A Planning Application by

SATNAM MILLENIUM LIMITED

In respect of

Peel Hall, Warrington

Utilities Report

June 2016

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DOCUMENT SIGNATURE AND REVIEW SHEET

Project Details

Project Title:	Peel Hall, Warrington		
Project No.:	1506-45	**Report No.:**	1506-45/TN/01B
Client:	SATNAM MILLENIUM LIMITED		

	Prepared By:	Checked By:	Approved for issue
Name	Paul Graham	Leigh Fotiadis	Leigh Fotiadis
Signature	PG	LF	LF
Date	January 2016	January 2016	January 2016

Document Review

Revision	Date	Description	Checked By
A	January 2016	Report Amended following response from United Utilities and CCTV survey	LF
B	June 2016	Report Amended following update to Masterplan	JH

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LIST OF APPENDICES

1 INTRODUCTION

1.1 Transport Planning Associates have been commissioned by Satnam Millenium Limited to provide a preliminary services report for the proposed development of Peel Hall, Warrington.

1.2 The application site is generally bounded by the M62 to the north, Mill Lane and existing recreational grounds to the east, Windermere Avenue to the south and the A49 to the west. Refer to Site Location Plan in **Appendix A**.

1.3 The proposed development is for an outline application for a new residential neighbourhood including C2 and C3 uses; local employment (B1 use); local centre including a food store up to 2000m^2; A1 – A5 (inclusive) and D1 uses class units of up to 600m^2 total (with no single unit of more than 200m^2) and a family restaurant / pub of up to 800m^2 (A3 / A4 use); a site for a primary school; open space including sports pitches with ancillary facilities; means of access and supporting infrastructure at Peel Hall, Warrington.

1.4 Proposals include the construction of a mixed use development which will comprise the following:

- 1200 (approx) Residential Dwellings;
- 2.3 ha of commercial development including a supermarket and employment space;
- Proposed primary school site; and
- 0.8ha employment zone.

1.5 This report provides the client with asset information and location maps provided by the individual utility suppliers with a summary of which assets are potentially affected by the proposed development and associated highway works. Recommendations will be made within this report outlining what actions are required to complete the study.

Method Statement

1.6 A standard suite of letters were sent out to the relevant individual utility suppliers with a copy of the Site Location plan (see **Appendix A**) and a brief description of the proposed works were described in the letters.

1.7 BT Openreach and United Utilities required payment to provide maps.

1.8 Upon receipt of the letters the utility suppliers allow 28 days for issuing the required information. The asset location maps and/or letters confirming that the assets are not affected by the scheme were then collated.

1.9 The map information is then reviewed to ascertain whether there are services which directly cross the development site or whether there are services which are not present. The map

information provided will not indicate capacity levels, as this will need confirming through further enquiries.

2 ASSET SEARCH

2.1 **United Utilities (Sewerage Network and Clean Water Mains)** – replied 15th July 2015 with mapping that confirmed that United Utilities assets are present within the site. There are a number of sewers located to the west of the site and also a sewer that crosses the eastern side of the side. Refer to **Appendix B**.

2.2 Due to the lack of clarity with the mapping in the western side of the site regarding whether the assets are currently in use or abandoned, a CCTV survey was carried out to establish which sewers in the network were still in use and easements will be required for these pipes.

2.3 **Clean Water Mains** – United Utilities mapping has confirmed that there is a clean water pipe that runs across the eastern side of the site. Refer to **Appendix B**.

2.4 **Public Sewers – Surface Water** – There is an existing surface water sewer within the western section of the boundary.

2.5 **Foul Water** – A foul sewer runs through the western side of the site. It would appear that this then connects into a combined sewer.

2.6 United Utilities have confirmed that they have no objection with the communication of foul flows with their existing network and that they would have a preference for a gravity connection. They have also confirmed that the easements required for the pipes will be based on their depth to invert which will be confirmed prior to construction. The easement should follow guidelines set out by the water authority but will most likely be 3m unless pipes are deeper than usual.

2.7 **BT Openreach** – replied 8th July 2015 with the asset plans for the area. There is currently BT apparatus within the application site along the access road to Peel Hall Farm. There are also BT assets at the South Eastern corner of the application boundary. (Refer to **Appendix C**).

2.8 **National Grid** – replied 30th June 2015, providing information of gas mains within the vicinity of the area.

2.9 National Grid maps confirmed that there are low pressure gas mains within the vicinity of the development site. The low pressure gas main travels along the access road to Peel Hall Farm. Furthermore there is a high pressure gas mains which runs along the northern boundary of the site, running east west broadly in parallel with the M62. (Refer to **Appendix D**).

2.10 **Scottish Power** – .Mapping was received on 2nd July 2015. This mapping indicated that there are two 11kV underground cables towards the eastern end of the site. There is also a

low voltage above ground cable along the access road to Peel Hall Farm. Refer to **Appendix E**.

2.11 Scottish Power have confirmed that 6m easements will be required for all HV cables and 3m easements will be required for all LV cables.

2.12 A point of connection of 33kVA is assumed by Scottish Power on Poplars Avenue, however, this will need to be formalised by Scottish Power before development commences.

Affected Services

2.13 **United Utilities** – As mentioned previously, there are existing assets within the application boundary. A CCTV survey is required to determine the nature of these assets and easements can be calculated from the survey information.

2.14 **National Grid** – As previously mentioned, a low pressure gas main is located within the access road to the east of the application site. If this access is to remain for the site, this main can remain under an adopted highway, subject to confirmation by the local authority and National Grid before after a design has been provided.

2.15 The high pressure main identified along the northern barrier may need to be diverted or may remain in situ with the correct easements being maintained to allow access by National Grid in the future. The required easements will be discussed with National Grid and requirement for potential diversion will be subject to confirmation after a design has been provided.

2.16 **Scottish Power** – As previously mentioned there are 11kV and low voltage cables within the application boundary. Both 11kV cables are already underground but easement requirements will need to be confirmed with Scottish Power. The low voltage cables that supply Peel Hall Farm currently run alongside the access road.

Budget Quotation

2.17 **Scottish Power** – Scottish Power provided an informal budget quotation for the supply of the site. The quotation was based on 1226 gas heated residential plots (1.5kVA per plot), 400kVA supply for a care home, 500kVA for employment area, 200kVA for a school and 300kVA for a small supermarket. The budget they provided was based on a primary substation (with the building to be constructed separately by the developer), 7 secondary substations and high and low voltage infrastructure on the site. The estimated cost is £3.59 million which can be reinforced following an established point of connection. Refer to **Appendix E** for detailed quotation information.

2.18 **Energetics** – Energetics have provided a quote of £2.1 million to carry out gas, electric and water main supply for 1300 residential units. For quote details refer to **Appendix F**.

3 CONCLUSIONS AND RECOMMENDATIONS

3.1 The asset location plans provided by the utility distributors show evidence that at least three of the services will directly affect the proposed development. United Utilities, National Grid and Scottish Power have apparatus crossing the development site, which will either need diversion or incorporating into the site layout.

