7 (%)	H8 (%)	H8 (%)	H10 (%)	H10 (%)	H11 (%)	H11 (%)	H14
Metals														
Arsenic	23.00			0.0030	0.0035	0.0035								3.8826
Beryllium	1.00	0.0003		0.0003	0.0003	0.0003								0.0003
Copper	1700.00	0.4250	0.4250											0.4250
Cadmium	16.00		0.0018		0.0018	0.0018								0.4250
Chromium	61.00					0.0099								0.0099
Lead	2300.00		0.2479							0.2479	0.2479			0.2479
Mercury	0.74			0.0001										0.0001
Nickel	74.00		0.0094				0.0094			0.0094				0.0094
Selenium	0.20				0.0000									0.0000
Zinc	2000.00													0.2480
Vanadium	31.00	0.0046			0.0046					0.0046		0.0046		0.0046
PAH														
Naphthalene	0.10		0.0000											0.0000
Benzo(a)anthracene	1.90				0.0002	0.0002								0.0002
Chrysene	2.10				0.0002	0.0002						0.0002		0.0002
Benzo(b)fluoranthene	4.10				0.0004	0.0004								0.0004
Benzo(k)fluoranthene	1.20				0.0001	0.0001								0.0001
Benzo(a)pyrene	2.40					0.0002				0.0002		0.0002		0.0002
Dibenzo(a,h)anthracene	0.28				0.0000	0.0000								0.0000
TPH														
Benzene	0.00				0.0000	0.0000								0.0000
1,2,4-trimethylbenzene	0.00	0.0000	0.0000											0.0000
Hydrocarbon (C6 to C35)	2562.84		0.2563			0.2563				0.0000	0.2563			0.2563
Total (or greatest)														
		0.4298	0.9405	0.0034	0.0112	(0.2563)	(0.0094)	0.0000	0.0000	(0.2479)	(0.2479)	(0.2563)	(0.0000)	3.8826
Threshold		1%	1%	0.10%	3%	0.10%	1%	5%	1%	0.50%	3%	0.10%	1%	1
Exceeded Y/N		N	N	N	N	Y	N	N	N	N	N	Y	N	N

Title
Hazard assessment spreadsheet

Table number
1 of 1

Landfill Waste Acceptance Criteria				Laboratory test data
Parameter	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill	WAC 1
Parameters determined on the waste				
Total organic carbon (w/w %)	3%	5%	6%*	3.2
Loss on ignition			10%*	4.6
BTEX (mg kg ⁻¹)	6			< 0.010
PCBs (7 congeners) (mg kg ⁻¹)	1			< 0.10
Mineral oil C ₁₀ - C ₄₀ (mg kg ⁻¹)	500			1300
PAH (17 congeners)	100			24
pH		>6		8.1
Acid neutralisation capacity pH 6 (mol kg ⁻¹)		To be evaluated	To be evaluated	0.026
Acid neutralisation capacity pH 4 (mol kg ⁻¹)		To be evaluated	To be evaluated	
Limit values (mg kg⁻¹) for compliance test using BN 12457-3 at L/S 10 l kg⁻¹				
As (arsenic)	0.5	2	25	0.059
Ba (barium)	20	100	300	< 0.50
Cd (cadmium)	0.04	1	5	< 0.010
Cr (chromium (total))	0.5	10	70	0.1
Cu (Copper)	2	50	100	< 0.050
Hg (mercury)	0.01	0.2	2	< 0.0050
Mo (molybdenum)	0.5	10	30	0.16
Ni (nickel)	0.4	10	40	< 0.050
Pb (lead)	0.5	10	50	0.031
Sb (antimony)	0.06	0.7	5	0.096
Se (selenium)	0.1	0.5	7	0.025
Zn (zinc)	4	50	200	< 0.50
Cl (chloride)	800	15,000	25,000	3100
F (fluoride)	10	150	500	5.8
SO ₄ (sulphate)	1000#	20,000	50,000	1000
Total Dissolved Solids (TDS) ⁺	4,000	60,000	100,000	6900
Phenol index	1			< 0.50
Dissolved organic carbon at own pH or pH 7.5-8.0 [@]	500	800	1000	83

Notes

- * Either TOC or LOI must be used for hazardous waste
- # If an inert waste does not meet the SO₄ L/S10 limit, alternative limit values of 1500 mg l-1 SO₄ at Co (initial eluate from the percolation test (prCEN/TS 14405:2003)) AND 6000 mg kg-1 SO₄ at L/S10 (either from the percolation test or batch test BS EN 12457-3), can be used to demonstrate compliance with the acceptable criteria for inert wastes.
- + The value for TDS can be used instead of the values for Cl and SO₄
- @ DOC at pH 7.5-8.0 abd L/S10 can be determined or eluate derived from a modified version of the pH dependence Test, prEN 14429, if the limit value at own pH (BS EN 12457 eluate) is not met.

