soiltechnics
environmental and geotechnical consultants

DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
Grass onto soft dark sandy organic CLAY with frequent rootlets. TOPSOIL						0.10		D
Firm medium strength orangish brown slightly sandy slightly gravelly silty CLAY. Gravel consists of fine to medium mudstone. DEVENSIAN TILL		0.40		HVP 0.50 PP 0.50	64 47	0.60		D
Stiff medium strength becoming high and very high strength reddish brown mottled bluish grey CLAY with occasional gravels of medium quartzite and sandstone. DEVENSIAN TILL		1.00		HVP 1.10 PP 1.10	91 60	1.10		D
...from 1.5m depth, becoming very stiff.				HVP 1.70	175			
				HVP 2.40	144	2.40		D
Stiff very high strength brown slighily silty CLAY DEVENSIAN TILL		2.50				3.00		D
TRIAL PIT TERMINATED AT 3.20m		3.20		HVP 3.20	155			

Notes: Trial pit sides remained upright and stable upon completion.

Ground level (mAOD)

Co-ordinates

Title
Trial pit record

Surface breaking
No

Groundwater observations
No groundwater encountered.

Dimensions (W x L)
0.60m x 2.50m

Date of excavation (range if applicable)
17/02/2016

Appendix
C

Method of excavation
JCB 3CX

Location plan on drawing number
02b

TP113

soiltechnics
environmental and geotechnical consultants

DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
Grass onto soft dark brown very sandy organic CLAY with frequent rootlets. TOPSOIL						0.10		D
		0.40						
Soft becoming firm medium strength orangish brown slightly silty slightly sandy CLAY. DEVENSIAN TILL				HVP 0.50 PP 0.50	65 88	0.50		D
				HVP 0.90 PP 0.90	58 70			
				HVP 1.30 PP 1.30	65 68	1.30		D
...from 1.5m depth, becoming stiff and friable.								
		1.70		HVP 1.70	127	1.70		D
Firm high strength reddish brown CLAY with occasional gravels of medium mudstone. DEVENSIAN TILL								
				HVP 2.30	120			
...no longer friable and occasional gravels of mudstone from 2.4m depth.								
TRIAL PIT TERMINATED AT 2.70m		2.70						

Notes: Trial pit sides remained upright and stable upon completion. Infiltration testing performed.

Ground level (mAOD)	**Co-ordinates**	**Title** Trial pit record	**Surface breaking** No
Groundwater observations No groundwater encountered.	**Dimensions (W x L)** 0.60m x 3.20m	**Date of excavation (range if applicable)** 17/02/2016	**Appendix** C
	Method of excavation JCB 3CX	**Location plan on drawing number** 02b	**TP114**

soiltechnics
environmental and geotechnical consultants

DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
Grass onto soft dark brown very sandy organic CLAY with frequent rootlets. TOPSOIL						0.10		B
		0.30						
Firm medium becoming high strength brown slightly gravelly silty CLAY with occasional cobbles of sandstone. Gravel consists of medium to coarse sandstone and quartzite. DEVENSIAN TILL				HVP 0.40	73			
						0.50		B
				HVP 0.80	88			
		1.00						
Firm to stiff medium becoming high strength reddish brown mottled bluish grey CLAY with occasional gravels of fine sandstone and mudstone. DEVENSIAN TILL						1.10		B
				HVP 1.20	76			
...from 1.6m depth, becoming stiff.								
				HVP 1.80	119			
Stiff high strength reddish brown CLAY with occasional cobbles of mudstone. DEVENSIAN TILL		2.50						
				HVP 2.70	140	2.70		B
TRIAL PIT TERMINATED AT 3.10m		3.10						

Notes: Trial pit sides remained upright and stable upon completion.

Ground level (mAOD)	**Co-ordinates**	**Title** Trial pit record	**Surface breaking** No
Groundwater observations No groundwater encountered.	**Dimensions (W x L)** 0.60m x 2.50m	**Date of excavation (range if applicable)** 17/02/2016	**Appendix** C
	Method of excavation JCB 3CX	**Location plan on drawing number** 02b	**TP115**

soiltechnics
environmental and geotechnical consultants

DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
Firm dark brown very sandy CLAY with occasional gravels of fine sandstone and frequent rootlets. TOPSOIL						0.10		D
		0.30						
Firm high strength dark brown gravelly CLAY. Gravel consists of fine to coarse sandstone and mudstone. DEVENSIAN TILL				HVP 0.40	94	0.40		D
		0.60						
Firm to stiff high strength orangish brown slightly silty CLAY with occasional gravels of medium sandstone. DEVENSIAN TILL				HVP 0.80	76	0.70		D
				HVP 1.20	99			
		1.30						
Firm medium strength brown mottled bluish grey CLAY. DEVENSIAN TILL						1.40		D
				HVP 1.50	67			
		1.60						
Stiff high becoming very high strength brown mottled bluish grey friable CLAY. DEVENSIAN TILL				HVP 1.80	140			
				HVP 2.60	198			
		3.00		HVP 3.00	146			
Stiff high strength reddish brown slightly silty CLAY with occasional gravels of medium mudstone. DEVENSIAN TILL		3.10						
TRIAL PIT TERMINATED AT 3.10m								

Notes: Trial pit sides remained upright and stable upon completion.

Ground level (mAOD)	**Co-ordinates**	**Title** Trial pit record	**Surface breaking** No
Groundwater observations No groundwater encountered.	**Dimensions (W x L)** 0.60m x 2.50m	**Date of excavation (range if applicable)** 17/02/2016	**Appendix** C
	Method of excavation JCB 3CX	**Location plan on drawing number** 02b	**TP116**

soiltechnics
environmental and geotechnical consultants

DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
Grass onto soft dark brown sandy organic CLAY with frequent rootlets. TOPSOIL						0.10		D
Firm medium strength orangish brown slightly silty CLAY with occasional gravels of coarse sandstone. DEVENSIAN TILL		0.25		HVP 0.40	76			
...from 0.6m depth, becoming mottled grey in colour.						0.50		D
				HVP 0.80	61			
Firm high strength orange mottled grey CLAY. DEVENSIAN TILL		1.10		HVP 1.20	84	1.20		D
				HVP 1.60	120			
Very stiff very high strength orange mottled grey friable CLAY. DEVONSIAN TILL		1.90		HVP 2.00	169	2.00		D
Stiff very high strength brown slightly silty CLAY with occasional gravels and cobbles of coarse mudstone. DEVENSIAN TILL		2.50						
TRIAL PIT TERMINATED AT 3.00m		3.00		HVP 3.00	182			

Notes: Trial pit sides remained upright and stable upon completion.

Ground level (mAOD)	**Co-ordinates**	**Title** Trial pit record	**Surface breaking** No
Groundwater observations No groundwater encountered.	**Dimensions (W x L)** 0.60m x 2.50m	**Date of excavation (range if applicable)** 17/02/2016	**Appendix** C
	Method of excavation JCB 3CX	**Location plan on drawing number** 02b	**TP117**

soiltechnics
environmental and geotechnical consultants

DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
Grass onto soft dark brown very sandy organic CLAY with frequent rootlets TOPSOIL						0.10		D
		0.20						
Firm medium strength orangish brown slightly silty slightly sandy CLAY with occasional gravels of medium sandstone. DEVENSIAN TILL								
		0.40						
Stiff high strength brown mottled bluish grey slightly sandy CLAY with occasional gravels of medium mudstone. DEVENSIAN TILL				HVP 0.50 PP 0.50	100 90	0.50		D
				HVP 1.00 PP 1.00	109 100	1.10		D
				HVP 1.40	96			
Firm from 1.6m depth, becoming very stiff and friable.								
				HVP 1.90	119	1.80		D
		2.40		HVP 2.40	137			
Very stiff high strength brown slightly silty CLAY with occasional cobbles of sandstone. DEVENSIAN TILL						2.60		D
		3.00						
TRIAL PIT TERMINATED AT 3.00m								

Notes: Trial pit sides remained upright and stable upon completion.

Ground level (mAOD)

Co-ordinates

Title
Trial pit record

Surface breaking
No

Groundwater observations
No groundwater encountered.

Dimensions (W x L)
0.60m x 2.50m

Date of excavation (range if applicable)
18/02/2016

Appendix
C

Method of excavation
JCB 3CX

Location plan on drawing number
02b

TP118

soiltechnics
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DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
Grass onto soft dark brown very sandy organic CLAY with frequent rootlets. TOPSOIL						0.10		D
Firm orangish brown slightly silty slightly sandy CLAY with occasional gravels of medium sandstone. DEVENSIAN TILL		0.35				0.50		D
				HVP 0.60	79			
Firm high strength greyish brown slightly gravelly CLAY. Gravel consists of medium sandstone. DEVENSIAN TILL		0.80		HVP 0.90	79			
...boulder sized pockets of sand at south end of pit between 0.8m and 1.0m depth.						1.00		D
				HVP 1.10	144			
Stiff very high becoming high strength reddish brown mottled grey CLAY with occasional gravels of coarse sandstone. DEVENSIAN TILL		1.30				1.40		D
				HVP 1.50	195			
				HVP 2.10	175			
				HVP 2.80	109	2.80		D
TRIAL PIT TERMINATED AT 3.00m		3.00						

Notes: Trial pit sides remained upright and stable upon completion.

Ground level (mAOD)

Co-ordinates

Title
Trial pit record

Surface breaking
No

Groundwater observations
No groundwater encountered.

Dimensions (W x L)
0.60m x 2.50m

Date of excavation (range if applicable)
18/02/2016

Appendix
C

Method of excavation
JCB 3CX

Location plan on drawing number
02b

TP119

soiltechnics
environmental and geotechnical consultants

DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
Grass onto soft dark brown very sandy organic CLAY with frequent roots and occasional cobbles of sandstone. TOPSOIL						0.10		D
		0.40						
Firm medium strength orangish brown slightly silty sandy CLAY with occasional gravels and cobbles of medium sandstone. DEVENSIAN TILL				HVP 0.50 PP 0.50	70 65	0.50		D
		1.00						
Firm to stiff medium to high strength orangish brown mottled bluish grey sandy CLAY. DEVENSIAN TILL				HVP 1.10 PP 1.10	79 75	1.10		D
				HVP 1.50	94			
		1.70						
Stiff high strength brown mottled bluish grey slightly sandy friable CLAY with occasional coarse gravels and cobbles of mudstone and quartzite. DEVENSIAN TILL				HVP 1.90	137	1.90 2.00		D D
				HVP 2.40	143			
		2.50						
Very stiff very high strength brown mottled bluish grey slightly silty slightly sandy friable CLAY with occasional coarse gravels and cobbles of mudstone and quartzite. DEVENSIAN TILL				HVP 2.90	167			
TRIAL PIT TERMINATED AT 3.20m		3.20		HVP 3.20	213			

Notes: Trial pit sides remained upright and stable upon completion.

Ground level (mAOD)	**Co-ordinates**	**Title** Trial pit record	**Surface breaking** No
Groundwater observations No groundwater encountered.	**Dimensions (W x L)** 0.60m x 2.50m	**Date of excavation (range if applicable)** 18/02/2016	**Appendix**
	Method of excavation JCB 3CX	**Location plan on drawing number** 02b	**TP120**

soiltechnics
environmental and geotechnical consultants

DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
Grass onto soft dark brown very sandy organic CLAY with frequent rootlets and occasional gravels of medium sandstone. TOPSOIL						0.10		B
Firm low to medium strength orangish brown slightly sandy CLAY with occasional gravels and cobbles of coarse sandstone. DEVENSIAN TILL		0.35		HVP 0.40	38			
...packets of grey sandy at north end of pit between 0.5m and 0.9m depth.						0.50		B
				HVP 0.80	61			
Firm medium strength brown mottled grey sandy CLAY DEVENSIAN TILL		0.90				1.00		B
				HVP 1.10	58			
Stiff high strength brown mottled grey and bluish grey CLAY. DEVENSIAN TILL		1.30		HVP 1.40	94			
						1.50		B
				HVP 1.80	134			
Very stiff very high strength brown mottled grey and bluish grey friable CLAY. DEVENSIAN TILL		1.90						
				HVP 2.20	160			
Stiff high strength brown slightly silty CLAY with occasional gravels of medium mudstone. DEVENSIAN TILL		2.70						
				HVP 2.90	140			
TRIAL PIT TERMINATED AT 3.10m		3.10				3.10		B

Notes: Trial pit sides remained upright and stable upon completion.

Ground level (mAOD)	**Co-ordinates**	**Title** Trial pit record	**Surface breaking** No
Groundwater observations Slight seepage in sand between 0.5m and 0.7m depth.	**Dimensions (W x L)** 0.60m x 2.50m	**Date of excavation (range if applicable)** 18/02/2016	**Appendix** C
	Method of excavation JCB 3CX	**Location plan on drawing number** 02b	**TP121**

soiltechnics
environmental and geotechnical consultants

DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
Grass onto high strength dark brown very sandy organic CLAY with occasional gravels of medium sandstone and quartzite and frequent rootlets. TOPSOIL						0.10		D
		0.25						
Firm high strength brown mottled grey slightly silty slightly gravelly sandy CLAY. Gravel consists of medium to coarse sandstone and quartzite. DEVENSIAN TILL				HVP 0.50 PP 0.50	75 100	0.50		D
		0.80						
Stiff high strength brown mottled bluish grey slightly sandy slightly gravelly CLAY. Gravel consists of sandstone and quartzite. DEVENSIAN TILL				HVP 0.90 PP 0.90	114 130	0.90		D
		1.40						
Very stiff very high strength brown mottled bluish grey slightly gravelly sandy CLAY. Gravel consists of sandstone and quartzite. DEVENSIAN TILL				HVP 1.50 PP 1.50	186 193			
						1.80		D
From 2.2m depth, becoming slightly silty.				HVP 2.20	170			
TRIAL PIT TERMINATED AT 3.10m		3.10		HVP 3.10	179			

Notes: Trial pit sides remained upright and stable upon completion.

Ground level (mAOD)

Co-ordinates

Title
Trial pit record

Surface breaking
No

Groundwater observations
No groundwater encountered.

Dimensions (W x L)
0.60m x 2.50m

Date of excavation (range if applicable)
18/02/2016

Appendix
C

Method of excavation
JCB 3CX

Location plan on drawing number
02b

TP122

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DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
Grass onto soft dark brown sandy organic CLAY with frequent rootlets. TOPSOIL						0.10		D
Firm medium strength orangish brown slightly silty slightly sandy CLAY with occasional gravels of fine to medium sandstone. DEVENSIAN TILL		0.25		HVP 0.50	71	0.50		D
				HVP 1.00	61			
Firm to stiff medium strength orangish brown mottled grey slightly silty CLAY with occasional gravels of medium sandstone and quartzite. DEVENSIAN TILL		1.10				1.20		D
				HVP 1.40	56			
				HVP 1.70	52			
Stiff very high strength reddish brown mottled bluish grey slightly sandy CLAY with occasional gravels of sandstone and medium quartzite. DEVENSIAN TILL		1.90		HVP 2.10	172	2.10		D
				HVP 2.20	155			
...from 2.6m depth, becoming stiff and friable.				HVP 2.60	179			
TRIAL PIT TERMINATED AT 3.10m		3.10						

Notes: Trial pit sides remained upright and stable upon completion.

Ground level (mAOD)	**Co-ordinates**	**Title** Trial pit record	**Surface breaking** No
Groundwater observations No groundwater encountered.	**Dimensions (W x L)** 0.60m x 2.50m	**Date of excavation (range if applicable)** 18/02/2016	**Appendix** C
	Method of excavation JCB 3CX	**Location plan on drawing number** 02b	**TP123**

soiltechnics
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DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
Grass onto soft high strength dark brown sandy organic CLAY with frequent rootlets. TOPSOIL						0.10		D
		0.30						
Firm medium strength orangish brown mottled grey slightly silty slightly sandy CLAY with occasional gravels of medium to coarse sandstone and quartzite. DEVENSIAN TILL				HVP 0.40 PP 0.40	88 75	0.50		D
				HVP 0.80 PP 0.80	73 70			
..boulder of grey mudstone at 1.1m depth..				HVP 1.10 PP 1.10	68 50	1.10		D
				HVP 1.50 PP 1.50	100 90			
Firm orangish brown mottled grey CLAY with occasional gravels of medium sandstone and mudstone. DEVENSIAN TILL		1.60						
		1.80						
Stiff high becoming very high strength brown mottled bluish grey slightly sandy friable CLAY with occasional gravels of medium sandstone. DEVENSIAN TILL						1.90		D
				HVP 2.00 PP 2.00	135 155			
...from 2.4m depth, becoming very stiff.				HVP 2.40 PP 2.40	213 225			
						2.90		D
TRIAL PIT TERMINATED AT 3.00m		3.00		HVP 3.00 PP 3.00	213 225			

Notes: Trial pit sides remained upright and stable upon completion.

Ground level (mAOD)

Co-ordinates

Title
Trial pit record

Surface breaking
No

Groundwater observations
No groundwater encountered.

Dimensions (W x L)
0.60m x 2.50m

Date of excavation (range if applicable)
18/02/2016

Appendix
C

Method of excavation
JCB 3CX

Location plan on drawing number
02b

TP124

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DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
Grass onto soft medium strength dark brown slightly gravelly very sandy CLAY. Gravel consists of sandstone, limestone and timber. MADE GROUND				HVP 0.10	67	0.10		D
Soft medium strength reddish brown slightly sandy gravelly CLAY. Gravel consists of fine to coarse brick, sandstone, loose wire and glass. MADE GROUND		0.35		HVP 0.50	58	0.50 0.51		D ES
Firm high strength brown CLAY with occasional gravels of sandstone and occasional rootlets. MADE GROUND		1.00		HVP 1.10	122	1.20		D
Stiff high strength orangish brown slightly silty CLAY. DEVENSIAN TILL		1.40		HVP 1.50	94	1.70		B
...from 1.8m depth, becoming very stiff.				HVP 1.90	141			
Stiff very high strength reddish brown mottled grey occasionally sandy CLAY with occasional gravels of medium sandstone. DEVENSIAN TILL		2.20		HVP 2.40	190			
TRIAL PIT TERMINATED AT 3.10m		3.10		HVP 3.10	198	3.10		B

Notes: Trial pit sides remained upright and stable upon completion.

Ground level (mAOD)

Co-ordinates

Title
Trial pit record

Surface breaking
No

Groundwater observations
No groundwater encountered.

Dimensions (W x L)
0.60m x 2.50m

Date of excavation (range if applicable)
18/02/2016

Appendix
C

Method of excavation
JCB 3CX

Location plan on drawing number
02b

TP125

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Key to legends

Composite materials, soils and lithology

Topsoil	Made Ground	Boulders
Chalk	Clay	Coal
Cobbles	Cobbles & Boulders	Concrete
Gravel	Limestone	Mudstone
Peat	Sand	Sand and Gravel
Sandstone	Silt	Silt / Clay
		Siltstone

Note: Composite soil types are signified by combined symbols.

Key to 'test results' and 'sampling' columns

Test result

Depth	Records depth that the test was carried out *(i.e.: at 2.10m or between 2.10m and 2.55m)*
Result	PID - Photo Ionisation Detector result (ppm equivalent Isobutylene) PP – Pocket penetrometer result (kN/m^2) HVP – Hand held shear vane result (kN/m^2) *PP result converted to an equivalent undrained shear strength by applying a factor of 50. Where at least 3 results obtained at same depth then an average value may be reported.* *SPT – Standard Penetration Test result (uncorrected)* *SPT(c) – Standard Penetration Test result (solid cone) (uncorrected)*

Sampling

From (m) To (m)	Records depth of sampling	
Type	D	Disturbed sample
	B	Bulk disturbed sample
	ES	Environmental sample comprising plastic and/or glass container
	W	Water sample
	U (32)	Undisturbed sample 100mm diameter sampler with number of blows of driving equipment required to obtain sample

Water observations

Described at foot of log and shown in the 'water strike' column.

▼ = water level observed after specified delay in drilling

▽ = water strike

Standpipe details

Gravel filter

Arisings

Bentonite

Slotted pipe

Unslotted pipe

Density

Density recorded in brackets inferred from density testing and soil descriptions from across the site (i.e.: [Medium dense]).

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WELL	DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
	Grass onto soft dark brown organic CLAY with frequent rootlets and occasional sub-angular gravels of medium sandstone. TOPSOIL						0.10		D
	Firm high strength brown slightly silty slightly sandy CLAY with occasional gravels of medium sandstone. DEVENSIAN TILL		0.30		PP 0.50	80	0.50		D
					PP 0.90	75			
	Stiff very high becoming high strength brown slightly gravelly CLAY. Gravel consists of medium to coarse sandstone and mudstone. DEVENSIAN TILL		1.30		HVP 1.40 PP 1.40	140 165	1.50		D
	...from 1.6m depth, becoming very stiff.				HVP 1.80 PP 1.80	213 220			
					HVP 2.35 PP 2.35	94 113			
					PP 2.70	120	2.70		D
	Firm medium strength light reddish brown CLAY with occasional gravels of medium mudstone. DEVENSIAN TILL		3.00		PP 3.10	73			
					PP 3.50	75			
					HVP 3.70	64			
					PP 3.90	63	3.80		D
	BOREHOLE TERMINATED AT 4.00m		4.00						

Notes: For Dynamic Cone Penetration testing, refer to DCP101.

Ground level (mAOD)

Co-ordinates

Title
Driven tube sampler borehole record

Surface breaking
No

Groundwater observations
No groundwater encountered.

Date of excavation (range if applicable)
16/02/2016

Appendix
D

Location plan on drawing number
02b

DTS101

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WELL	DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
	Grass onto soft dark brown sandy organic CLAY with frequent rootlets. TOPSOIL						0.20		D
			0.25						
	Firm medium strength orangish brown slightly sandy silty CLAY DEVENSIAN TILL						0.40		D
	...from 0.5m depth, becoming soft.				HVP 0.60	77			
			0.80						
	Firm brown slightly sandy slightly gravelly CLAY. Gravel consists of medium to coarse sandstone and mudstone. DEVENSIAN TILL						0.90		D
			1.30						
	Stiff high strength brown CLAY. DEVENSIAN TILL				PP 1.35	137	1.40		D
					HVP 1.50	128			
					PP 1.70	113			
					PP 2.10	123			
					PP 2.50	97			
			2.60						
	Soft to firm medium strength reddish brown slightly silty CLAY. DEVENSIAN TILL				HVP 2.80	65			
					PP 2.80	48			
					PP 3.20	62			
							3.50		D
					PP 3.60	52			
	BOREHOLE TERMINATED AT 4.00m		4.00		PP 4.00	38			

Notes: For Dynamic Cone Penetration testing, refer to DCP102.

Ground level (mAOD)

Co-ordinates

Title
Driven tube sampler borehole record

Surface breaking
No

Groundwater observations
No groundwater encountered.

Date of excavation (range if applicable)
16/02/2016

Appendix
D

Location plan on drawing number
02b

DTS102

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WELL	DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
	Grass onto soft dark brown slightly sandy slightly gravelly organic CLAY with frequent rootlets. Gravel consists of medium mudstone. TOPSOIL						0.10		D
	Firm medium and high strength brown slightly gravelly CLAY. Gravel consists of medium sandstone and mudstone. DEVENSIAN TILL		0.30		PP 0.40	85			
	...cobble of sandstone at 0.4m depth.				HVP 0.60	63			
					PP 0.80	55	0.70		D
	Firm medium strength orangish brown silty CLAY. DEVENSIAN TILL		1.10		PP 1.20	72			
					HVP 1.40	94			
					PP 1.60	68	1.50		D
	...from 2m depth, becoming dark brown mottled bluish grey in colour.				PP 2.10	63			
					HVP 2.50	56			
	Stiff high strength reddish brown slightly silty CLAY. DEVENSIAN TILL		2.60		PP 2.50	48			
					PP 2.80	112			
					HVP 2.90	122			
							3.00		D
					PP 3.20	185			
					HVP 3.30	119			
					PP 3.60	158			
					PP 3.90	115			
	BOREHOLE TERMINATED AT 4.00m		4.00						

Notes:

Ground level (mAOD)

Co-ordinates

Title
Driven tube sampler borehole record

Surface breaking
No

Groundwater observations
No groundwater encountered.

Date of excavation (range if applicable)
16/02/2016

Appendix
D

Location plan on drawing number
02b

DTS103

soiltechnics
environmental and geotechnical consultants

WELL	DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
	Grass onto soft dark brown sandy organic CLAY with occasional gravels of fine sandstone and frequent rootlets. TOPSOIL						0.20		D
			0.30		PP 0.40	45			
	Firm medium becoming high strength orangish brown silty CLAY. DEVENSIAN TILL						0.70		D
					HVP 0.80	87			
					PP 0.80	92			
			1.10						
	Stiff high strength brown mottled bluish grey occasionally sandy friable CLAY. DEVENSIAN TILL				PP 1.20	75			
							1.40		D
					HVP 1.50	213			
					PP 1.60	137			
			1.80						
	Very stiff very high strength becoming medium strength at 4.0m depth reddish brown slightly silty CLAY. DEVENSIAN TILL				PP 2.00	200			
					PP 2.40	197			
					PP 2.80	192			
					HVP 2.90	106			
							3.00		D
					PP 3.20	188			
					PP 3.60	143			
	BOREHOLE TERMINATED AT 4.00m		4.00		PP 4.00	67			

Notes:

Ground level (mAOD)

Co-ordinates

Title
Driven tube sampler borehole record

Surface breaking
No

Groundwater observations
No groundwater encountered.

Date of excavation (range if applicable)
16/02/2016

Appendix
D

Location plan on drawing number
02b

DTS104

soiltechnics
environmental and geotechnical consultants

WELL	DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
	Grass onto soft dark brown slightly sandy organic CLAY with frequent rootlets. TOPSOIL						0.15		D
	Firm medium and high strength orangish brown slightly silty slightly sandy CLAY. **DEVENSIAN TILL**		0.25		PP 0.30	83			
					PP 0.70	63	0.70		D
					PP 1.10	77			
	Stiff very high becoming high strength brown mottled bluish grey slightly sandy CLAY. DEVENSIAN TILL		1.20		PP 1.40	192	1.40		D
					PP 1.80	220			
					PP 2.20	177			
					PP 2.60	157			
					PP 3.00	93	3.00		D
	Stiff high strength reddish brown slightly silty CLAY with occasional gravels of coarse sandstone. **DEVENSIAN TILL**		3.20		PP 3.40	107			
					PP 3.80	77			
	BOREHOLE TERMINATED AT 4.00m		4.00						

Notes:

Ground level (mAOD)

Co-ordinates

Title
Driven tube sampler borehole record

Surface breaking
No

Groundwater observations
No groundwater encountered.

Date of excavation (range if applicable)
16/02/2016

Appendix
D

Location plan on drawing number
02b

DTS105

soiltechnics
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WELL	DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
	Grass onto soft dark brown slightly sandy organic CLAY with frequent rootlets. TOPSOIL						0.10		D
	Firm to stiff medium and high strength orangish brown mottled dark brown slightly silty CLAY. DEVENSIAN TILL		0.30		PP 0.40	80			
					HVP 0.60	101			
					HVP 0.80	213	0.80		D
					PP 0.80	60			
					PP 1.20	70			
	Stiff very high strength brown mottled bluish grey CLAY. DEVENSIAN TILL		1.40		PP 1.50	180			
	from 1.8m depth, becoming very stiff						1.80		D
					PP 2.00	217			
	from 2.3m depth, becoming slightly gravelly with medium to coarse gravels of sandstone.				PP 2.40	200			
					PP 2.80	170			
	Stiff high and very high strength reddish brown slightly silty CLAY. DEVENSIAN TILL		3.00		PP 3.20	138	3.20		D
					HVP 3.50	149			
					PP 3.60	170			
	BOREHOLE TERMINATED AT 4.00m		4.00		PP 4.00	123			

Notes: For Dynamic Cone Penetration testing, refer to DCP103.

Ground level (mAOD)

Co-ordinates

Title
Driven tube sampler borehole record

Surface breaking
No

Groundwater observations
No groundwater encountered.

Date of excavation (range if applicable)
16/02/2016

Appendix
D

Location plan on drawing number
02b

DTS106

soiltechnics
environmental and geotechnical consultants

WELL	DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
	Grass onto soft dark brown sandy organic CLAY with frequent rootlets. TOPSOIL								
	Soft medium strength orangish brown silty CLAY. DEVENSIAN TILL		0.25		PP 0.30	42	0.20		D
					PP 0.70	42	0.70		D
	...from 0.8m depth, becoming firm.				PP 1.00	85			
					PP 1.20	47			
	Stiff very high strength brown friable CLAY. DEVENSIAN TILL		1.40				1.70		D
					PP 2.00	198			
					PP 2.40	212	2.50		D
					PP 2.80	192			
	...from 3m depth, becoming stiff.				PP 3.20	175			
					PP 3.60	100			
	Firm medium strength brown CLAY. DEVENSIAN TILL		3.80				3.90		D
	...from 3.8m depth, becoming firm.		4.00		PP 4.00	75			
	BOREHOLE TERMINATED AT 4.00m								

Notes:

Ground level (mAOD)

Co-ordinates

Title
Driven tube sampler borehole record

Surface breaking
No

Groundwater observations
No groundwater encountered.

Date of excavation (range if applicable)
16/02/2016

Appendix
D

Location plan on drawing number
02b

DTS107

soiltechnics
environmental and geotechnical consultants

WELL	DESCRIPTION	LEGEND	DEPTH (m)	WATER STRIKE	TEST RESULTS TYPE/ DEPTH (m)	TEST RESULTS RESULT	SAMPLING FROM (m)	SAMPLING TO (m)	SAMPLING TYPE
	Grass onto soft dark brown sandy organic CLAY with frequent rootlets. TOPSOIL						0.10		D
	Firm low becoming medium strength orangish brown slightly silty CLAY. DEVENSIAN TILL		0.20		PP 0.30	37			
					PP 0.70	63	0.70		D
					PP 1.00	138			
	Stiff medium and high strength brown mottled grey slightly gravelly friable CLAY. Gravel consists of medium mudstone. DEVENSIAN TILL		1.10		PP 1.30	120			
					PP 1.70	72	1.70		D
					PP 2.10	107			
					PP 2.50	97			
	Firm medium strength reddish brown slightly silty CLAY. DEVENSIAN TILL		2.60		PP 2.80	55			
							3.00		D
					PP 3.20	38			
					PP 3.60	47			
	BOREHOLE TERMINATED AT 4.00m		4.00		PP 4.00	58			

Notes:

Ground level (mAOD)

Co-ordinates

Title
Driven tube sampler borehole record

Surface breaking
No

Groundwater observations
No groundwater encountered.

Date of excavation (range if applicable)
16/02/2016

Appendix
D

Location plan on drawing number
02b

DTS108

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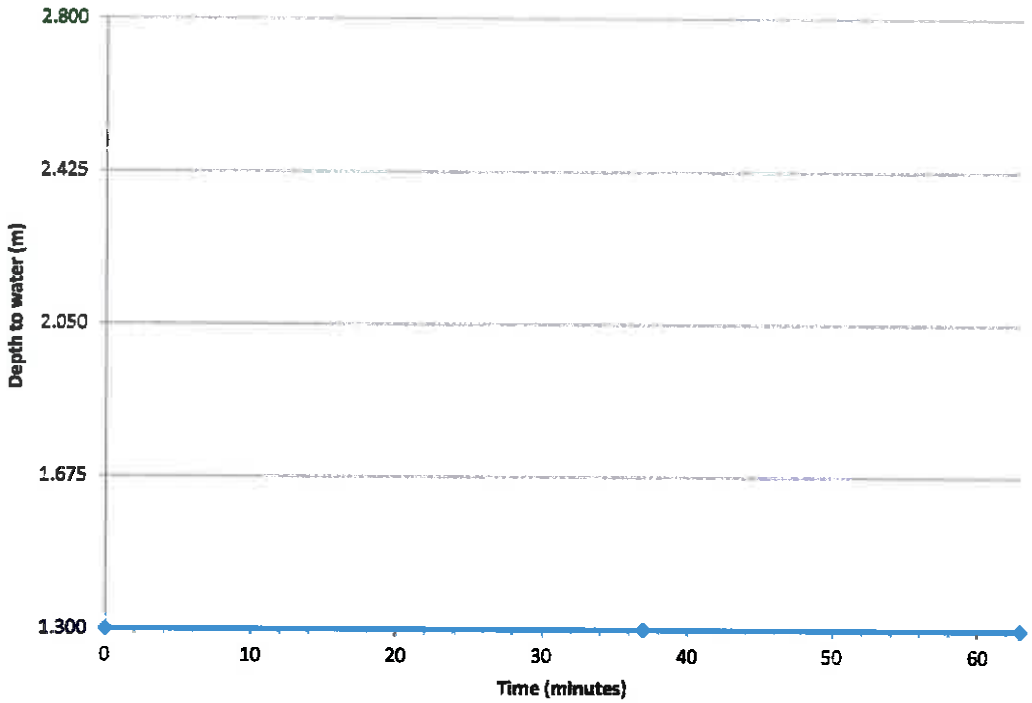
Plot showing time against depth to water:



Test observations:

TIME (mins)	DEPTH TO WATER (m)	TIME (mins)	DEPTH TO WATER (m)
0	1.3		
37	1.3		
63	1.3		

Calculations:

No movement in water level over 63 minutes of monitoring therefore unable to calculate soil infiltration rate.

Groundwater observations
No groundwater encountered.