3.2 A utilities survey is recommended to provide a more accurate picture of existing utilities located within the site

3.3 Easement requirements for United Utility sewers are to be confirmed following CCTV survey.

3.4 Easements of 3m and 6m are required for Scottish Power assets crossing the site.

3.5 Points of connection will need to be confirmed or formalised for utilities before construction.

3.6 Scottish Power has provided a budget quotation for electricity infrastructure for the site.

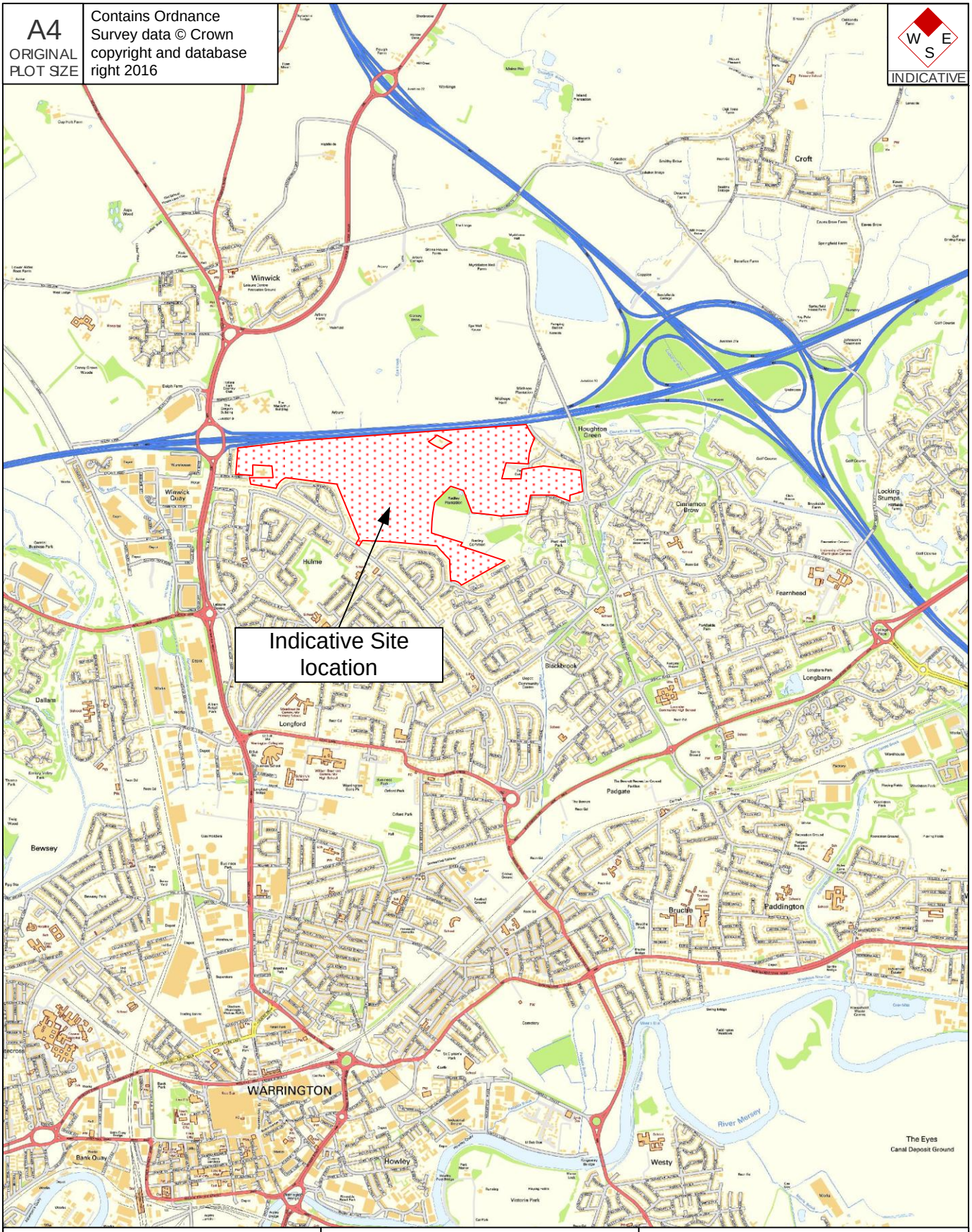
3.7 Energetics have provided a budget quotation for gas, water and electricity infrastructure on the site.

APPENDIX A

A4
ORIGINAL
PLOT SIZE

W E S

INDICATIVE



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tpa Transport Planning Associates

PEEL HALL FARM, WARRINGTON

STATUS: INFORMATION

SITE LOCATION PLAN

SCALE:	PREPARED BY:	CHECKED BY:	APPROVED BY:
NTS	TH	JH	JH

SATNAM PLANNING SERVICES LIMITED

JOB NO:	FIGURE NO:	DATE:
1506-45	2.1	JUNE '15

APPENDIX B

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

Transport Planning Associates
STUDIO 4
37 BROADWATER ROAD
WELWYN GARDEN CITY

AL7 3AX

Your Ref: 1503-45 PG
Our Ref: 14/ 1121570
Date: 15/7/2015

FAO:

Dear Sirs

Location: AREA OF LAND NEAR PEEL HALL FARM WARRINGTON WA2 0TA

I acknowledge with thanks your request dated 02/07/15 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.
I attach General Condition Information sheets, which details contact numbers for additional services (i.e. new supplies, connections, diversions) which we are unable to deal with at this office. In addition you should ensure they 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.

Refno	Cover	Func	Invert	Size.x	Size.y	Shape	Matl	Length	Grad
0501		CO		150		CI	PVC	10.89	
0701		SW							
0705		SW							
1502	14.41	SW	12.22	375		CI	CO	14.42	206
1503	14.05	SW							
1504	14.05	SW							
1505	13.62	SW	12.76	150		CI	VC	42.76	130
1506	13.3	SW	11.77	450		CI	CO	17	243
1507	13.17	SW							
1509	14.08	FO	12.65	150		CI	VC	18.03	113
1510	14.04	FO	12.45	150		CI	VC	28.64	64
1511	13.29	FO	11.98	150		CI	VC	18	43
1512	13.16	FO	11.56	150		CI	VC	10.77	120
1513	13.36	FO	12.13	150		CI	VC	17.46	34
1514	13.42	SW							
1515	13.12	FO	11.46	150		CI	VC	33.24	208
1518		CO							
1519		CO							
1521		FO		150		CI	PVC	7.21	
1522		FO							
1523		FO							
1524		FO							
1524		FO							
1527		FO							
1529		SW							
1601	14.58	SW							
1602	14.61	SW							
1603		SW							
1607		FO							
1608		FO							
1701		SW	0			CI	UN	34.27	
1703		SW							
1705		SW	0			CI	UN	19.7	
1707		SW	0			CI	UN	25.69	
1801	16.4	SW							
1802	17.1	SW							
1804	16.43	FO							
1806	17.12	FO							
1902	16.18	SW	15.17	225		CI	VC	38.18	225
1903	16.08	SW							
1904		FO	0	150		CI	VC	26.42	
1905	16.1	FO							
1906	16.12	FO							
2501		FO							
2502		FO							
2503	14.86	SW							
2504	15.09	SW	13.8	150		CI	VC	19.24	1
2505	15.47	SW	13.84	150		CI	VC	18.68	1
2506	13.87	SW							
2507	14.03	SW							
2508	14.16	SW	12.83	225		CI	VC	34.54	345
2509	15.39	SW	13.64	300		CI	CO	61.27	94
2510	15.55	SW	13.86	225		CI	VC	9.9	76
2511	13.37	SW	11.88	300		CI	CO	48.17	301
2512		FO	0	150		CI	VC	11.18	
2513	13.43	FO							
2514	14	FO							
2515	13.84	FO							
2516	14.84	FO							
2517	15.37	FO	13.19	150		CI	VC	35.23	3
2518	15.34	FO	13.48	150		CI	VC	15.62	58
2521		CO							
2525		FO							
2601	14.65	SW	12.92	375		CI	CO	28.23	81
2602	14.46	SW	12.56	375		CI	CO	15.81	158
2802	16.56	CO							
2803	16.55	SW							
2901	15.77	CO							
2902	15.96	CO							
2903	16.19	CO							
3501	15.15	SW	13.85	225		CI	VC	60.53	155
3502	15.15	SW	13.92	150		CI	VC	31.02	388
3503	15.57	FO	13.23	150		CI	VC	52.47	57
3701	17.03	SW	14.51	225		CI	VC	26.25	146
3702		CO							
3703	16.61	CO	13.01	225		CI	VC	9.06	
3704		FO		150		CI	UN	52.86	
3705		FO							
3706		FO							
3801		FO	0	225		CI	VC	27.31	
3802	16.88	CO	13.3	225		CI	VC	69.58	240
3803	16.03	CO							
4501	13.47	FO	11.46	225		CI	VC	30.77	
4502	13.44	SW	11.93	225		CI	VC	31.58	
4601	14.43	SW	12.92	225		CI	VC	27.02	73
4602	15.08	SW	13.61	225		CI	VC	28.64	44
4603	13.83	SW							
4604	13.84	SW							
4605	13.95	SW	12.57	225		CI	VC	16.12	101
4606	14.38	SW							
4607	14.55	SW	13.22	225		CI	VC	20.81	87
4608	14.44	FO	12.52	225		CI	VC	48.27	60
4609	15.06	FO	13.19	225		CI	VC	30.46	48
4610	13.86	FO							
4611	13.85	FO							
4612	14.4	FO							
4613	14.52	FO	12.55	225		CI	VC	17.8	127
4616		FO							
4618		FO							
4701	16.32	SW							
4702	16.06	SW	14.56	150		CI	VC	29.21	97
4703	16.49	SW							
4704	16.32	CO							
4705	16.09	FO	14.16	150		CI	VC	8.76	64
4706	16.45	CO							
4707	15	SW	13.33	225		CI	VC	39.2	103
4708	14.98	FO	12.95	225		CI	VC	39.05	95
4710		FO							
4711		FO							
4714		FO							
4715		FO							
4716		FO							
4801	14.55	SW	13.08	150		CI	VC	18.97	112
4802	15.1	SW	12.8	225		CI	VC	28.28	166
4803	15.56	SW	12.61	225		CI	VC	37.8	172
4804	15.28	SW	12.37	225		CI	VC	10.44	116
4805	15.2	SW							
4806	13.55	SW							
4807	13.75	SW	11.49	300		CI	CO	30.08	501
4808	13.96	SW	11.42	300		CI	CO	15.13	80
4809	14.11	SW	11.13	375		CI	CO	15.26	382
4810	14.31	SW	11.07	375		CI	CO	15.81	132
4811	15.88	SW	13.94	225		CI	VC	20.1	67
4812	13.56	FO							
4813	13.7	FO	10.97	225		CI	VC	31.02	258
4814	13.97	FO	10.82	225		CI	VC	12	300
4815	14.13	CO	10.77	225		CI	VC	19.31	386
4816	14.3	CO	10.69	225		CI	VC	19.24	175
4817	15.21	CO							
4818	15.32	FO	12.1	225		CI	VC	5.83	32
4819	15.55	FO	12.37	225		CI	VC	33.02	132
4820	15.1	FO	12.61	225		CI	VC	28.07	122
4821	14.57	FO	12.88	150		CI	VC	18.44	92
4822	15.87	CO	12.24	225		CI	VC	22.02	58
4826		FO							
4827		FO							
4828		FO							
4901	13.32	SW	11.99	150		CI	VC	35.47	114
4902	13.35	FO							
4905		FO							
4906		SW							
4907		FO							
4913		FO							
0702		SW	0	150		CI	VC	10	
0703		SW	0	150		CI	VC	3.61	
1501		SW							
1516		SW	12.15	300		CI	CO	14.42	180
1517		SW	11.67	375		CI	CO	7.28	243
1530		CO							
1532		CO							