PRIMARY CLASSIFICATION	HAZARDOUS
SECONDARY CLASSIFICATION	STABLE NON-REACTIVE HAZARDOUS WASTE IN NON- HAZARDOUS LANDFILL

Title

Comparison of test data to landfill waste acceptance criteria (table 5.1) (Secondary classification)

Table number

1 of 1

Basic categorisation schedule for Made Ground soils

Produced following the requirements of The Landfill (England and Wales) (Amendment)
Regulations 2004 Part 2 (5)

(a) Source and origin of waste

Commercial development at Harts Farm Way, Havant, PO9 1JU

(b) Process producing the waste

Foundation and service trench excavations / general site clearance

(c) Statement on waste treatment

Refer to pre-treatment confirmation form

(d) Composition of the waste

Mixture of fine grained and coarse grained soils including dark brown to brown and white mottled orange, white and dark grey sandy gravelly clay and sandy gravel. With gravels of flint, chalk, timber, brick, concrete, rare pottery, metal plastic, limestone and bituminous coated material.

(e) Appearance of the waste

As above

(f) European waste catalogue code

17-05-03 (for soils and stones containing hazardous substances)

(g) Hazardous waste properties

Carcinogenic, Mutagenic, Ecotoxic

(h) Is the waste prohibited under regulation 9?

No

(i) Landfill class

Stable non-reactive hazardous waste in non-hazardous landfill.

(j) Additional precautions required at landfill

None

(k) Can waste be recycled or recovered?

Yes

(l) Name and address of waste producer

To be confirmed

(m) Name and address of consultant

Soiltechnics Limited, Cedar Barn, White Lodge, Walgrave, Northampton. NN6 9PY.

Tel: (01604) 781877

E-mail: mail@soiltechnics.net

Fax: (01604) 781007

Website: www.soiltechnics.net

Schedule Date:

signed

November 2016

Soiltechnics reference:

STN3703G-G01

Alejandro Garcia M. Geological Engineer
Geo-environmental Engineer for Soiltechnics Limited

Basic categorisation schedule for Alluvium soils

Produced following the requirements of The Landfill (England and Wales) (Amendment)
Regulations 2004 Part 2 (5)

(a) Source and origin of waste

Commercial development at Harts Farm Way, Havant, PO9 1JU

(b) Process producing the waste

Foundation and service trench excavations/general site clearance

(c) Statement on waste treatment

Refer to pre-treatment confirmation form

(d) Composition of the waste

Light grey to cream slightly sandy gravel and gravelly clays.

(e) Appearance of the waste

As above

(f) European waste catalogue code

17-05-04 (for non-hazardous waste)

(g) Hazardous waste properties

None

(h) Is the waste prohibited under regulation 9?

No

(i) Landfill class

Inert based on soils being of natural origin and unlikely to be affected by artificial contamination

(j) Additional precautions required at landfill

None

(k) Can waste be recycled or recovered?

Yes

(l) Name and address of waste producer

To be confirmed

(m) Name and address of consultant

Soiltechnics Limited, Cedar Barn, White Lodge, Walgrave, Northampton. NN6 9PY.

Tel: (01604) 781877

E-mail: mail@soiltechnics.net

Fax: (01604) 781007

Website: www.soiltechnics.net

Schedule Date:

signed

October 2016

Soiltechnics reference:

STN3703G-G01

Alejandro García M. Geological Engineer
Geo-environmental Engineer for Soiltechnics Limited

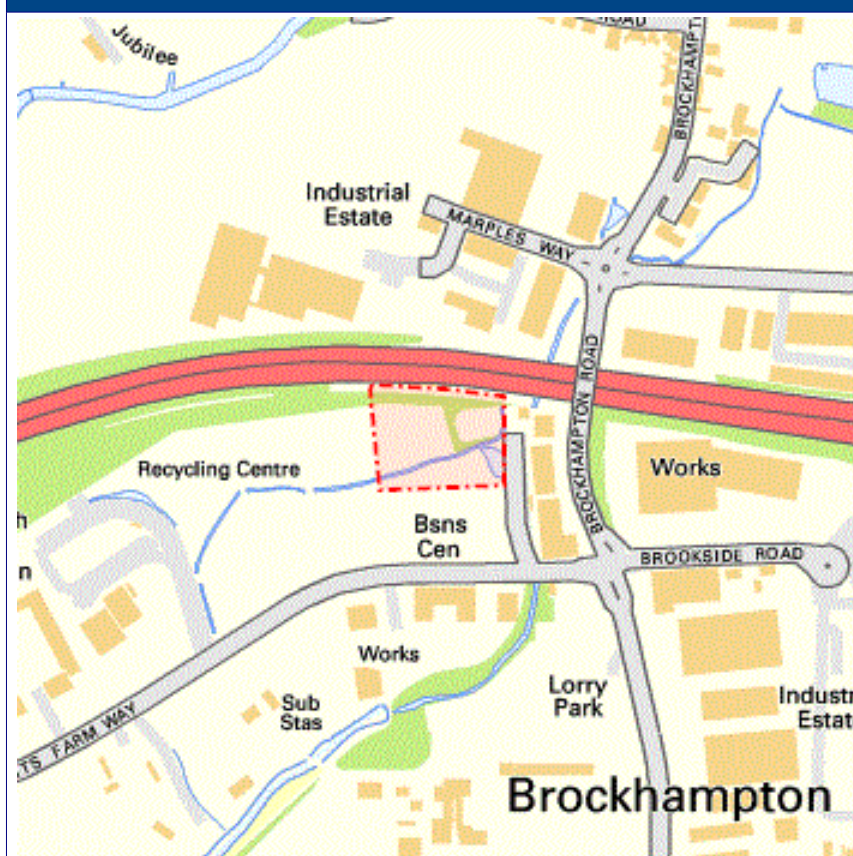
Enquirer

Name	Ms Sara Bertholdson	Phone	01604 781877
Company	Soiltechnics Limited	Mobile	Not Supplied
		Fax	Not Supplied
Address	Cedar Barn White Lodge Walgrave Northamptonshire NN6 9PY		
Email	sara.bertholdson@soiltechnics.net		
Notes	Please ensure your contact details are correct and up to date on the system in case the LSBUD Members need to contact you.		