Title
Soil infiltration test (following principles of the Building Research Establishment Digest 365 2007)

Trial pit dimensions (width x length)
0.6m x 2.5m

Ground level
N/A

Location plan on drawing number
02

Depth of trial pit at start of test (m)
2.8

Co-ordinates

Trial pit number
TP107

Cycle number
1

Date of excavation
17/02/2016

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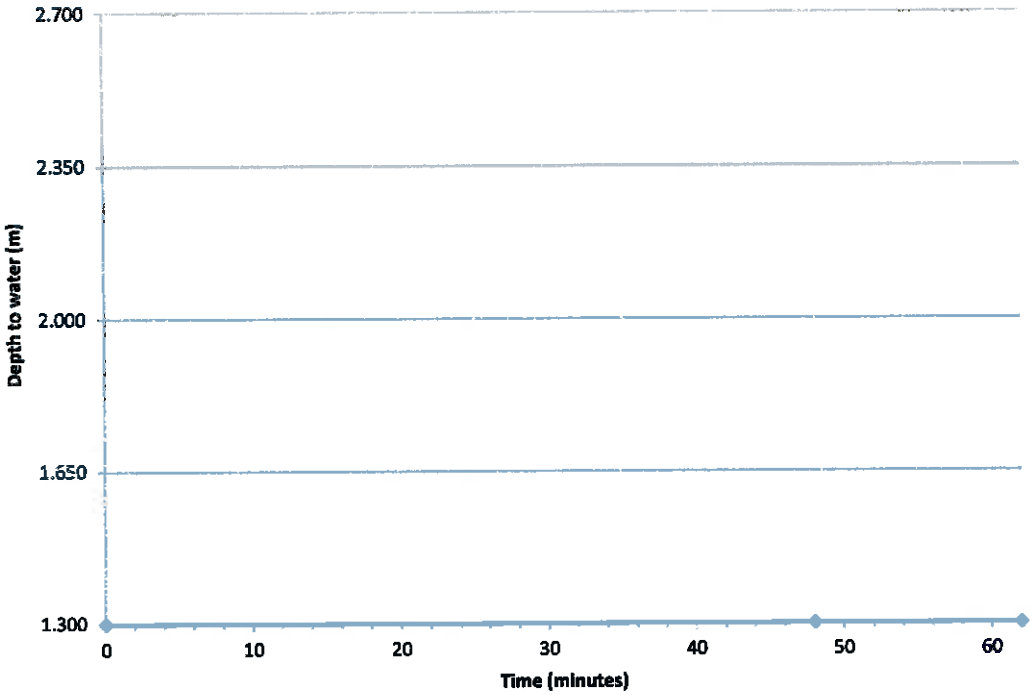
Plot showing time against depth to water:



Test observations:

TIME (mins)	DEPTH TO WATER (m)	TIME (mins)	DEPTH TO WATER (m)
0	1.3		
48	1.3		
62	1.3		

Calculations:

No movement in water level over 62 minutes of monitoring therefore unable to calculate soil infiltration rate.

Groundwater observations
No groundwater encountered.

Title
Soil infiltration test (following principles of the Building Research Establishment Digest 365 2007)

Trial pit dimensions (width x length)
0.6m x 3.2m

Ground level
N/A

Location plan on drawing number
02

Depth of trial pit at start of test (m)
2.7

Co-ordinates
-

Trial pit number
TP114

Cycle number
1

Date of excavation
17/02/2016

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TEST REPORT

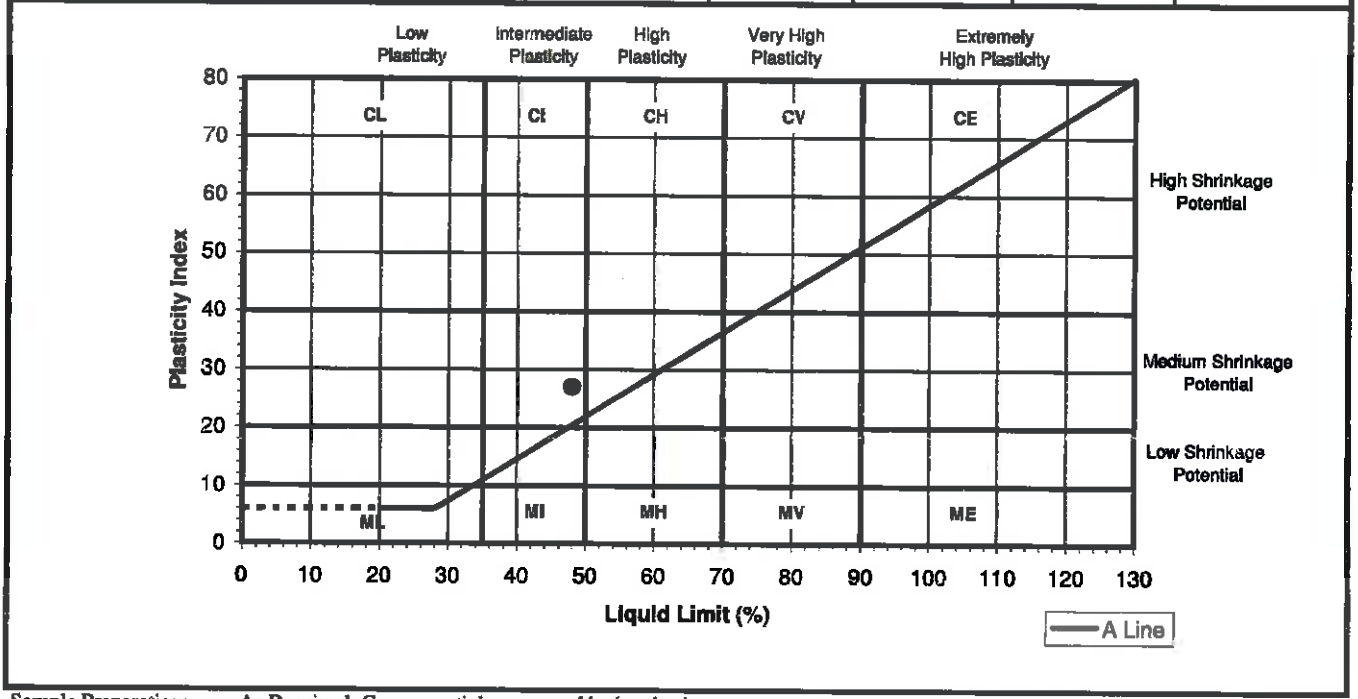
Determination of Moisture Content and Atterberg Limits

Client:	Soiltechnics Limited	Report No:	51021428/16/09
Client Address:	Cedar Barn, White Lodge Walgrave	Batch Number:	DAM0059571
		Client Reference:	STN3505NM
Postcode:	NN6 9PY	Sampled by:	Client
Contact:	Andy Keeler	Date Sampled:	16.02.16
		Date Received:	21.03.16
Site:	Chipping Lane, Longbridge	Tested From:	23.03.16-24.03.16
		Sample Type:	Disturbed

Test Results:

Description: Brown CLAY with Silt

Laboratory Reference	Location	Depth (m)	As Received Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Passing 425µm
45274323	TP102	0.60	N/A	48	21	27	100



Sample Preparation: 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

Page: 1 of 1
Date: 04.04.16

Signed D. Berr

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

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TEST REPORT

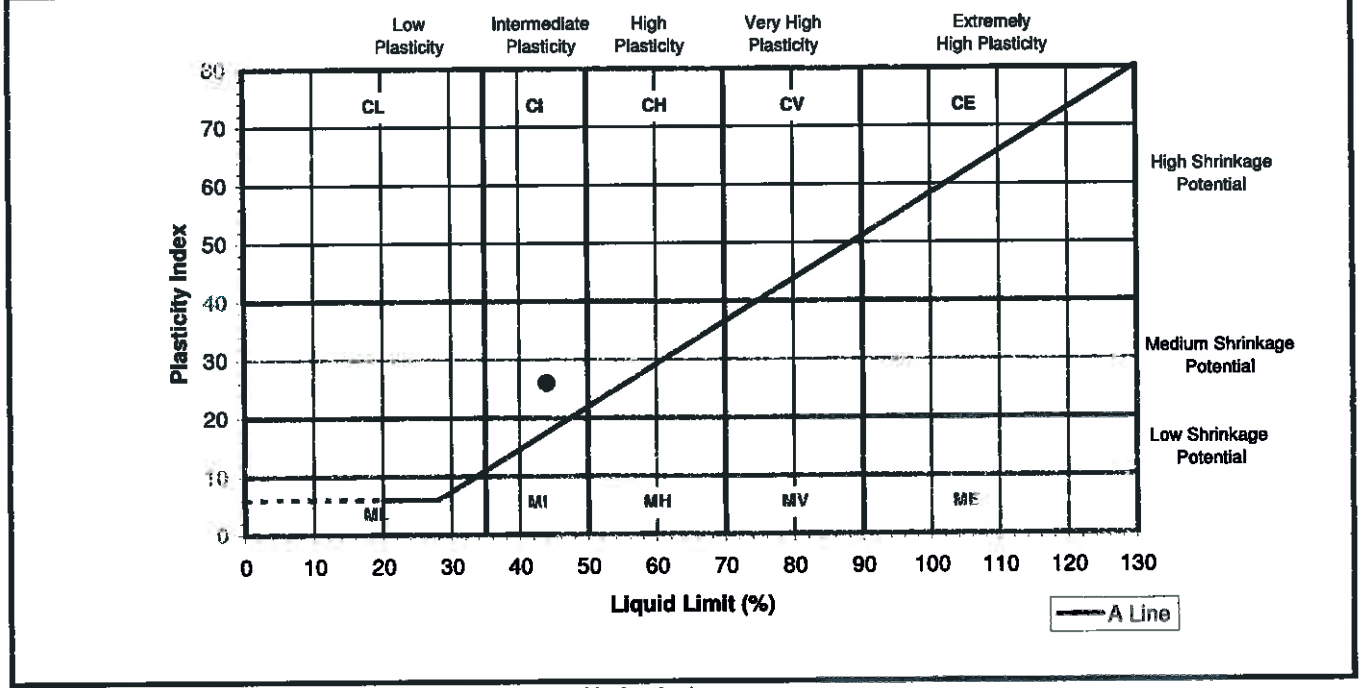
Determination of Moisture Content and Atterberg Limits

Client:	Soiltechnics Limited	Report No:	51021428/16/10
Client Address:	Cedar Barn,	Batch Number:	DAM0059571
	White Lodge		
	Walgrave	Client Reference:	STN3505NM
Postcode:	NN6 9PY	Sampled by:	Client
Contact:	Andy Keeler	Date Sampled:	16.02.16
		Date Received:	21.03.16
Site:	Chipping Lane, Longbridge	Tested From:	23.03.16-24.03.16
		Sample Type:	Disturbed

Test Results:

Description: Brown CLAY

Laboratory Reference	Location	Depth (m)	As Received Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Passing 425µm
45274324	TP106	2.10	N/A	44	18	26	100



Sample Preparation: 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

Page: 1 of 1
Date: 04.04.16

Signed D. Berr

[ ] M. Carr - Section Manager
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For and on behalf of Environmental Scientifics Group

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

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TEST REPORT

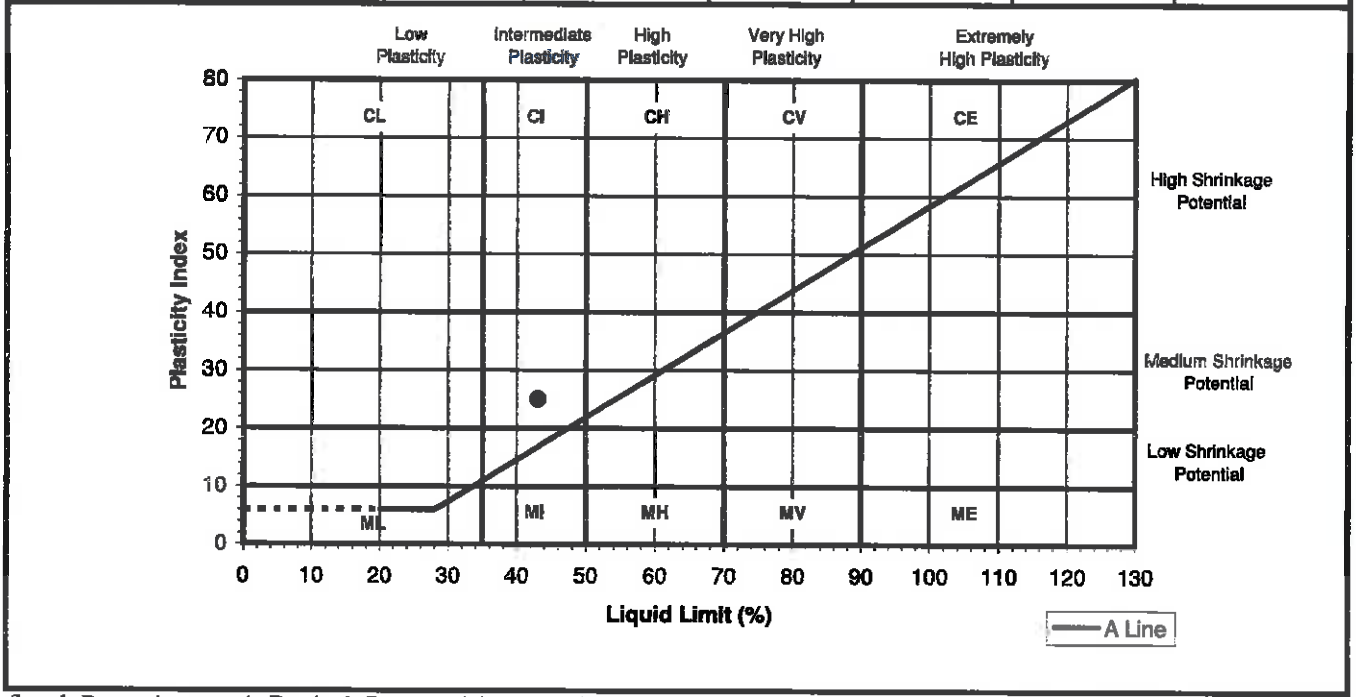
Determination of Moisture Content and Atterberg Limits

Client:	Soiltechnics Limited	Report No:	51021428/16/11
Client Address:	Cedar Barn, White Lodge Walgrave	Batch Number:	DAM0059571
		Client Reference:	STN3505NM
Postcode:	NN6 9PY	Sampled by:	Client
Contact:	Andy Keeler	Date Sampled:	16.02.16
		Date Received:	21.03.16
Site:	Chipping Lane, Longbridge	Tested From:	23.03.16-24.03.16
		Sample Type:	Disturbed

Test Results:

Description: Brown CLAY with Silt

Laboratory Reference	Location	Depth (m)	As Received Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Passing 425µm
45274325	TP107	0.50	N/A	43	18	25	100



Sample Preparation: 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

Page: 1 of 1
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TEST REPORT

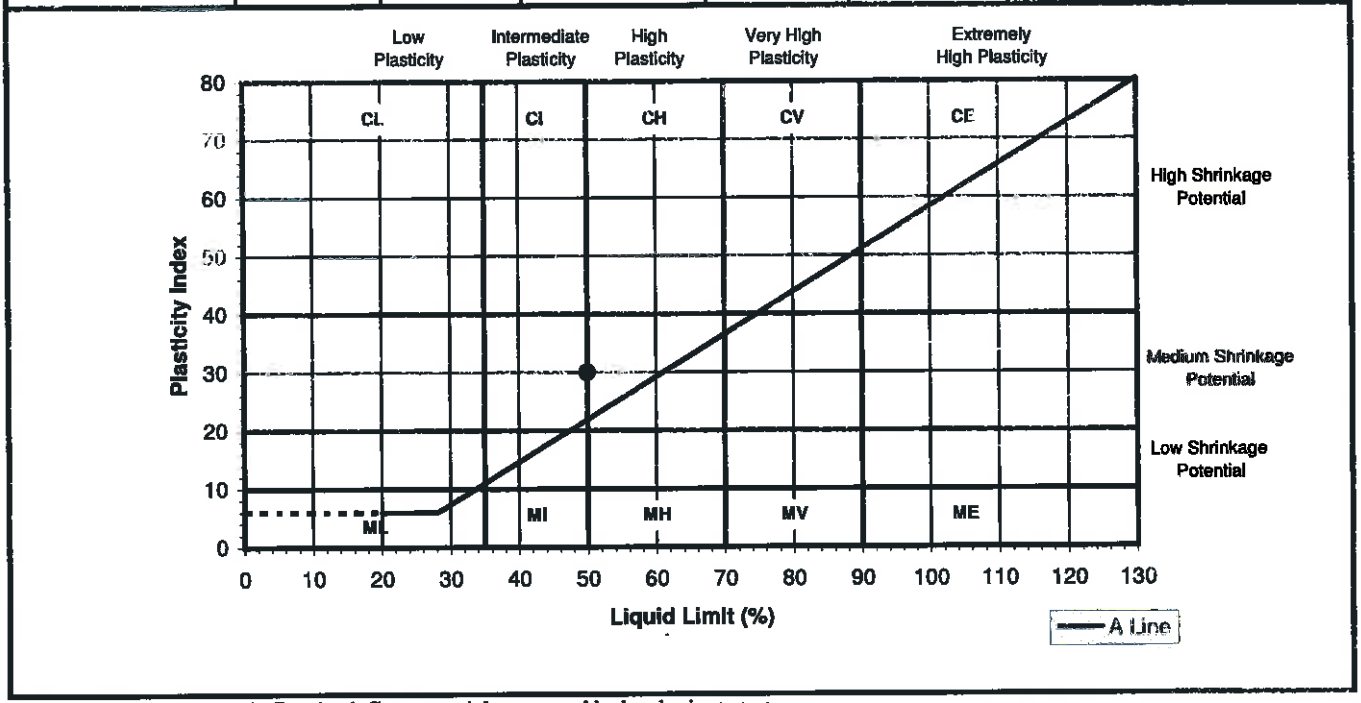
Determination of Moisture Content and Atterberg Limits

Client:	Soiltechnics Limited	Report No:	51021428/16/12
Client Address:	Cedar Barn,	Batch Number:	DAM0059571
	White Lodge		
	Walgrave	Client Reference:	STN3505NM
Postcode:	NN6 9PY	Sampled by:	Client
Contact:	Andy Keeler	Date Sampled:	16.02.16
		Date Received:	21.03.16
Site:	Chipping Lane, Longbridge	Tested From:	23.03.16-24.03.16
		Sample Type:	Disturbed

Test Results:

Description: Brown CLAY

Laboratory Reference	Location	Depth (m)	As Received Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Passing 425µm
45274326	TP109	1.30	N/A	50	20	30	100



Sample Preparation: 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

Page: 1 of 1
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TEST REPORT

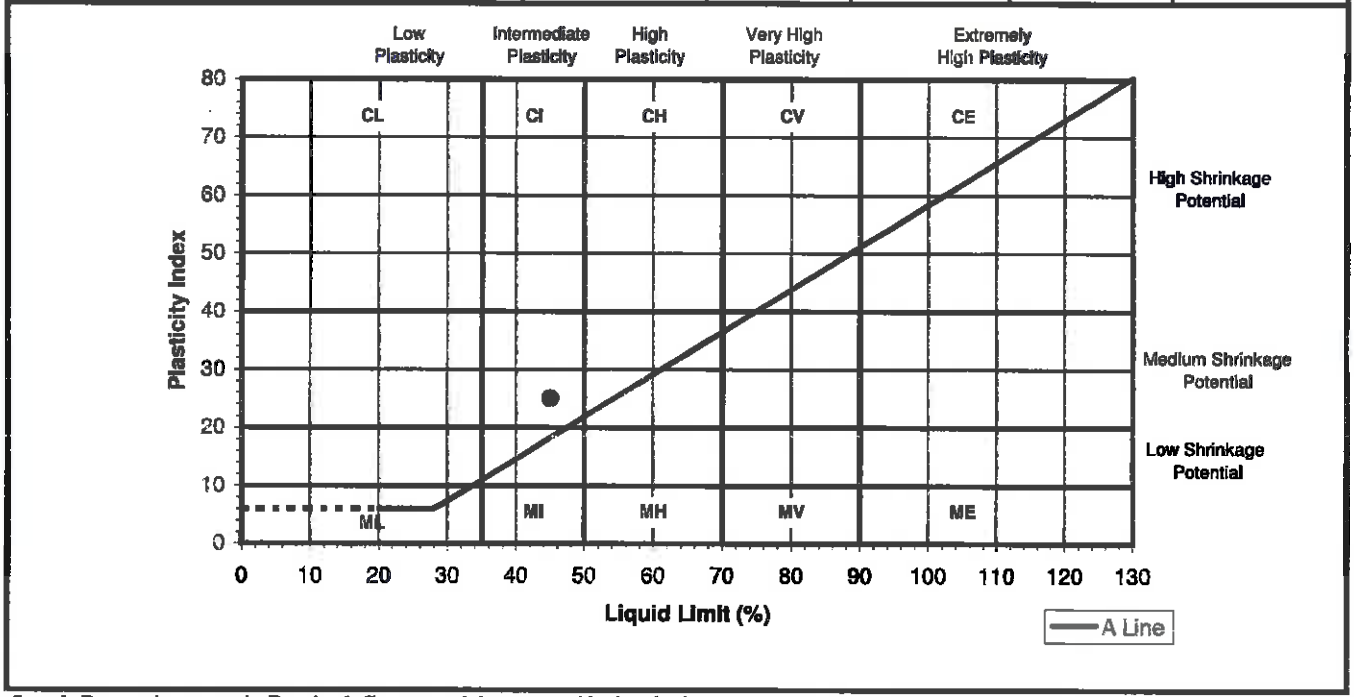
Determination of Moisture Content and Atterberg Limits

Client:	Soiltechnics Limited	Report No:	51021428/16/13
Client Address:	Cedar Barn, White Lodge Walgrave	Batch Number:	DAM0059571
		Client Reference:	STN3505NM
Postcode:	NN6 9PY	Sampled by:	Client
Contact:	Andy Keeler	Date Sampled:	16.02.16
		Date Received:	21.03.16
Site:	Chipping Lane, Longbridge	Tested From:	23.03.16-24.03.16
		Sample Type:	Disturbed

Test Results:

Description: Brown CLAY

Laboratory Reference	Location	Depth (m)	As Received Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Passing 425µm
45274327	TP113	1.10	N/A	45	20	25	100



Sample Preparation: 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

Page: 1 of 1
Date: 04.04.16

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TEST REPORT

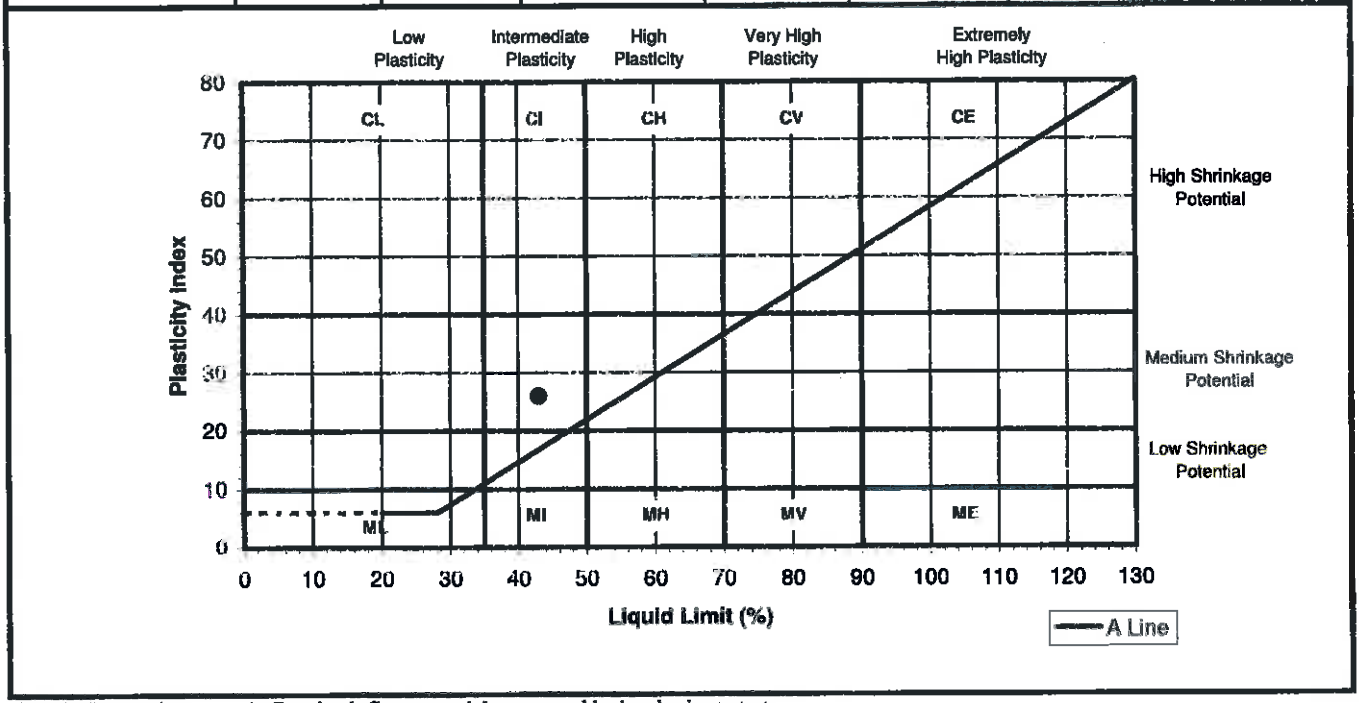
Determination of Moisture Content and Atterberg Limits

Client:	Soiltechnics Limited	Report No:	51021428/16/14
Client Address:	Cedar Barn,	Batch Number:	DAM0059571
	White Lodge		
	Walgrave	Client Reference:	STN3505NM
Postcode:	NN6 9PY	Sampled by:	Client
Contact:	Andy Keeler	Date Sampled:	16.02.16
		Date Received:	21.03.16
Site:	Chipping Lane, Longbridge	Tested From:	23.03.16-24.03.16
		Sample Type:	Disturbed

Test Results:

Description: Brown CLAY

Laboratory Reference	Location	Depth (m)	As Received Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Passing 425µm
45274328	TP119	1.40	N/A	43	17	26	100



Sample Preparation: 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

Page: 1 of 1
Date: 04.04.16

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TEST REPORT

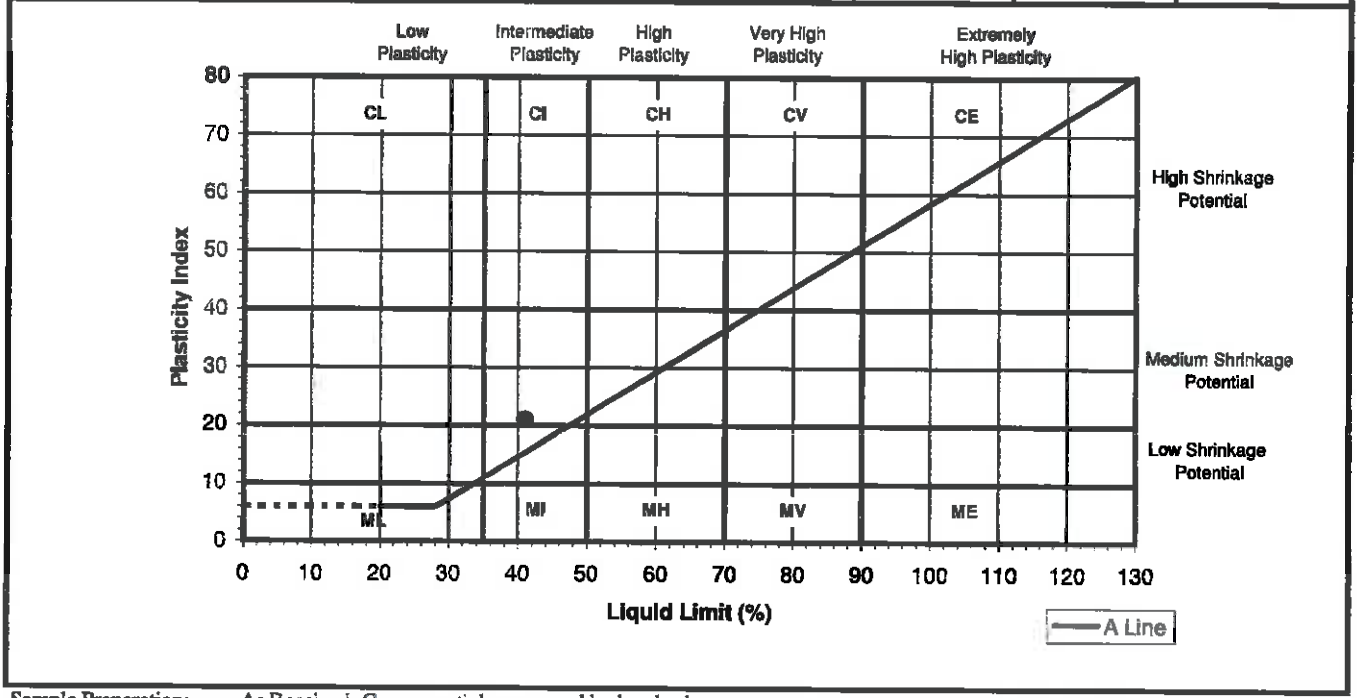
Determination of Moisture Content and Atterberg Limits

Client:	Soiltechnics Limited	Report No:	51021428/16/15
Client Address:	Cedar Barn, White Lodge Walgrave	Batch Number:	DAM0059571
		Client Reference:	STN3505NM
Postcode:	NN6 9PY	Sampled by:	Client
Contact:	Andy Keeler	Date Sampled:	16.02.16
		Date Received:	21.03.16
Site:	Chipping Lane, Longbridge	Tested From:	23.03.16-24.03.16
		Sample Type:	Disturbed

Test Results:

Description: Brown CLAY

Laboratory Reference	Location	Depth (m)	As Received Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Passing 425µm
45274329	TP120	1.90	N/A	41	20	21	100



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

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Page: 1 of 1
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TEST REPORT

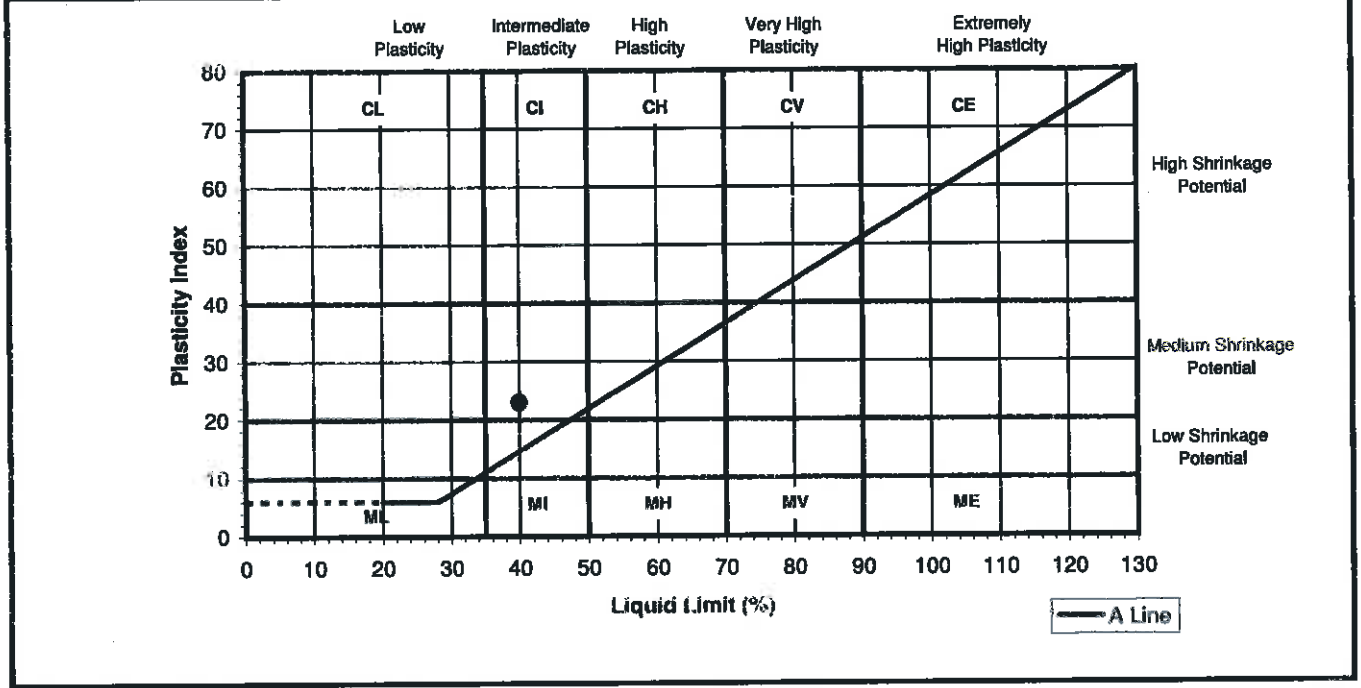
Determination of Moisture Content and Atterberg Limits

Client:	Soiltechnics Limited	Report No:	51021428/16/16
Client Address:	Cedar Barn, White Lodge Walgrave	Batch Number:	DAM0059571
		Client Reference:	STN3505NM
Postcode:	NN6 9PY	Sampled by:	Client
Contact:	Andy Keeler	Date Sampled:	16.02.16
		Date Received:	21.03.16
Site:	Chipping Lane, Longbridge	Tested From:	23.03.16-24.03.16
		Sample Type:	Disturbed

Test Results:

Description: Brown CLAY with occasional Gravel

Laboratory Reference	Location	Depth (m)	As Received Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Passing 425µm
45274330	TP124	1.90	N/A	40	17	23	95



Sample Preparation: 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

Page: 1 of 1
Date: 04.04.16

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2183

Final Report

Report No.:	16-04814-1
Initial Date of Issue:	02-Mar-2016
Client	Soiltechnics Limited
Client Address:	Cedar Barn White Lodge Walgrave Northampton Northamptonshire NN6 9PY
Contact(s):	Rachel Brown
Project	STN3505NM - Chipping Lane

Quotation No.:		**Date Received:**	29-Feb-2016
Order No.:	21026	**Date Instructed:**	29-Feb-2016
No. of Samples:	3	**Target Date:**	02-Mar-2016
Turnaround (Wkdays):	5	**Results Due:**	04-Mar-2016
Date Approved:	02-Mar-2016		

Approved By:

Details: Martin Dyer, Laboratory Manager

Chemtest
The right chemistry to deliver results

Results - Soil

Project: STN3505NM - Chipping Lane

Client: Soiltechnics Limited			Chemtest Job No.:		16-04814	16-04814	16-04814
Quotation No.:			Chemtest Sample ID.:		261045	261046	261047
Order No.: 21026			Client Sample Ref.:		TP101	TP108	TP125
			Client Sample ID.:		7-001	7-003	7-005
			Sample Type:		SOIL	SOIL	SOIL
			Top Depth (m):		0.90	0.50	0.50
			Date Sampled:		16-Feb-2016	17-Feb-2016	18-Feb-2016
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Moisture	N	2030	%	0.020	15	17	21
Soil Colour	N	2040		N/A	Grey	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Clay	Clay	Clay
Organic Matter	M	2625	%	0.40	1.4	1.2	3.3
Total Organic Carbon	M	2625	%	0.20	0.81	0.70	1.9
Aliphatic TPH >C5-C6	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010
Aliphatic TPH >C6-C8	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010
Aliphatic TPH >C8-C10	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C10-C12	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C12-C16	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C16-C21	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C21-C35	N	2680	mg/kg	0.10	< 0.10	< 0.10	30
Aliphatic TPH >C35-C44	N	2680	mg/kg	0.10	< 0.10	< 0.10	2.3
Total Aliphatic Hydrocarbons	N	2680	mg/kg	1.0	< 1.0	< 1.0	32
Aromatic TPH >C5-C7	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010
Aromatic TPH >C7-C8	N	2680	mg/kg	0.010	< 0.010	< 0.010	< 0.010
Aromatic TPH >C8-C10	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C10-C12	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C12-C16	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C16-C21	N	2680	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C21-C35	N	2680	mg/kg	0.10	< 0.10	< 0.10	14
Aromatic TPH >C35-C44	N	2680	mg/kg	0.10	< 0.10	< 0.10	1.4
Total Aromatic Hydrocarbons	N	2680	mg/kg	1.0	< 1.0	< 1.0	15
Total Petroleum Hydrocarbons	N	2680	mg/kg	2.0	< 2.0	< 2.0	47
Dichlorodifluoromethane	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Chloromethane	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Bromomethane	M	2760	µg/kg	20	< 20	< 20	< 20
Chloroethane	U	2760	µg/kg	2.0	< 2.0	< 2.0	< 2.0
Trichlorofluoromethane	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Trans 1,2-Dichloroethene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
cis 1,2-Dichloroethene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Bromochloromethane	U	2760	µg/kg	5.0	< 5.0	< 5.0	< 5.0
Trichloromethane	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0

Chemtest
The right chemistry to deliver results

Results - Soil

Project: STN3505NM - Chipping Lane

Client: Soiltechnics Limited					Chemtest Job No.:	16-04814	16-04814	16-04814
Quotation No.:					Chemtest Sample ID.:	261045	261046	261047
Order No.: 21026					Client Sample Ref.:	TP101	TP108	TP125
					Client Sample ID.:	7-001	7-003	7-005
					Sample Type:	SOIL	SOIL	SOIL
					Top Depth (m):	0.90	0.50	0.50
					Date Sampled:	16-Feb-2016	17-Feb-2016	18-Feb-2016
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
1,1-Dichloropropene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	M	2760	µg/kg	2.0		< 2.0	< 2.0	< 2.0
Trichloroethene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
Dibromomethane	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
Bromodichloromethane	M	2760	µg/kg	5.0		< 5.0	< 5.0	< 5.0
cis-1,3-Dichloropropene	N	2760	µg/kg	10		< 10	< 10	< 10
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
Trans-1,3-Dichloropropene	N	2760	µg/kg	10		< 10	< 10	< 10
1,1,2-Trichloroethane	M	2760	µg/kg	10		< 10	< 10	< 10
Tetrachloroethene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	U	2760	µg/kg	2.0		< 2.0	< 2.0	< 2.0
Dibromochloromethane	U	2760	µg/kg	10		< 10	< 10	< 10
1,2-Dibromoethane	M	2760	µg/kg	5.0		< 5.0	< 5.0	< 5.0
Chlorobenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	M	2760	µg/kg	2.0		< 2.0	< 2.0	< 2.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
Styrene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
Tribromomethane	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
Isopropylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
Bromobenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
1,2,3-Trichloropropane	N	2760	µg/kg	50		< 50	< 50	< 50
N-Propylbenzene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
2-Chlorotoluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
4-Chlorotoluene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
Tert-Butylbenzene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
Sec-Butylbenzene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
4-Isopropyltoluene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
N-Butylbenzene	U	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50		< 50	< 50	< 50
1,2,4-Trichlorobenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0

Chemtest
The right chemistry to deliver results

Results - Soil

Project: STN3505NM - Chipping Lane

Client: Soiltechnics Limited			Chemtest Job No.:		16-04814	16-04814	16-04814
Quotation No.:			Chemtest Sample ID.:		261045	261046	261047
Order No.: 21026			Client Sample Ref.:		TP101	TP108	TP125
			Client Sample ID.:		7-001	7-003	7-005
			Sample Type:		SOIL	SOIL	SOIL
			Top Depth (m):		0.90	0.50	0.50
			Date Sampled:		16-Feb-2016	17-Feb-2016	18-Feb-2016
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Hexachlorobutadiene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	U	2760	µg/kg	2.0	< 2.0	< 2.0	< 2.0
Carbon Disulphide	N	2760	µg/kg	50	< 50	< 50	< 50
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
N-Nitrosodimethylamine	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Phenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
2-Chlorophenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Bis-(2-Chloroethyl)Ether	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
1,3-Dichlorobenzene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
1,4-Dichlorobenzene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
2-Methylphenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Hexachloroethane	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
N-Nitrosodi-n-propylamine	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
4-Methylphenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Nitrobenzene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Isophorone	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
2-Nitrophenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
2,4-Dimethylphenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Bis(2-Chloroethoxy)Methane	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
2,4-Dichlorophenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
1,2,4-Trichlorobenzene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Naphthalene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
4-Chloroaniline	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Hexachlorobutadiene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
4-Chloro-3-Methylphenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
2-Methylnaphthalene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Hexachlorocyclopentadiene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
2,4,6-Trichlorophenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
2,4,5-Trichlorophenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
2-Chloronaphthalene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
2-Nitroaniline	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Acenaphthylene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Dimethylphthalate	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
2,6-Dinitrotoluene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Acenaphthene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Dibenzofuran	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
4-Chlorophenylphenylether	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50

Results - Soil

Project: STN3505NM - Chipping Lane

Client: Solitechnics Limited				Chemtest Job No.:	16-04814	16-04814	16-04814
Quotation No.:				Chemtest Sample ID.:	261045	261046	261047
Order No.: 21026				Client Sample Ref.:	TP101	TP108	TP125
				Client Sample ID.:	7-001	7-003	7-005
				Sample Type:	SOIL	SOIL	SOIL
				Top Depth (m):	0.90	0.50	0.50
				Date Sampled:	16-Feb-2016	17-Feb-2016	18-Feb-2016
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
2,4-Dinitrotoluene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Fluorene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Diethyl Phthalate	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
4-Nitroaniline	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Azobenzene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
4-Bromophenylphenyl Ether	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Hexachlorobenzene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Pentachlorophenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Phenanthrene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Anthracene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Carbazole	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Di-N-Butyl Phthalate	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Fluoranthene	N	2790	mg/kg	0.50	< 0.50	0.55	< 0.50
Pyrene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Butylbenzyl Phthalate	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Benzo[a]anthracene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Chrysene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Di-N-Octyl Phthalate	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Benzo[b]fluoranthene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Benzo[k]fluoranthene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Benzo[a]pyrene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Indeno(1,2,3-c,d)Pyrene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Dibenz(a,h)Anthracene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Benzo[g,h,i]perylene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Naphthalene	M	2800	mg/kg	0.10	< 0.10	0.37	0.20
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	0.76	0.35
Anthracene	M	2800	mg/kg	0.10	< 0.10	0.13	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	< 0.10	0.22	0.78
Pyrene	M	2800	mg/kg	0.10	< 0.10	0.21	0.67
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.15
Chrysene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.19
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.16
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.15

Chemtest
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Results - Soil

Project: STN3505NM - Chipping Lane

Client: Soiltechnics Limited					Chemtest Job No.:	16-04814	16-04814	16-04814
Quotation No.:					Chemtest Sample ID.:	261045	261046	261047
Order No.: 21026					Client Sample Ref.:	TP101	TP108	TP125
					Client Sample ID.:	7-001	7-003	7-005
					Sample Type:	SOIL	SOIL	SOIL
					Top Depth (m):	0.90	0.50	0.50
					Date Sampled:	16-Feb-2016	17-Feb-2016	18-Feb-2016
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0		< 2.0	< 2.0	2.7

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Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis
The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols
For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at our Coventry laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container

Sample Retention and Disposal

All soil samples will be retained for a period of 60 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.co.uk

Chemtest
The right chemistry to deliver results
Chemtest Ltd.
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.co.uk

Final Report

Report No.:	16-06222-1
Initial Date of Issue:	23-Mar-2016
Client	Soiltechnics Limited
Client Address:	Cedar Barn White Lodge Walgrave Northampton Northamptonshire NN6 9PY
Contact(s):	Rachel Brown
Project	STN3505NM - Chipping Lane

Quotation No.:		**Date Received:**	16-Mar-2016
Order No.:	21137	**Date Instructed:**	21-Mar-2016
No. of Samples:	29	**Target Date:**	23-Mar-2016
Turnaround (Wkdays):	3	**Results Due:**	23-Mar-2016

Date Approved: 23-Mar-2016

Approved By:

Details: Robert Monk, Technical Development Chemist

Chemtest
The right chemistry to deliver results

Results - Leachate

Project: STN3505NM - Chipping Lane

Client: Soiltechnics Limited				Chemtest Job No.:	16-06222	16-06222	16-06222	16-06222
Quotation No.:				Chemtest Sample ID.:	267964	267975	267979	267990
Order No.: 21137				Client Sample Ref.:	TP102	TP110	TP114	TP125
				Client Sample ID.:	9-043	9-080	9-098	9-148
				Sample Type:	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	0.20	0.10	0.10	0.50
				Date Sampled:	16-Feb-2016	17-Feb-2016	17-Feb-2016	18-Feb-2016
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
pH	U	1010		N/A	7.9	6.2	6.5	8.3
Nitrate	U	1220	mg/l	0.50	6.5	4.8	2.4	2.0
Sulphate	U	1220	mg/l	1.0	10	4.2	2.7	2.4
Cyanide (Total)	U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cyanide (Free)	U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cyanide (Complex)	U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sulphide	U	1325	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Arsenic (Dissolved)	U	1450	µg/l	1.0	2.5	2.7	5.6	1.4
Boron (Dissolved)	U	1450	µg/l	20	< 20	26	< 20	< 20
Beryllium (Dissolved)	U	1450	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium (Dissolved)	U	1450	µg/l	0.080	0.13	0.26	0.18	< 0.080
Chromium (Dissolved)	U	1450	µg/l	1.0	2.4	4.5	6.6	< 1.0
Copper (Dissolved)	U	1450	µg/l	1.0	6.3	13	13	5.7
Mercury (Dissolved)	U	1450	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Nickel (Dissolved)	U	1450	µg/l	1.0	1.9	4.3	4.2	< 1.0
Lead (Dissolved)	U	1450	µg/l	1.0	6.8	11	10	1.2
Selenium (Dissolved)	U	1450	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (Dissolved)	U	1450	µg/l	1.0	6.4	7.6	18	2.4
Zinc (Dissolved)	U	1450	µg/l	1.0	5.3	17	18	1.9
Naphthalene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	U	1800	µg/l	0.10	< 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	< 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.10	< 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	< 0.10
Total Of 16 PAH's	U	1800	µg/l	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total Phenols	U	1920	mg/l	0.030	< 0.030	< 0.030	< 0.030	< 0.030

Chemtest
The right chemistry to deliver results

Results - Soil

Project: STN3505NM - Chipping Lane

Client: Soiltechnics Limited					Chemtest Job No.:	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222
Quotation No.:					Chemtest Sample ID.:	267963	267964	267965	267966	267967	267968	267969	267970	267971
Order No.: 21137					Client Sample Ref.:	TP101	TP102	TP102	TP103	TP103	TP104	TP106	TP106	TP107
					Client Sample ID.:	9-037	9-043	9-045	9-048	9-049	9-054	9-064	9-066	9-069
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.30	0.20	1.00	0.10	0.30	0.10	0.10	1.10	0.10
					Date Sampled:	16-Feb-2016	16-Feb-2016	16-Feb-2016	16-Feb-2016	16-Feb-2016	16-Feb-2016	16-Feb-2016	16-Feb-2016	17-Feb-2016
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Moisture	N	2030	%	0.020		20	32	18	31	17	31	31	16	26
Soil Colour	N	2040		N/A		Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A		Roots	Roots	NONE	NONE	Roots	Roots	Roots	NONE	NONE
Soil Texture	N	2040		N/A		Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay
pH	M	2010		N/A		8.2	7.6	7.5	7.2	8.3	6.0	5.0	8.0	6.2
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40		< 0.40	0.43		< 0.40	< 0.40	< 0.40	< 0.40		< 0.40
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010				< 0.010					< 0.010	
Total Sulphur	M	2175	%	0.010				0.016					0.040	
Cyanide (Complex)	M	2300	mg/kg	0.50		< 0.50	< 0.50		< 0.50	< 0.50	< 0.50	< 0.50		< 0.50
Cyanide (Free)	M	2300	mg/kg	0.50		< 0.50	< 0.50		< 0.50	< 0.50	< 0.50	< 0.50		< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50		< 0.50	< 0.50		< 0.50	< 0.50	< 0.50	< 0.50		< 0.50
Sulphate (Acid Soluble)	M	2430	%	0.010				< 0.010					0.016	
Arsenic	M	2450	mg/kg	1.0		15	14		11	14	13	13		11
Beryllium	U	2450	mg/kg	1.0		< 1.0	< 1.0		< 1.0	1.0	< 1.0	< 1.0		< 1.0
Cadmium	M	2450	mg/kg	0.10		0.20	0.30		0.27	0.18	0.25	0.36		0.18
Chromium	M	2450	mg/kg	1.0		23	33		30	41	29	30		27
Copper	M	2450	mg/kg	0.50		110	59		24	24	17	24		20
Mercury	M	2450	mg/kg	0.10		0.25	0.22		0.20	0.11	0.14	0.22		0.13
Nickel	M	2450	mg/kg	0.50		25	27		25	47	21	23		23
Lead	M	2450	mg/kg	0.50		71	74		56	21	42	60		38
Selenium	M	2450	mg/kg	0.20		< 0.20	0.40		0.37	< 0.20	0.35	0.52		0.33
Vanadium	U	2450	mg/kg	5.0		29	48		37	43	36	40		36
Zinc	M	2450	mg/kg	0.50		110	110		78	57	64	86		47
Chromium (Hexavalent)	N	2490	mg/kg	0.50		< 0.50	< 0.50		< 0.50	< 0.50	< 0.50	< 0.50		< 0.50
Organic Matter	M	2625	%	0.40		2.9	7.6		6.4	1.1	6.0	7.4		5.9
Naphthalene	M	2800	mg/kg	0.10		< 0.10	< 0.10		< 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	< 0.10	< 0.10		< 0.10
Acenaphthene	M	2800	mg/kg	0.10		< 0.10	< 0.10		< 0.10	< 0.10	< 0.10	< 0.10		< 0.10
Fluorene	M	2800	mg/kg	0.10		< 0.10	< 0.10		< 0.10	< 0.10	< 0.10	< 0.10		< 0.10
Phenanthrene	M	2800	mg/kg	0.10		1.6	1.5		0.10	< 0.10	< 0.10	< 0.10		< 0.10
Anthracene	M	2800	mg/kg	0.10		0.31	0.35		< 0.10	< 0.10	< 0.10	< 0.10		< 0.10
Fluoranthene	M	2800	mg/kg	0.10		2.3	3.6		0.25	< 0.10	< 0.10	0.11		< 0.10
Pyrene	M	2800	mg/kg	0.10		2.0	3.5		0.23	< 0.10	< 0.10	0.14		< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.10		0.58	1.5		< 0.10	< 0.10	< 0.10	< 0.10		< 0.10
Chrysene	M	2800	mg/kg	0.10		0.70	1.9		< 0.10	< 0.10	< 0.10	< 0.10		< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		0.96	2.6		< 0.10	< 0.10	< 0.10	< 0.10		< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		0.18	0.84		< 0.10	< 0.10	< 0.10	< 0.10		< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10		0.65	2.0		< 0.10	< 0.10	< 0.10	< 0.10		< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		0.39	1.4		< 0.10	< 0.10	< 0.10	< 0.10		< 0.10

Chemtest
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Results - Soil

Project: STN3505NM - Chipping Lane

Client: Soiltechnics Limited					Chemtest Job No.:	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222
Quotation No.:					Chemtest Sample ID.:	267963	267964	267965	267966	267967	267968	267969	267970	267971
Order No.: 21137					Client Sample Ref.:	TP101	TP102	TP102	TP103	TP103	TP104	TP106	TP106	TP107
					Client Sample ID.:	9-037	9-043	9-045	9-048	9-049	9-054	9-064	9-066	9-069
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.30	0.20	1.00	0.10	0.30	0.10	0.10	1.10	0.10
					Date Sampled:	16-Feb-2016	16-Feb-2016	16-Feb-2016	16-Feb-2016	16-Feb-2016	16-Feb-2016	16-Feb-2016	16-Feb-2016	17-Feb-2016
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		< 0.10	< 0.10		< 0.10	< 0.10	< 0.10	< 0.10		< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		0.38	1.3		< 0.10	< 0.10	< 0.10	< 0.10		< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0		10	21		< 2.0	< 2.0	< 2.0	< 2.0		< 2.0
Total Phenols	M	2920	mg/kg	0.30		< 0.30	< 0.30		< 0.30	< 0.30	< 0.30	< 0.30		< 0.30

Chemtest
The right chemistry to deliver results

Results - Soil

Project: STN3505NM - Chipping Lane

Client: Soiltechnics Limited					Chemtest Job No.:	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222
Quotation No.:					Chemtest Sample ID.:	267972	267973	267974	267975	267976	267977	267978	267979	267980
Order No.: 21137					Client Sample Ref.:	TP108	TP108	TP108	TP110	TP110	TP112	TP113	TP114	TP114
					Client Sample ID.:	9-072	7-003	9-073	9-080	9-083	9-089	9-093	9-098	9-100
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.10	0.50	1.80	0.10	1.70	0.10	0.10	0.10	1.30
					Date Sampled:	17-Feb-2016	17-Feb-2016	17-Feb-2016	17-Feb-2016	17-Feb-2016	17-Feb-2016	17-Feb-2016	17-Feb-2016	17-Feb-2016
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Moisture	N	2030	%	0.020		27	18	15	30	17	28	23	34	19
Soil Colour	N	2040		N/A		Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A		Roots	NONE	NONE	NONE	Roots	NONE	Roots	NONE	NONE
Soil Texture	N	2040		N/A		Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay
pH	M	2010		N/A		7.3	8.2	8.0	5.2	8.3	5.8	5.5	5.5	8.0
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40		< 0.40	< 0.40		0.85		0.71	0.42	< 0.40	
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010				< 0.010		< 0.010				< 0.010
Total Sulphur	M	2175	%	0.010				0.014		< 0.010				0.016
Cyanide (Complex)	M	2300	mg/kg	0.50		< 0.50	< 0.50		< 0.50		< 0.50	< 0.50	< 0.50	
Cyanide (Free)	M	2300	mg/kg	0.50		< 0.50	< 0.50		< 0.50		< 0.50	< 0.50	< 0.50	
Cyanide (Total)	M	2300	mg/kg	0.50		< 0.50	< 0.50		< 0.50		< 0.50	< 0.50	< 0.50	
Sulphate (Acid Soluble)	M	2430	%	0.010				< 0.010		< 0.010				< 0.010
Arsenic	M	2450	mg/kg	1.0		13	13		16		12	11	11	
Beryllium	U	2450	mg/kg	1.0		< 1.0	< 1.0		1.1		< 1.0	1.0	< 1.0	
Cadmium	M	2450	mg/kg	0.10		0.27	0.17		0.36		0.27	0.29	0.25	
Chromium	M	2450	mg/kg	1.0		36	26		33		29	29	29	
Copper	M	2450	mg/kg	0.50		27	29		29		21	21	23	
Mercury	M	2450	mg/kg	0.10		0.16	0.12		0.18		0.17	0.17	0.18	
Nickel	M	2450	mg/kg	0.50		33	29		29		25	25	22	
Lead	M	2450	mg/kg	0.50		52	35		80		53	47	54	
Selenium	M	2450	mg/kg	0.20		0.26	< 0.20		0.49		0.43	0.38	0.46	
Vanadium	U	2450	mg/kg	5.0		39	28		42		33	34	38	
Zinc	M	2450	mg/kg	0.50		74	63		80		63	75	74	
Chromium (Hexavalent)	N	2490	mg/kg	0.50		< 0.50	< 0.50		< 0.50		< 0.50	< 0.50	< 0.50	
Organic Matter	M	2625	%	0.40		3.5	2.8		5.7		4.8	4.3	8.1	
Naphthalene	M	2800	mg/kg	0.10		< 0.10	0.17		< 0.10		< 0.10	< 0.10	< 0.10	
Acenaphthylene	N	2800	mg/kg	0.10		< 0.10	< 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	< 0.10	< 0.10	
Fluorene	M	2800	mg/kg	0.10		< 0.10	< 0.10		< 0.10		< 0.10	< 0.10	< 0.10	
Phenanthrene	M	2800	mg/kg	0.10		< 0.10	0.72		< 0.10		< 0.10	< 0.10	< 0.10	
Anthracene	M	2800	mg/kg	0.10		< 0.10	0.13		< 0.10		< 0.10	< 0.10	< 0.10	
Fluoranthene	M	2800	mg/kg	0.10		< 0.10	1.9		< 0.10		< 0.10	< 0.10	0.21	
Pyrene	M	2800	mg/kg	0.10		< 0.10	1.5		< 0.10		< 0.10	< 0.10	0.23	
Benzo[a]anthracene	M	2800	mg/kg	0.10		< 0.10	0.41		< 0.10		< 0.10	< 0.10	< 0.10	
Chrysene	M	2800	mg/kg	0.10		< 0.10	0.70		< 0.10		< 0.10	< 0.10	< 0.10	
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		< 0.10	0.82		< 0.10		< 0.10	< 0.10	< 0.10	
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		< 0.10	0.21		< 0.10		< 0.10	< 0.10	< 0.10	
Benzo[a]pyrene	M	2800	mg/kg	0.10		< 0.10	0.49		< 0.10		< 0.10	< 0.10	< 0.10	
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		< 0.10	0.32		< 0.10		< 0.10	< 0.10	< 0.10	

Chemtest
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Results - Soil

Project: STN3505NM - Chipping Lane

Client: Soiltechnics Limited					Chemtest Job No.:	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222
Quotation No.:					Chemtest Sample ID.:	267972	267973	267974	267975	267976	267977	267978	267979	267980
Order No.: 21137					Client Sample Ref.:	TP108	TP108	TP108	TP110	TP110	TP112	TP113	TP114	TP114
					Client Sample ID.:	9-072	7-003	9-073	9-080	9-083	9-089	9-093	9-098	9-100
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.10	0.50	1.80	0.10	1.70	0.10	0.10	0.10	1.30
					Date Sampled:	17-Feb-2016	17-Feb-2016	17-Feb-2016	17-Feb-2016	17-Feb-2016	17-Feb-2016	17-Feb-2016	17-Feb-2016	17-Feb-2016
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		< 0.10	< 0.10		< 0.10		< 0.10	< 0.10	< 0.10	
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		< 0.10	0.29		< 0.10		< 0.10	< 0.10	< 0.10	
Total Of 16 PAH's	N	2800	mg/kg	2.0		< 2.0	7.7		< 2.0		< 2.0	< 2.0	< 2.0	
Total Phenols	M	2920	mg/kg	0.30		< 0.30	< 0.30		< 0.30		< 0.30	< 0.30	< 0.30	

Chemtest
The right chemistry to deliver results

Results - Soil

Project: STN3505NM - Chipping Lane

Client: Soiltechnics Limited					Chemtest Job No.:	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222
Quotation No.:					Chemtest Sample ID.:	267981	267982	267983	267984	267985	267986	267987	267988	267989
Order No.: 21137					Client Sample Ref.:	TP116	TP117	TP118	TP118	TP119	TP120	TP122	TP123	TP124
					Client Sample ID.:	9-106	9-110	9-114	9-117	9-119	9-124	9-137	9-138	9-142
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.10	0.10	0.10	1.80	0.10	0.10	1.80	0.10	0.10
					Date Sampled:	17-Feb-2016	17-Feb-2016	18-Feb-2016	18-Feb-2016	18-Feb-2016	18-Feb-2016	18-Feb-2016	18-Feb-2016	18-Feb-2016
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Moisture	N	2030	%	0.020		24	25	25	16	39	30	15	32	27
Soil Colour	N	2040		N/A		Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A		Roots	Roots	Roots	Roots	Roots	Roots	NONE	Roots	Roots
Soil Texture	N	2040		N/A		Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay
pH	M	2010		N/A		5.8	5.8	5.3	8.3	5.6	5.5	8.3	5.9	5.6
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40		0.45	0.56	0.53		0.61	0.77		0.72	0.72
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010					< 0.010			< 0.010		
Total Sulphur	M	2175	%	0.010					0.014			0.013		
Cyanide (Complex)	M	2300	mg/kg	0.50		< 0.50	< 0.50	< 0.50		< 0.50	< 0.50		< 0.50	< 0.50
Cyanide (Free)	M	2300	mg/kg	0.50		< 0.50	< 0.50	< 0.50		< 0.50	< 0.50		< 0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50		< 0.50	< 0.50	< 0.50		< 0.50	< 0.50		< 0.50	< 0.50
Sulphate (Acid Soluble)	M	2430	%	0.010					< 0.010			< 0.010		
Arsenic	M	2450	mg/kg	1.0		12	11	14		22	14		10	10
Beryllium	U	2450	mg/kg	1.0		1.1	1.1	1.1		1.3	1.2		1.0	1.0
Cadmium	M	2450	mg/kg	0.10		0.30	0.21	0.29		0.50	0.32		0.28	0.26
Chromium	M	2450	mg/kg	1.0		35	35	37		46	36		32	32
Copper	M	2450	mg/kg	0.50		36	27	32		44	26		22	20
Mercury	M	2450	mg/kg	0.10		0.23	0.17	0.20		0.25	0.18		0.16	0.16
Nickel	M	2450	mg/kg	0.50		29	30	26		31	29		27	25
Lead	M	2450	mg/kg	0.50		65	41	61		96	57		42	42
Selenium	M	2450	mg/kg	0.20		0.34	0.32	0.41		0.67	0.38		0.37	0.39
Vanadium	U	2450	mg/kg	5.0		44	40	49		59	42		37	43
Zinc	M	2450	mg/kg	0.50		110	59	83		120	82		62	54
Chromium (Hexavalent)	N	2490	mg/kg	0.50		< 0.50	< 0.50	< 0.50		< 0.50	< 0.50		< 0.50	< 0.50
Organic Matter	M	2625	%	0.40		4.3	5.2	6.6		10	5.5		5.7	4.3
Naphthalene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 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	< 0.10		< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10		< 0.10	< 0.10		< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10		< 0.10	< 0.10		< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10		< 0.10	< 0.10	0.75		0.11	< 0.10		< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10		< 0.10	< 0.10	0.16		< 0.10	< 0.10		< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10		< 0.10	< 0.10	1.5		0.36	< 0.10		< 0.10	< 0.10
Pyrene	M	2800	mg/kg	0.10		< 0.10	< 0.10	1.4		0.31	< 0.10		< 0.10	< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.10		< 0.10	< 0.10	0.29		< 0.10	< 0.10		< 0.10	< 0.10
Chrysene	M	2800	mg/kg	0.10		< 0.10	< 0.10	0.33		< 0.10	< 0.10		< 0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10		< 0.10	< 0.10		< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10		< 0.10	< 0.10		< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10		< 0.10	< 0.10		< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10		< 0.10	< 0.10		< 0.10	< 0.10

Chemtest
The right chemistry to deliver results

Results - Soil

Project: STN3505NM - Chipping Lane

Client: Soiltechnics Limited					Chemtest Job No.:	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222	16-06222
Quotation No.:					Chemtest Sample ID.:	267981	267982	267983	267984	267985	267986	267987	267988	267989
Order No.: 21137					Client Sample Ref.:	TP116	TP117	TP118	TP118	TP119	TP120	TP122	TP123	TP124
					Client Sample ID.:	9-106	9-110	9-114	9-117	9-119	9-124	9-137	9-138	9-142
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.10	0.10	0.10	1.80	0.10	0.10	1.80	0.10	0.10
					Date Sampled:	17-Feb-2016	17-Feb-2016	18-Feb-2016	18-Feb-2016	18-Feb-2016	18-Feb-2016	18-Feb-2016	18-Feb-2016	18-Feb-2016
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10		< 0.10	< 0.10		< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10		< 0.10	< 0.10		< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0		< 2.0	< 2.0	4.4		< 2.0	< 2.0		< 2.0	< 2.0
Total Phenols	M	2920	mg/kg	0.30		< 0.30	< 0.30	< 0.30		< 0.30	< 0.30		< 0.30	< 0.30

Chemtest
The right chemistry to deliver results

Results - Soil

Project: STN3505NM - Chipping Lane

Client: Soiltechnics Limited			Chemtest Job No.:		16-06222	16-06222
Quotation No.:			Chemtest Sample ID.:		267990	267991
Order No.: 21137			Client Sample Ref.:		TP125	TP125
			Client Sample ID.:		9-148	9-149
			Sample Type:		SOIL	SOIL
			Top Depth (m):		0.50	1.20
			Date Sampled:		18-Feb-2016	18-Feb-2016
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Moisture	N	2030	%	0.020	21	21
Soil Colour	N	2040		N/A	Brown	Brown
Other Material	N	2040		N/A	Roots	Roots
Soil Texture	N	2040		N/A	Clay	Clay
pH	M	2010		N/A	7.9	8.5
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010		< 0.010
Total Sulphur	M	2175	%	0.010		0.022
Cyanide (Complex)	M	2300	mg/kg	0.50	< 0.50	
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50	
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	
Sulphate (Acid Soluble)	M	2430	%	0.010		0.030
Arsenic	M	2450	mg/kg	1.0	11	
Beryllium	U	2450	mg/kg	1.0	< 1.0	
Cadmium	M	2450	mg/kg	0.10	0.18	
Chromium	M	2450	mg/kg	1.0	32	
Copper	M	2450	mg/kg	0.50	18	
Mercury	M	2450	mg/kg	0.10	0.10	
Nickel	M	2450	mg/kg	0.50	31	
Lead	M	2450	mg/kg	0.50	26	
Selenium	M	2450	mg/kg	0.20	0.23	
Vanadium	U	2450	mg/kg	5.0	32	
Zinc	M	2450	mg/kg	0.50	46	
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	
Organic Matter	M	2625	%	0.40	2.8	
Naphthalene	M	2800	mg/kg	0.10	< 0.10	
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	
Fluorene	M	2800	mg/kg	0.10	< 0.10	
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	
Anthracene	M	2800	mg/kg	0.10	< 0.10	
Fluoranthene	M	2800	mg/kg	0.10	< 0.10	
Pyrene	M	2800	mg/kg	0.10	< 0.10	
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	
Chrysene	M	2800	mg/kg	0.10	< 0.10	
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	

Chemtest
The right chemistry to deliver results

Results - Soil

Project: STN3505NM - Chipping Lane

Client: Soiltechnics Limited			Chemtest Job No.:		16-06222	16-06222
Quotation No.:			Chemtest Sample ID.:		267990	267991
Order No.: 21137			Client Sample Ref.:		TP125	TP125
			Client Sample ID.:		9-148	9-149
			Sample Type:		SOIL	SOIL
			Top Depth (m):		0.50	1.20
			Date Sampled:		18-Feb-2016	18-Feb-2016
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0	
Total Phenols	M	2920	mg/kg	0.30	< 0.30	

Chemtest
The right chemistry to deliver results

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis
The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols
For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at our Coventry laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.co.uk

soiltechnics
environmental and geotechnical consultants

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

Adopted Model: Residential without plant uptake
Receptor: Current site user

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	40	21	10.0	22.0	12.9	0	Mean value below guideline	n					not normal	not normal	n	15.4	Arsenic
Beryllium	S4UL	1.7	21	1.0	1.3	1.0	0	Mean value below guideline	n					not normal	not normal	n	1.1	Beryllium
Boron	S4UL	11000	21	0.4	0.9	0.5	0	Mean value below guideline	y					not normal	not normal	n	0.7	Boron
Cadmium	S4UL	85	21	0.2	0.5	0.3	0	Mean value below guideline	n					not normal	not normal	n	0.3	Cadmium
Chromium	S4UL	910	21	23.0	46.0	32.4	0	Mean value below guideline	n					normal	normal	y	34.3	Chromium
Copper	S4UL	7100	21	17.0	110.0	31.1	0	Mean value below guideline	n					not normal	not normal	n	50.6	Copper
Cyanide (total)	ATK	34	21	0.5	0.5	0.5	0	Mean value below guideline	y					not normal	not normal	n	0.5	Cyanide (total)
Lead	ATK	383	21	21.0	96.0	53.0	0	Mean value below guideline	y					normal	normal	y	59.8	Lead
Mercury#	S4UL	1.2	21	0.1	0.3	0.2	0	Mean value below guideline	y					normal	normal	y	0.2	Mercury#
Nickel	S4UL	180	21	21.0	47.0	27.7	0	Mean value below guideline	n					not normal	not normal	n	32.9	Nickel
Selenium	S4UL	430	21	0.2	0.7	0.4	0	Mean value below guideline	n					normal	normal	y	0.4	Selenium
Vanadium	S4UL	1200	21	28.0	59.0	39.5	0	Mean value below guideline	n					normal	normal	y	42.2	Vanadium
Zinc	S4UL	40000	21	46.0	120.0	76.0	0	Mean value below guideline	y					normal	normal	y	84.1	Zinc

C4SL Category 4 Screening Level
S4UL Suitable for Use Level as published by LQM/CIEH
SGV Soil Guideline Value as published by the Environment Agency 2009
GAC Generic Assessment Criterion as published by LQM and CIEH
SSV Soil Screening Value as derived by Soiltechnics
ATK Soil Screening Value derived by Atkins
NGV No Guideline Value
BPG5 Guideline from BPG Note 5 as published by Forest Research

\# Assumed to be elemental mercury as initial screening value

Title: Analysis of test data in relation to concentrations of inorganic chemical contaminants.