Refno	Cover	Func	Invert	Size.x	Size.y	Shape	Matl	Length	Grad
1604		SW		225		CI	VC	26.72	
1608		FO							
1704		SW	0			CI	UN	22.2	
1803		SW	0	150		CI	VC	13.89	
1805		FO	0	225		CI	VC	15	
1807		FO							
1901		SW	0	150		CI	VC	10.63	
1907		FO	0	150		CI	VC	13.15	
2520		CO							
2801		FO	0	150		CI	VC	29.41	
2904		FO							
3708		FO							
4614		SW	12.55	300		CI	CO	27.02	71
4615		SW							
4617		FO							
4713		FO							
4719		FO							
4720		FO							
4823		CO							
4904		FO							
4910		FO							
4911		FO							
4912		FO							
4915		FO							
1520		FO							
1528		FO							
1706		SW	0			CI	UN	13.55	
1708		SW	0			CI	UN	23.16	
2524		CO							
4718		FO							
0601		SW		225		CI	VC	78.44	

WASTE WATER SYMBOLOGY

Foul Surface Combined Overflow

Manhole
Manhole, Side Entry
MainSewer, Public
MainSewer, Private
MainSewer, S104
Rising Main, Public
Rising Main, Private
Rising Main, S104
Highway Drain, Private

Foul Surface Combined

WW Site Termination
Air Valve
Cascade
Non Return Valve
Extent of Survey
Flow Meter
Gulley
Hatch Box
Head of System
Hydrobrake / Vortex
Inlet
Inspection Chamber
Bifurcation
Catchpit
Contaminated Surface Water
WW Pumping Station
Sludge Pumping Station
Sewer Overflow
T Junction/Saddle
LampHole
OilInterceptor
PenStock
Pump
RoddingEye
Soakaway
Summit
Valve
Valve Chamber
Washout Chamber
DropShaft
WW Treatment Works
Septic Tank
Vent Column
Network Storage Tank
Orifice Plate
Vortex Chamber
Penstock Chamber
Blind Manhole

Sludge Main, Public
Sludge Main, Private
Sludge Main, S104

ABANDONED PIPE
MainSewer
Rising Main
Highway Drain
Sludge Main

Foul Surface Combined Overflow

Screen Chamber
Discharge Point
Outfall

Control Kiosk
Unspecified

LEGEND

MANHOLE FUNCTION

FO	Foul
SW	Surface Water
CO	Combined
OV	Overflow

SEWER SHAPE

CI	Circular	TR	Trapezoidal
EG	Egg	AR	Arch
OV	Oval	BA	Barrel
FT	Flat Top	HO	HorseShoe
RE	Rectangular	UN	Unspecified
SQ	Square		

SEWER MATERIAL

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

The position of underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available.
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: SJ6291NW
Scale: 1: 1250 Date: 15/07/2015
181 Nodes
Sheet 1 of 1

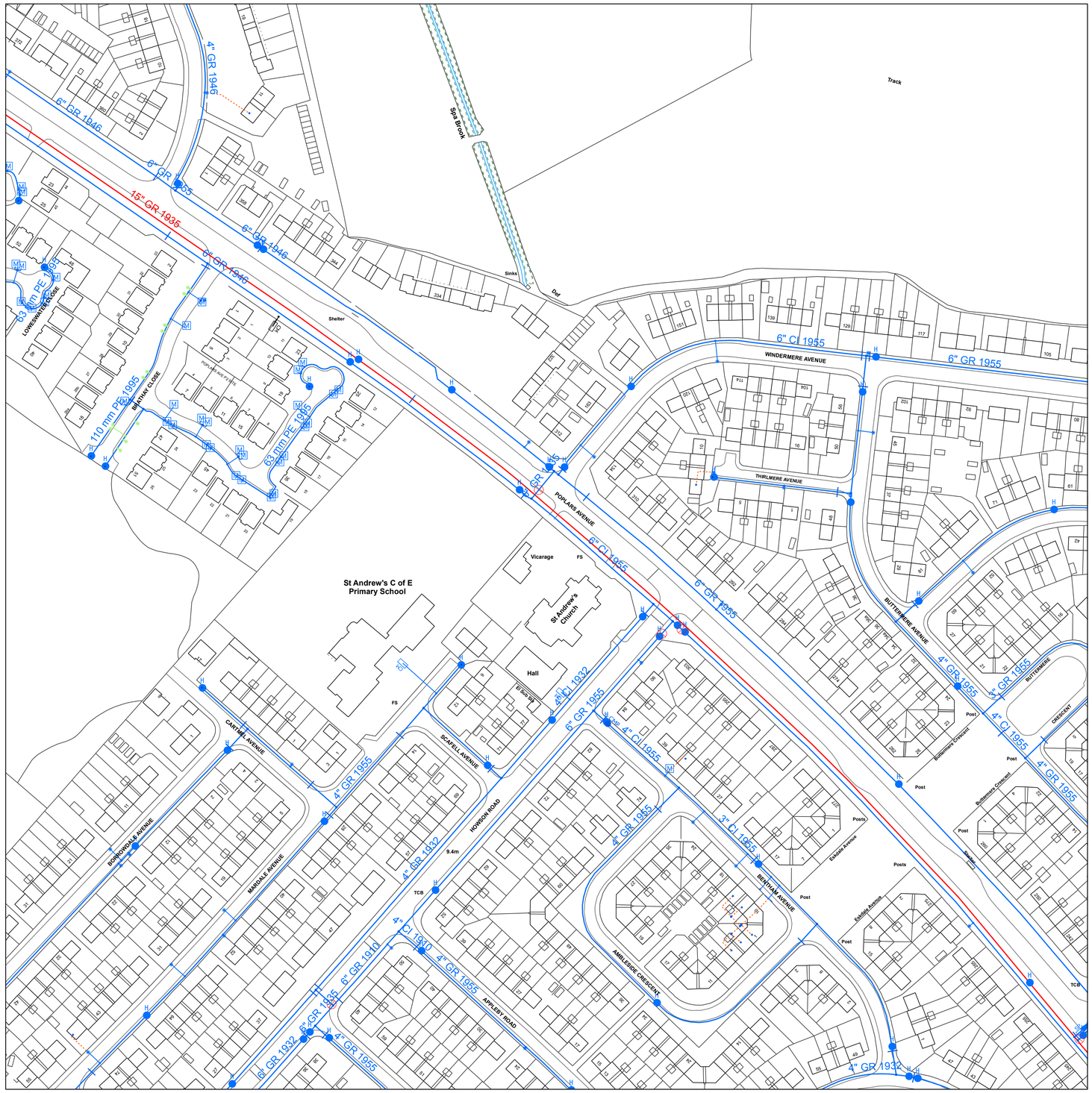
United Utilities
helping life flow smoothly

SEWER RECORDS

OS Sheet No: SJ6291NW

Approximately Scale: 1: 1250 Date: 15/07/2015

Printed By: Property Searches



OS Sheet No: SJ6191SW

Scale: 1: 1250 Date: 15/07/2015

Printed By: Katy Lowry

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	Inlet	Inlet Point
		Bulk Supply Point
FH	FH	Fire Hydrant
H	H	Hydrant
PFH	PFH	Private Fire Hydrant
		Pump
		Site Termination
		Service Start
		Service End
PM	PM	Process Meter
		Stop Tap
		Monitor Location
SP	SP	Strainer Point
AP	AP	Access Point
HB	HB	Hatch Box
IP	IP	IP Point
RM		Route Marker
SPT	SPT	Sampling Station
LB	LB	Logger Box

Property Types

Live	Proposed	
		Condition Report
PB	PB	Pipe Bridges
PT	PT	Tunnels (non carrier)
		Pumping Station
		Water Treatment Works
PC	PC	Private Treatment Works
VH	VH	Valve House
		Water Tower
SR	SR	Service Reservoir
SR AS	SR AS	Supply Reservoir
Inlet AP	Inlet AP	Abstraction Point
M	M	Domestic meter
CM	CM	Commercial meter
T	T	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