Enquiry Details

Scheme/Reference	STN3703G		
Enquiry type	Initial Enquiry	Work category	Development Projects
Start date	14/09/2016	Work type	Commercial/industrial
End date	14/09/2016	Site size	8911 metres square
Searched location	XY= 470794, 105937 Easting/Northing	Work type buffer*	25 metres
Confirmed location	470777 105947		

* The WORK TYPE BUFFER is a distance added to your search area based on the Work type you have chosen

Site Map


Asset Owners

Terms and Conditions. Please note that this enquiry is subject always to our standard terms and conditions available at www.lineasearchbeforeudig.co.uk ("Terms of Use") and the disclaimer at the end of this document. Please note that in the event of any conflict or ambiguity between the terms of this Enquiry Confirmation and the Terms of Use, the Terms of Use shall take precedence.

Validity and search criteria. The results of this enquiry are based on the confirmed information you entered and are valid only as at the date of the enquiry. It is your responsibility to ensure that the Enquiry Details are correct, and LineasearchbeforeUdig accepts no responsibility for any errors or omissions in the Enquiry Details or any consequences thereof. LSBUD Members update their asset information on a regular basis so you are advised to consider this when undertaking any works. It is your responsibility to choose the period of time after which you need to resubmit any enquiry but the maximum time (after which your enquiry will no longer be dealt with by the LSBUD Helpdesk and LSBUD Members) is 28 days. If any details of the enquiry change, particularly including, but not limited to, the location of the work, then a further enquiry must be made.

Asset Owners & Responses. Please note the enquiry results include the following:

1. "LSBUD Members" who are asset owners who have registered their assets on the LSBUD service.
2. "Non LSBUD Members" are asset owners who have not registered their assets on the LSBUD service but LSBUD is aware of their existence. Please note that there could be other asset owners within your search area.

Below are three lists of asset owners:

1. **LSBUD Members who have assets registered within your search area. ("Affected")**
 - a. **These LSBUD Members will either:**
 - i. **Ask for further information ("Email Additional Info" noted in status).** The additional information includes: Site contact name and number, Location plan, Detailed plan (minimum scale 1:2500), Cross sectional drawings (if available), Work Specification.
 - ii. **Respond directly to you ("Await Response").** In this response they may either send plans directly to you or ask for further information before being able to do so, particularly if any payments or authorisations are required.
2. **LSBUD Members who do not have assets registered within your search area. ("Not Affected")**
3. **Non LSBUD Members who may have assets within your search area.** Please note that this list is not exhaustive and all details are provided as a guide only. It is your responsibility to identify and consult with all asset owners before proceeding.

National Grid. Please note that the LSBUD service only contains information on National Grid's Gas above 2 bar asset and all National Grid Electricity Transmission asset. For National Grid Gas below 2 bar asset information please go to www.beforeyoudig.nationalgrid.com

LSBUD Members who have assets registered on the LSBUD service within the vicinity of your search area.

List of affected LSBUD members

No LineasearchbeforeUdig Asset Owners within the Zone of Interest

LSBUD members who do not have assets registered on the LSBUD service within the vicinity of your search area. Please be aware that LSBUD members make regular changes to their assets.

List of not affected LSBUD members

AWE Pipeline	ESSAR	Perenco UK Limited (Purbeck Southampton Pipeline)
BOC Limited (A Member of the Linde Group)	Esso Petroleum Company Limited	Petroineos
BP Midstream Pipelines	FibreSpeed Limited	Phillips 66
BPA	Fulcrum Pipelines Limited	Premier Transmission Ltd (SNIP)
Carrington Gas Pipeline	Gamma	Redundant Pipelines - LPDA
CATS Pipeline c/o Wood Group PSN	Humbly Grove Energy	RWEnpower (Little Barford and South Haven)
Cemex	IGas Energy	SABIC UK Petrochemicals
Centrica Energy	Ineos Enterprises Limited	Scottish Power Generation
Centrica Storage Ltd	INEOS Manufacturing (Scotland and TSEP)	Seabank Power Ltd
CLH Pipeline System Ltd	Lark Energy	Shell (St Fergus to Mossmorran)
ConocoPhillips (UK) Ltd	Lightsource SPV Limited	Shell Pipelines
Coryton Energy Co Ltd (Gas Pipeline)	Mainline Pipelines Limited	Total (Finaline, Colnbrook & Colwick Pipelines)
CSP Fibre c/o Centara	Manchester Jetline Limited	Transmission Capital
Dong Energy (UK) Ltd	Manx Cable Company	Uniper UK Ltd
E.ON UK CHP Limited	Marchwood Power Ltd (Gas Pipeline)	Vattenfall
EirGrid	National Grid Gas (above 2 bar) and National Grid Electricity Transmission	Western Power Distribution
Electricity North West Limited	Northumbrian Water Group	Wingas Storage UK Ltd
ENI & Himor c/o Penspen Ltd	NPower CHP Pipelines	Zayo Group UK Ltd c/o JSM Group Ltd
ESP Utilities Group	Oikos Storage Limited	

The following non-LSBUD members may have assets in your search area. It is **YOUR RESPONSIBILITY** to contact them before proceeding. Please be aware this list is not exhaustive and it is your responsibility to identify and contact all asset owners within your search area.