Table number: 1

soiltechnics
environmental and geotechnical consultants

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

Adopted model: Residential without plant uptake
Receptor: Current site user

Test procedure			Summary of test data					Initial Screening	Outlier test				Normality test			UCL	
Contaminant	Guideline source	Guideline value mg/kg	No. of tests	Min. mg/kg	Max. mg/kg	Mean mg/kg	No. of tests above guideline value	Initial screening	Pass outlier test?	Number of outliers	Location of outlier	Depth	Concentration mg/kg	Shapiro-Wilk Normality test	Probability plot test	Data normally distributed?	95% UCL of mean mg/kg	Contaminant
Acenaphthene	S4UL	210	21	0.1	0.1	0.1	0	Mean value below guideline	y					not normal	not normal	n	0.1	Acenaphthene
Acenaphthylene	S4UL	170	21	0.1	0.1	0.1	0	Mean value below guideline	y					not normal	not normal	n	0.1	Acenaphthylene
Anthracene	S4UL	2460	21	0.1	0.4	0.1	0	Mean value below guideline	n					not normal	not normal	n	0.2	Anthracene
Benzo(a)anthracene	S4UL	7.2	21	0.1	1.5	0.2	0	Mean value below guideline	n					not normal	not normal	n	0.5	Benzo(a)anthracene
Benzo(a)pyrene	S4UL	2.2	21	0.1	2.0	0.2	0	Mean value below guideline	n					not normal	not normal	n	0.6	Benzo(a)pyrene
Benzo(b)fluoranthene	S4UL	2.6	21	0.1	2.6	0.3	0	Mean value below guideline	n					not normal	not normal	n	0.8	Benzo(b)fluoranthene
Benzo(g,h,i)perylene	S4UL	320	21	0.1	1.3	0.2	0	Mean value below guideline	n					not normal	not normal	n	0.4	Benzo(g,h,i)perylene
Benzo(k)fluoranthene	S4UL	77	21	0.1	0.8	0.1	0	Mean value below guideline	n					not normal	not normal	n	0.3	Benzo(k)fluoranthene
Chrysene	S4UL	15	21	0.1	1.9	0.3	0	Mean value below guideline	n					not normal	not normal	n	0.7	Chrysene
Dibenzo(a,h)anthracene	S4UL	0.24	21	0.1	0.1	0.1	0	Mean value below guideline	y					not normal	not normal	n	0.1	Dibenzo(a,h)anthracene
Fluoranthene	S4UL	280	21	0.1	3.6	0.5	0	Mean value below guideline	n					not normal	not normal	n	1.5	Fluoranthene
Fluorene	S4UL	170	21	0.1	0.1	0.1	0	Mean value below guideline	y					not normal	not normal	n	0.1	Fluorene
Indeno(1,2,3-cd)pyrene	S4UL	27	21	0.1	1.4	0.2	0	Mean value below guideline	n					not normal	not normal	n	0.5	Indeno(1,2,3-cd)pyrene
Naphthalene	S4UL	2.3	21	0.1	0.2	0.1	0	Mean value below guideline	n					not normal	not normal	n	0.1	Naphthalene
Phenanthrene	S4UL	95	21	0.1	1.6	0.3	0	Mean value below guideline	n					not normal	not normal	n	0.7	Phenanthrene
Phenols	S4UL	260	21	0.3	0.3	0.3	0	Mean value below guideline	y					not normal	not normal	n	0.3	Phenols
Pyrene	S4UL	620	21	0.1	3.5	0.5	0	Mean value below guideline	n					not normal	not normal	n	1.3	Pyrene

Notes

C4SL	Category 4 Screening Level
S4UL	Suitable for Use Level as published by LQM/CIEH
SGV	Soil Guideline Value as published by the Environment Agency 2009
GAC	Generic Assessment Criterion as published by LQM and CIEH
SSV	Soil Screening Value as derived by Soiltechnics
ATK	Soil Screening Value derived by Atkins
NGV	No Guideline Value

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

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

Adopted Model: Residential
Receptor: Proposed site user

Contaminant	Guideline source	Guideline value mg/kg	No. of tests	Min. mg/kg	Max. mg/kg	Mean mg/kg	No. of tests above guideline value	Initial comparison: Initial screening	Outlier test: Pass outlier test?	Number of outliers	Location of outlier	Depth	Concentration mg/kg	Normality test: Shapiro-Wilk Normality test	Normality test: Probability plot test	Data normally distributed?	UCL: 95% UCL of mean mg/kg	Contaminant
Arsenic	S4UL	37	21	10.0	22.0	12.9	0	Mean value below guideline	n					not normal	not normal	n	15.4	**Arsenic**
Beryllium	S4UL	1.7	21	1.0	1.3	1.0	0	Mean value below guideline	n					not normal	not normal	n	1.1	**Beryllium**
Boron	S4UL	290	21	0.4	0.9	0.5	0	Mean value below guideline	y					not normal	not normal	n	0.7	**Boron**
Cadmium	S4UL	11	21	0.2	0.5	0.3	0	Mean value below guideline	n					not normal	not normal	n	0.3	**Cadmium**
Chromium	S4UL	910	21	23.0	46.0	32.4	0	Mean value below guideline	n					normal	normal	y	34.3	**Chromium**
Copper	S4UL	2400	21	17.0	110.0	31.1	0	Mean value below guideline	n					not normal	not normal	n	50.6	**Copper**
Cyanide (total)	ATK	34	21	0.5	0.5	0.5	0	Mean value below guideline	y					not normal	not normal	n	0.5	**Cyanide (total)**
Lead	ATK	276	21	21.0	96.0	53.0	0	Mean value below guideline	y					normal	normal	y	59.8	**Lead**
Mercury#	S4UL	1.2	21	0.1	0.3	0.2	0	Mean value below guideline	y					normal	normal	y	0.2	**Mercury#**
Nickel	S4UL	180	21	21.0	47.0	27.7	0	Mean value below guideline	n					not normal	not normal	n	32.9	**Nickel**
Selenium	S4UL	250	21	0.2	0.7	0.4	0	Mean value below guideline	n					normal	normal	y	0.4	**Selenium**
Vanadium	S4UL	410	21	28.0	59.0	39.5	0	Mean value below guideline	n					normal	normal	y	42.2	**Vanadium**
Zinc	S4UL	3700	21	46.0	120.0	76.0	0	Mean value below guideline	y					normal	normal	y	84.1	**Zinc**

C4SL Category 4 Screening Level
S4UL Suitable for Use Level as published by LQM/CIEH
SGV Soil Guideline Value as published by the Environment Agency 2009
GAC Generic Assessment Criterion as published by LQM and CIEH
SSV Soil Screening Value as derived by Soiltechnics
ATK Soil Screening Value derived by Atkins
NGV No Guideline Value
BPG5 Guideline from BPG Note 5 as published by Forest Research

Assumed to be elemental mercury as initial screening value

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

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

Adopted model: Residential
Receptor: Proposed site user

Test procedure			Summary of test data					Initial Screening	Outlier test				Normality test				UCL	
Contaminant	Guideline source	Guideline value mg/kg	No. of tests	Min. mg/kg	Max. mg/kg	Mean mg/kg	No. of tests above guideline value	Initial screening	Pass outlier test?	Number of outliers	Location of outlier	Depth	Concentration mg/kg	Shapiro-Wilk Normality test	Probability plot test	Data normally distributed?	95% UCL of mean mg/kg	Contaminant
Acenaphthene	S4UL	3000	21	0.1	0.1	0.1	0	Mean value below guideline	y					not normal	not normal	n	0.1	Acenaphthene
Acenaphthylene	S4UL	2900	21	0.1	0.1	0.1	0	Mean value below guideline	y					not normal	not normal	n	0.1	Acenaphthylene
Anthracene	S4UL	31000	21	0.1	0.4	0.1	0	Mean value below guideline	n					not normal	not normal	n	0.2	Anthracene
Benzo(a)anthracene	S4UL	11	21	0.1	1.5	0.2	0	Mean value below guideline	n					not normal	not normal	n	0.5	Benzo(a)anthracene
Benzo(a)pyrene	S4UL	3.2	21	0.1	2.0	0.2	0	Mean value below guideline	n					not normal	not normal	n	0.6	Benzo(a)pyrene
Benzo(b)fluoranthene	S4UL	3.9	21	0.1	2.6	0.3	0	Mean value below guideline	n					not normal	not normal	n	0.8	Benzo(b)fluoranthene
Benzo(g,h,i)perylene	S4UL	350	21	0.1	1.3	0.2	0	Mean value below guideline	n					not normal	not normal	n	0.4	Benzo(g,h,i)perylene
Benzo(k)fluoranthene	S4UL	110	21	0.1	0.8	0.1	0	Mean value below guideline	n					not normal	not normal	n	0.3	Benzo(k)fluoranthene
Chrysene	S4UL	30	21	0.1	1.9	0.3	0	Mean value below guideline	n					not normal	not normal	n	0.7	Chrysene
Dibenzo(a,h)anthracene	S4UL	0.31	21	0.1	0.1	0.1	0	Mean value below guideline	y					not normal	not normal	n	[illegible]	Dibenzo(a,h)anthracene
Fluoranthene	S4UL	1500	21	0.1	3.6	0.5	0	Mean value below guideline	n					not normal	not normal	n	1.5	Fluoranthene
Fluorene	S4UL	2800	21	0.1	0.1	0.1	0	Mean value below guideline	y					not normal	not normal	n	0.1	Fluorene
Indeno(1,2,3-cd)pyrene	S4UL	45	21	0.1	1.4	0.2	0	Mean value below guideline	n					not normal	not normal	n	0.5	Indeno(1,2,3-cd)pyrene
Naphthalene	S4UL	2.3	21	0.1	0.2	0.1	0	Mean value below guideline	n					not normal	not normal	n	0.1	Naphthalene
Phenanthrene	S4UL	1300	21	0.1	1.5	0.3	0	Mean value below guideline	n					not normal	not normal	n	0.7	Phenanthrene
Phenols	S4UL	750	21	0.3	0.3	0.3	0	Mean value below guideline	y					not normal	not normal	n	0.3	Phenols
Pyrene	S4UL	3700	21	0.1	3.5	0.5	0	Mean value below guideline	n					not normal	not normal	n	1.3	Pyrene

Notes

C4SL	Category 4 Screening Level
S4UL	Suitable for Use Level as published by LQM/CIEH
SGV	Soil Guideline Value as published by the Environment Agency 2009
GAC	Generic Assessment Criterion as published by LQM and CIEH
SSV	Soil Screening Value as derived by Soiltechnics
ATK	Soil Screening Value derived by Atkins
NGV	No Guideline Value
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 organic chemical contaminants.	4

soiltechnics
environmental and geotechnical consultants

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 mg/kg	No. of tests	Min. mg/kg	Max. mg/kg	Mean mg/kg	No. of tests above guideline value	Initial screening	Pass outlier test?	Number of outliers	Location of outlier	Depth	Concentration mg/kg	Shapiro-Wilk Normality test	Probability plot test	Data normally distributed?	95% UCL of mean mg/kg	Contaminant
Arsenic	SGV	640	21	10.0	22.0	12.9	0	Mean value below guideline	n					not normal	not normal	n	15.4	Arsenic
Beryllium	GAC	420	21	1.0	1.3	1.0	0	Mean value below guideline	n					not normal	not normal	n	1.1	Beryllium
Boron	GAC	192000	21	0.4	0.9	0.5	0	Mean value below guideline	y					not normal	not normal	n	0.7	Boron
Cadmium	SGV	230	21	0.2	0.5	0.3	0	Mean value below guideline	n					not normal	not normal	n	0.3	Cadmium
Chromium	GAC	30400	21	23.0	46.0	32.4	0	Mean value below guideline	n					normal	normal	y	34.3	Chromium
Copper	GAC	71700	21	17.0	110.0	31.1	0	Mean value below guideline	n					not normal	not normal	n	50.6	Copper
Cyanide (total)	ATK	34	21	0.5	0.5	0.5	0	Mean value below guideline	y					not normal	not normal	n	0.5	Cyanide (total)
Lead	ATK	6490	21	21.0	96.0	53.0	0	Mean value below guideline	y					normal	normal	y	59.8	Lead
Mercury#	SGV	26	21	0.1	0.3	0.2	0	Mean value below guideline	y					normal	normal	y	0.2	Mercury#
Nickel	SGV	1800	21	21.0	47.0	27.7	0	Mean value below guideline	n					not normal	not normal	n	32.9	Nickel
Selenium	SGV	13000	21	0.2	0.7	0.4	0	Mean value below guideline	n					normal	normal	y	0.4	Selenium
Vanadium	GAC	3160	21	28.0	59.0	39.5	0	Mean value below guideline	n					normal	normal	y	42.2	Vanadium
Zinc	GAC	665000	21	46.0	120.0	76.0	0	Mean value below guideline	y					normal	normal	y	84.1	Zinc

C4SL	Category 4 Screening Level
S4UL	Suitable for Use Level as published by LQM/CIEH
SGV	Soil Guideline Value as published by the Environment Agency 2009
GAC	Generic Assessment Criterion as published by LQM and CIEH
SSV	Soil Screening Value as derived by Soiltechnics
ATK	Soil Screening Value derived by Atkins
NGV	No Guideline Value
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.	5

soiltechnics
environmental and geotechnical consultants

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

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

Test procedure			Summary of test data					Initial Screening	Outlier test				Normality test			UCL	
Contaminant	Guideline source	Guideline value mg/kg	No. of tests	Min. mg/kg	Max. mg/kg	Mean mg/kg	No. of tests above guideline value	Initial screening	Pass outlier test?	Number of outliers	Location of outlier	Depth / Concentration mg/kg	Shapiro-Wilk Normality test	Probability plot test	Data normally distributed?	95% UCL of mean mg/kg	Contaminant
Acenaphthene	S4UL	3000	21	0.1	0.1	0.1	0	Mean value below guideline	y				not normal	not normal	n	0.1	Acenaphthene
Acenaphthylene	S4UL	2900	21	0.1	0.1	0.1	0	Mean value below guideline	y				not normal	not normal	n	0.1	Acenaphthylene
Anthracene	S4UL	31000	21	0.1	0.4	0.1	0	Mean value below guideline	n				not normal	not normal	n	0.2	Anthracene
Benzo(a)anthracene	S4UL	11	21	0.1	1.5	0.2	0	Mean value below guideline	n				not normal	not normal	n	0.5	Benzo(a)anthracene
Benzo(a)pyrene	S4UL	3.2	21	0.1	2.0	0.2	0	Mean value below guideline	n				not normal	not normal	n	0.6	Benzo(a)pyrene
Benzo(b)fluoranthene	S4UL	3.9	21	0.1	2.6	0.3	0	Mean value below guideline	n				not normal	not normal	n	0.6	Benzo(b)fluoranthene
Benzo(g,h,i)perylene	S4UL	360	21	0.1	1.3	0.2	0	Mean value below guideline	n				not normal	not normal	n	0.4	Benzo(g,h,i)perylene
Benzo(k)fluoranthene	S4UL	110	21	0.1	0.8	0.1	0	Mean value below guideline	n				not normal	not normal	n	0.3	Benzo(k)fluoranthene
Chrysene	S4UL	30	21	0.1	1.9	0.3	0	Mean value below guideline	n				not normal	not normal	n	0.7	Chrysene
Dibenzo(a,h)anthracene	S4UL	0.31	21	0.1	0.1	0.1	0	Mean value below guideline	y				not normal	not normal	n	0.1	Dibenzo(a,h)anthracene
Fluoranthene	S4UL	1500	21	0.1	3.6	0.5	0	Mean value below guideline	n				not normal	not normal	n	1.5	Fluoranthene
Fluorene	S4UL	2800	21	0.1	0.1	0.1	0	Mean value below guideline	y				not normal	not normal	n	0.1	Fluorene
Indeno(1,2,3-cd)pyrene	S4UL	45	21	0.1	1.4	0.2	0	Mean value below guideline	n				not normal	not normal	n	0.5	Indeno(1,2,3-cd)pyrene
Naphthalene	S4UL	2.3	21	0.1	0.2	0.1	0	Mean value below guideline	n				not normal	not normal	n	0.1	Naphthalene
Phenanthrene	S4UL	1300	21	0.1	1.6	0.3	0	Mean value below guideline	n				not normal	not normal	n	0.7	Phenanthrene
Phenols	S4UL	750	21	0.3	0.3	0.3	0	Mean value below guideline	y				not normal	not normal	n	0.3	Phenols
Pyrene	S4UL	3700	21	0.1	3.5	0.5	0	Mean value below guideline	n				not normal	not normal	n	1.3	Pyrene

Notes

C4SL	Category 4 Screening Level
S4UL	Suitable for Use Level as published by LQM/CIEH
SGV	Soil Guideline Value as published by the Environment Agency 2009
GAC	Generic Assessment Criterion as published by LQM and CIEH
SSV	Soil Screening Value as derived by Soiltechnics
ATK	Soil Screening Value derived by Atkins
NGV	No Guideline Value
BPG5	Guideline from BPG Note 5 as published by Forest Research

Title	Table number
Analysis of test data in relation to concentrations of organic chemical contaminants.	6

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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 mg/kg	No. of tests	Min. mg/kg	Max. mg/kg	Mean mg/kg	No. of tests above guideline value	Initial screening	Pass outlier test?	Number of outliers	Location of outlier	Depth	Concentration mg/kg	Shapiro-Wilk Normality test	Probability plot test	Data normally distributed?	95% UCL of mean mg/kg	Contaminant
Arsenic	S4UL	640	21	10.0	22.0	12.9	0	Mean value below guideline	n					not normal	not normal	n	15.4	Arsenic
Beryllium	S4UL	12	21	1.0	1.3	1.0	0	Mean value below guideline	n					not normal	not normal	n	1.1	Beryllium
Boron	S4UL	240000	21	0.4	0.9	0.5	0	Mean value below guideline	y					not normal	not normal	n	0.7	Boron
Cadmium	S4UL	190	21	0.2	0.5	0.3	0	Mean value below guideline	n					not normal	not normal	n	0.3	Cadmium
Chromium	S4UL	8600	21	23.0	46.0	32.4	0	Mean value below guideline	n					normal	normal	y	34.3	Chromium
Copper	BPG5	130	21	17.0	110.0	31.1	0	Mean value below guideline	n					not normal	not normal	n	50.6	Copper
Cyanide (total)	ATK	34	21	0.5	0.5	0.5	0	Mean value below guideline	y					not normal	not normal	n	0.5	Cyanide (total)
Lead	ATK	6490	21	21.0	96.0	53.0	0	Mean value below guideline	y					normal	normal	y	59.8	Lead
Mercury#	S4UL	58	21	0.1	0.3	0.2	0	Mean value below guideline	y					normal	normal	y	0.2	Mercury#
Nickel	S4UL	980	21	21.0	47.0	27.7	0	Mean value below guideline	n					not normal	not normal	n	32.9	Nickel
Selenium	S4UL	12000	21	0.2	0.7	0.4	0	Mean value below guideline	n					normal	normal	y	0.4	Selenium
Vanadium	S4UL	9000	21	28.0	59.0	39.5	0	Mean value below guideline	n					normal	normal	y	42.2	Vanadium
Zinc	BPG5	300	21	46.0	120.0	76.0	0	Mean value below guideline	y					normal	normal	y	84.1	Zinc

C4SL	Category 4 Screening Level
S4UL	Suitable for Use Level as published by LQM/CIEH
SGV	Soil Guideline Value as published by the Environment Agency 2009
GAC	Generic Assessment Criterion as published by LQM and CIEH
SSV	Soil Screening Value as derived by Soiltechnics
ATK	Soil Screening Value derived by Atkins
NGV	No Guideline Value
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.	7

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Summary of petroleum hydrocarbon test results

BTEX (Red highlights indicate exceedance of guideline value)

Indicator	unit	S4UL	Concentration		
			TP101	TP108	TP125
			0.90	0.50	0.50
Benzene	mg/kg	0.33	< 0.001	< 0.001	< 0.001
Toluene	mg/kg	610	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/kg	350	< 0.001	< 0.001	< 0.001
o-Xylene	mg/kg	250	< 0.001	< 0.001	< 0.001
m,p-Xylene	mg/kg	230	< 0.001	< 0.001	< 0.001

Hydrocarbon banding (Red highlights indicate exceedance of GAC value)

Fraction	unit	S4UL	Concentration		
			TP101	TP108	TP125
			0.90	0.50	0.50
Aliphatic					
EC 5 - 6	mg/kg	30	< 0.010	< 0.010	< 0.010
EC >6 - 8	mg/kg	73	< 0.010	< 0.010	< 0.010
EC >8 - 10	mg/kg	19	< 0.10	< 0.10	< 0.10
EC >10 - 12	mg/kg	93	< 0.10	< 0.10	< 0.10
EC >12 - 16	mg/kg	740	< 0.10	< 0.10	< 0.10
EC >16 - 35	mg/kg	45000	< 0.10	< 0.10	30
EC >35 - 44	mg/kg	45000	< 0.10	< 0.10	2.3
Aromatic					
EC 5 - 7 (benzene)	mg/kg	65	< 0.010	< 0.010	< 0.010
EC >7 - 8 (toluene)	mg/kg	120	< 0.010	< 0.010	< 0.010
EC >8 - 10	mg/kg	27	< 0.10	< 0.10	< 0.10
EC >10 - 12	mg/kg	69	< 0.10	< 0.10	< 0.10
EC >12 - 16	mg/kg	140	< 0.10	< 0.10	< 0.10
EC >16 - 21	mg/kg	250	< 0.10	< 0.10	< 0.10
EC >21 - 35	mg/kg	890	< 0.10	< 0.10	14
EC >35 - 44	mg/kg	890	< 0.10	< 0.10	1.4

Notes

S4UL Suitable for Use Level as published by LQM/CIEH

Title	Table number
Comparison of measured concentrations of petroleum hydrocarbons with guideline values.	8

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Summary of leachate test results

Receptor	**Groundwater**		
Water type	**Freshwater**		
Fish type	**Cyprinid**		
Water hardness	50-100	mg/l	**(Based on information presented on the Drinking Water Inspectorate website)**

Contaminant	Guideline value (ug/l)	Guideline source	Location	TP102	TP110	TP114	TP125
			Depth (m)	0.20	0.10	0.10	0.50
Inorganics (ug/l)							
Arsenic	50	EQS (f)		2.5	2.7	5.6	1.4
Boron	2000	EQS (f)		< 20	26.0	< 20	< 20
Cadmium	5	EQS (f)		0.1	0.3	0.2	< 0.080
Chromium	175	EQS (f)		2.4	4.5	6.6	< 1.0
Copper	6	EQS (f)		6.3	13.0	13.0	5.7
Lead	125	EQS (f)		6.8	11.0	10.0	1.2
Mercury	1	EQS (f)		< 0.50	< 0.50	< 0.50	< 0.50
Nickel	100	EQS (f)		1.9	4.3	4.2	< 1.0
Selenium[1]	10	UKDWS		< 1.0	< 1.0	< 1.0	< 1.0
Vanadium[2]	20	EQS (f)		6.4	7.6	18.0	2.4
Zinc	175	EQS (f)		5.3	17.0	18.0	1.9
Free Cyanide[1]	50	UKDWS		< 50	< 50	< 50	< 50
Nitrate as N	50000	UKDWS		6500	4800	2400	2000
Sulphate as SO4	400000	EQS(f)		10000	4200	2700	2400
PAH (ug/l)							
Benzo(a)pyrene[1,4]	0.01	UKDWS		< 0.10	< 0.10	< 0.10	< 0.10
Naphthalene[2]	10	EQS (f)		< 0.10	< 0.10	< 0.10	< 0.10
Sum of 4 PAH[1]	0.1	UKDWS		<0.1*	<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

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	Table number
Comparison of measured concentrations with guideline values for water receptors.	9

soiltechnics

Initial Conceptual Model

Current site use commercial/industrial
Proposed site use residential

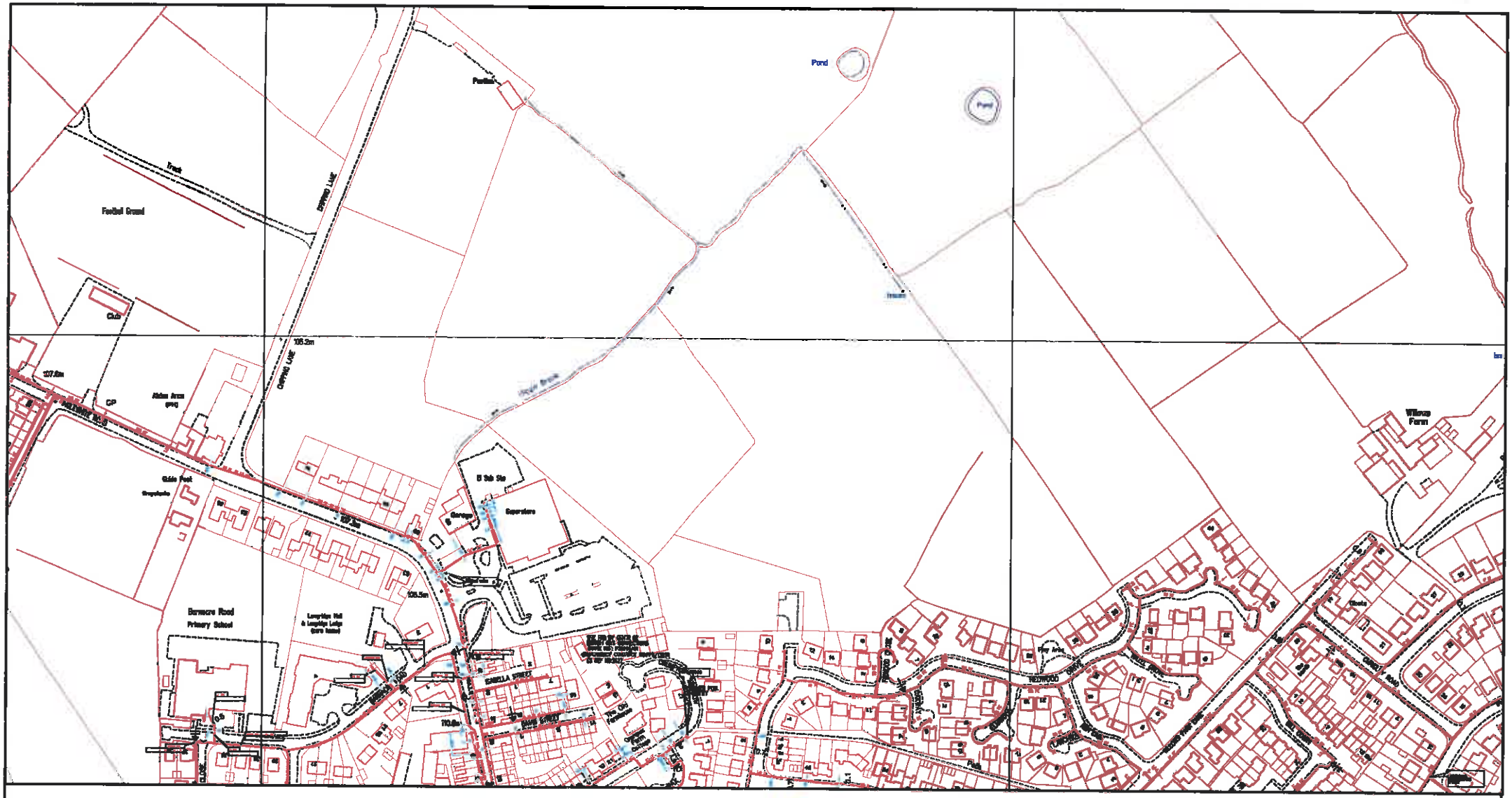
Source	Pathway									Receptor		Risk assessment to CIRIA C552	
	Humans						Vegetation	Water				Consequence of risk occurring via most likely pathway	Risk
	Ingestion of airborne dusts	Ingestion of soil	Ingestion of vegetables and soil attached to vegetables	Inhalation of airborne dusts	Inhalation of 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 soils	Saturation of contaminated soils by flood waters				
Soils													
Made Ground - Inorganic and organic contmainants	Likely	Likely	Unlikely	Likely	Likely	Likely	-				Current site users	Adult	Medium	Moderate
	Likely	Likely	Likely	Likely	Likely	Likely	-				Proposed site users	Child	Medium	Moderate
	Likely	Likely	Unlikely	Likely	Likely	Likely	-				Construction operatives	Adult	Medium	Moderate
	-	-	-	-	-	-	Likely				Vegetation (current and proposed)	-	Mild	Low/moderate
	-	-	-	-	-	-	-	Unlikely	Likely	Unlikely	Water (current and proposed)	-	Mild	Low/moderate

Final Conceptual Model

Current site use commercial/industrial
Proposed site use residential

Source	Pathway									Receptor		Risk assessment to CIRIA C552	
	Humans						Vegetation	Water				Consequence of risk occurring via most likely pathway	Risk
	Ingestion of airborne dusts	Ingestion of soil	Ingestion of vegetables and soil attached to vegetables	Inhalation of airborne 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 soils	Saturation of contaminated soils by flood waters				
Soils													
No measured exceedances of inorganic or organic contaminants	Likely	Likely	Unlikely	Likely	Likely	Likely	-				Current site users	Adult	Minor	Low
	Likely	Likely	Likely	Likely	Likely	Likely	-				Proposed site users	Child	Minor	Low
	Likely	Likely	Unlikely	Likely	Likely	Likely	-				Construction operatives	Adult	Minor	Low
	-	-	-	-	-	-	Likely				Vegetation (current and proposed)	-	Minor	Low
	-	-	-	-	-	-	-	Unlikely	Likely	Unlikely	Water (current and proposed)	-	Minor	Low
Leachate													
Elevated leachable concentrations of copper in Topsoil	-	-	-	-	-	-	-	Unlikely	Likely	Unlikely	Water (current and proposed)	-	Mild	Low-moderate

Title	Table number
Conceptual Site Model	1



SCALE: Not to scale	LP MAINS
USER ID: wignalp	MP MAINS
DATE: 06/11/2015	IP MAINS
EXTRACT DATE: 15/06/2015	UHP MAINS
MAP REF: SD6037	NHP MAINS
CENTRE: 360328, 437960	

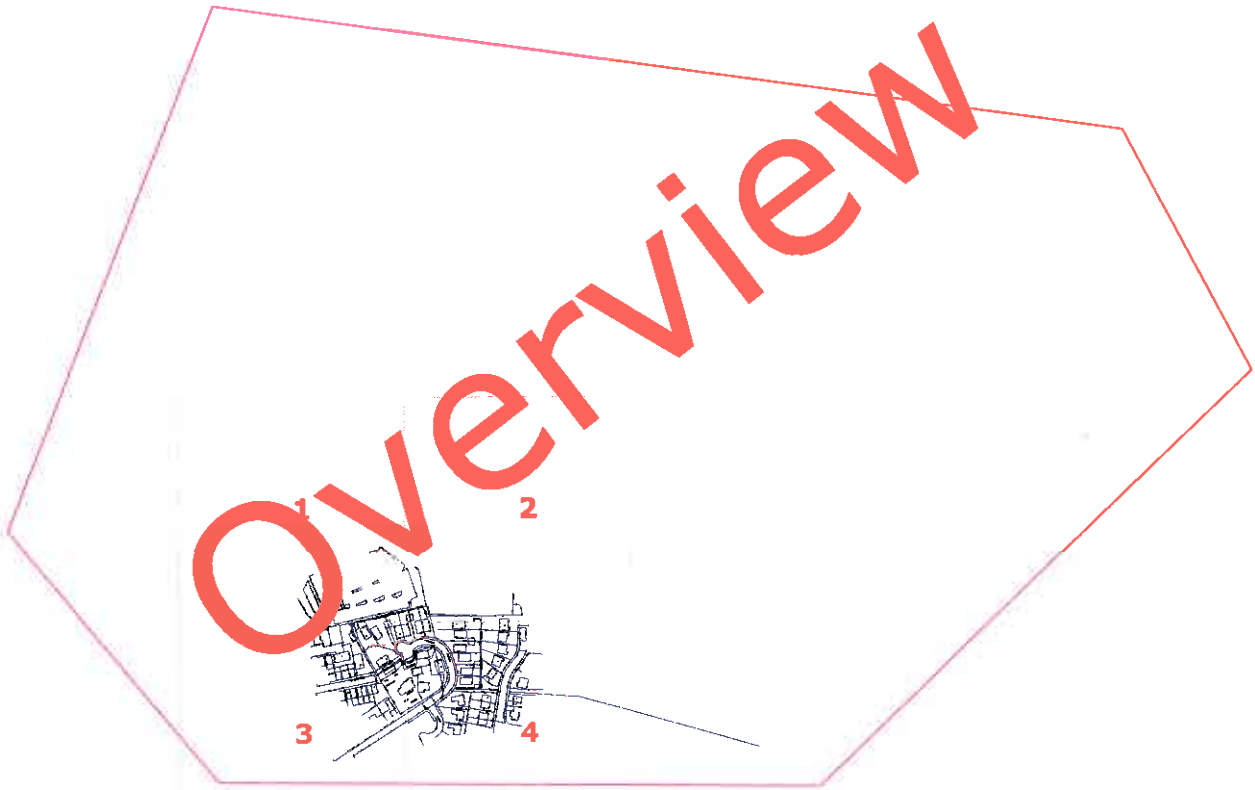
Some Examples of Plant Terms

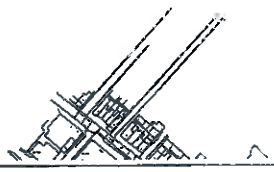
Valve | Decrease Cover | Syphon | Diameter Change | Material Change

This plan shows those pipes owned by National Grid Gas 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 National Grid Gas 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. Further information on all DR4s can be determined by calling the DR4 hotline on 01455 892426 (8am-5pm) A DR4 is where a potential error has been identified within the asset record and a process is currently underway to investigate and resolve the error as appropriate.