OS Sheet No: SJ6191SW
Scale: 1: 1250
Date: 15/07/2015

United Utilities
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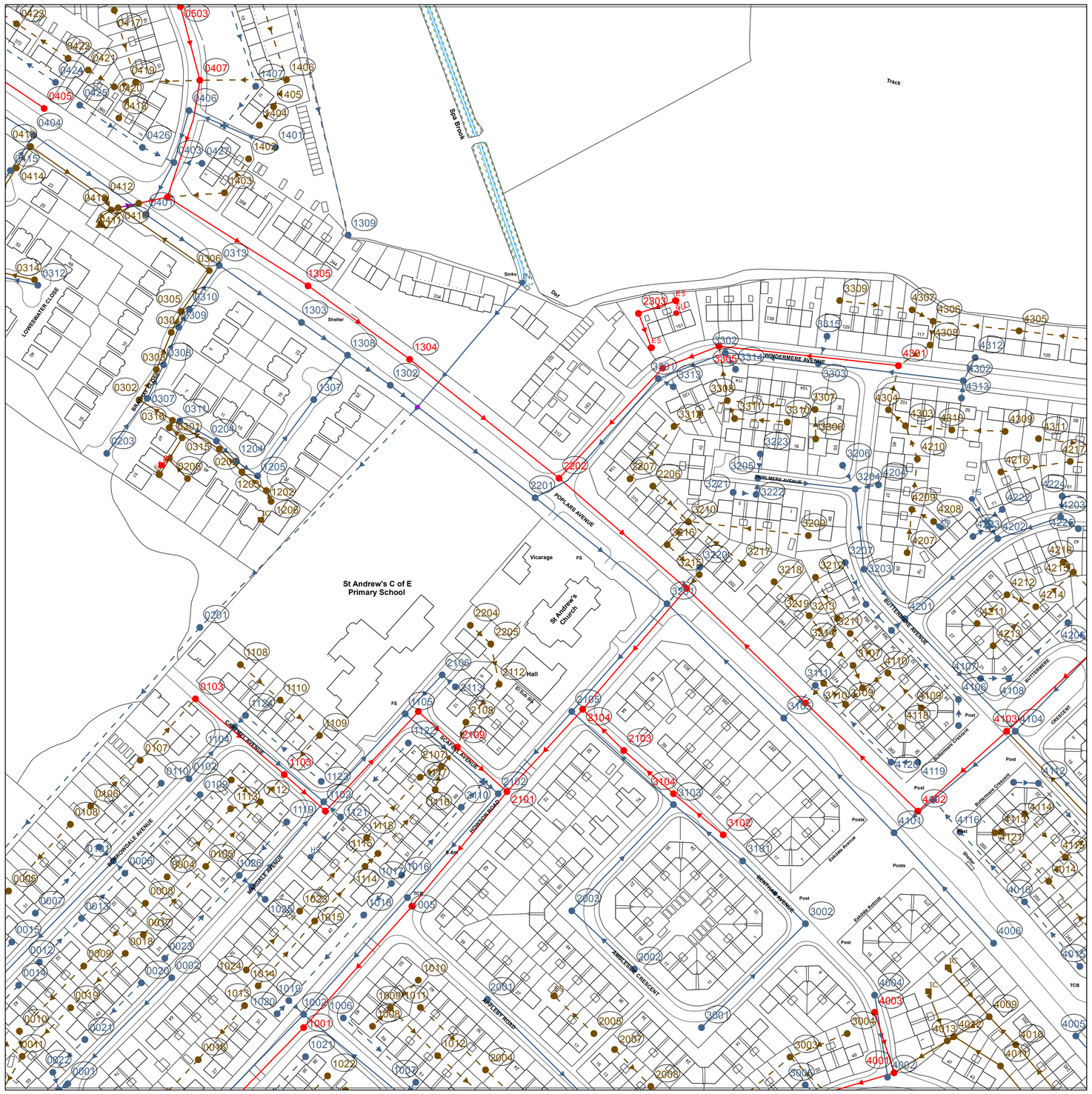
WATER MAIN RECORDS



Refno	Cover	Func	Invert	Size.x	Size.y	Shape	Matl	Length	Grad
0001	9.8	SW	7.52	225		CI	VC	6	
0002	10.1	SW	8.26	225		CI	VC	33.94	154
0004		FO		225		CI	VC	43.1	
0005		SW		225		CI	VC	28.44	
0006		SW							
0007		SW		225		CI	VC	42.47	
0008		FO		225		CI	VC	40.76	
0009		FO							
0010		FO							
0011		FO							
0012		SW		225		CI	VC	28.07	
0013		SW							
0014		SW		225		CI	VC	33.81	
0015		SW		225		CI	VC	37.77	
0016		FO							
0017		FO		225		CI	VC	42.8	
0018		FO		225		CI	VC	35.59	
0019		FO							
0020		SW		225		CI	VC	36.95	
0021		SW		225		CI	VC	21.23	
0022		SW		225		CI	VC	8.79	
0023		SW		225		CI	VC	51.59	
0101	9.71	SW	8.27	225		CI	VC	97.59	257
0102	9.55	SW	8.04	225		CI	VC	31.89	177
0103	9.54	CO	7.77	225		CI	VC	53.91	168
0105		FO		225		CI	VC	39.01	
0106		FO		225		CI	VC	31.21	
0107		FO		225		CI	VC	38.2	
0108		FO		225		CI	VC	42.02	
0109		SW		225		CI	VC	50.27	
0110		SW		225		CI	VC	41.15	
0111		SW							
0201		SW							
0202	10.12	FO							
0203	9.93	SW	8.87	225		CI	CO	31.53	126
0204	10.17	SW	8.45	225		CI	CO	12.89	143
0205		FO							
0301	10.25	FO							
0302	10.13	FO							
0303	10.05	FO							
0304	10.28	FO							
0305	10.4	FO							
0306	10.28	FO	6.59	150		CI	CO	51.15	128
0307	10.09	SW							
0308	10.06	SW							
0309	10.31	SW							
0310	10.41	SW							
0311	10.29	SW	8.58	225		CI	CO	19.3	148
0312	10.99	SW	9.2	225		CI	CO	20.2	184
0313	10.32	SW							
0314	10.97	FO	8.39	150		CI	CO	19.42	54
0315		FO							
0316		FO							
0401	10.3	SW							
0402	10.11	CO							
0403	10.11	SW							
0404	10.16	SW							
0405	10.42	CO	9.57	225		CI	VC	73.5	230
0406	10.15	SW	8.32	225		CI	VC	25	313
0407	10.32	CO							
0410	10.67	FO							
0411	10.64	FO	0	150		CI	CO	9.68	
0412	10.63	FO							
0413	10.49	FO							
0414	10.94	FO	7.28	150		CI	CO	11.85	
0415	10.95	SW	8.39	300		CI	VC	19.65	
0416	10.56	FO							
0417		FO		225		CI	VC	34.67	
0418		FO		225		CI	VC	18.27	
0419		FO							
0420		FO							
0421		FO		225		CI	VC	14.34	
0422		FO		225		CI	VC	28.76	
0423		FO		225		CI	VC	28.46	
0424		SW		225		CI	VC	29.76	
0425		SW		225		CI	VC	34.94	
0426		SW							
0427		SW		225		CI	VC	12.98	
0503	10.37	CO							
1001	9.98	CO	6.21	450		CI	CO	101.83	
1002	10	SW							
1003	10.07	SW							
1004	9.65	CO							
1005	9.65	SW							
1006		SW		225		CI	VC	44.82	
1007		SW		225		CI	VC	6.87	
1008		FO		0		CI		11.85	
1009		FO		0		CI		31.09	
1010		FO		0		CI		18.24	
1011		FO		225		CI	VC	41.72	
1012		FO		225		CI	VC	35.61	
1013		FO		0		CI	UN	32.87	
1014		FO		0		CI	UN	39.84	
1015		FO		0		CI	UN	34.33	
1016		SW		0		CI	UN	41.73	
1017		SW		0		CI	UN	19.37	
1018		SW							
1019		SW		750			CO	9.39	
1020		SW		0		CI	UN	8.22	
1021		SW		0		CI	UN	44.01	
1022		FO		0		CI	UN	31.97	
1023		FO		225		CI	VC	45.97	
1024		FO		225		CI	VC	36.63	
1025		SW		225		CI	VC	8.5	
1026		SW							
1101	9.78	CO	7.31	225		CI	VC	62.97	180
1102	9.75	SW	7.7	375		CI	VC	55.52	327
1103	9.57	CO							
1104	9.39	SW							
1105	9.43	SW							
1106	9.46	CO							
1108		FO		225		CI	VC	24.7	
1109		FO							
1110		FO		225		CI	VC	24.41	
1111		FO		225		CI	VC	16.84	
1112		FO							
1113		FO		225		CI	VC	14.05	
1114		FO		225		CI	VC	8.48	
1115		FO							
1116		FO							
1117		FO							
1118		FO		225		CI	VC	37.39	
1119		SW		225		CI	VC	33.05	
1121		SW							
1122		SW		0		CI	UN	46.41	
1123		SW		0		CI	UN	46.5	
1204		SW		375			VC	7.38	
1202	9.87	FO							
1203	10.03	FO							
1204	10.01	SW	8.36	300		CI	CO	12.11	303
1205	9.96	SW							
1206		FO							
1302	10.36	SW	7.7	450		CI	CO	16.18	539
1303	10.43	SW		225		CI	VC	88.24	304
1304	10.42	CO	7.3	300		CI	VC	88.24	304
1305		FO							
1307	10.3	SW							
1308	10.39	SW							
1309		SW							
1401	10.06	SW	8.88	150		CI	VC	25.57	
1402		FO		300		CI	VC	19.38	
1403		FO		300		CI	VC	26.42	
1404		FO		225		CI	VC	10.85	
1405		FO							
1406		FO		225		CI	VC	40.06	
1407		SW		150		CI	VC	23.24	
2001	9.6	SW	8.2	225		CI	VC	86.67	
2002	9.75	SW	8.18	225		CI	VC	39.62	233
2003	10.02	SW	8	225		CI	VC	67.9	339
2004		FO		225		CI	VC	55.65	