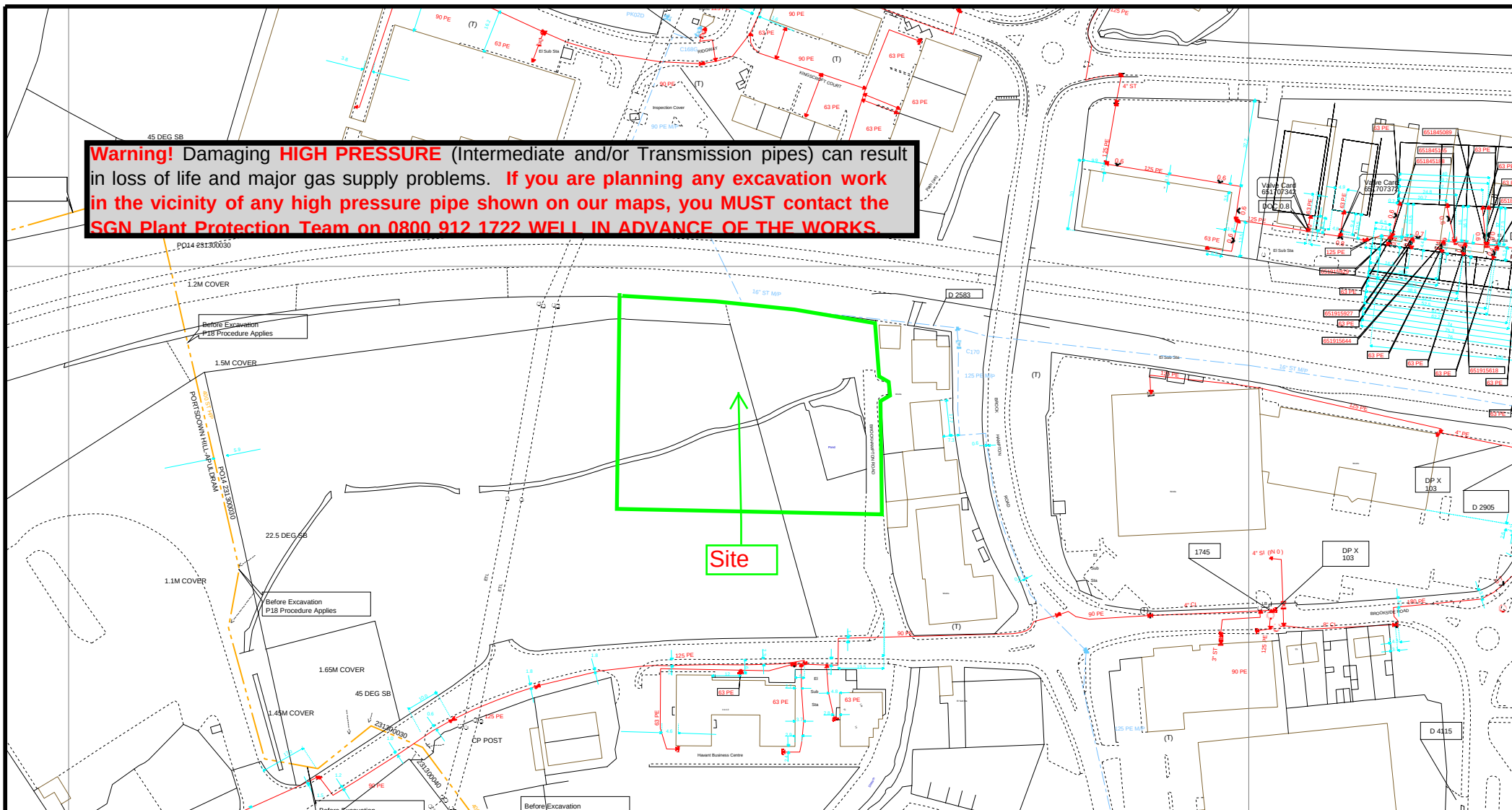
Non-LSBUD members (Asset owners not registered on LSBUD)			
Asset Owner	Preferred contact method	Phone	Status
BT	https://www.swns.bt.com/pls/mbe/welcome.home	08009173993	Not Notified
CityFibre	asset.team@cityfibre.com	033 3150 7282	Not Notified
Colt	plantenquiries@catelecomuk.com	01227768427	Not Notified
Energetics Electricity	plantenquiries@energetics-uk.com	01698404646	Not Notified
ENGIE	nrsua@cofely-gdftsuez.com	01293 549944	Not Notified
GTC	https://pe.gtc-uk.co.uk/PlantEnqMembership	01359240363	Not Notified
Hibernia Networks	info@hibernianetworks.com	01704 322 300	Not Notified
Instalcom	plantenquiries@instalcom.co.uk	02087314613	Not Notified
Interoute	interoute.enquiries@plancast.co.uk	02070259000	Not Notified
Mobile Broadband Network Limited	mbnl.plant.enquires@turntown.com	01212 621 100	Not Notified
Portsmouth Water	m.white@portsmouthwater.co.uk	02392449082	Not Notified
Redcentric plc	plant-enquiries@redcentricplc.com	0845 200 2200	Not Notified
Scottish and Southern Energy	mapping.services@sse.com	01256337294	Not Notified
Sky UK Limited	nrsua@sky.uk	02070323234	Not Notified
Southern Gas Networks	plantlocation@sgn.co.uk	08009121722	Not Notified
Southern Water	searches@southernwater.co.uk	08452700212	Not Notified
Tata, KPN (c/- McNicholas)	plantenquiries@mcnicholas.co.uk	03300558469	Not Notified
Utility assets Ltd	assetrecords@utilityassets.co.uk		Not Notified
Verizon Business	osp-team@uk.verizonbusiness.com	01293611736	Not Notified
Virgin Media	http://www.digdat.co.uk	08708883116	Not Notified
Vodafone	osm.enquiries@atkinsglobal.com	01454662881	Not Notified
Vtesse Networks	https://vtplant.vtesse.com	01992532100	Not Notified