MAPS Viewer Version 5.6.7.0

Local Machine





Date Requested: 09/11/2015
Requested by: Paul Wignall
Job Reference: 7631462

Company: Barratt Homes Manchester
Your Scheme/Reference: Chippings Lane

Key for Mains & Service Pipework

Existing LP mains or services operating up to 75 millibar gauge

Existing MP mains or services operating between 75 millibar and 2 bar gauge

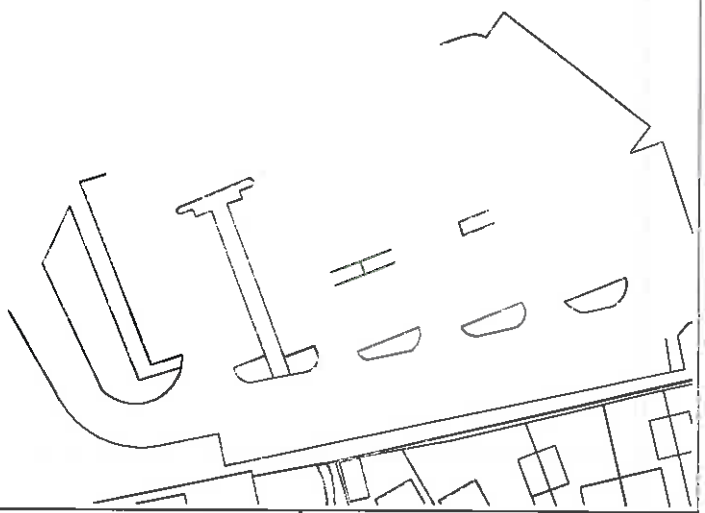
Existing IP mains or services operating between 2 bar and 7 bar gauge

ESP UTILITIES GROUP

ESP Utilities Group Ltd
Hazeldean, Station Road
Leatherhead,
Surrey, KT22 7AA
Phone: 01372 227560
Email: info@espipelines .com

Dig Sites:
Area Line
Approx scale on A4 paper: 1:1000
(excluding Overview map)

1



Date Requested: 09/11/2015
Requested by: Paul Wignall
Job Reference: 7631462

Company: Barratt Homes Manchester
Your Scheme/Reference: Chippings Lane

Key for Mains & Service Pipework

Existing LP mains or services operating up to 75 millibar gauge

Existing MP mains or services operating between 75 millibar and 2 bar gauge

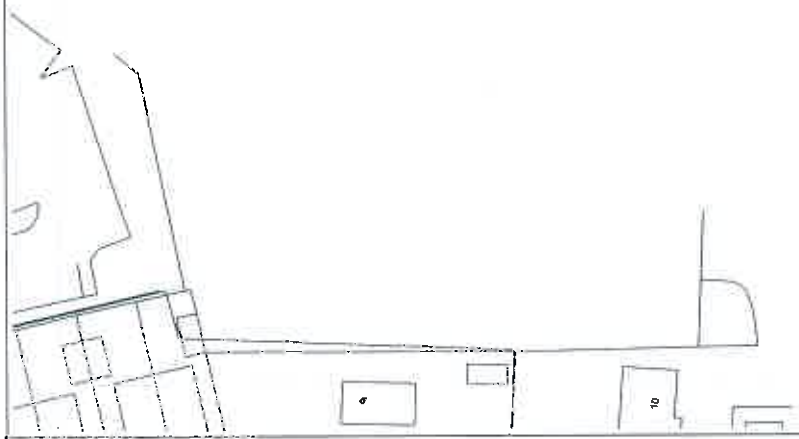
Existing IP mains or services operating between 2 bar and 7 bar gauge

ESP UTILITIES GROUP

ESP Utilities Group Ltd
Hazeldean, Station Road
Leatherhead,
Surrey, KT22 7AA
Phone: 01372 227560
Email: info@espipelines .com

Dig Sites:
Area Line
Approx scale on A4 paper: 1:1000
(excluding Overview map)

2



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Requested by: Paul Wignall
Job Reference: 7631462

Company: Barratt Homes Manchester
Your Scheme/Reference: Chippings Lane

Key for Mains & Service Pipework

Existing LP mains or services operating up to 75 millibar gauge

Existing MP mains or services operating between 75 millibar and 2 bar gauge

Existing IP mains or services operating between 2 bar and 7 bar gauge

ESP UTILITIES GROUP

ESP Utilities Group Ltd
Hazeldean, Station Road
Leatherhead,
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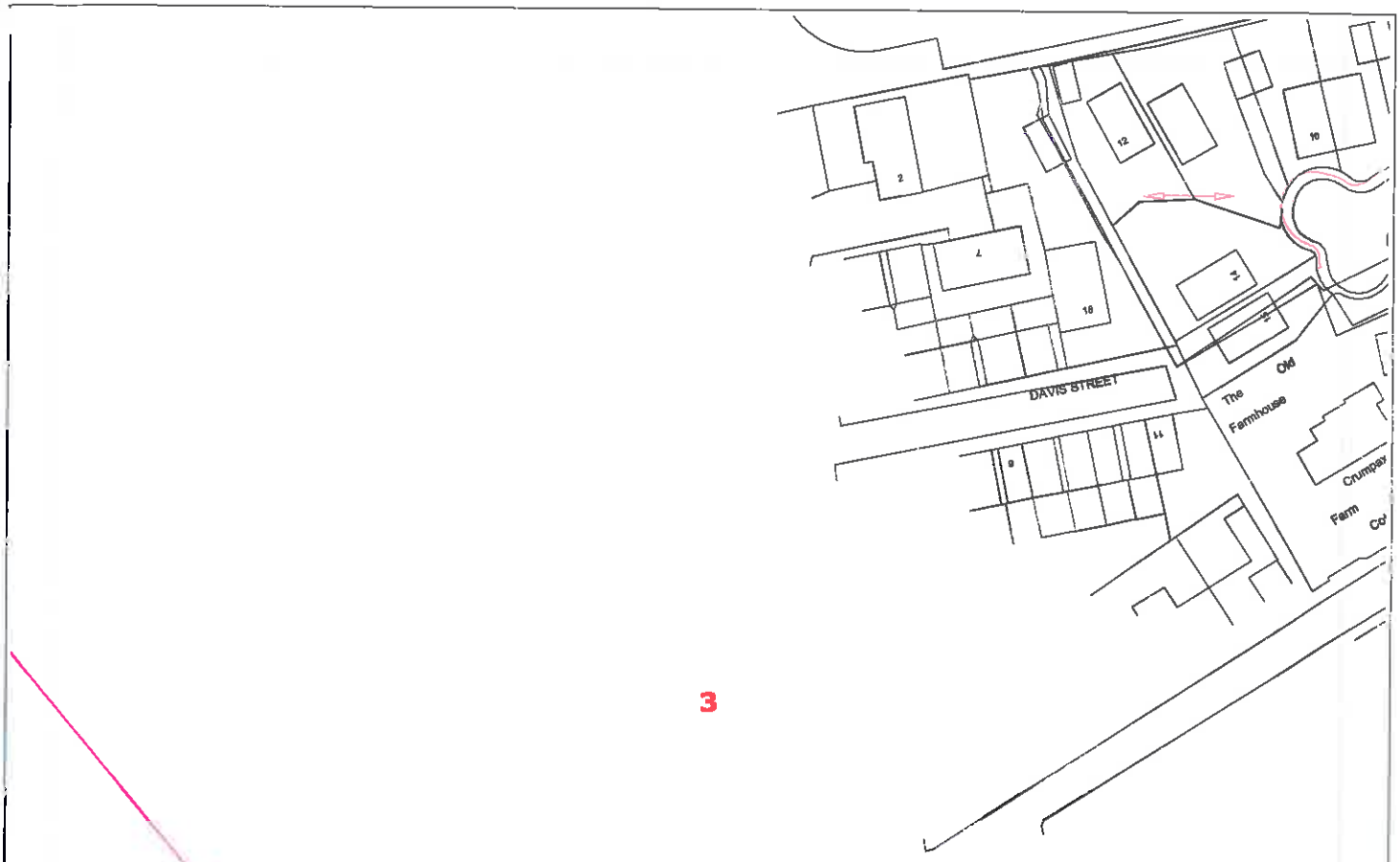
Dig Sites:
Area Line
Approx scale on A4 paper: 1:1000
(excluding Overview map)



Date Requested: 09/11/2015
Requested by: Paul Wignall
Job Reference: 7631462

Company: Barratt Homes Manchester
Your Scheme/Reference: Chippings Lane

Key for Mains & Service Pipework

Existing LP mains or services operating up to 75 millibar gauge

Existing MP mains or services operating between 75 millibar and 2 bar gauge

Existing IP mains or services operating between 2 bar and 7 bar gauge

ESP UTILITIES GROUP

ESP Utilities Group Ltd
Hazeldean, Station Road
Leatherhead,
Surrey, KT22 7AA
Phone: 01372 227560
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Job Reference: 7631462

Company: Barratt Homes Manchester
Your Scheme/Reference: Chippings Lane

Key for Mains & Service Pipework

Existing LP mains or services operating up to 75 millibar gauge

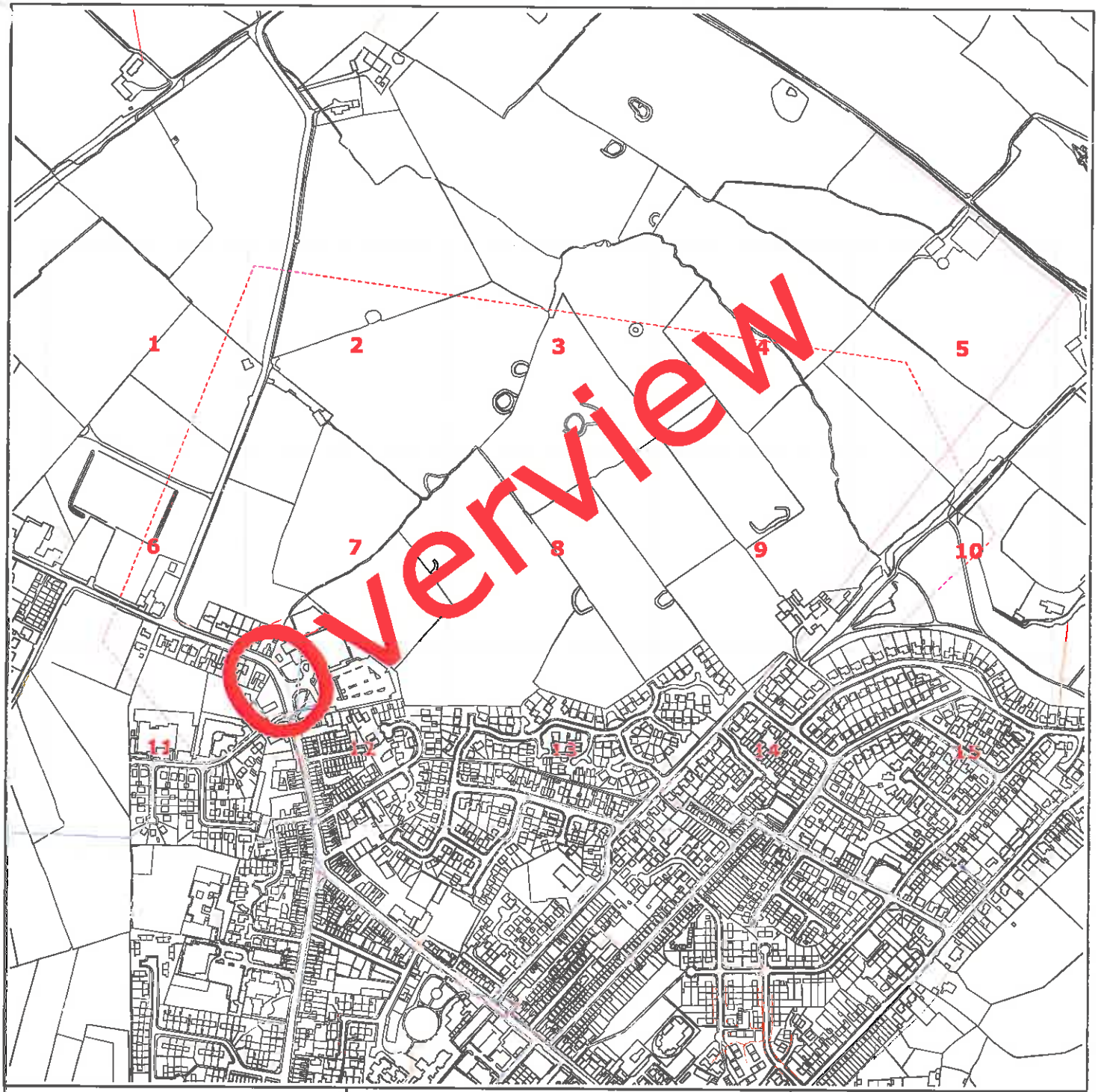
Existing MP mains or services operating between 75 millibar and 2 bar gauge

Existing IP mains or services operating between 2 bar and 7 bar gauge

ESP UTILITIES GROUP

ESP Utilities Group Ltd
Hazeldean, Station Road
Leatherhead,
Surrey, KT22 7AA
Phone: 01372 227560
Email: info@espipelines .com

Dig Sites:
Area Line
Approx scale on A4 paper: 1:1000
(excluding Overview map)



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Dig Sites:
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electricity north west

Data Management
Electricity North West
Linley House
Dickinson Street
Manchester, M1 4LF
Phone: 0800 195 4141
Email: planrequest@enwl.co.uk

Scales on A4 paper:
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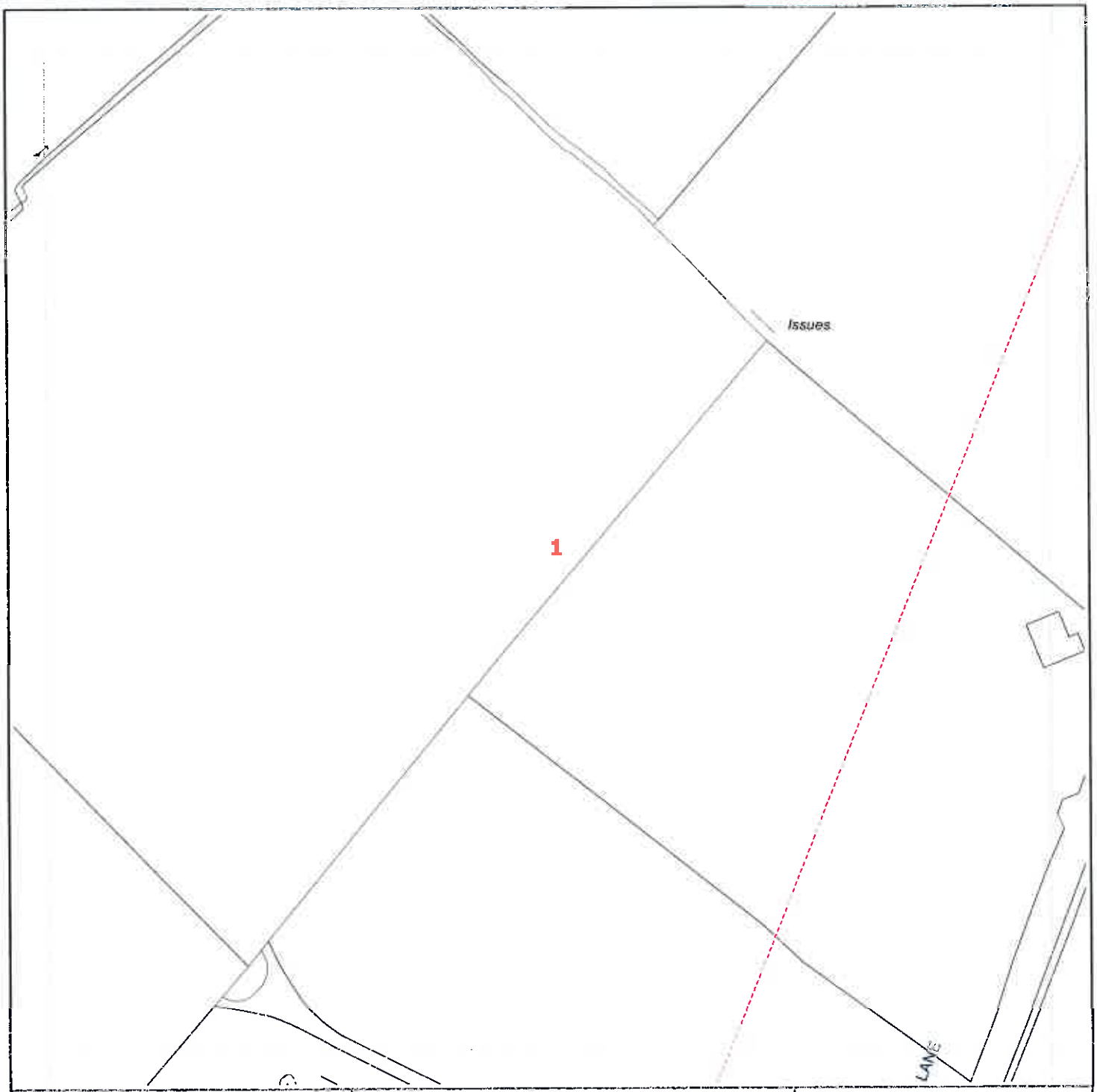

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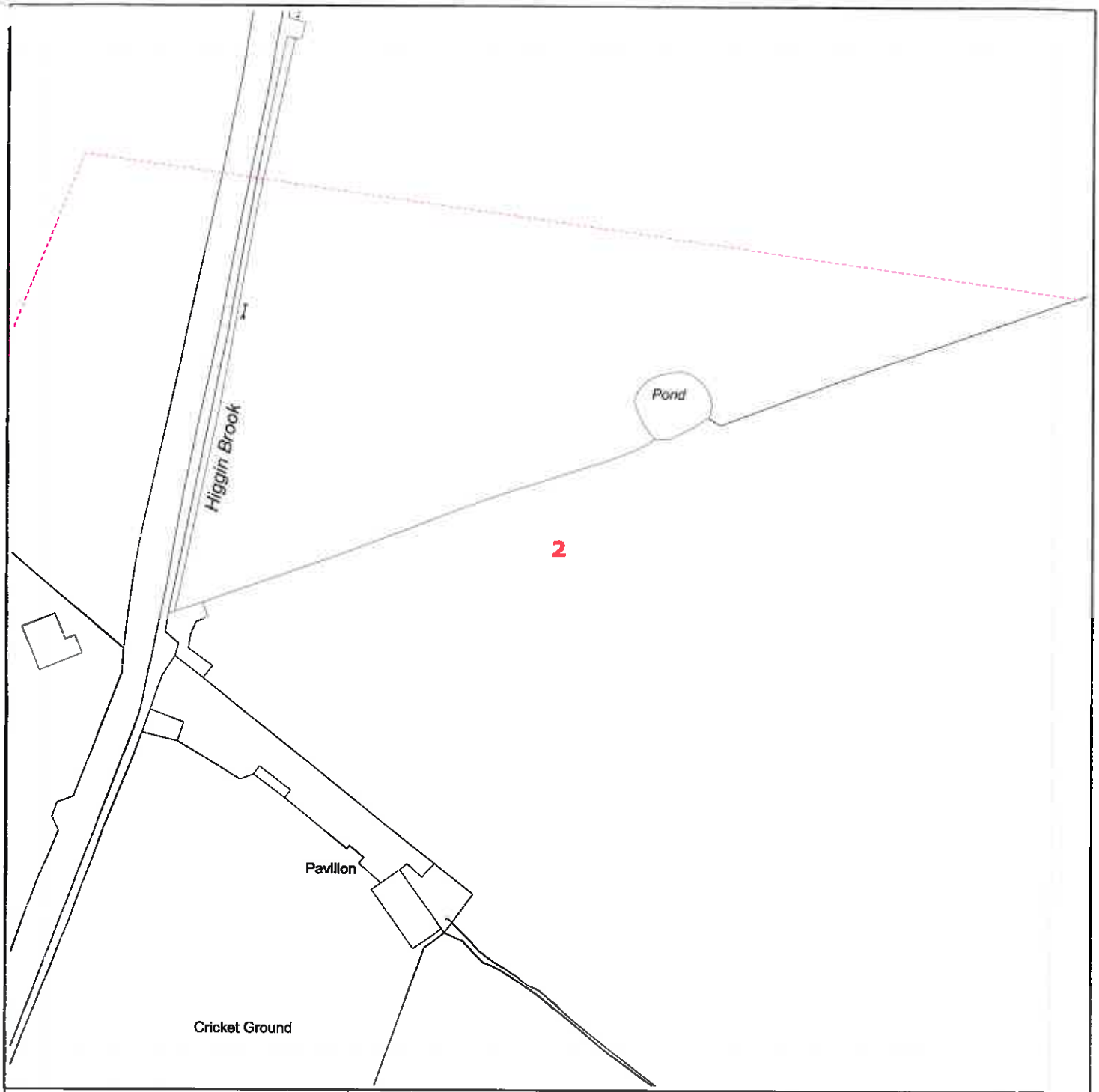

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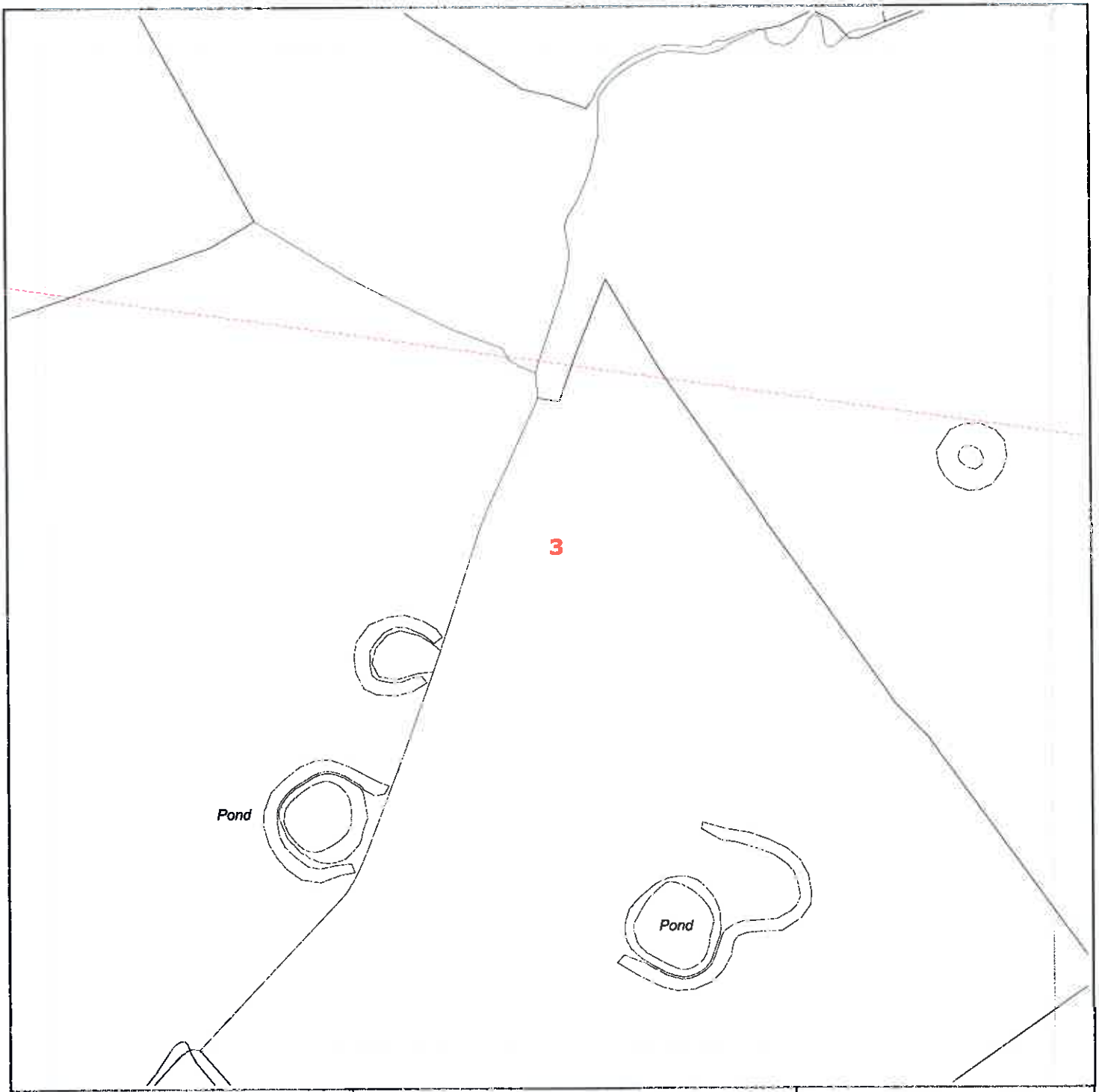

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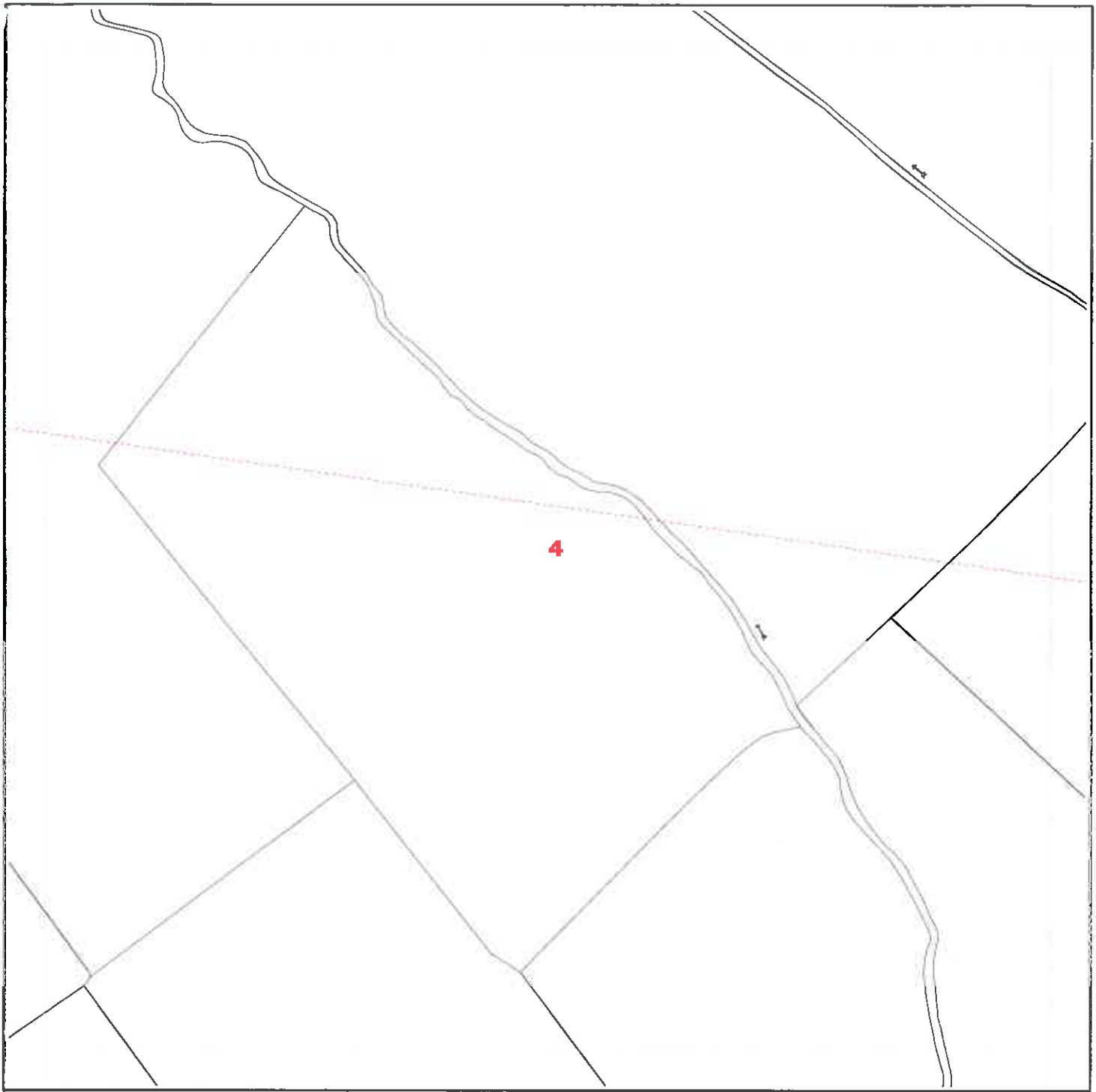

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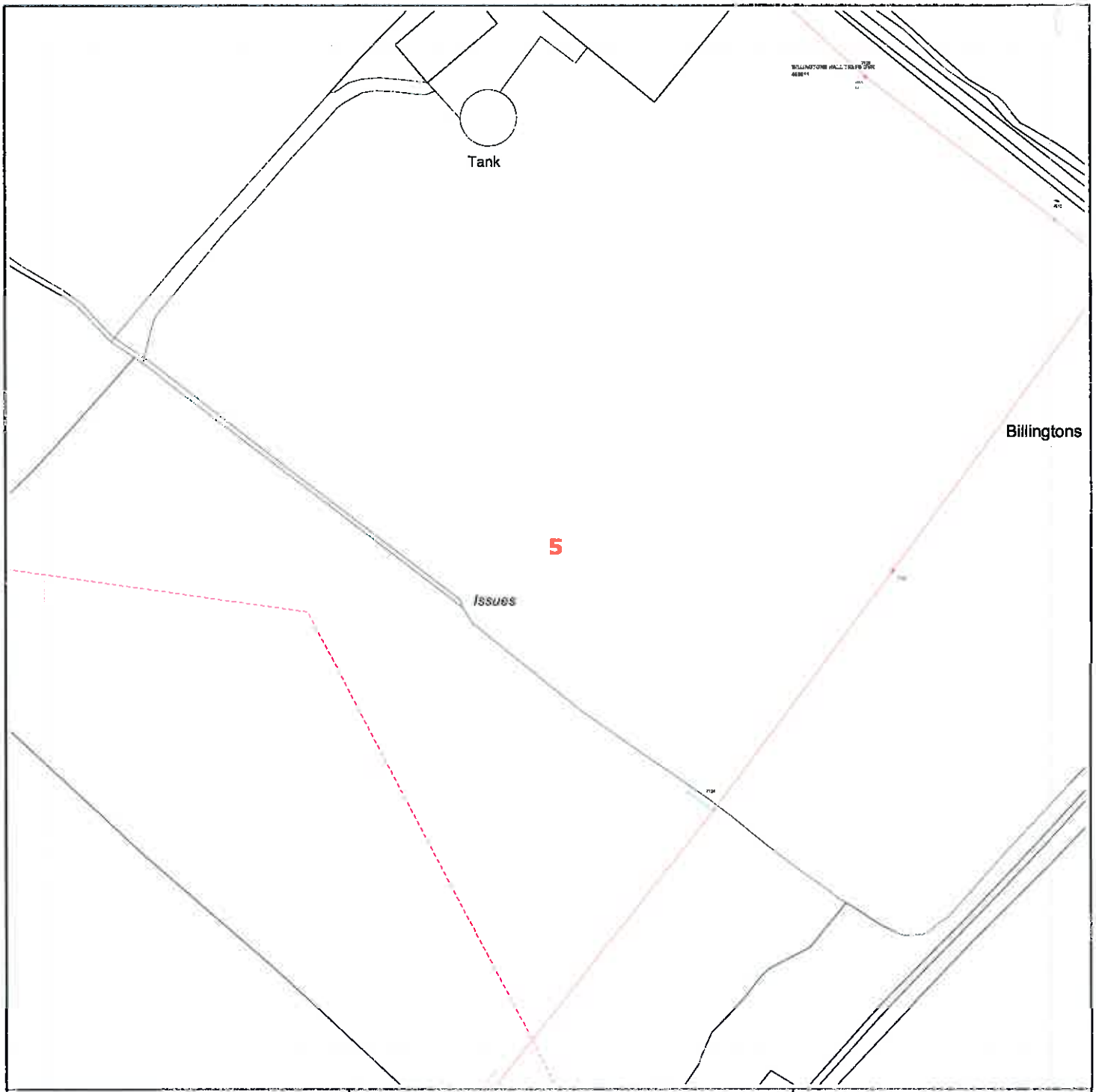