Refno	Cover	Func	Invert	Size.x	Size.y	Shape	Matl	Length	Grad
2005		FO		0		CI		25.15	
2007		FO		0		CI		23.87	
2008		FO		0		CI		31.39	
2101	9.13	CO	6.45	450		CI	CO	68.88	765
2102	9.13	SW	7.12	675		CI	CO	63.78	491
2103	9.42	CO							
2104	9.23	CO							
2105	9.22	SW							
2106	9.57	SW	7.94	225		CI	VC	24.76	92
2107		FO							
2108		FO		225		CI	VC	12.09	
2109		CO							
2110		FO							
2112		FO		225		CI	VC	23.47	
2113		SW		225		CI	VC	8.26	
2201	9.71	SW	7.67	450		CI	CO	78.24	340
2202	9.67	CO	7.01	300		CI	VC	77.98	300
2204		FO		225		CI	VC	12.84	
2205		FO		225		CI	VC	18.92	
2206		FO		0		CI	UN	23.14	
2207		FO		225		CI	VC	31.57	
2303		CO							
3001	10.18	SW	8.47	225		CI	VC	67.88	219
3002	9.81	SW							
3003		FO							
3004		SW		225		CI	VC	28.6	
3005		SW		225		CI	VC	10.99	
3101	9.76	SW							
3102	9.68	CO	7.33	225		CI	VC	29.83	249
3103	9.77	SW							
3104	9.7	CO							
3105	10.05	SW	7.53	600		CI	CO	75.66	504
3106	9.95	CO	6.88	375		CI	VC	76.38	382
3107		FO		375			VC	11.27	
3108		FO							
3109		FO		375			VC	14.24	
3110		FO							
3111		SW							
3201	9.53	SW							
3202	9.62	CO	6.7	450		CI	CO	73.76	671
3203	9.94	SW	8.31	225		CI	VC	29.83	142
3204	10.02	SW	8.47	225		CI	VC	37.22	248
3205	9.97	SW	8.67	225		CI	VC	45.28	226
3206		SW		225		CI	VC	12.4	
3207		SW		225		CI	VC	21.45	
3208		SW							
3209		FO		0		CI	UN	55.94	
3210		FO							
3211		FO		0		CI	UN	25.37	
3212		FO		0		CI	UN	21.51	
3213		FO							
3214		FO		0		CI	UN	14.41	
3215		FO	450			CI	CO	8.71	
3216		FO	450			CI	CO	30.35	
3217		FO		0		CI	UN	31.83	
3218		FO		0		CI	UN	22.54	
3219		FO							
3220		SW		0		CI	UN	22.69	
3221		SW		225		CI	VC	10.61	
3222		SW		225		CI	VC	7.65	
3223		SW		225		CI	VC	11.36	
3301	9.89	SW							
3302	9.92	SW	7.97	300		CI	VC	33.24	332
3303	9.91	SW							
3304	9.98	CO							
3305	9.93	CO							
3306		FO		225		CI	VC	13.63	
3307		FO							
3308		FO		225		CI	VC	33.81	
3310		FO		225		CI	VC	24.38	
3311		FO							
3312		FO							
3313		SW		300		CI	VC	7.84	
3314		SW		300		CI	VC	9	
3315		SW		300		CI	VC	13.28	
4001	9.84	CO							
4002	9.84	SW							
4003	9.76	CO	8.15	225		CI	VC	29.41	196
4004	9.8	SW	8.57	225		CI	VC	38.47	148
4005	10.03	SW	8.59	225		CI	VC	29.73	
4006	9.77	SW	0	225		CI	VC	68.68	
4009		FO							
4010		FO							
4011		FO		225		CI	VC	25.4	
4012		FO		225		CI	VC	3.71	
4013		FO							
4014		FO							
4015		SW		0		CI	UN	39.25	
4016		SW		600			CO	43.95	
4101	9.93	SW							
4102	9.87	CO	7.08	375		CI	VC	72.14	401
4103	9.78	CO							
4104	9.79	SW							
4105		SW		225		CI	VC	12.08	
4106		SW		225		CI	VC	44.37	
4107		SW		0		CI	UN	12.93	
4108		SW							
4109		FO		0		CI	UN	22.22	
4110		FO							
4111		SW		300		CI	VC	11.61	
4112		SW		300		CI	VC	41.5	
4113		FO		225		CI	VC	31.9	
4114		FO		225		CI	VC	27.56	
4115		FO							
4116		SW							
4118		FO		0		CI	UN	25.53	
4119		SW		0		CI	UN	12.41	
4120		SW		600			CO	49.88	
4121		FO							
4201	9.83	SW	8.09	225		CI	VC	72.84	251
4202	9.99	SW	8.34	225		CI	VC	56.73	247
4203	9.91	SW							
4204		SW		225		CI	VC	10.94	
4205		SW							
4206		SW							
4207		FO		225		CI	VC	20.11	
4208		FO		225		CI	VC	11.45	
4209		FO							
4210		FO							
4211		FO		0		CI	UN	19.29	
4212		FO							
4213		FO		0		CI	UN	26.73	
4214		FO							
4215		FO							
4216		FO		300		CI	VC	32.38	
4217		FO							
4218		FO		0		CI	UN	6.65	
4222		SW		225		CI	VC	9.19	
4223		SW		225		CI	VC	8.98	
4224		SW		225		CI	VC	9.67	
4225		SW							
4301	9.91	CO							
4302	9.92	SW	8.62	225		CI	VC	67.48	173
4303		FO							
4304		FO							
4305		FO		225		CI	VC	40.12	
4306		FO		225		CI	VC	10.99	
4307		FO		225		CI	VC	11	
4308		FO		225		CI	VC	17.6	
4309		FO		225		CI	VC	24.61	
4310		FO							
4311		FO		300		CI	VC	32.4	
4312		SW		225		CI	VC	12.04	
4313		SW		225		CI	VC	7.99	
0003		SW	8.04	150		CI	VC	34.66	158
0104		SW							
1107		SW							
1120		SW		0		CI	UN	23.33	
1201		SW		450		CI	VC	70.71	

OS Sheet No: SJ6191SW

Approximately Scale: 1: 1250 Date: 15/07/2015

Printed By: Property Searches

WASTE WATER SYMBOLOGY

Foul Surface Combined Overflow

Manhole
Manhole, Side Entry
MainSewer, Public
MainSewer, Private
MainSewer, S104
Rising Main, Public
Rising Main, Private
Rising Main, S104
Highway Drain, Private

Foul Surface Combined

WW Site Termination
Air Valve
Cascade
Non Return Valve
Extent of Survey
Flow Meter
Gulley
Hatch Box
Head of System
Hydrobrake / Vortex
Inlet
Inspection Chamber
Bifurcation
Catchpit
Contaminated Surface Water
WW Pumping Station
Sludge Pumping Station
Sewer Overflow
T Junction/Saddle
LampHole
OilInterceptor
PenStock
Pump
RoddingEye
Soakaway
Summit
Valve
Valve Chamber
Washout Chamber
DropShaft
WW Treatment Works
Septic Tank
Vent Column
Network Storage Tank
Orifice Plate
Vortex Chamber
Penstock Chamber
Blind Manhole
Foul Surface Combined Overflow
Screen Chamber
Discharge Point
Outfall

Sludge Main, Public
Sludge Main, Private
Sludge Main, S104

ABANDONED PIPE
MainSewer
Rising Main
Highway Drain
Sludge Main

Control Kiosk
Unspecified

LEGEND

MANHOLE FUNCTION

FO	Foul
SW	Surface Water
CO	Combined
OV	Overflow

SEWER SHAPE

CI	Circular	TR	Trapezoidal
EG	Egg	AR	Arch
OV	Oval	BA	Barrel
FT	Flat Top	HO	HorseShoe
RE	Rectangular	UN	Unspecified
SQ	Square		

SEWER MATERIAL

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

The position of underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available.
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: SJ6191SW
Scale: 1: 1250 Date: 15/07/2015
316 Nodes
Sheet 1 of 2

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SEWER RECORDS

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
- Route Marker
- 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