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Warning! Damaging HIGH PRESSURE (Intermediate and/or Transmission pipes) can result in loss of life and major gas supply problems. **If you are planning any excavation work in the vicinity of any high pressure pipe shown on our maps, you MUST contact the SGN Plant Protection Team on 0800 912 1722 WELL IN ADVANCE OF THE WORKS.**



USER ID: SaraB

DATE: 31 Aug 2016

EXTRACT DATE: 07 Jul 2016

MAP REF: SU7005NE

CENTRE: 470795, 105939

SCALE: 1:2,313

LP Mains

MP Mains

IP Mains

LHP Mains

NHP Mains



This plan shows those pipes owned by Scotia Gas Networks plc in their role as a Licensed Gas Transporter (GT). Gas pipes owned by other GTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, syphons, stub connections, etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Scotia Gas Networks plc or their agents, servants or contractors for any error or omission. Safe digging practices, in accordance with HS(G)47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas apparatus. The information included on this plan should not be referred to beyond a period of 28 days from the date of issue.

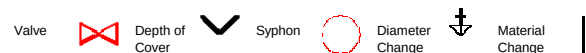
Product: UtilityMaps

Version: 1.6.8.1

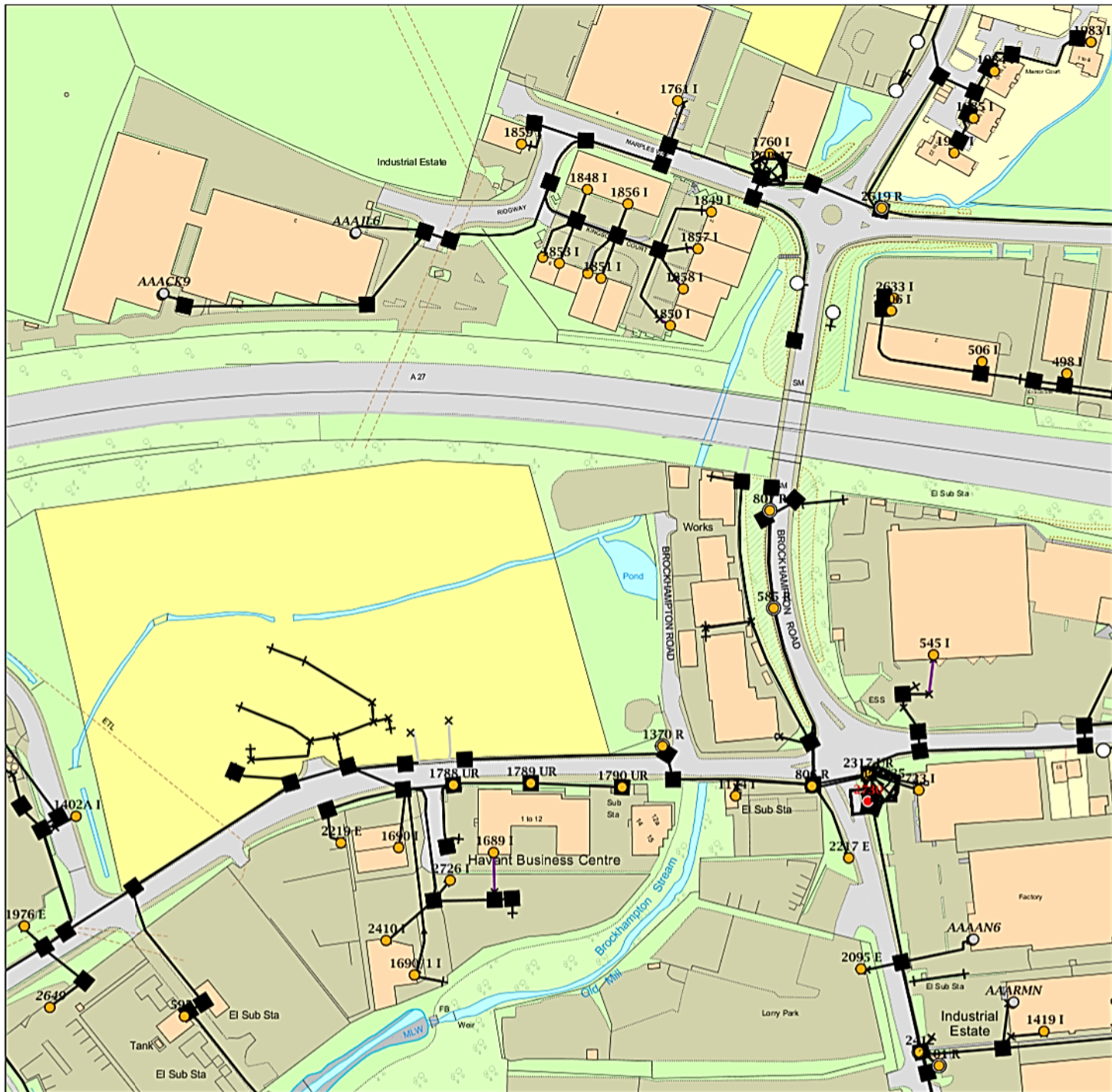
Template: 'Scotia Gas Networks (A4 Landscape)'