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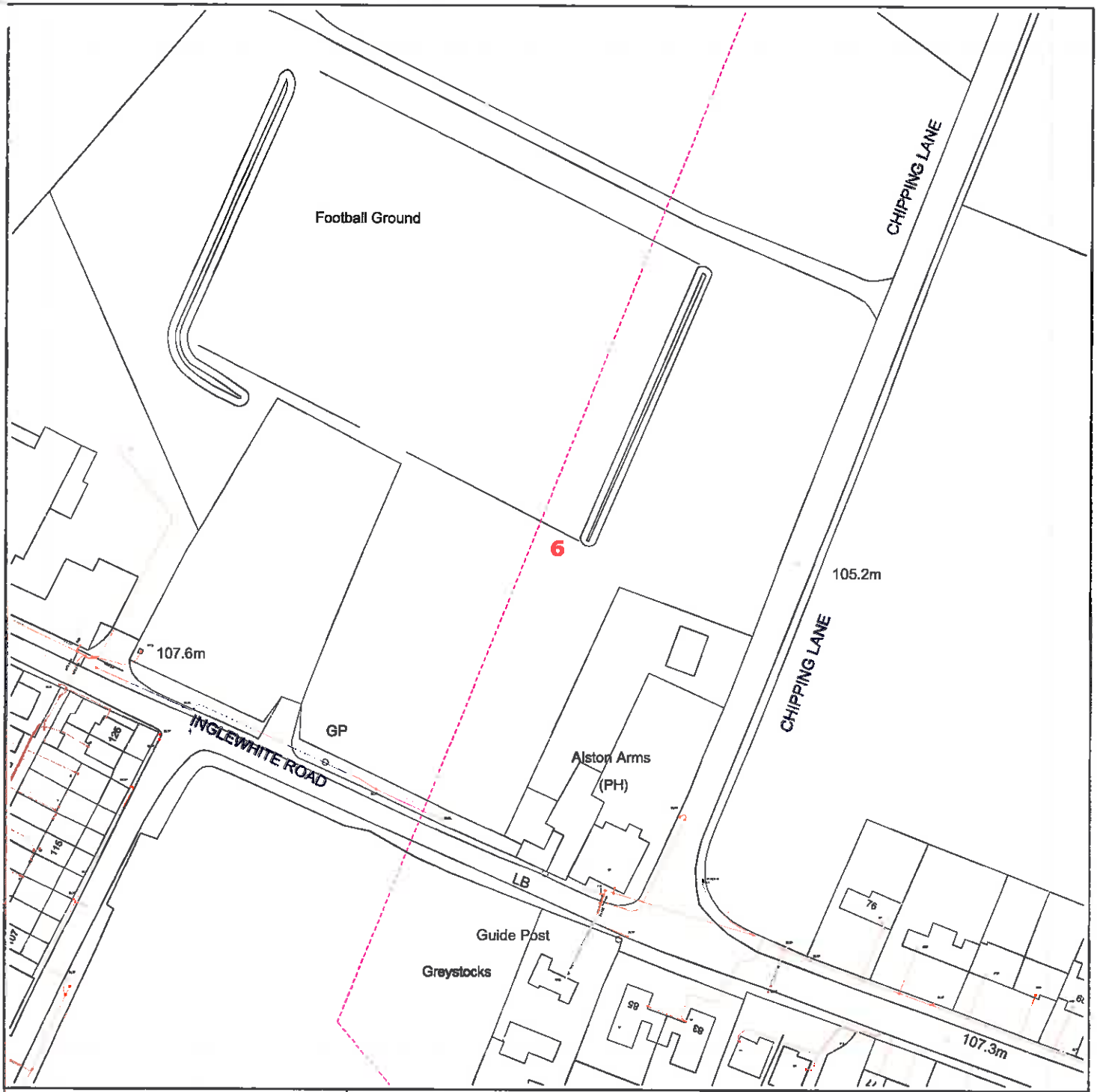

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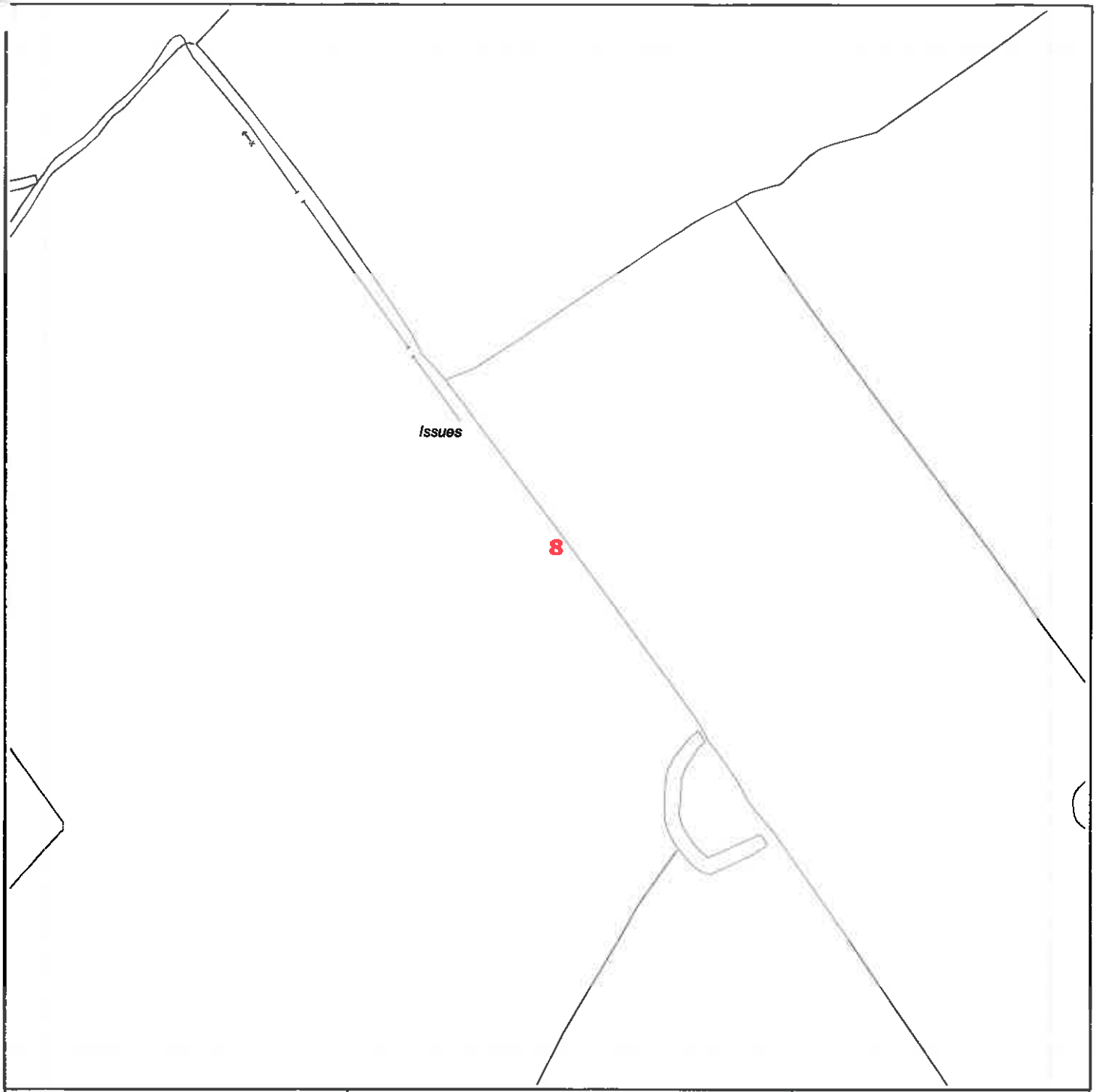

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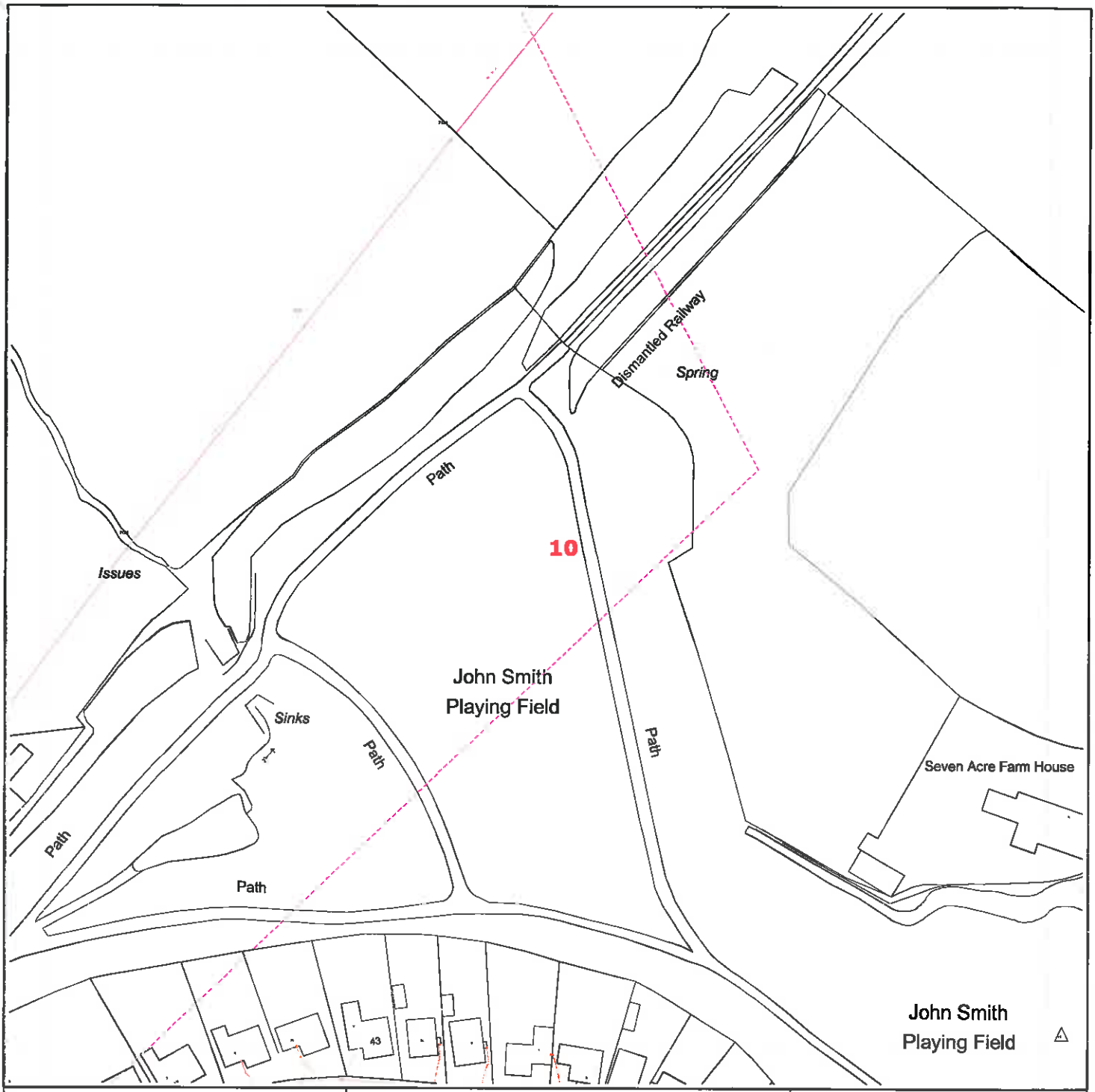

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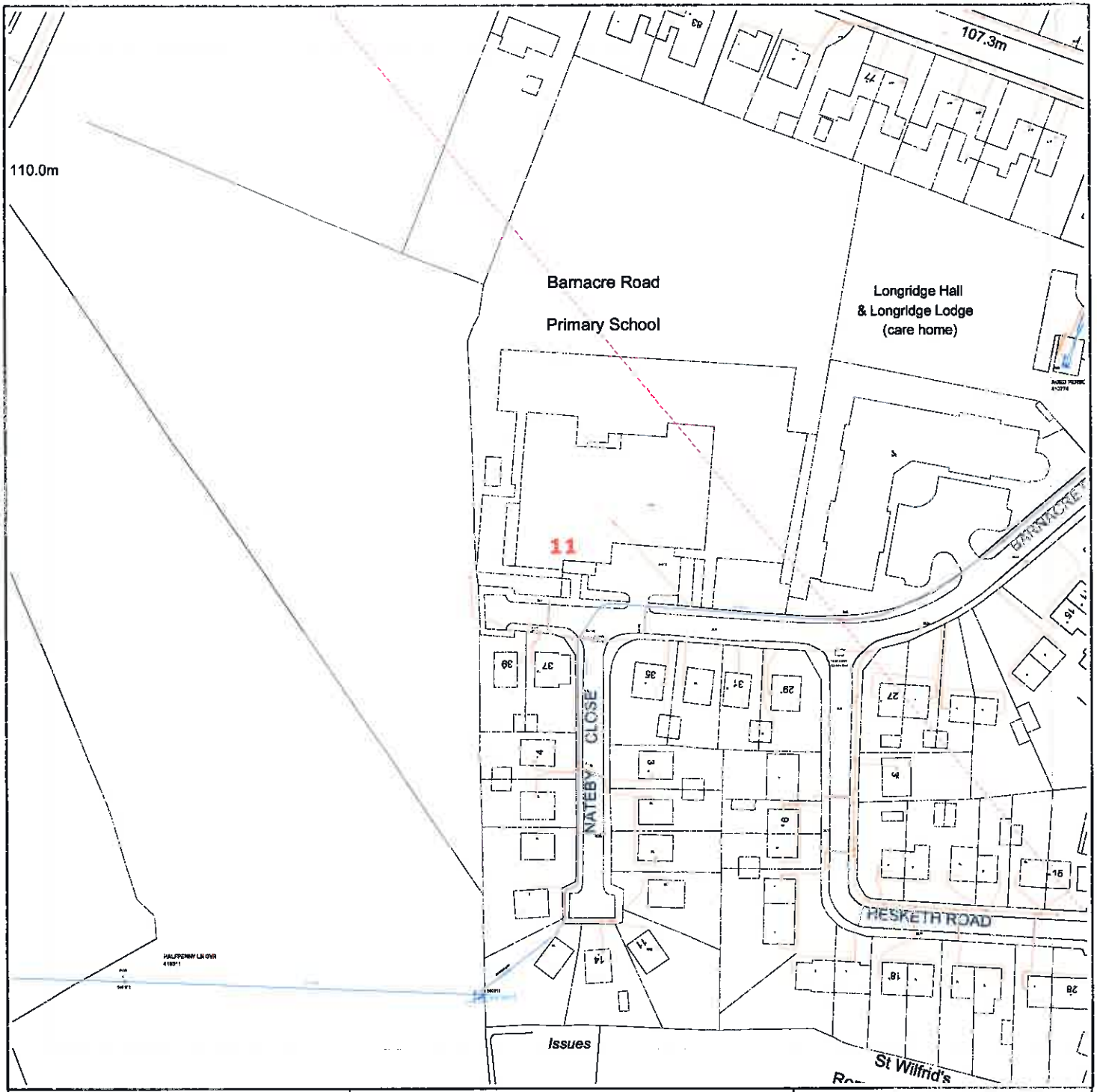

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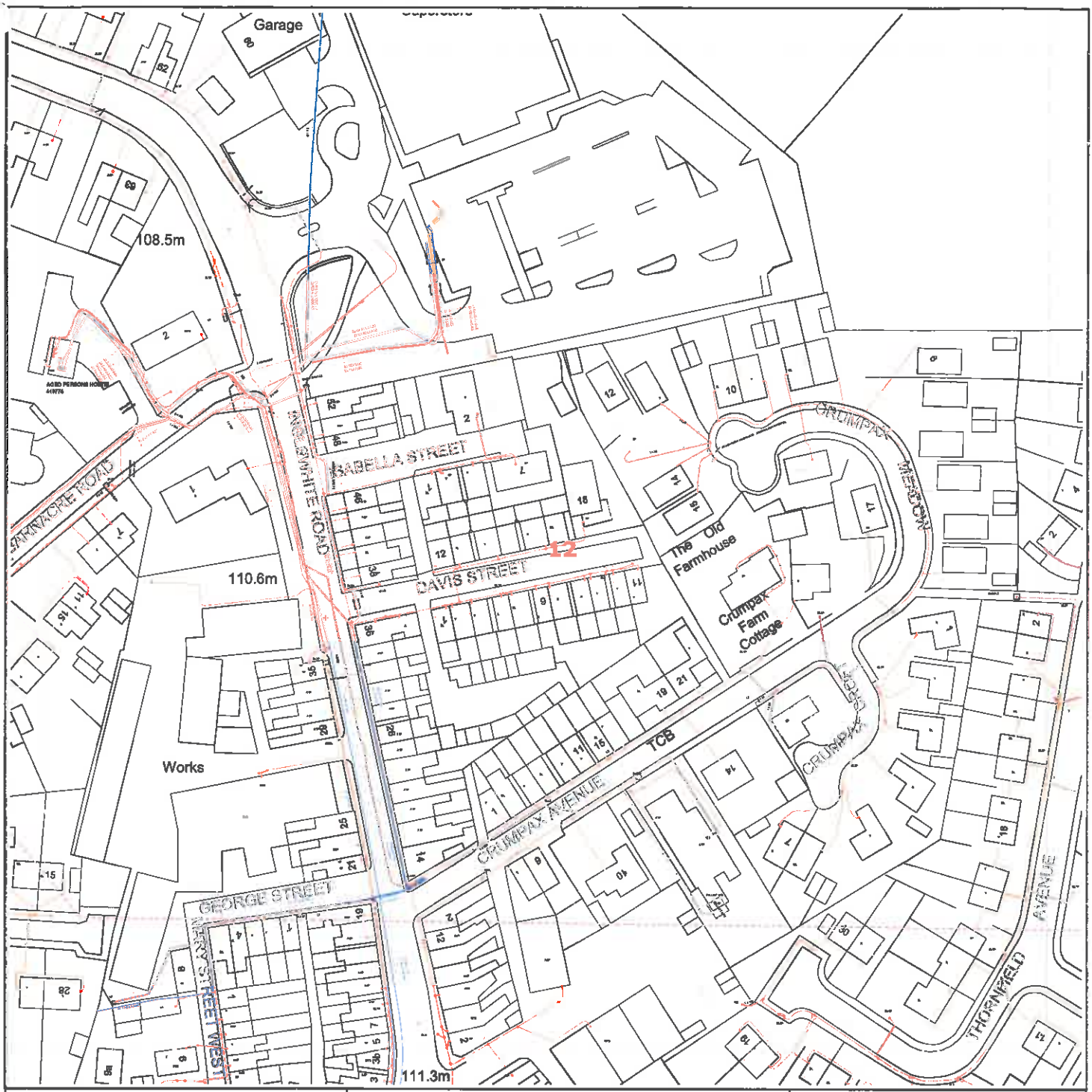

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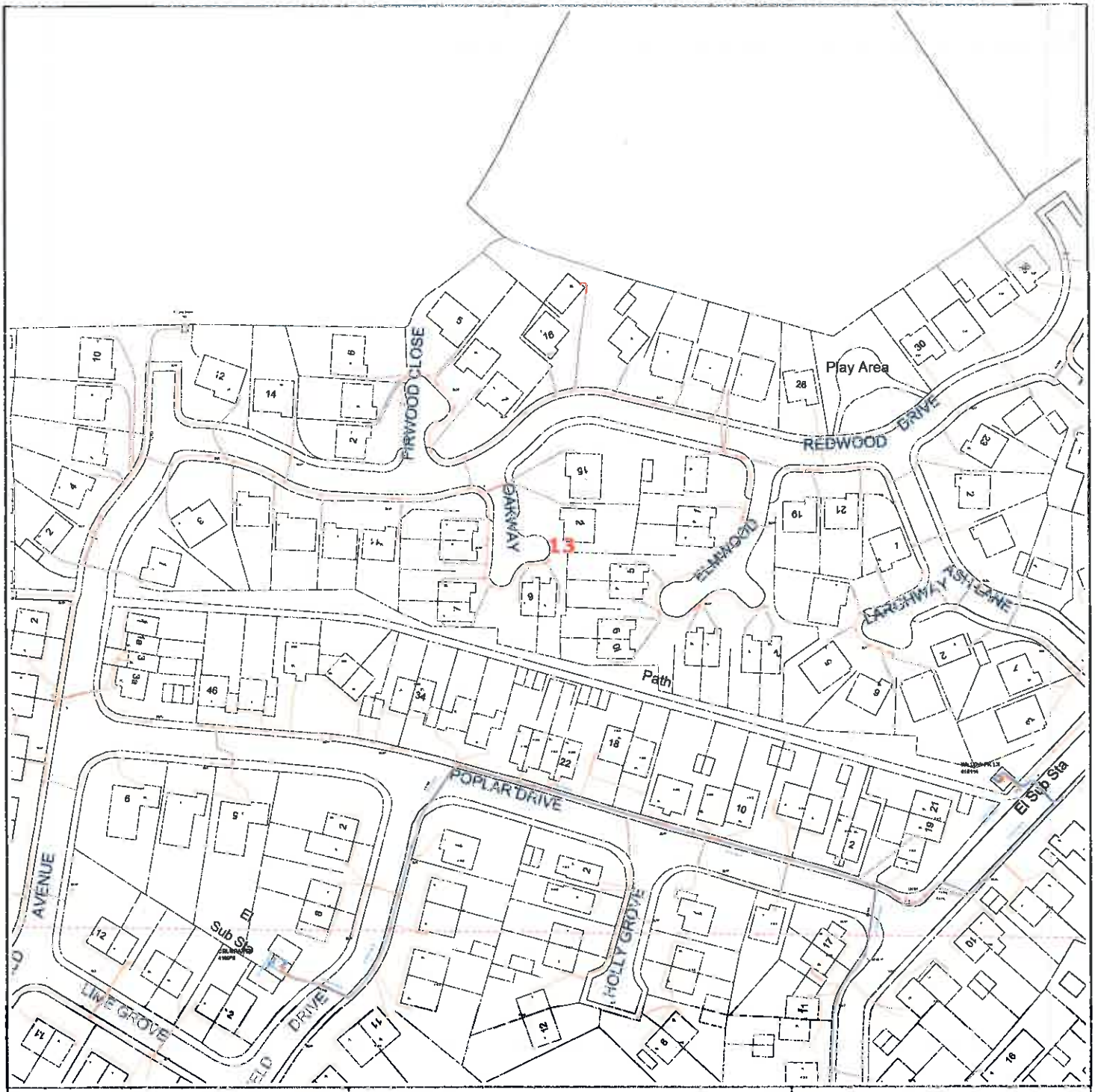

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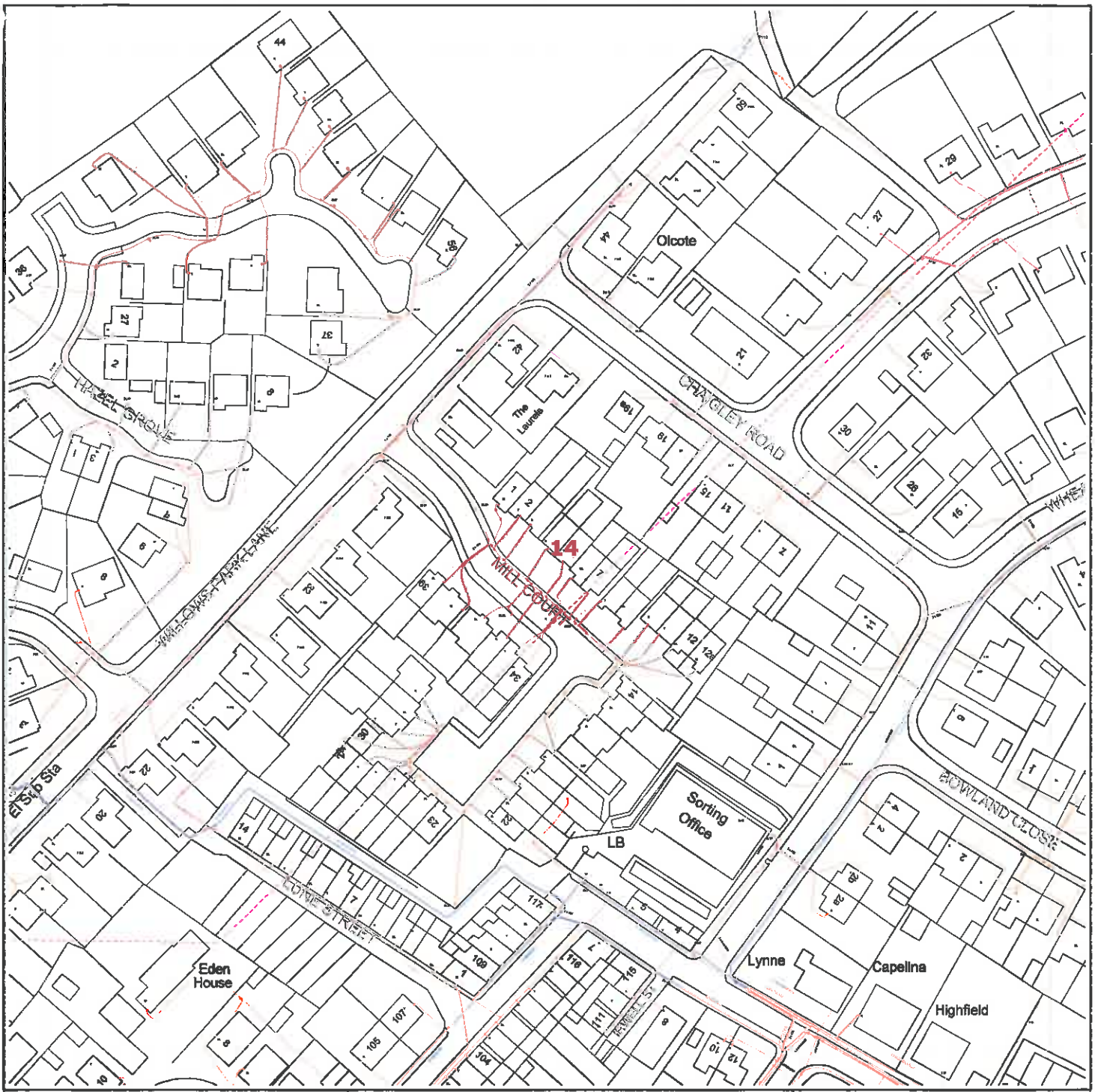

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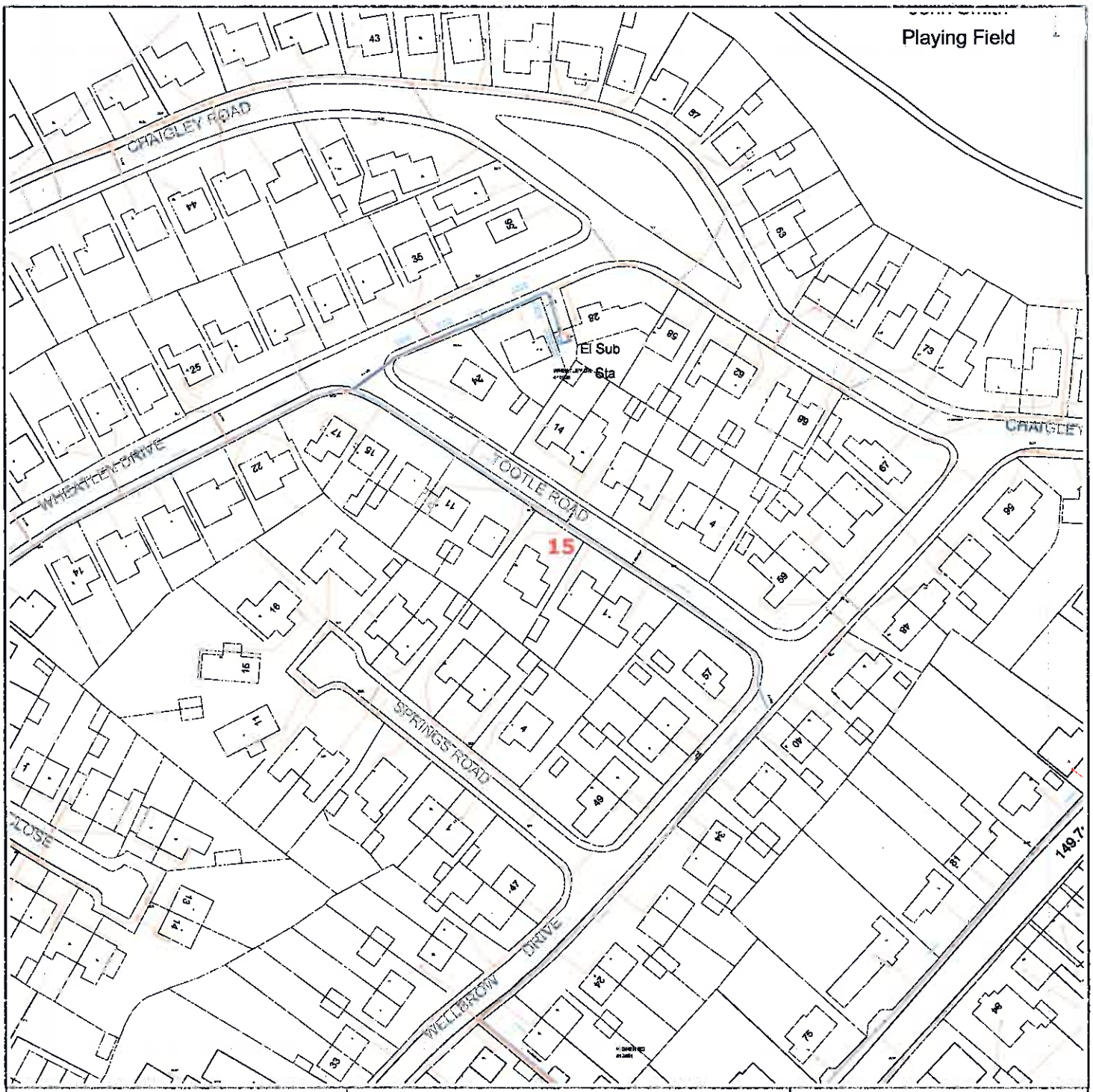

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Date Requested: 09/11/2015
Job Reference: 7631462
Your Scheme/Reference: Chippings Lane

Dig Sites:

Area Line

Operating Voltage	Colour Code	Line Colour
132kV	Black	
33kV	Green	
22kV-25kV	Yellow	
11kV	Red	
6kV-6.6kV	Blue	
1kV-6kV	Violet	
LV	Orange	
Unknown Voltage	Brown	

electricity north west

Data Management
Electricity North West
Linley House
Dickinson Street
Manchester, M1 4LF
Phone: 0800 195 4141
Email: planrequest@enwl.co.uk

Scales on A4 paper:
1:1250 Area dig site
1:250 Line dig site

United Utilites Water Limited
Property Searches
Ground Floor Grasmere House
Lingley Mere Business Park
Great Sankey
Warrington
WA5 3LP
DX 715568 Warrington
Telephone 0370 751 0101

Property.searches@uuplc.co.uk

Your Ref: LONGRIDGE - FREDDIE
Our Ref: 14/ 1154561
Date: 10/11/2015

Barratt Manchester

4 Brindley Road, City Park
Manchester

M16 9HQ

FAO:

Dear Sirs

Location: LONGRIDGE CRICKET CLUB CHIPPING LANE LONGRIDGE PRESTON PR3 2NA

I acknowledge with thanks your request dated 09/11/15 for information on the location of our services.

Please find enclosed plans showing the approximate position of our apparatus known to be in the vicinity of this site. The enclosed plans are being provided to you subject to the United Utilities Terms and Conditions - Wastewater & Water Distribution Plans which are shown overleaf.

I also attach United Utilities' General Condition and Information sheets regarding United Utilities wastewater network and water distribution apparatus, which details contact numbers for additional services (i.e. new supplies, connections, diversions) which we are unable to deal with at this office. You should ensure that the Condition and Information sheets are made available to anyone carrying out any works which may affect our apparatus.

I trust the above meets with you requirements and look forward to hearing from you should you need anything further.

If you have any queries regarding this matter please telephone us on 0370 7510101.

Yours Faithfully,

S McManus

Sue McManus
Operations Manager
Property Searches

United Utilities Water Limited
Registered in England & Wales No. 2366678
Registered Office: Haweswater House,
Lingley Mere Business Park, Lingley Green Avenue,
Great Sankey, Warrington, WA5 3LP

TERMS AND CONDITIONS - WASTERWATER & WATER DISTRIBUTION PLANS

These provisions apply to the public sewerage, water distribution and telemetry systems (including sewers which are the subject of an agreement under Section 104 of the Water Industry Act 1991 and mains installed in accordance with the agreement for the self construction of water mains) (UUWL apparatus) of United Utilities Water Limited "(UUWL)".

TERMS AND CONDITIONS:

1. This Map and any information supplied with it is issued subject to the provisions contained below, to the exclusion of all others and no party relies upon any representation, warranty, collateral contract or other assurance of any person (whether party to this agreement or not) that is not set out in this agreement or the documents referred to in it.

2. This Map and any information supplied with it is provided for general guidance only and no representation, undertaking or warranty as to its accuracy, completeness or being up to date is given or implied.

3. In particular, the position and depth of any UUWL apparatus shown on the Map are approximate only. UUWL strongly recommends that a comprehensive survey is undertaken in addition to reviewing this Map to determine and ensure the precise location of any UUWL apparatus. The exact location, positions and depths should be obtained by excavation trial holes.

4. The location and position of private drains, private sewers and service pipes to properties are not normally shown on this Map but their presence must be anticipated and accounted for and you are strongly advised to carry out your own further enquiries and investigations in order to locate the same.

5. The position and depth of UUWL apparatus is subject to change and therefore this Map is issued subject to any removal or change in location of the same. The onus is entirely upon you to confirm whether any changes to the Map have been made subsequent to issue and prior to any works being carried out.

6. This Map and any information shown on it or provided with it must not be relied upon in the event of any development, construction or other works (including but not limited to any excavations) in the vicinity of UUWL apparatus or for the purpose of determining the suitability of a point of connection to the sewerage or other distribution systems.

7. No person or legal entity, including any company shall be relieved from any liability howsoever and whensoever arising for any damage caused to UUWL apparatus by reason of the actual position and/or depths of UUWL apparatus being different from those shown on the Map and any information supplied with it.

8. If any provision contained herein is or becomes legally invalid or unenforceable, it will be taken to be severed from the remaining provisions which shall be unaffected and continue in full force and affect.

9. This agreement shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts, save that nothing will prevent UUWL from bringing proceedings in any other competent jurisdiction, whether concurrently or otherwise.

OS Sheet No: SD6037NE

Scale: 1: 1250 Date: 10/11/2015

Printed By: Property Searches

LEGEND

MANHOLE FUNCTION
FO Foul
SW Surface Water
CO Combined
OV Overflow

SEWER SHAPE
CI Circular
EG Egg
OV Oval
FT Flat Top
RE Rectangular
SQ Square
TR Trapezoidal
AR Arch
CA Barrel
HO Horseshoe
UX Unspecified

SEWER MATERIAL
AC Asbestos Cement
BR Brick
PE Polyethylene
RP Reinforced Plastic Matrix
CO Concrete
CSB Concrete Segment Bolted
CSU Concrete Segment Unbolted
CC Concrete Box Culverted
PSC Plastic/Steel Composite
GRC Glass Reinforced Concrete
GRP Glass Reinforced Plastic
DI Ductile Iron
PVC Polyvinyl Chloride
CI Cast Iron
SI Spun Iron
ST Steel
VC Vitrified Clay
PP Polypropylene
PF Pitch Fibre
MAC Masonry, Coursed
MAR Masonry, Random
U Unspecified

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The actual positions may be different from those shown on the plan and private pipes, sewers or drains may not be recorded.
United Utilities will not accept any liability for any damage caused by the actual positions being different from those shown.