OS Sheet No: SJ6191SE
Scale: 1: 1250
Date: 15/07/2015

United Utilities
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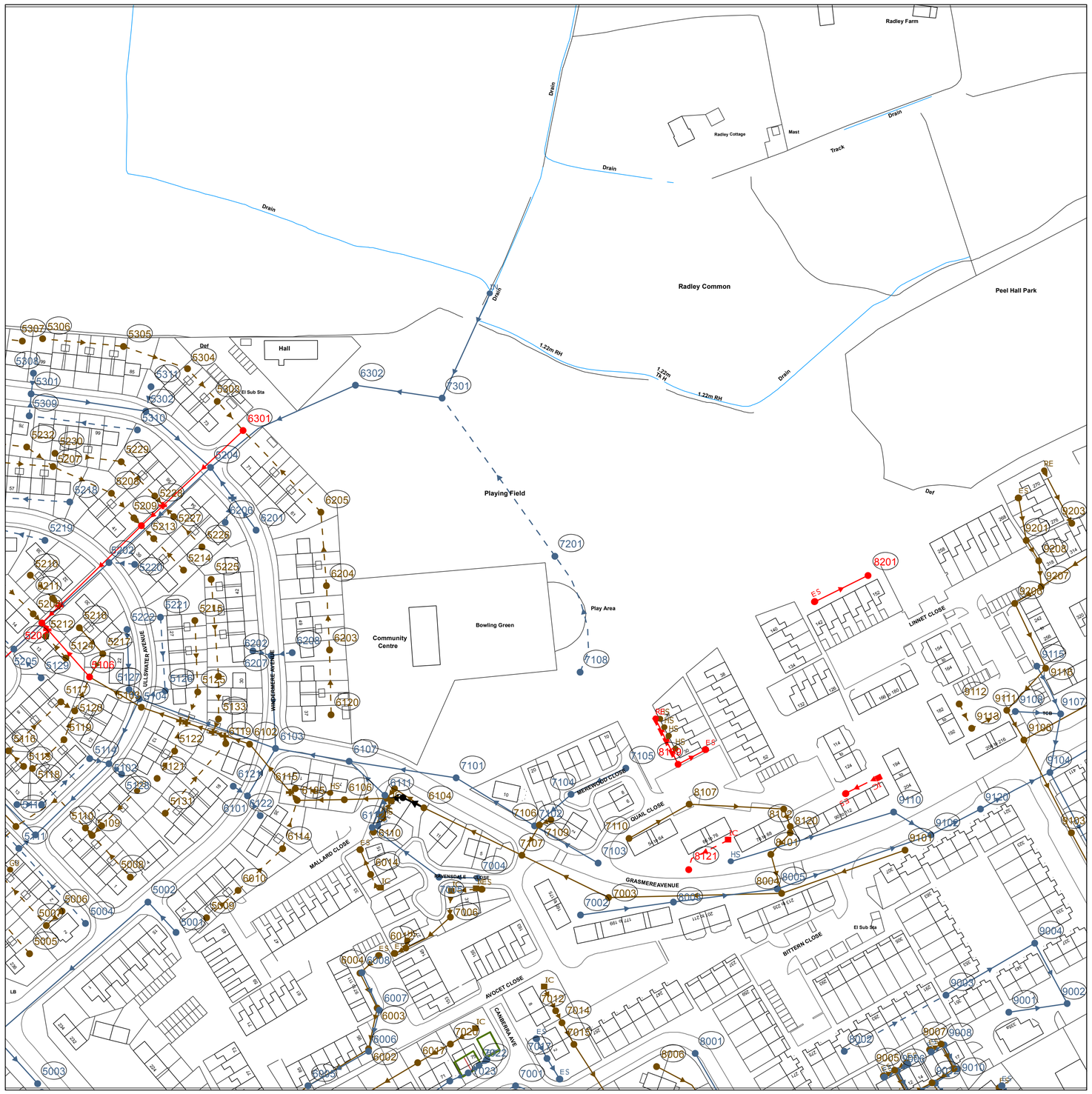
WATER MAIN RECORDS

Printed By: Katy Lowry

OS Sheet No: SJ6191SE

Scale: 1: 1250 Date: 15/07/2015



Refno	Cover	Func	Invert	Size.x	Size.y	Shape	Matl	Length	Grad
5001	10.48	SW	9.36	150		CI	VC	19.1	
5002	10.21	SW	0	225		CI	VC	84.26	
5003		SW							
5004		SW		300		CI	VC	46.43	
5005		FO		225		CI	VC	44.12	
5006		FO		225		CI	VC	9.77	
5007		FO		225		CI	VC	42.6	
5008		FO		150		CI	VC	28.04	
5009		FO		225		CI	VC	19.29	
5101	9.88	FO	7.95	225		CI	VC	60.83	92
5102	9.85	SW							
5103	9.89	FO							
5104	9.65	SW							
5105	9.91	SW							
5106	9.88	CO							
5109		FO		150		CI	VC	4.63	
5110		FO							
5111		SW							
5112		SW		300		CI	VC	11.35	
5113		SW							
5114		SW							
5115		FO		225		CI	VC	10.1	
5116		FO		225		CI	VC	33.07	
5117		FO							
5118		FO		225		CI	VC	19.75	
5119		FO							
5120		FO							
5121		FO		225		CI	VC	15.14	
5122		FO							
5124		FO		225		CI	VC	13.77	
5125		FO							
5126		SW							
5127		SW							
5128		SW		300		CI	VC	7.59	
5129		SW		0		CI	UN	18.34	
5131		FO		225		CI	VC	42.67	
5133		FO		225		CI	VC	6.49	
5134		FO		225		CI	VC	19.71	
5135		FO							
5201	9.99	CO	7.32	375		CI	VC	73.59	491
5202	9.74	SW							
5203	9.89	CO	7.51	300		CI	VC	52.97	
5204	9.74	SW	8.08	450		CI	CO	84.38	644
5205	10.05	SW	7.86	450		CI	CO	53.04	408
5206		FO		375		CI	VC	5.91	
5207		FO		300		CI	VC	29.71	
5208		FO		300		CI	VC	15.42	
5209		FO		300		CI	VC	5.03	
5210		FO		300		CI	VC	14.8	
5211		FO		300		CI	VC	4.75	
5212		FO							
5213		FO							
5214		FO		300		CI	VC	20.03	
5215		FO		225		CI	VC	32.99	
5216		FO							
5217		FO		225		CI	VC	12.32	
5218		SW		225		CI	VC	41.16	
5219		SW		225		CI	VC	22.82	
5220		SW		0		CI	UN	11.86	
5221		SW		300		CI	VC	34.08	
5222		SW							
5225		FO		225		CI	VC	45.07	
5226		FO		300		CI	VC	19.16	
5227		FO		300		CI	VC	7.12	
5228		FO		300		CI	VC	5.75	
5229		FO		300		CI	VC	22.31	
5230		FO		300		CI	VC	30.87	
5232		FO		300		CI	VC	15.14	
5301	9.87	SW							
5302	9.78	SW							
5303		FO							
5304		FO		300		CI	VC	20.45	
5305		FO		300		CI	VC	31.31	
5306		FO		300		CI	VC	37.59	
5307		FO		225		CI	VC	39.32	
5308		SW		225		CI	VC	9.56	
5309		SW							
5310		SW		225		CI	VC	50.48	
5311		SW		225		CI	VC	11.66	
6001	10.96	FO							
6002	10.96	FO	9.17	150		CI	VC	32.76	
6003	11.04	FO							
6004	10.97	FO	9.7	150		CI	VC	17.95	82
6005	10.96	SW	0	225		CI	VC	16.4	
6006		SW	0	225		CI	VC	32.25	
6007	11.04	SW	0	225		CI	CO	19.65	
6008	10.97	SW	0	939		CI	CO	19.14	
6010		FO							
6012		FO							
6014		FO							
6017		FO							
6101	9.9	SW	8.36	225		CI	VC	25.55	
6102	9.99	FO	7.99	225		CI	VC	11.97	
6103	9.86	SW							
6104	11.2	FO	8.63	225		CI	VC	16.3	163
6105		FO							
6106		FO	0	225		CI	VC	21.78	
6107		SW							
6108	10.8	FO							
6110	10.76	FO	8.93	150		CI	VC	16.89	39
6111	10.7	SW							
6112	10.77	SW							
6113	10.73	FO							
6114		FO							
6115		FO							
6119		FO							
6120		FO		300		CI	VC	29.91	
6121		SW		225		CI	VC	7.96	
6122		SW		225		CI	VC	10.74	
6201	9.73	SW	8.39	225		CI	VC	16.41	
6202	9.81	SW							
6203		FO							
6204		FO		300		CI	VC	34.1	
6205		FO		300		CI	VC	52.12	
6206		SW		225		CI	VC	11.91	
6207		SW		225		CI	VC	8.8	
6208		SW		225		CI	VC	9.8	
6301	9.8	CO	7.67	300		CI	VC	50.64	
6302	9.81	SW	8.2	450		CI	CO	77.67	706
7001		SW							
7002	12.2	SW	0	150		CI	VC	43.42	
7003	12.36	FO	8.94	225		CI	VC	44.62	112
7004	12.35	SW	11.01	150		CI	CO	17.94	44
7005	11.97	SW	10.6	150		CI	CO	38.48	26
7006		FO							
7012		FO							
7014		FO							
7015		FO							
7017		SW							
7020		FO							
7022		SW							
7023		SW							
7024		SW							
7101	11.34	SW							
7102	12.21	SW	10.01	225		CI	VC	42.46	115
7103	12.45	SW	10.55	225		CI	VC	34.15	63
7104	12.16	SW	10.58	225		CI	VC	22.29	39
7105	12.14	SW	10.98	150		CI	CO	28.09	70
7106	12.24	FO	10.56	150		CI	CO	16.19	11
7107	12.18	FO	8.94	225		CI	VC	50.35	162
7108		SW		0		CI	UN	58.02	
7109		FO		150		CI	VC	5.78	
7110		FO							
7201		SW		450			CO	89.77	
7301	9.86	SW	8.31	450		CI	CO	40.45	404
8001		SW	0	150		CI	VC	60.03	
8002	11.25	SW		225		CI	VC	53.71	
8003	12.43	SW							
8004	12.18	FO							
8005	12.24	SW	10.01	225		CI	VC	38.28	957