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Maps by email Plant Information Reply



IMPORTANT WARNING

Information regarding the location of BT apparatus is given for your assistance and is intended for general guidance only. No guarantee is given of its accuracy.

It should not be relied upon in the event of excavations or other works being made near to BT apparatus which may exist at various depths and may deviate from the marked route.



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a BT Group business

CLICK BEFORE YOU DIG

FOR PROFESSIONAL FREE ON SITE ASSISTANCE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS INCLUDING LOCATE AND MARKING SERVICE

email cbyd@openreach.co.uk

ADVANCE NOTICE REQUIRED
(Office hours: Monday - Friday 08.00 to 17.00)
www.openreach.co.uk/cbyd

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KEY TO BT SYMBOLS

DP	
Planned DP	
PCP	
Planned PCP	
Built	
Planned	
Inferred	
Building	
Kiosk	
Hatchings	

Pole	
Planned Pole	
Joint Box	
Change Of State	
Split Coupling	
Duct Tee	
Planned Box	
Manhole	
Planned Manhole	
Cabinet	
Planned Cabinet	

Other proposed plant is shown using dashed lines.
BT Symbols not listed above maybe disregarded.
Existing BT Plant may not be recorded.
Information valid at time of preparation

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a BT Group business

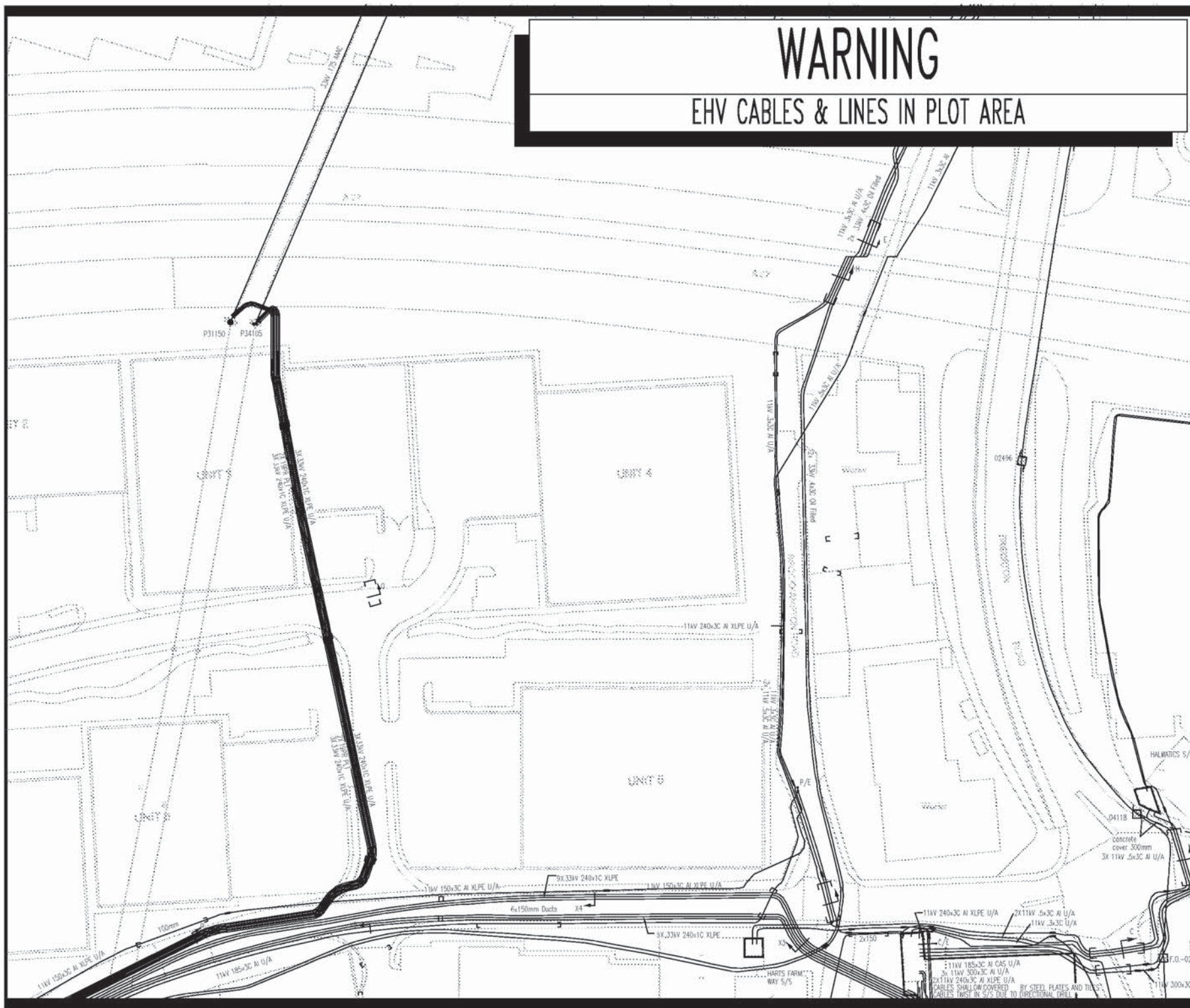
BT Ref : IIX11188G

Map Reference : (centre) SU7079405937

Easting/Northing : (centre) 470794,105937

Issued : 31/08/2016 11:19:06

WARNING: IF PLANNED WORKS FALL INSIDE HATCHED AREA IT IS ESSENTIAL BEFORE PROCEEDING THAT YOU CONTACT THE NATIONAL NOTICE HANDLING CENTRE. PLEASE SEND E-MAIL TO: nnhc@openreach.co.uk



WARNING

EHV CABLES & LINES IN PLOT AREA

Scottish and Southern
Energy



BASED UPON THE ORDNANCE SURVEY MAP WITH THE SANCTION
OF THE CONTROLLER OF H.M. STATIONERY OFFICE CROWN
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200 Dunkeld Road Perth PH1 3AQ

PORTSMOUTH

023-9262-4200

H.V. MAINS RECORD

Scale 1:1250

Date: 31/08/2016

Grid Ref: SU70790593

aeeler

SOI

Plot 1 of 2

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Subject to Revision without Notice

Template: SIAS NRSWA BW A4 plot3

NORMAL DEPTH TO THE TOP OF THE
CABLE WHEN LAID.

	services	lv	lv	shv
FOOTPATH	0.40m	0.45m	0.60m	0.75m

	0.65m	0.60m	0.75m	0.90m
ROAD CROSSING				

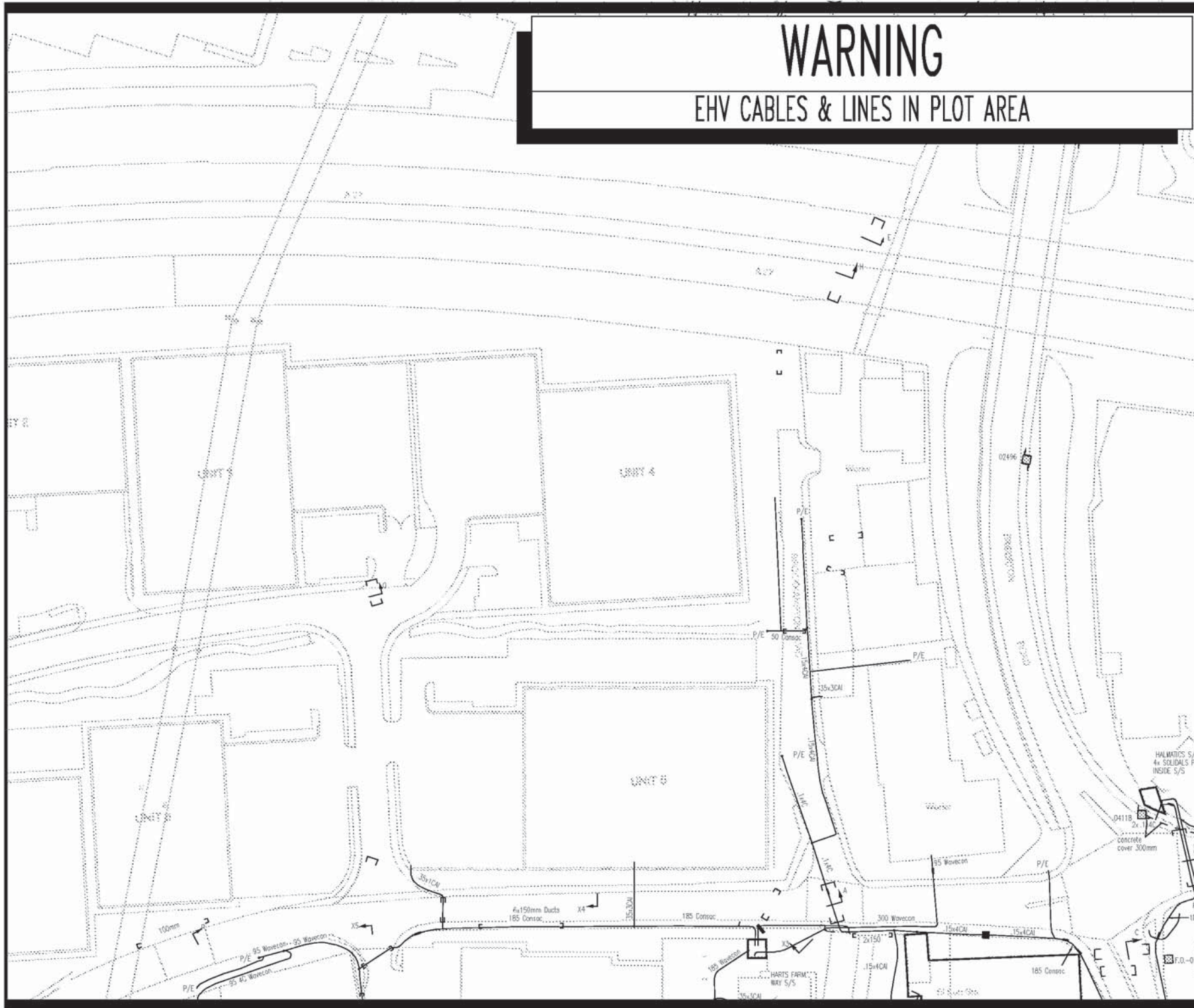
l.v./services	-up to 1000V
h.v.	-over 1000V to 11,000V
e.h.v.	-22,000V and 132,000V