OS Sheet No: SD6037NE

Scale: 1: 1250 Date: 10/11/2015

158 Nodes

Sheet 1 of 1

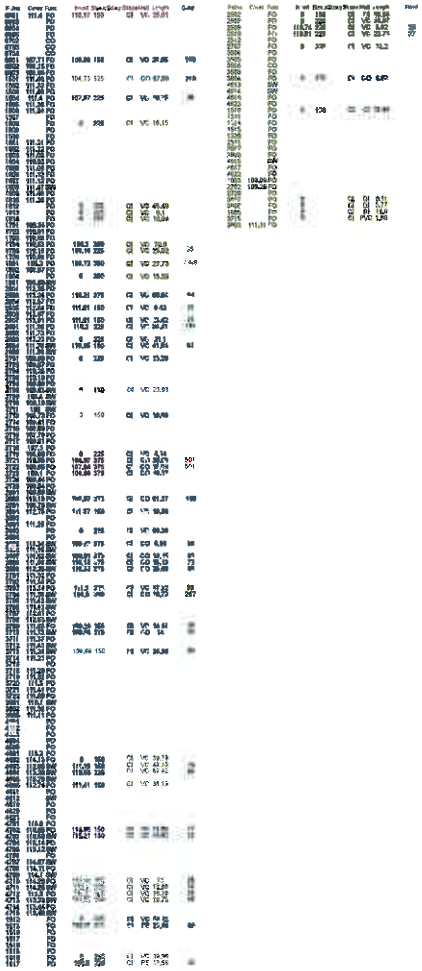
United Utilities

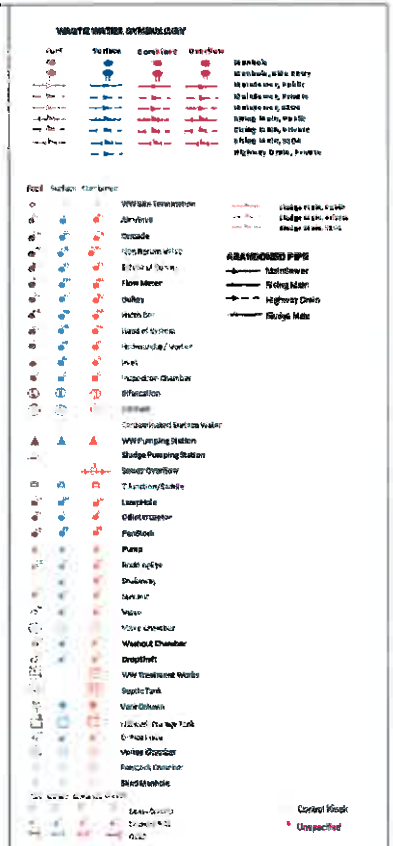
SEWER RECORDS

OS Sheet No: SD6037NW

Scale: 1: 1250 Date: 10/11/2015

Printed By: Property Searches





OS Sheet No: SD6037NW

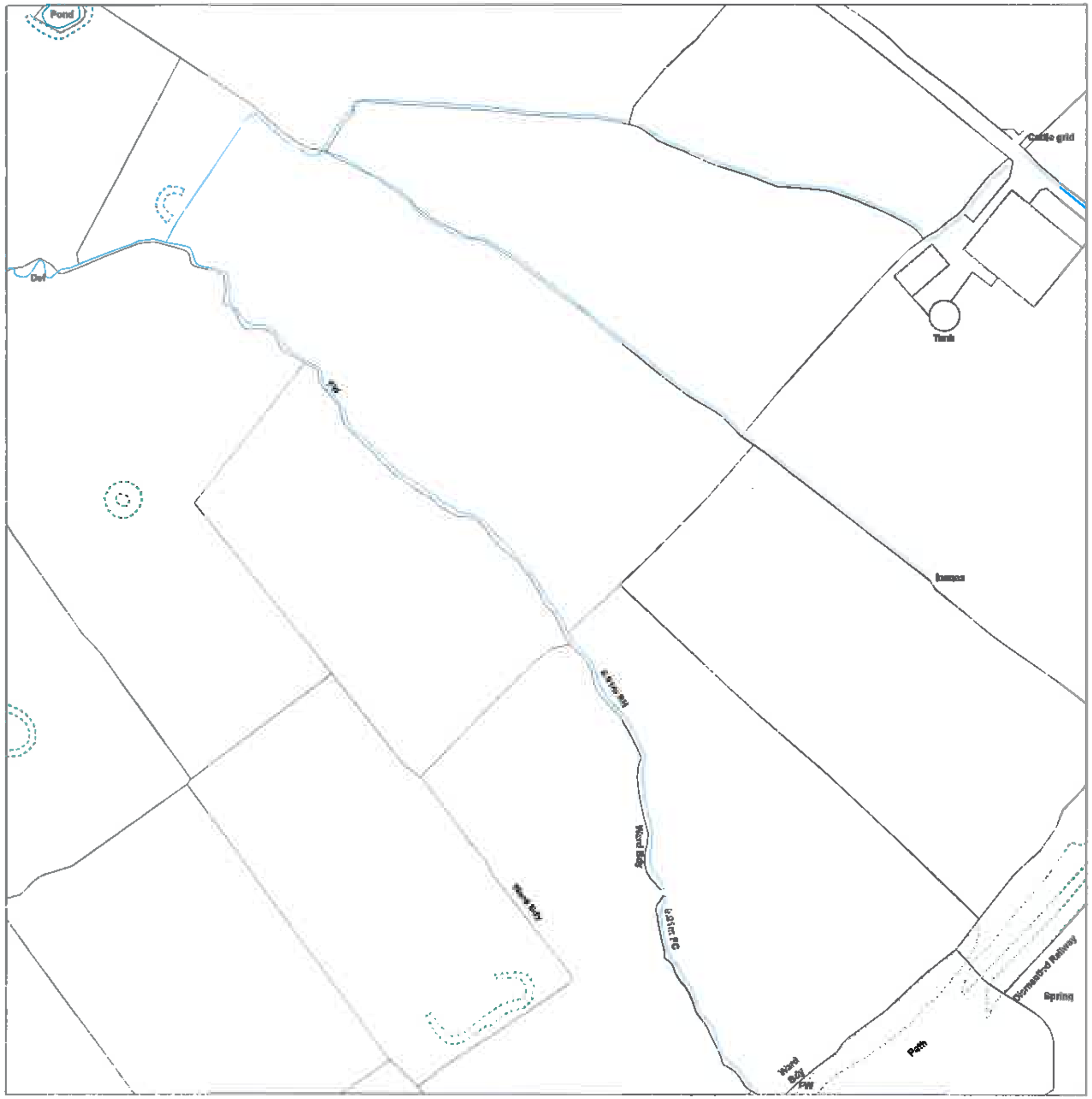
Scale: 1: 1250 Date: 10/11/2015

184 Nodes

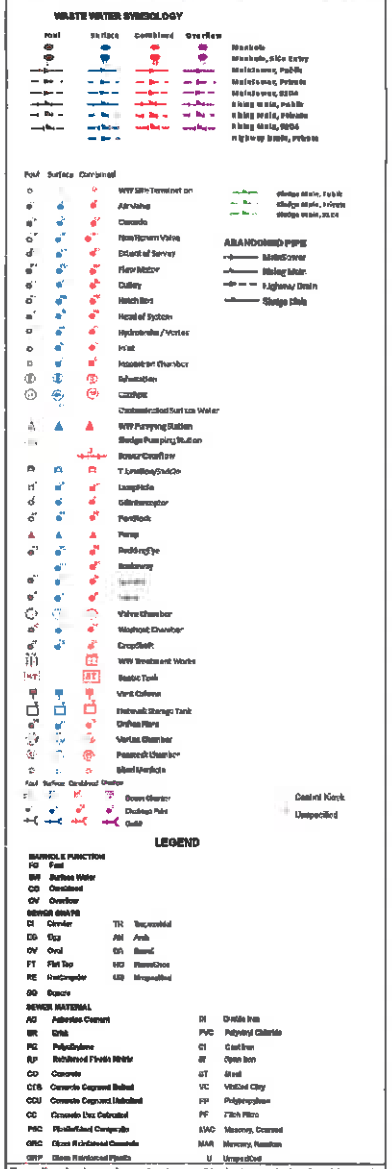
Sheet 1 of 1

United Utilities

SEWER RECORDS



Printed By: Property Searches



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OS Sheet No: SD6038SE
Scale: 1: 1250 Date: 10/11/2015
0 Nodes
Sheet 1 of 1

United Utilities
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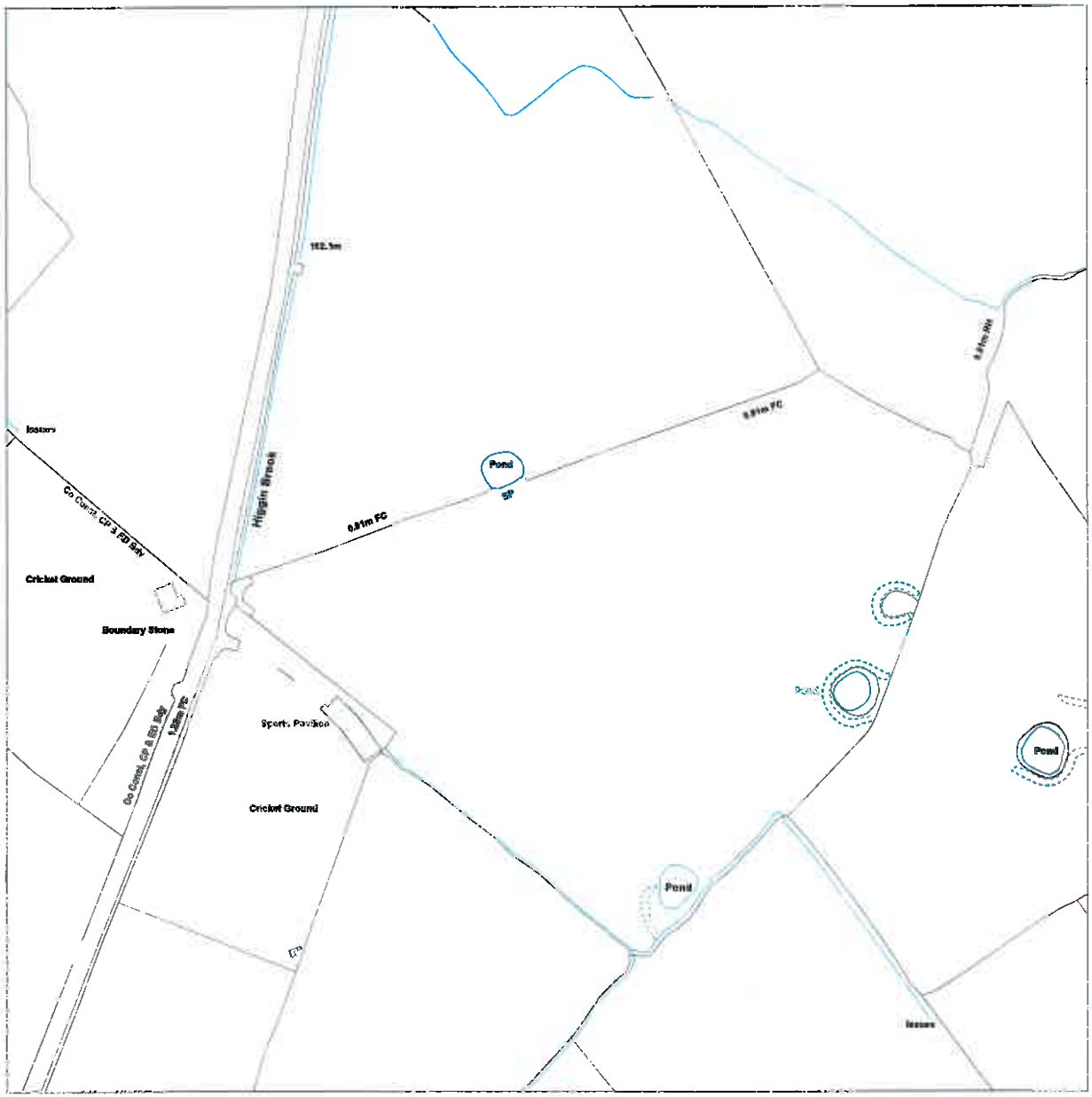
SEWER RECORDS



OS Sheet No: SD6038SW

Scale: 1: 1250 Date: 10/11/2015

Printed By: Property Searches

LEGEND

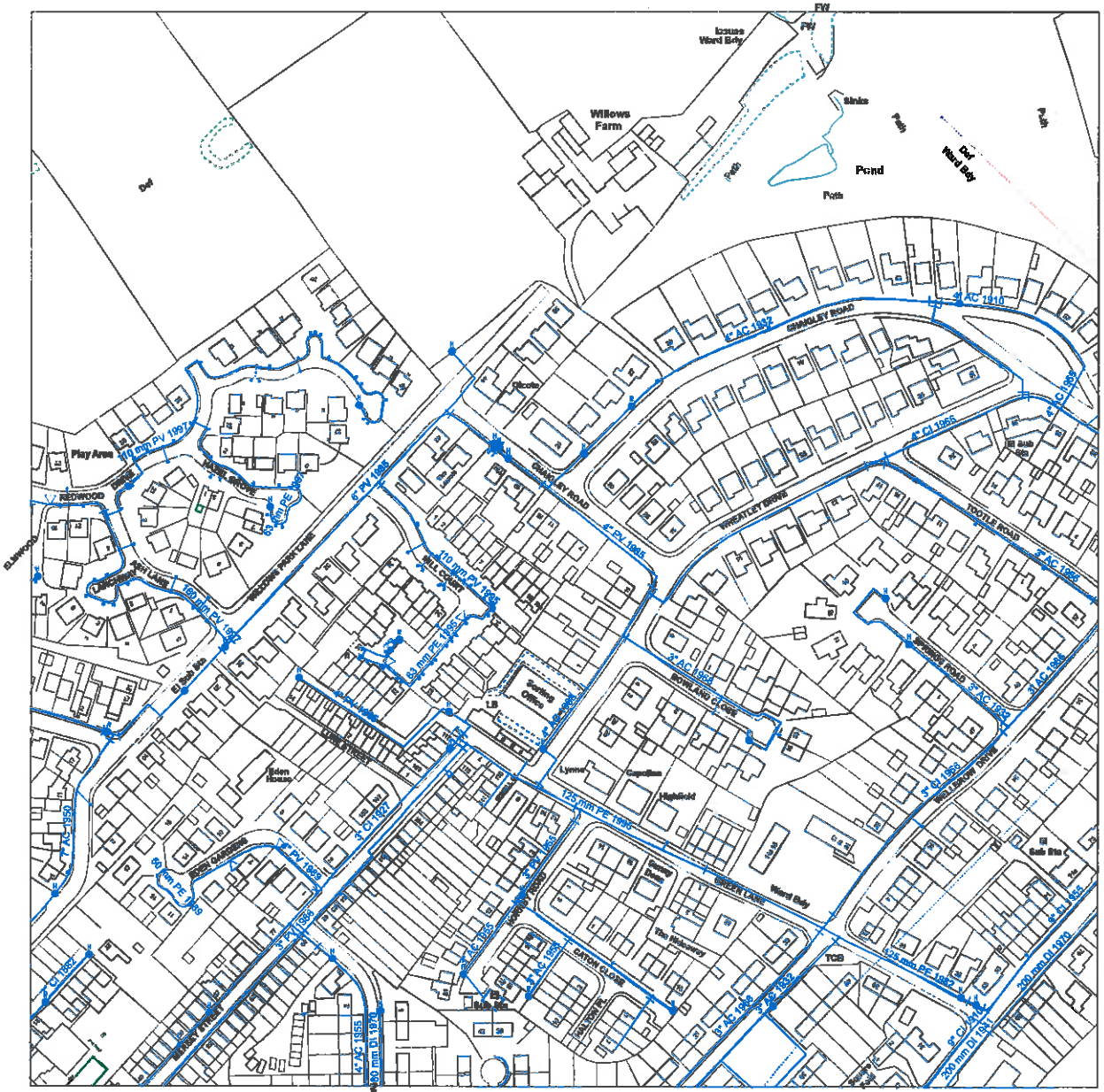
OS Sheet No: SD6038SW

Scale: 1: 1250 Date: 10/11/2015

0 Node

Sheet 1 of 1

SEWER RECORDS



OS Sheet No: SD6037NE

Scale: 1: 1250 Date: 10/11/2015

Printed By: Property Searches

Legend

FIPE WORK

Live	Proposed	
		Trunk Main - PressurisedMain
		Raw Water Aqueduct - PressurisedMain
		Raw Water Aqueduct - GravityMain
		LDTM Raw Water Distribution - PressurisedMain
		LDTM Raw Water Distribution - GravityMain
		LDTM Treated Water Distribution - PressurisedMain
		LDTM Treated Water Distribution - GravityMain
		Private Pipe - Lateral Line
		Distribution Main - PressurisedMain
		Comms Pipe - LateralLine
		Concessionary Service - LateralLine

ABANDONED PIPE

- Trunk Main
- Raw Water Aqueduct
- LDTM Raw Water Distribution
- LDTM Treated Water Distribution
- Private Pipe
- Distribution Main
- Comms Pipe
- Concessionary Service

NODES/ FURNITURE

Live	Proposed	
		End Cap
		CC Valve
		AC Valve
		Air Valve
		Sluice Valve
		Non Return Valve
		Pressure Management Valve
		Change of Char
		Anode
		Chlorination Point
		De Chlorination Point
		Bore Hole
		Inlet Point
		Bulk Supply Point
FH		Fire Hydrant
		Hydrant
PFH		Private Fire Hydrant
		Pump
		Site Termination
		Service Start
		Service End
PM		Process Meter
		Stop Tap
		Monitor Location
		Strainer Point
		Access Point
		Hatch Box
		IP Point
RM		Route Marker
SPT	SPT	Sampling Station
LB		Logger Box

Property Types

Live	Proposed	
		Condition Report
		Pipe Bridges
		Tunnels (non carrier)
		Pumping Station
		Water Treatment Works
		Private Treatment Works
		Valve House
		Water Tower
		Service Reservoir
		Supply Reservoir
		Abstraction Point
		Domestic meter
		Commercial meter
		Telemetry Outstation

Material Types

AC ASBESTOS CEMENT	OT OTHERS
CI CAST IRON	PB LEAD
CU COPPER	PV uPVC
CO CONCRETE	SI SPUN IRON
DI DUCTILE IRON	ST STEEL
GI GALVANISED IRON	UN UNKNOWN
GR GREY IRON	PE POLYETHYLENE

Lining Types

CL CEMENT LINING	ERL EPOXY RESIN
TB TAR OR BITUMEN	

Insertion Types

DD DIE DRAWN	MO MOLING
DR DIRECTIONAL DRILLING	PI PIPELINE
	SL SLIP LINED

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OS Sheet No: SD6037NE

Scale: 1: 1250 Date: 10/11/2015

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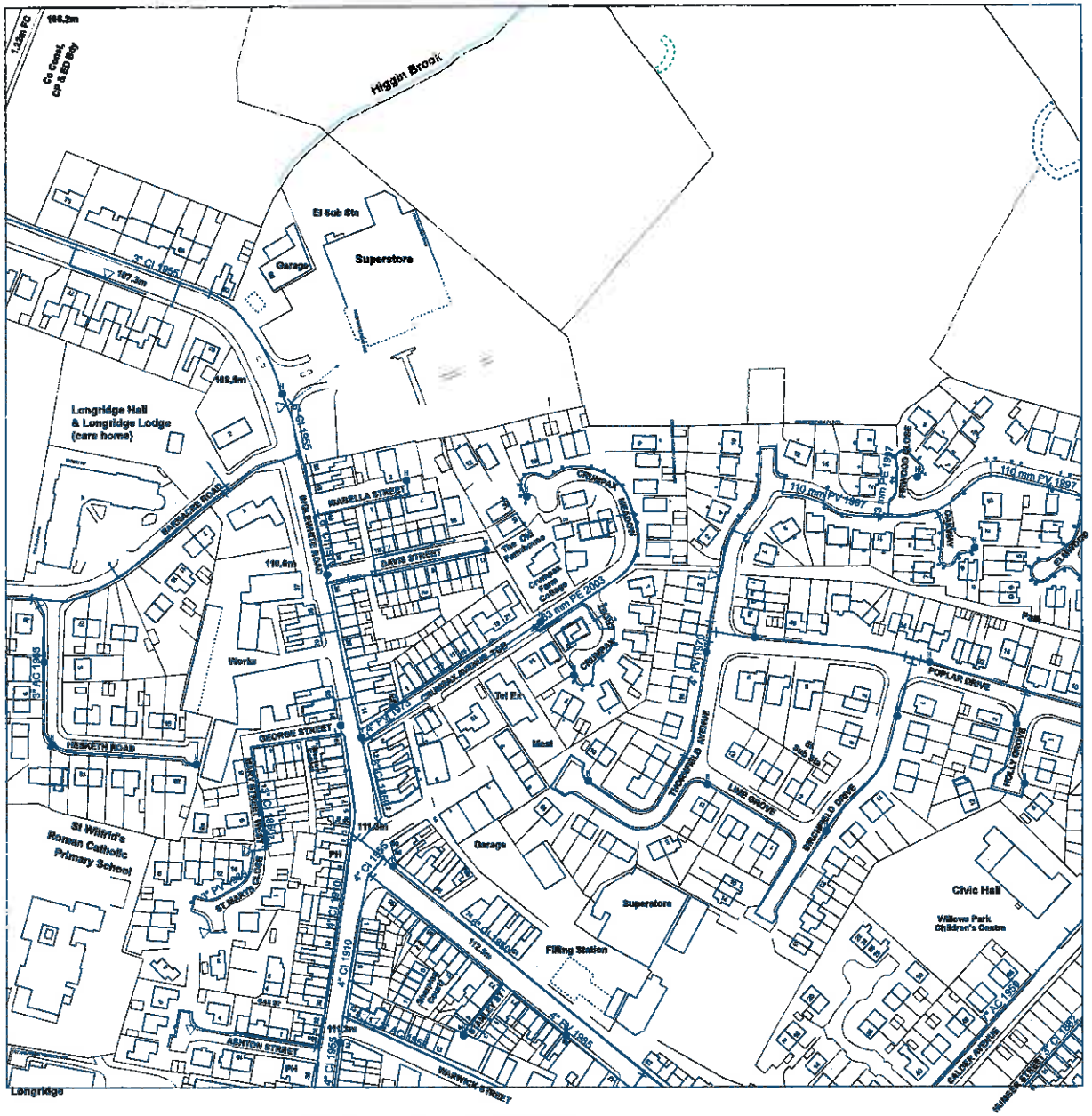
WATER MAIN RECORDS



OS Sheet No: SD6037NW

Scale: 1: 1250 Date: 10/11/2015

Printed By: Property Searches

Legend

PIPE WORK

Live / Proposed

- Trunk Main - Pressurised Main
- Raw Water Aqueduct - PressurisedMain
- Raw Water Aqueduct - GravityMain
- LDTM Raw Water Distribution - PressurisedMain
- LDTM Raw Water Distribution - GravityMain
- LDTM Treated Water Distribution - PressurisedMain
- LDTM Treated Water Distribution - GravityMain
- Private Pipe - LateralLine
- Distribution Main - PressurisedMain
- Comms Pipe - LateralLine
- Concessionary Service - LateralLine

ABANDONED PIPE

- Trunk Main
- Raw Water Aqueduct
- LDTM Raw Water Distribution
- LDTM Treated Water Distribution
- Private Pipe
- Distribution Main
- Comms Pipe
- Concessionary Service

NODES/ FURNITURE

Live / Proposed

- End Cap
- CC Valve
- AC Valve
- Air Valve
- Sluice Valve
- Non Return Valve
- Pressure Management Valve
- Change of Size
- Tundish
- Chlorination Point
- De Chlorination Point
- Bore Hole
- Inlet Point
- Bulk Supply Point
- Fire Hydrant
- Hydrant
- Private Fire Hydrant
- Pump
- Site Termination
- Service Start
- Service End
- Process Meter
- Stop Tap
- Monitor Location
- Strainer Point
- Access Point
- Hatch Box
- IP Point
- Private Meter
- Sampling Station
- Logger Box

Property Types

Live / Proposed

- Condition Report
- Pipe Bridges
- Tunnels (non carrier)
- Pumping Station
- Water Treatment Works
- Private Treatment Works
- Valve House
- Water Tower
- Service Reservoir
- Supply Reservoir
- Abstraction Point
- Domestic meter
- Commercial meter
- Telemetry Outstation

Material Types

AC	ASBESTOS CEMENT	OT	OTHERS
CI	CAST IRON	PB	LEAD
CU	COPPER	PV	uPVC
CO	CONCRETE	SI	SPUN IRON
DI	DUCTILE IRON	ST	STEEL
GI	GALVANISED IRON	UN	UNKNOWN
GR	GREY IRON	PE	POLYETHYLENE

Lining Types

CL	CEMENT LINING	ERL	EPOXY RESIN
TB	TAR OR BITUMEN		

Insertion Types

DD	DIE DRAWN	MO	MOLING
DR	DIRECTIONAL DRILLING	PI	PIPELINE
		SL	SLIP LINED

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Scale: 1: 1250 Date: 10/11/2015

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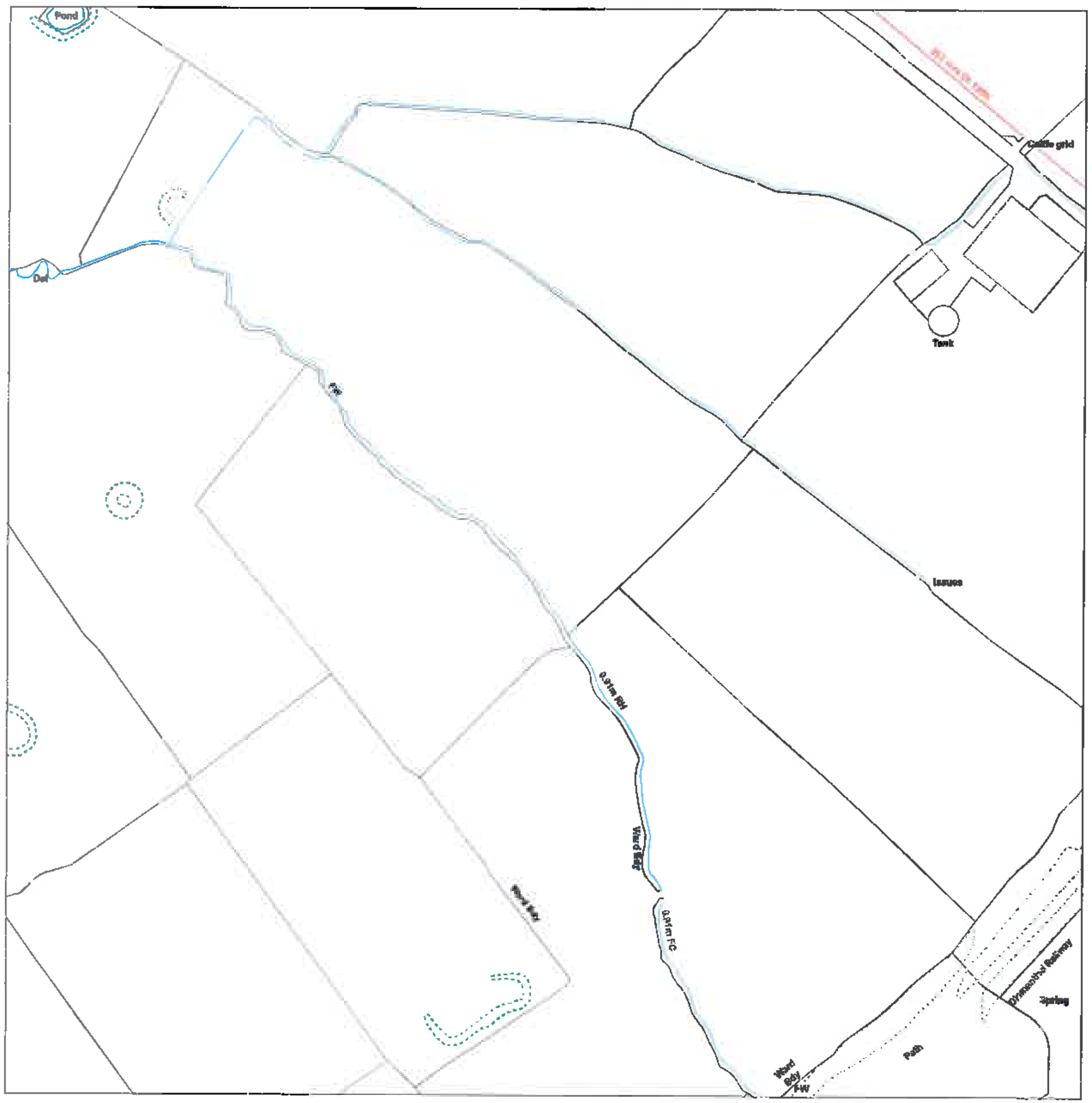
WATER MAIN RECORDS



Printed By: Property Searches

OS Sheet No: SD6038SE

Scale: 1: 1250 Date: 10/11/2015

Legend

PIPE WORK (Live / Proposed)

- Trunk Main - PressurisedMain
- Raw Water Aqueduct - PressurisedMain
- Raw Water Aqueduct - GravityMain
- LDTM Raw Water Distribution - PressurisedMain
- LDTM Raw Water Distribution - GravityMain
- LDTM Treated Water Distribution - PressurisedMain
- LDTM Treated Water Distribution - GravityMain
- Private Pipe - LateralLine
- Distribution Main - PressurisedMain
- Comms Pipe - LateralLine
- Concessionary Service - LateralLine

ABANDONED PIPE

- Trunk Main
- Raw Water Aqueduct
- LDTM Raw Water Distribution
- LDTM Treated Water Distribution
- Private Pipe
- Distribution Main
- Comms Pipe
- Concessionary Service

NODES/ FURNITURE (Live / Proposed)

- End Cap
- CC Valve
- AC Valve
- Air Valve
- Sluice Valve
- Non Return Valve
- Pressure Management Valve
- Change of Char
- Anode
- Chlorination Point
- De Chlorination Point
- Bore Hole
- Inlet Point
- Bulk Supply Point
- Fire Hydrant
- Hydrant
- Private Fire Hydrant
- Pump
- Site Termination
- Service Start
- Service End
- Process Meter
- Stop Tap
- Monitor Location
- Strainer Point
- Access Point
- Hatch Box
- IP Point
- RM Route Marker
- SPT Sampling Station
- LB Logger Box

Property Types (Live / Proposed)

- Condition Report
- Pipe Bridges
- Tunnels (non carrier)
- Pumping Station
- Water Treatment Works
- Private Treatment Works
- Valve House
- Water Tower
- Service Reservoir
- Supply Reservoir
- Abstraction Point
- Domestic meter
- Commercial meter
- Telemetry Outstation

Material Types

AC ASBESTOS CEMENT
CI CAST IRON
CU COPPER
CO CONCRETE
DI DUCTILE IRON
GI GALVANISED IRON
GR GREY IRON
OT OTHERS
PB LEAD
PV uPVC
SI SPUN IRON
ST STEEL
UN UNKNOWN
PE POLYETHYLENE

Lining Types

CL CEMENT LINING
TB TAR OR BITUMEN
ERL EPOXY RESIN

Insertion Types

DD DIE DRAWN
DR DIRECTIONAL DRILLING
MO MOLING
PI PIPELINE
SL SLIP LINED

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Scale: 1: 1250 Date: 10/11/2015

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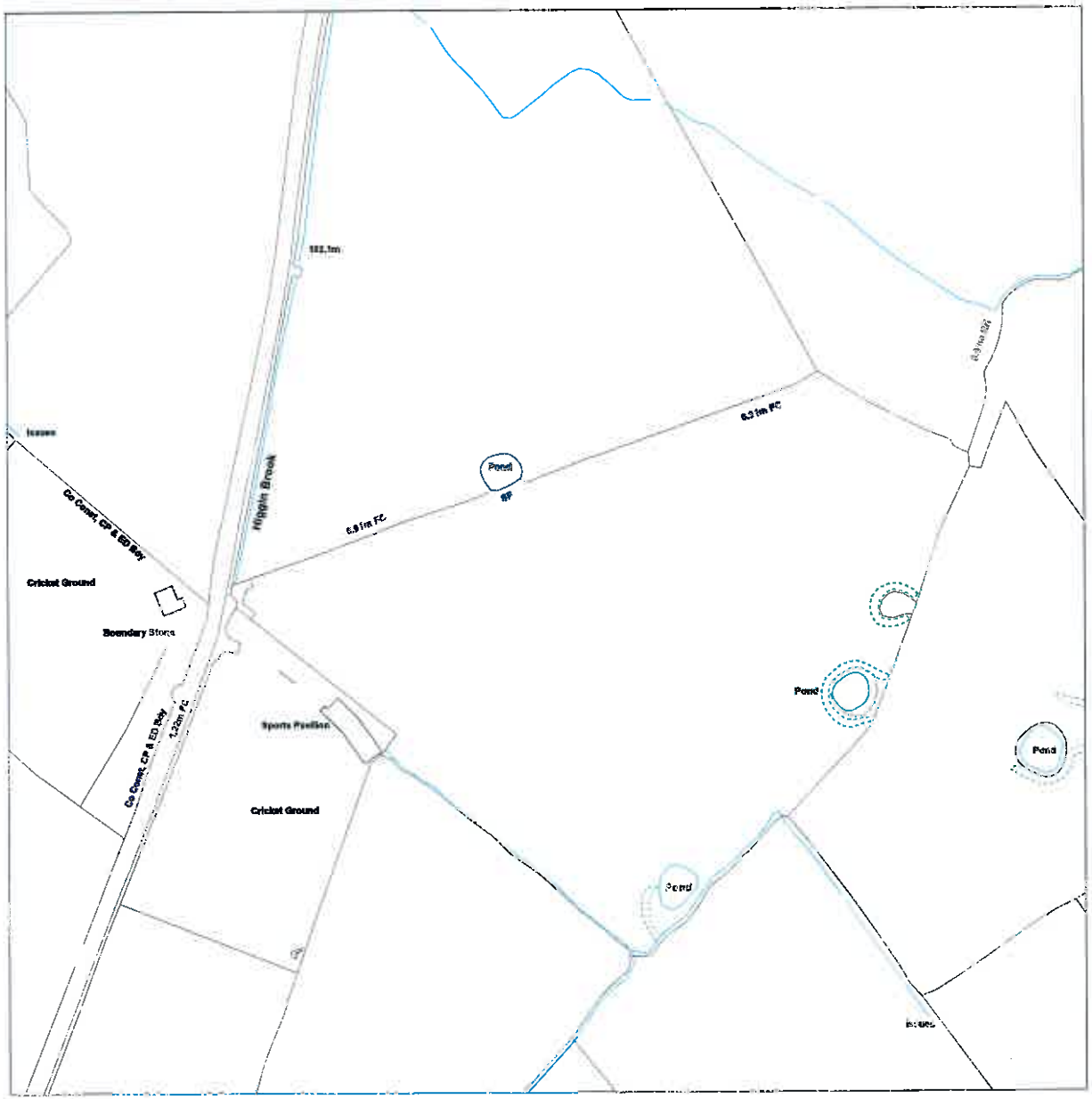
WATER MAIN RECORDS