Refno	Cover	Func	Invert	Size.x	Size.y	Shape	Matl	Length	Grad
8006		FO							
8101	11.79	FO	9.62	150		CI	VC	18.68	208
8102	11.91	FO							
8103	11.8	FO	9.88	150		CI	VC	8.54	285
8107		FO							
8109		CO							
8120	11.8	FO	9.63	150		CI	VC	13.45	1345
8121		CO							
8201		CO							
9001	10.36	SW	9.44	225		CI	VC	27.29	455
9002	10.36	SW							
9003	10.67	SW							
9004	10.57	SW							
9005		FO							
9006		SW							
9007		FO							
9008		SW							
9009		FO							
9010		SW							
9011		FO							
9012		SW							
9101	11.26	FO	9.52	225		CI	VC	60.41	431
9102	11.44	SW							
9103	11.08	FO	8.69	225		CI	VC	44.29	277
9104	11.37	SW							
9106	11.39	FO							
9107	11.52	SW							
9108	11.39	SW	9.64	225		CI	VC	21.02	162
9110		SW							
9111	11.66	FO							
9112		FO		150		CI	VC	12.76	
9113		FO							
9115	11.49	SW	9.57	150		CI	VC	12.53	418
9116		FO							
9120	11.38	SW							
9201		FO							
9203		FO							
9206		FO							
9207		FO							
9208		FO							
9107		FO							
9108		FO		150		CI	VC	22.72	
9200		SW		300		CI	VC	21.23	
6009		FO	9.37	150		CI	PF	10.2	102
6013		FO							
6016		FO							
6116		FO		225		CI	VC	16.09	
6123		FO							
6125		FO							
6126		SW							
6127		SW							
7010		FO							
7013		FO							
7021		FO							
7303		SW	8.39	375		CI	VC	26.4	330
8100		SW	0	300		CI	VC	78.95	39
8104		SW							
8105		CO							
8111		FO							
8112		FO							
8113		FO							
8114		FO							
8117		CO							
8118		CO							
6109	11.3	FO							
7302		SW	8.46	375		CI	CO	26.4	377

WASTE WATER SYMBOLOGY

Foul Surface Combined Overflow

Manhole
Manhole, Side Entry
MainSewer, Public
MainSewer, Private
MainSewer, S104
Rising Main, Public
Rising Main, Private
Rising Main, S104
Highway Drain, Private

Foul Surface Combined

WW Site Termination
Air Valve
Cascade
Non Return Valve
Extent of Survey
Flow Meter
Gulley
Hatch Box
Head of System
Hydrobrake / Vortex
Inlet
Inspection Chamber
Bifurcation
Catchpit
Contaminated Surface Water
WW Pumping Station
Sludge Pumping Station
Sewer Overflow
TJunction/Saddle
LampHole
OilInterceptor
PenStock
Pump
RoddingEye
Soakaway
Summit
Valve
Valve Chamber
Washout Chamber
DropShaft
WW Treatment Works
Septic Tank
Vent Column
Network Storage Tank
Orifice Plate
Vortex Chamber
Penstock Chamber
Blind Manhole

Foul Surface Combined Overflow

Screen Chamber
Discharge Point
Outfall

Sludge Main, Public
Sludge Main, Private
Sludge Main, S104

ABANDONED PIPE

MainSewer
Rising Main
Highway Drain
Sludge Main

Control Kiosk
Unspecified

LEGEND

MANHOLE FUNCTION

FO	Foul
SW	Surface Water
CO	Combined
OV	Overflow

SEWER SHAPE

CI	Circular	TR	Trapezoidal
EG	Egg	AR	Arch
OV	Oval	BA	Barrel
FT	Flat Top	HO	HorseShoe
RE	Rectangular	UN	Unspecified
SQ	Square		

SEWER MATERIAL

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

The position of underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available.
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: SJ6191SE
Scale: 1: 1250 Date: 15/07/2015
232 Nodes
Sheet 1 of 1

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SEWER RECORDS

OS Sheet No: SJ6191SE

Printed By: Property Searches

Approximately Scale: 1: 1250 Date: 15/07/2015

OS Sheet No: SJ6191NW

Scale: 1: 1250 Date: 15/07/2015

Printed By: Katy Lowry

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	Inlet	Inlet Point
		Bulk Supply Point
FH	FH	Fire Hydrant
H	H	Hydrant
PFH	PFH	Private Fire Hydrant
		Pump
		Site Termination
		Service Start
		Service End
PM	PM	Process Meter
		Stop Tap
		Monitor Location
SP	SP	Strainer Point
AP	AP	Access Point
HB	HB	Hatch Box
IP	IP	IP Point
RM		Route Marker
SPT	SPT	Sampling Station
LB	LB	Logger Box

Property Types

Live	Proposed	
		Condition Report
PB	PB	Pipe Bridges
PT	PT	Tunnels (non carrier)
		Pumping Station
		Water Treatment Works
PC	PC	Private Treatment Works
VH	VH	Valve House
		Water Tower
SR	SR	Service Reservoir
SUP RES	SUP RES	Supply Reservoir
Inlet AP	Inlet AP	Abstraction Point
M	M	Domestic meter
CM	CM	Commercial meter
T	T	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

OS Sheet No: SJ6191NW
Scale: 1: 1250
Date: 15/07/2015

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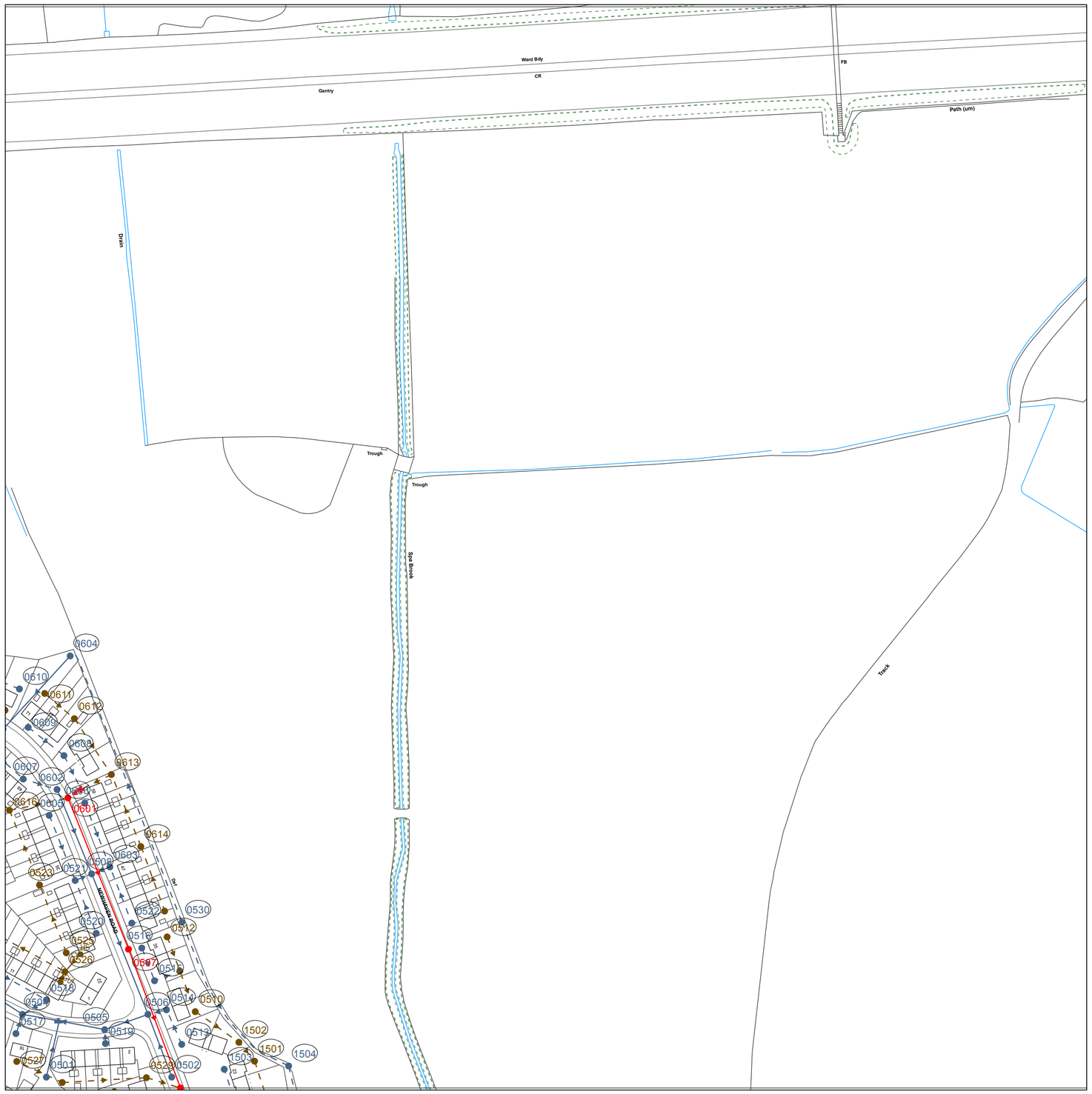
WATER MAIN RECORDS