WARNING

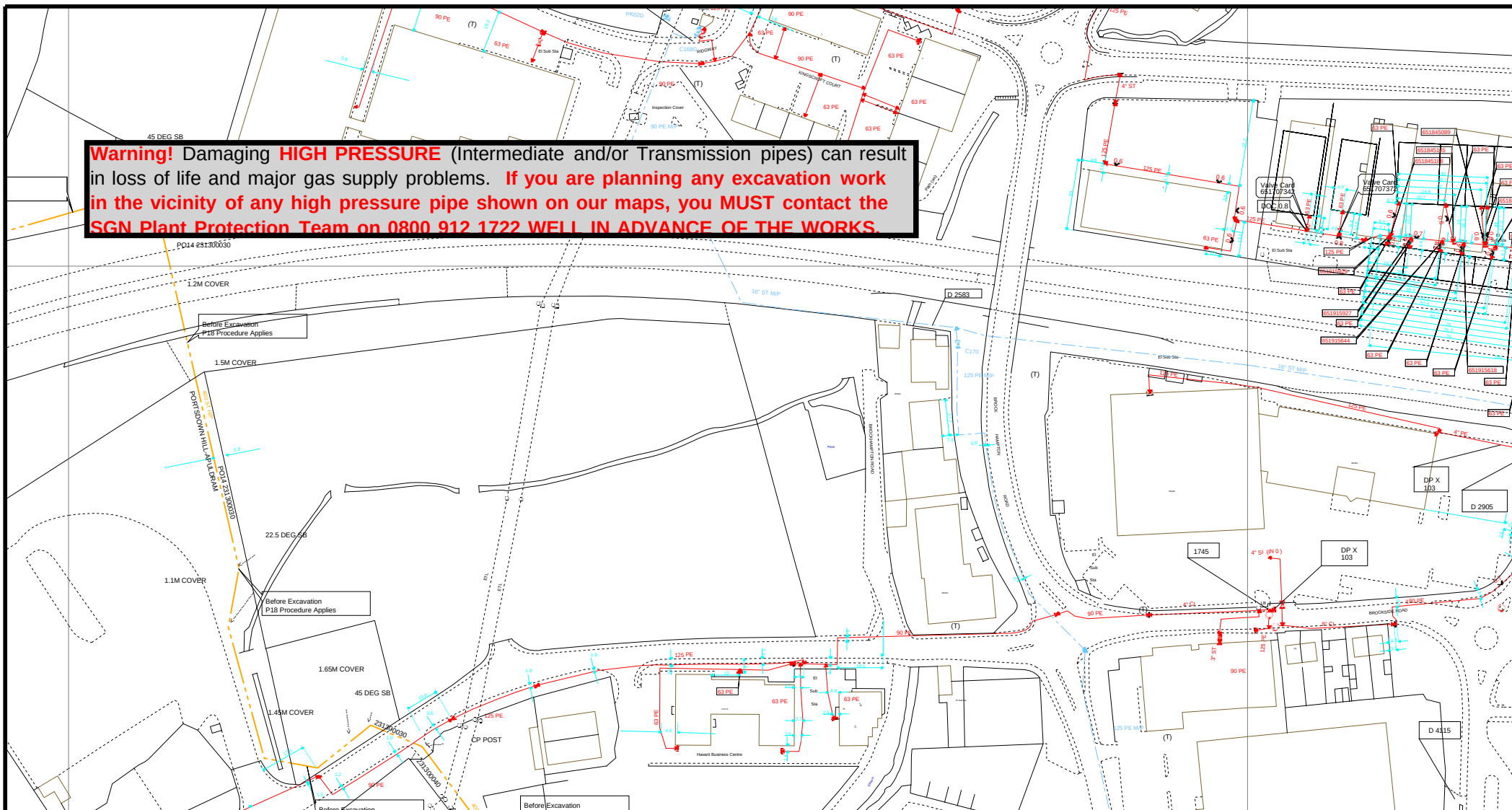
There may have been subsequent alterations to
the surface levels. Trial holes must be taken to
determine positions and depths of cables. HS (G)
47 Booklet from the Health and Safety Executive -
Avoiding Danger from Buried Cables - should be
consulted before commencing excavation work.
(available from HMSO)

WHEN WORKING IN THE VICINITY OF OVERHEAD LINES
THE HEALTH AND SAFETY GUIDANCE NOTE GSC SHOULD
BE CONSULTED.
(AVAILABLE FROM HMSO)

WHEN WORKING IN THE VICINITY OF OVERHEAD LINES
THE HEALTH AND SAFETY GUIDANCE NOTE G56 SHOULD
BE CONSULTED.
(AVAILABLE FROM HMSO)



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USER ID: SaraB

DATE: 31 Aug 2016

EXTRACT DATE: 07 Jul 2016

MAP REF: SU7005NE

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Product: UtilityMaps

Version: 1.6.8.1

Template: 'Scotia Gas Networks (A4 Landscape)'



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