OS Sheet No: SD6038SW

Scale: 1: 1250 Date: 10/11/2015

Printed By: Property Searches

Legend

PIPE WORK

Live	Proposed	
		Trunk Main - PressurisedMain
		Raw Water Aqueduct - PressurisedMain
		Raw Water Aqueduct - GravityMain
		LDTM Raw Water Distribution - PressurisedMain
		LDTM Raw Water Distribution - GravityMain
		LDTM Treated Water Distribution - PressurisedMain
		LDTM Treated Water Distribution - GravityMain
		Private Pipe - LateralLine
		Distribution Main - PressurisedMain
		Comms Pipe - LateralLine
		Concessionary Service - LateralLine

ABANDONED PIPE

- Trunk Main
- Raw Water Aqueduct
- LDTM Raw Water Distribution
- LDTM Treated Water Distribution
- Private Pipe
- Distribution Main
- Comms Pipe
- Concessionary Service

NODES/ FURNITURE

Live	Proposed	
		End Cap
		CC Valve
		CF Valve
		Air Valve
		Sluice Valve
		Non Return Valve
		Pressure Management Valve
		Change of Class
		Meter
		Chlorination Point
		Ela Chlorination Point
		Bore Hole
		Inlet Point
		Bulk Supply Point
		Fire Hydrant
		Hydrant
		Private Fire Hydrant
		Pump
		Site Termination
		Service Start
		Service End
		Process Meter
		Stop Tap
		Monitor Location
		Strainer Point
		Access Point
		Hatch Box
		IP Point
RM		Route Marker
SPT	SPT	Sampling Station
LB	LB	Logger Box

Property Types

Live	Proposed	
		Condition Report
		Pipe Bridges
		Tunnels (non carrier)
		Pumping Station
		Water Treatment Works
		Private Treatment Works
		Valve House
		Water Tower
		Service Reservoir
		Supply Reservoir
		Abstraction Point
		Domestic meter
		Commercial meter
		Telemetry Outstation

Material Types

AC ASBESTOS CEMENT	OT OTHERS
CI CAST IRON	PB LEAD
CU COPPER	PV uPVC
CO CONCRETE	SI SPUN IRON
DI DUCTILE IRON	ST STEEL
GI GALVANISED IRON	UN UNKNOWN
GR GREY IRON	PE POLYETHYLENE

Lining Types

CL CEMENT LINING	ERL EPOXY RESIN
TB TAR OR BITUMEN	

Insertion Types

DD DIE DRAWN	MO MOLING
DR DIRECTIONAL DRILLING	PI PIPELINE
	SL SLIP LINED

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Scale: 1: 1250 Date: 10/11/2015

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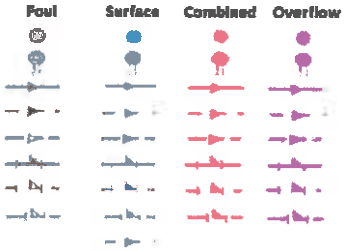
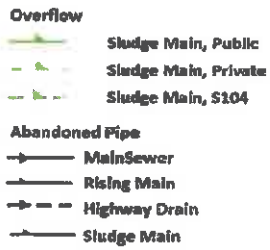
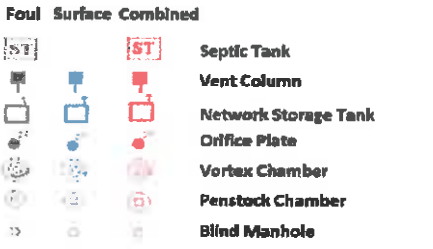
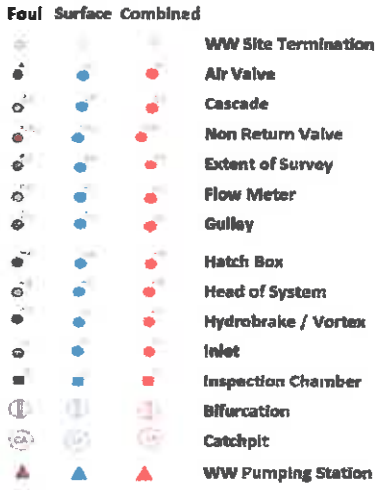
WATER MAIN RECORDS

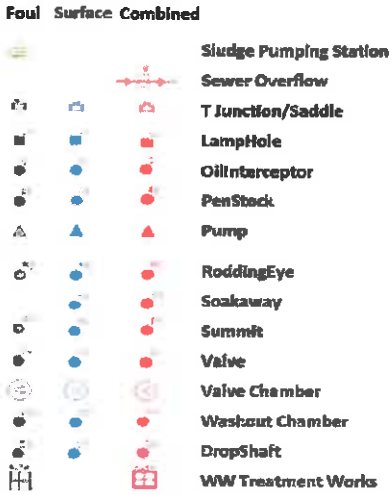
WASTE WATER SYMBOLOGY











Legend

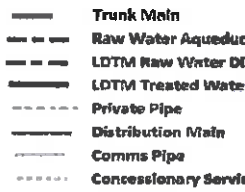
MANHOLE FUNCTION		SEWER SHAPE			
FO	Foul	CI	Circular	TR	Trapezoidal
SW	Surface Water	EG	Egg	AR	Arch
CO	Combined	OV	Oval	BA	Barrel
OV	Overflow	FT	Flat Top	HO	Horseshoe
		RE	Rectangular	UN	Unspecified
		SQ	Square		

SEWER MATERIAL			
AC	Asbestos Cement	DI	Ductile Iron
BR	Brick	VC	Vitrified Clay
CO	Concrete	PP	Polypropylene
CSB	Concrete Segment	PF	Pitched Fibre
CSU	Concrete Segment	MA	Masonry, Coursed
EC	Concrete Egg Cuivered	MA	Masonry, Random
PSC	Plastic / Steel	RP	Reinforced Plastic
GR	Glass Reinforced	CI	Cast Iron
GRP	Glass Reinforced	SI	Spun Iron
PVC	Polyvinyl Chloride	ST	Steel
PE	Polyethylene	U	Unspecified

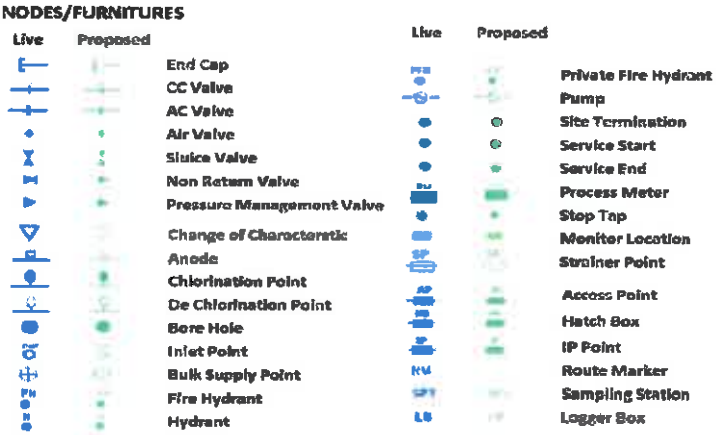
CLEAN WATER SYMBOLOGY

PIPE WORK

ABANDONED PIPE



NODES/FURNITURES

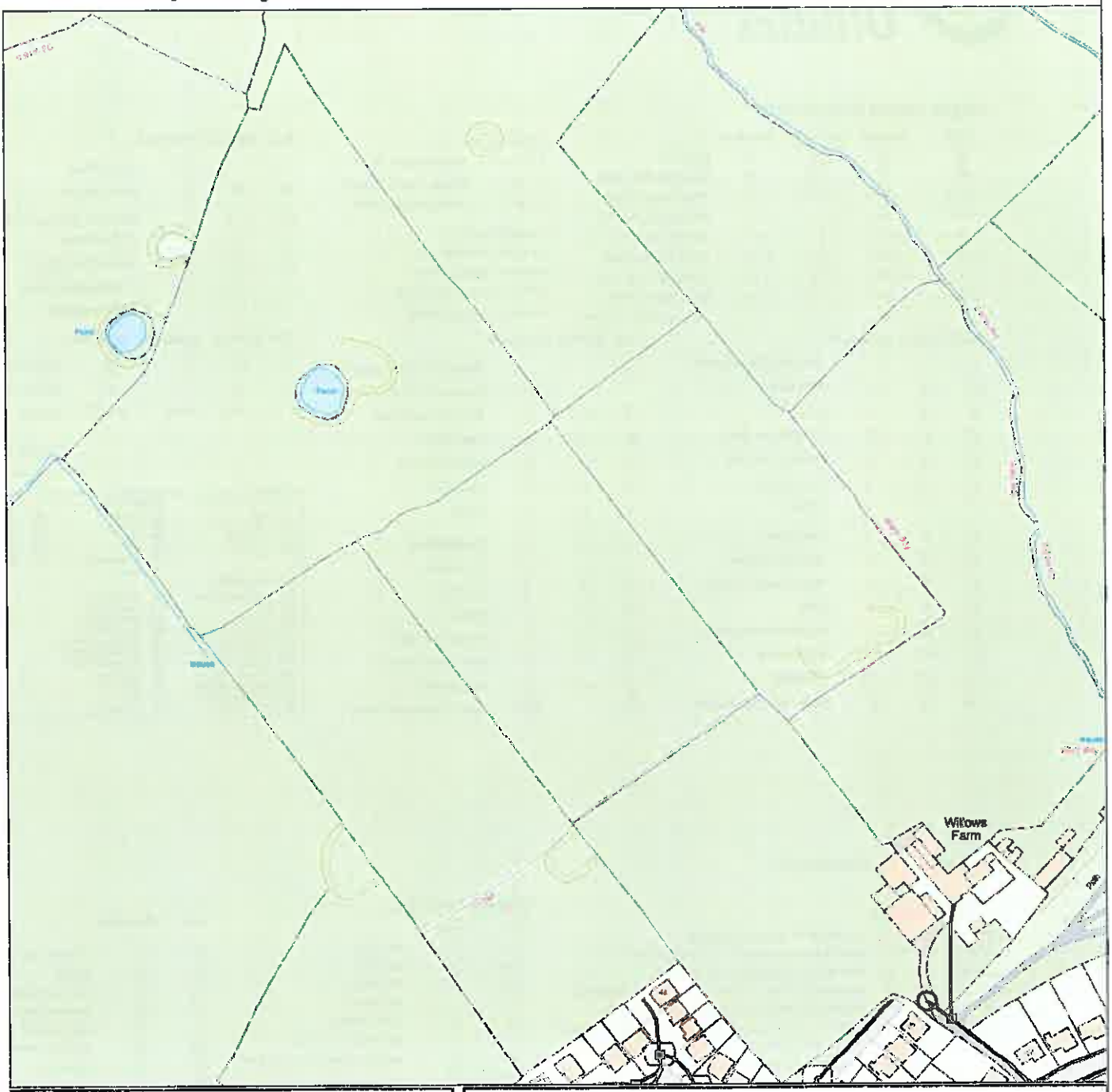


PROPERTY TYPES

Legend

MATERIAL TYPES		LINING TYPES	
AC	ASBESTOS CEMENT	CL	CEMENT LINING
CI	CAST IRON	TB	TAR OR BITUMEN
CU	COPPER	EPL	EPOXY RESIN
CO	CONCRETE		
DI	DUCTILE IRON	INSERTION TYPES	
GI	GALVANISED IRON		
GR	GREY IRON	DD	DIE DRAWN
OT	OTHERS	DR	DIRECTIONAL DRILLING
PB	LEAD	MO	MOLDING
PV	uPVC	PI	PIPELINE
SI	SPUN IRON	SL	SLIP LINED
ST	STEEL		
UN	UNKOWN		
PE	POLYETHYLENE		

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.

DIAL BEFORE YOU DIG

FOR PROFESSIONAL ON SITE ASSISTANCE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS

ADVANCE NOTICE REQUIRED
(Office hours: Monday-Friday 08.00 to 17.00)

Tel: 0800 9173993
E-mail: dbyd@openreach.co.uk
Website: www.dialbeforeyoudig.com

KEY TO BT SYMBOLS

UNDERGROUND PLANT	POLE
A/C, D/W or W OVERHEAD PLANT	CABINET
JOINT BOX	BURIED JOINT
DISTRIBUTION POINT	JOINTING POST
MANHOLE	PROPOSED U/G
DP BOUNDARY	A/C, D/W or W PROPOSED O/H
OTHER BT BOUNDARY	PROPOSED BOX

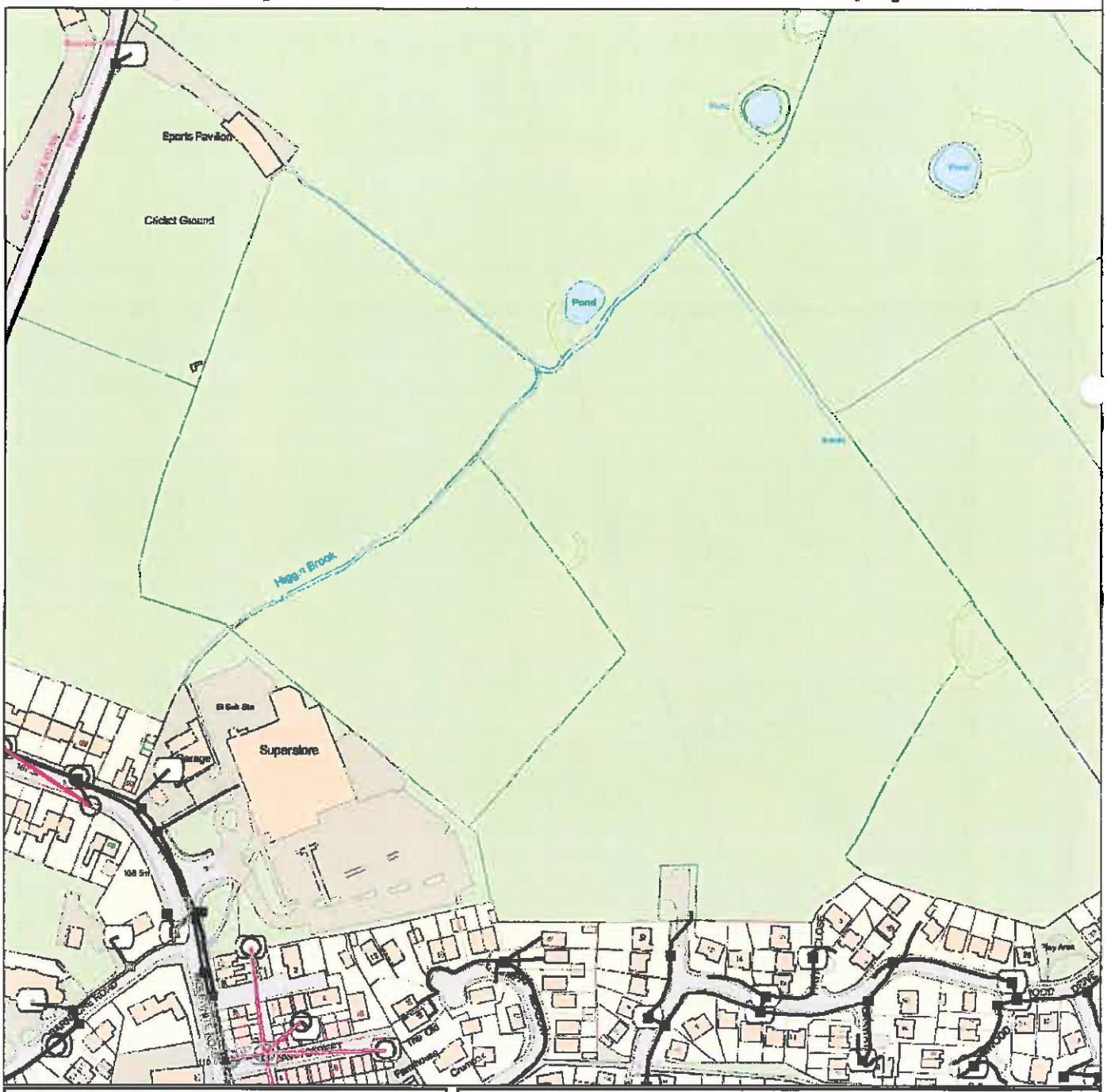
Other proposed plant is shown using dashed lines. BT symbols not listed above may be disregarded. Existing BT plant may not be recorded. Information valid at the time of preparation.

openreach
BT Group business

BT Ref : SFE10281D
Map Reference : (centre) SD6058538084
Easting/Northing : (centre) 360585,4380
Issued : 09/11/2015 10:29:12

FOOTNOTE: WARNING IT IS ESSENTIAL THAT YOU CONTACT NATIONAL NETWORK HANDLING CENTRE BY EMAIL nnhc@openreach.co.uk BEFORE PROCEEDING WITH ANY WORK IN THE HATCHED AREA

Maps by email Plant Information Reply



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(Office hours: Monday-Friday 08.00 to 17.00)

Tel: 0800 9173993
E-mail: dbyd@openreach.co.uk
Website: www.dialbeforeyoudig.com

KEY TO BT SYMBOLS

UNDERGROUND PLANT	POLE
OVERHEAD PLANT (A/C, DW or W)	CABINET
JOINT BOX	BURIED JOINT
DISTRIBUTION POINT (456 OR 456)	JOINTING POST
MANHOLE (OR 72)	PROPOSED U/G
DP BOUNDARY	PROPOSED O/H (A/C, DW or W)
OTHER BT BOUNDARY (DB)	PROPOSED BOX

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

openreach
BT Group business

BT Ref : WEU102831
Map Reference : (centre) SD6029637980
Easting/Northing : (centre) 360296,437980
Issued : 09/11/2015 10:28:47

FOOTNOTE: WARNING IT IS ESSENTIAL THAT YOU CONTACT NATIONAL NETWORK HANDLING CENTRE BY EMAIL nnhc@openreach.co.uk BEFORE PROCEEDING WITH ANY WORK IN THE HATCHED AREA

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.

DIAL BEFORE YOU DIG

FOR PROFESSIONAL ON SITE ASSISTANCE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS

ADVANCE NOTICE REQUIRED
(Office hours: Monday-Friday 08:00 to 17:00)

Tel: 0800 9173993
E-mail: dbyd@openreach.co.uk
Website: www.dialbeforeyoudig.com

KEY TO BT SYMBOLS

UNDERGROUND PLANT	POLE
A/C, D/W or W OVERHEAD PLANT	CABINET
JOINT BOX	BURIED JOINT
456 OR 456 DISTRIBUTION POINT	J JOINTING POST
OR 72 MANHOLE	PROPOSED U/G
DP BOUNDARY	A/C, D/W or W PROPOSED O/H
OR OTHER BT BOUNDARY	PROPOSED BOX

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

openreach
BT Group business

BT Ref : WRN10294F
Map Reference : (centre) SD6018638227
Easting/Northing : (centre) 360186,43821
Issued : 09/11/2015 10:29:32

FOOTNOTE: WARNING IT IS ESSENTIAL THAT YOU CONTACT NATIONAL NETWORK HANDLING CENTRE BY EMAIL nnhc@openreach.co.uk BEFORE PROCEEDING WITH ANY WORK IN THE HATCHED AREA

Sam Dean

From: Daniel Sutcliffe <Daniel.Sutcliffe@ribblevalley.gov.uk>
Sent: 15 February 2016 10:53
To: Sam Dean; Linden Richardson
Cc: Stephen Kilmartin
Subject: RE: STN3505NM: Gas monitoring at Longridge Preston

Follow Up Flag: Follow up
Flag Status: Flagged

Good Morning,

Apologies for the delay in responding but I have been off sick recently and I'm still catching up. I am happy for you to forego the gas monitoring on this site as I agree the likelihood/risk is relatively minimal. Please report on the intrusive ground investigations that you carry out and ensure that your findings (and details of any remediation work carried out) are submitted with your verification statement.

I've copied in the relevant planning officer for your site so that he is kept up to date and can make any necessary comment.

Kind Regards

Daniel Sutcliffe
Engineering Assistant
Ribble Valley Borough Council

From: Sam Dean [mailto:Sam.Dean@soiltechnics.net]
Sent: 11 February 2016 12:21
To: Sam Dean; Daniel Sutcliffe; Linden Richardson
Subject: RE: STN3505NM: Gas monitoring at Longridge Preston

Afternoon Daniel

have you had a chance to review our comments as per below?

Any queries please give me a call

Kind regards

Sam Dean
B.Sc. (Hons)., MIEnvSc., FGS
Associate Director

m 07917 602346 t 0161 9470270
e sam.dean@soiltechnics.net
w www.soiltechnics.net

Head Office
Cedar Barn, White Lodge, Walgrave, Northamptonshire NN6 9PY t 01604 781877

Manchester Office
Ivy Mill Business Centre, Crown Street, Failsworth, Manchester M35 9BG t 0161 9470270

From: Sam Dean
Sent: 04 February 2016 12:37
To: Daniel Sutcliffe; Linden Richardson
Subject: RE: STN3505NM: Gas monitoring at Longridge Preston

Daniel

Ref is Application 3/2014/0764

Any queries please give me a call

Kind regards

Sam Dean
B.Sc. (Hons)., MIEnvSc., FGS
Associate Director

m 07917 602346 t 0161 9470270
e sam.dean@soiltechnics.net
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Cedar Barn, White Lodge, Walgrave, Northamptonshire NN6 9PY t 01604 781877

Manchester Office
Ivy Mill Business Centre, Crown Street, Failsworth, Manchester M35 9BG t 0161 9470270

From: Daniel Sutcliffe [mailto:Daniel.Sutcliffe@ribblevalley.gov.uk]
Sent: 04 February 2016 10:34
To: Sam Dean <Sam.Dean@soiltechnics.net>; Linden Richardson <Linden.Richardson@soiltechnics.net>
Subject: RE: STN3505NM: Gas monitoring at Longridge Preston

Morning,

Could you please send me the relevant planning application reference for this site so that I can look it up?

Regards

Daniel Sutcliffe
Engineering Assistant
Ribble Valley Borough Council

From: Sam Dean [mailto:Sam.Dean@soiltechnics.net]
Sent: 02 February 2016 13:43
To: Linden Richardson
Cc: Daniel Sutcliffe
Subject: Re: STN3505NM: Gas monitoring at Longridge Preston

Daniel

Just to add to what Linden outlined, the site has outline planning (phase 1 and phase 2 approx 350 dwellings) and I believe you would have been in receipt of a phase 1 desk study report for the site already undertaken by a third party. They have outlined that gas is a source of concern based on the presence of potential Made Ground offsite.

The site is greenfield and geology is glacial till (clays). Landfill sources and historic pits are limited and distant. In our opinion even if there was a source of gas in Made Ground soils offsite, there is no preferential migration pathway to the site and the source, unless it contained significant concentrations of degradable and putrescible material of significant thickness, is considered low risk.

As you can appreciate, this may cause some conflict and delays later in the planning process if the LA are expecting to see some gas monitoring based on he recommendations of the desk study report and we do not undertake based on our assessment. If the LA recommend that such monitoring is undertaken as a matter course on all sites within their remit the we would obviously have no objection to this.

We would appreciate any feedback at your earliest convenience, we are programmed to undertake intrusive ground investigations at the site Weds and Thursday this week in the phase 1 area, with phase 2 following next week.

Regards

Sam Dean
(Associate Director for Soiltechnics Ltd)

Sent from my iPhone

On 2 Feb 2016, at 12:50, Linden Richardson <Linden.Richardson@soiltechnics.net> wrote:

> Dear Mr Sutcliffe
>
> I am working on the ground investigation for a proposed residential development at the above address (postcode PR3 2NA, it is the land north of the village and east of Chipping Lane) and will shortly be undertaking the site investigation.
>
> It has been suggested to me that I get in touch with you to get your position on the requirements for gas monitoring at the site. Our desk study has revealed no clear sources of ground gas and we are of the opinion that gas monitoring is not required at the site. If you agree with this position it would be useful to receive confirmation of this so that gas monitoring can be discounted. This would allow the planning application to be completed more promptly and at lower expense. However, should you need more time to deliberate, or not be able to respond before the works are undertaken then we will happily proceed with installations and monitoring.
>
> Many thanks for any input you can provide.
>
> Regards

Linden Richardson
B.Eng. (Hons)., MSc., AIEMA
Geo-environmental Engineer

t 0161 9470270
m 0777 9417287
e linden.richardson@soiltechnics.net
www.soiltechnics.net

<image001.png>
Head Office
Cedar Barn, White Lodge, Walgrave, Northamptonshire NN6 9PY **t** 01604 781877

Manchester Office
Ivy Mill Business Centre, Crown Street, Failsworth, Manchester M35 9BG **t** 0161 9470270

Bowland Meadows, Land East of Chipping Lane, Longridge

Phase 1 Detailed Desk Top Study

Curtin's Ref: EB1355/GL/3692

Revision: A

Issue Date: 14 April 2014

Client Name: Barratt Homes

Client Address: 4 Brindley Road, City Park, Manchester, M16 9HQ

Site Address: Bowland Meadow, Land East of Chipping Lane, Longridge

Curtins
10 Oxford Court, Bishopsgate,
Manchester, M2 3WQ
Tel: 0161 236 2394
www.curtins.com

Client:	Barratt Homes
Project:	Residential Development
Report Type:	Geo-Environmental Site Appraisal, Phase 1 – Detailed Desk Top Study
Report Reference:	EB1355/GL/3692
Revision:	A
Report Status:	**Issue 01**
Date:	14 April 2014

Report Author(s)	Signature	Date
G Lownsbrough BSc (Hons)		14 April 2014

Checked	Signature	Date
A Ward MGeoscience		14 April 2014

Authorised	Signature	Date
P D Winterburn BSc (Hons) CEng MICE MIStructE MCIWEM C.WEM **Technical Director**		14 April 2014

For and on behalf of **Curtins**

Planning Guidance Contamination Statement
Does the site described herein involve any of the following: a. Land which is known to be contaminated? **No** b. Land where contamination is suspected for all or part of the site? **Yes** c. A proposed use that would be particularly vulnerable to the presence of contamination? **Yes**

Table of contents

Appendices

Appendix A1 – Site Location Plan

Appendix A2 – Envirocheck Report

Appendix A3 – Diagrammatic Conceptual Model

Appendix A4 – Qualitative Risk Assessment Rationale

1.0 Introduction

In April 2014 Curtins were instructed by Barratt Homes to undertake a Phase 1 Geo-Environmental Detailed Desk Top Study, of a site located on Bowland Meadow, Land East of Chipping Lane, Longridge.

The site is centred on national grid reference 360130, 438020 with an area of 7.22ha. A location plan can be found in Appendix A1.

It is understood that proposals are for new residential development. The site is currently occupied open fields and farmland.

Scope of Phase 1 Investigation – Detailed Desk Top Study

The desk top study is to be undertaken, principally, to provide an overview of the geo-environmental setting of the site of interest with a brief assessment of any risks that could be presented to site users and the wider environment.

Additionally the desk top study should provide information that could be used to ascertain the extent of any in-situ geo-environmental investigation required to confirm the site conceptual model developed in the desk top study. The desk top study provides an initial view in respect of the status of the site with regard to:

- The potential impact on the site of interest from surrounding land uses and other environmental factors.
- Potential contamination of the site strata by historical and or current use.
- The potential impact on the wider environment by historical and or current use of the site of interest.
- Potential problems associated with geological features such as faulting, mineral extraction, mining and land instability.
- The location of apparent sub-surface structures that may affect the proposed redevelopment.
- The location of above-surface features that may affect the proposed redevelopment.

2.0 Phase 1 – Detailed Desk Top Study

In accordance with the scope identified in Section 1.1, this desk top study has been undertaken using the following data sources and involves no intrusive investigations or testing.

- Envirocheck Report.
- British Geological Society 1:50,000 map.
- British Geological Society website.
- Environment Agency website.
- Local Authority records.
- Radon Atlas for England and Wales.

2.1 Previous Site Use

Since the earliest historical map dated 1893 the site has been occupied by open fields and farmland. To the north and north east of the site boundary approximately 50-100m are a number of small ponds bounded by embankments. The historical maps illustrate no existing buildings or developments and have remained unchanged up until the most recent historical map dated 2013.

2.2 Surrounding Land Use

Since 1893 the surrounding area adjacent to the site is bound by Chipping Lane to the east and Higher Lane to the south. Pit street mill is illustrated to the south east of the site approximately 20m away and a cluster of residential housing and farm houses including Berry Farm and Crumpax Farm are located approximately 50-60m from the site. Additionally illustrated on the map is a drinking fountain/trough suspected to be associated with the surrounding farms. Adjacent south west of the site are several buildings labelled Alston Arms and west of the site boundary approximately 50m is an iron and brass foundry.

During 1895 the surrounding area illustrates the development of a number of works, mills and factories, including a gas works and a foundry circa 50m south west of the site. South Longridge is continuing to be developed. Another significant development to the area was a railway line running approximately 500m from site, and several mills and a quarry to the east.

From 1913 onwards steady urban expansion continued, and by 1932 this had slowed. A brook is now shown running adjacent to the western boundary.

From 1961 to 1967 the surrounding area expanded significantly, with the closest developments occurring approximately 10-30m from the site (Frey Stocks) and a garage south east of the site.

By 1970 the railway running adjacent to the mills and factories towards the south east was dismantled

The pattern of redevelopment to the surrounding area continues, however not within close proximity of the site.

The site remains predominantly unchanged up to the most recent historical map dated 2013.

2.3 Mapping Data Recorded In the Envirocheck Report

The Envirocheck report contains historical ordnance survey maps (Lancashire and Furness) as identified below.

- 1:2,500 scale maps provided for the survey publication of 1893, 1912, 1932, 1967, 1975, 1975-1992, 1978-1987, 1981-1982, 1992, 1994, 1995, 1996,
- 1:10,000 scale maps for the survey publication of 1956, 1968, 1970, 1976, 1994, 2001, 2006 and 2013.
- 1:10,560 scale maps for the survey publication of 1847, 1895, 1913-1914 and 1932,

A summary of the map records is provided on the following pages; a copy of all maps obtained can be referred to in Appendix A2.

Date	Scale	Description
1:1,250 and 1:2,500 Scale Mapping		
1893	1:2,500	The site is occupied by open fields with occasional woodland. The far north eastern corner illustrates a small pond surrounded by sparse woodland. The sites surrounding area adjacent bounding the site is Chipping Lane to the east and Higher Lane to the south. Pit street mill is illustrated to the south east of the site approximately 20m and a cluster of residential housing and farm houses including Berry Farm and Crumpax Farm approximately 50-60m from the site, also illustrated is a drinking fountain/trough suspected to be associated with the surrounding farms. To the south west of the site approximately 50m is Iron and Brass Foundry. Adjacent south west of the site are a few buildings labelled Alston Arms. West of the site boundary approximately 50m in iron and brass foundry. Surrounding the site towards the east and north east are a number of small ponds between 50-100m from the site boundary.
1912	1:2,500	The site and surrounding are remains the same as the previous historical map.
1932	1:2,500	The site remains the same as the previous historical map with a small potential spring towards the south eastern boundary of the site. The surrounding area remains predominantly unchanged apart from Bobbin Works which is now illustrated. Higgin Brook runs adjacent to site on the western boundary.

1961-1967	1:2,500	The site remains undeveloped. Higgin Brook is now labelled on the eastern site if the site. The surrounding area illustrates significant residential housing developments south and south east adjacent to and approximately 50-100m from the site boundary. Further south (100m) of the residential buildings is a large building labelled Fell View. There is a large building illustrated and labelled as Ashley Dairy, which is likely to be associated with the surrounding farm land. To the south western corner of the site boundary approximately 10-30m are a few small buildings labelled as Frey Stocks. To the south east of the site adjacent is a number of small buildings labelled as a garage. To the north and north east of the site boundary approximately 50-100m are a number of small ponds bounded by embankments.
1975	1:2,500	South east tiles illustrated only. No significant changes to the site or surrounding area, apart from Ashley Dairy building appears to have been demolished and rebuilt and to the south approximately 50-100m from the site are a number of residential homes with associated gardens.
1975-1992	1:2,500	South and Western tiles illustrated only. No significant changes made to the site. Surrounding area remains predominantly the same apart from a newly established Longridge County Primary School.
1978-1987	1:2,500	Southern tiles illustrated only. No significant changes have been made. The surrounding area illustrates no significant changes, apart from residential developments 100m from the site boundary in the south east.
1981-1992	1:2,500	The site and surrounding area remains predominantly the same with no significant changes made.
1992	1:2,500	South east tiles not illustrated, no significant changes the site or surrounding area.
1994	1:2,500	The site remains the same as the previous historical map. The surrounding area remains unchanged from the previous historical map.
1995	1:2,500	South east tiles illustrated only. There are no significant changes made to the site or surrounding area.
1996	1:1,250	South east tiles illustrated only. There are no significant changes made to the site or surrounding area.
1:10,560 & 1:10,000 Scale Mapping		
1847	1:10,560	The site is open fields and occasional woodland. The surrounding are illustrates no infrastructure only occasional small ponds and farmland with woodland.