Refno	Cover	Func	Invert	Size.x	Size.y	Shape	Matl	Length	Grad
0501	10.24	SW	8.62	150		CI	VC	26.68	
0502	10.33	SW	8.63	225		CI	VC	31.02	155
0504	10.22	SW	8.17	300		CI	VC	44.1	
0505	10.27	SW	8.37	300		CI	VC	38.64	215
0506	10.39	SW							
0507	10.57	CO							
0508	10.6	SW	8.86	225		CI	VC	70.01	163
0510		FO							
0511		FO							
0512		FO		0		CI	UN	16.9	
0513		SW		300		CI	VC	17.48	
0514		SW							
0515		SW							
0516		SW		0		CI	UN	16.14	
0517		SW		300		CI	VC	9.38	
0518		SW							
0519		SW		300		CI	VC	6.49	
0520		SW		225		CI	VC	26.31	
0521		SW							
0522		SW		225		CI	VC	27.88	
0523		FO							
0524		FO		225		CI	VC	31.87	
0525		FO		225		CI	VC	33.73	
0526		FO		225		CI	VC	45.24	
0527		FO		225		CI	VC	23.24	
0528		FO							
0529		FO							
0530		SW		225		CI	VC	85.93	
0601	10.75	CO							
0602	10.7	SW							
0603		SW							
0604		SW	0	525		CI	CO	45.88	
0605		SW		225		CI	VC	32.46	
0606		SW		225		CI	VC	31.88	
0607		SW							
0608		SW							
0609		SW		225		CI	VC	21.09	
0610		SW		225		CI	VC	18.96	
0611		FO		225		CI	VC	17.89	
0612		FO							
0613		FO							
0614		FO		225		CI	VC	35.96	
0616		FO							
1501		FO							
1502		FO							
1503		SW		150		CI	VC	47.65	
1504		SW		225		CI	VC	119.03	
0503		FO							
0531		FO							
0532		FO							
0509		SW							
0615		CO							

Refno	Cover	Func	Invert	Size.x	Size.y	Shape	Matl	Length	Grad

OS Sheet No: SJ6191NW

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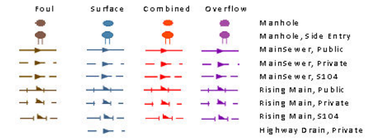
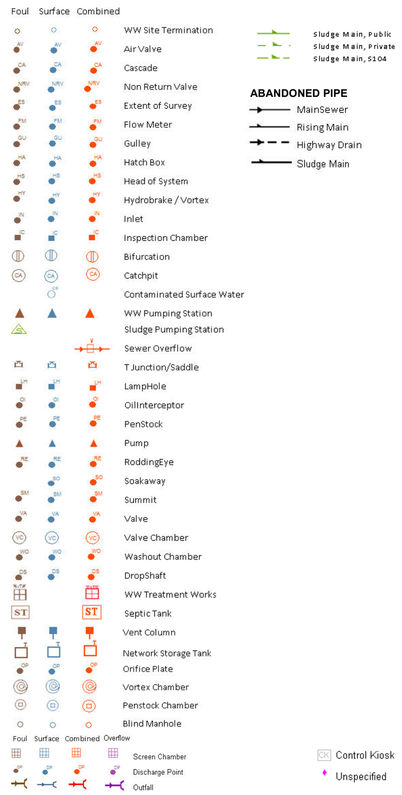
Approximately Scale: 1: 1250 Date: 15/07/2015

WASTE WATER SYMBOLOGY





LEGEND

MANHOLE FUNCTION

FO	Foul
SW	Surface Water
CO	Combined
OV	Overflow

SEWER SHAPE

CI	Circular	TR	Trapezoidal
EG	Egg	AR	Arch
OV	Oval	BA	Barrel
FT	Flat Top	HO	HorseShoe
RE	Rectangular	UN	Unspecified
SQ	Square		

SEWER MATERIAL

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

OS Sheet No: SJ6191NW
Scale: 1: 1250 Date: 15/07/2015
52 Nodes
Sheet 1 of 1

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SEWER RECORDS

OS Sheet No: SJ6191NE

Scale: 1: 1250 Date: 15/07/2015

Printed By: Katy Lowry

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	Inlet	Inlet Point
		Bulk Supply Point
FH	FH	Fire Hydrant
H	H	Hydrant
PFH	PFH	Private Fire Hydrant
		Pump
		Site Termination
		Service Start
		Service End
PM	PM	Process Meter
		Stop Tap
		Monitor Location
SP	SP	Strainer Point
AP	AP	Access Point
HB	HB	Hatch Box
IP	IP	IP Point
RM		Route Marker
SPT	SPT	Sampling Station
LB	LB	Logger Box

Property Types

Live	Proposed	
		Condition Report
PB	PB	Pipe Bridges
PT	PT	Tunnels (non carrier)
		Pumping Station
		Water Treatment Works
PC	PC	Private Treatment Works
VH	VH	Valve House
		Water Tower
SR	SR	Service Reservoir
SUP RES	SUP RES	Supply Reservoir
Inlet AP	Inlet AP	Abstraction Point
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Material Types

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GI GALVANISED IRON	UN UNKNOWN
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Lining Types

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TB TAR OR BITUMEN	

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

OS Sheet No: SJ6191NE
Scale: 1: 1250
Date: 15/07/2015

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WATER MAIN RECORDS

Refno Cover Func Invert Size.x Size.y Shape Matl Length Grad Refno Cover Func Invert Size.x Size.y Shape Matl Length Grad

WASTE WATER SYMBOLOGY

Foul Surface Combined Overflow

- Manhole
- Manhole, Side Entry
- MainSewer, Public
- MainSewer, Private
- MainSewer, S104
- Rising Main, Public
- Rising Main, Private
- Rising Main, S104
- Highway Drain, Private

Foul Surface Combined

- WW Site Termination
- Air Valve
- Cascade
- Non Return Valve
- Extent of Survey
- Flow Meter
- Gulley
- Hatch Box
- Head of System
- Hydrobrake / Vortex
- Inlet
- Inspection Chamber
- Bifurcation
- Catchpit
- Contaminated Surface Water
- WW Pumping Station
- Sludge Pumping Station
- Sewer Overflow
- T Junction/Saddle
- LampHole
- OilInterceptor
- PenStock
- Pump
- RoddingEye
- Soakaway
- Summit
- Valve
- Valve Chamber
- Washout Chamber
- DropShaft
- WW Treatment Works
- Septic Tank
- Vent Column
- Network Storage Tank
- Orifice Plate
- Vortex Chamber
- Penstock Chamber
- Blind Manhole

Foul Surface Combined Overflow

- Screen Chamber
- Discharge Point
- Outfall

- Sludge Main, Public
- Sludge Main, Private
- Sludge Main, S104

ABANDONED PIPE

- MainSewer
- Rising Main
- Highway Drain
- Sludge Main

- Control Kiosk
- Unspecified

LEGEND

MANHOLE FUNCTION

FO	Foul
SW	Surface Water
CO	Combined
OV	Overflow

SEWER SHAPE

CI	Circular	TR	Trapezoidal
EG	Egg	AR	Arch
OV	Oval	BA	Barrel
FT	Flat Top	HO	HorseShoe
RE	Rectangular	UN	Unspecified
SQ	Square		

SEWER MATERIAL

AC	Asbestos Cement	DI	Ductile Iron
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CSB	Concrete Segment Bolted	VC	Vitrified Clay
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CC	Concrete Box Culverted	PF	Pitch Fibre
PSC	Plastic/Steel Composite	MAC	Masonry, Coursed
GRC	Glass Reinforced Concrete	MAR	Masonry, Random
GRP	Glass Reinforced Plastic	U	Unspecified

OS Sheet No: SJ6191NE
Scale: 1: 1250 Date: 15/07/2015
0 Nodes
Sheet 1 of 1

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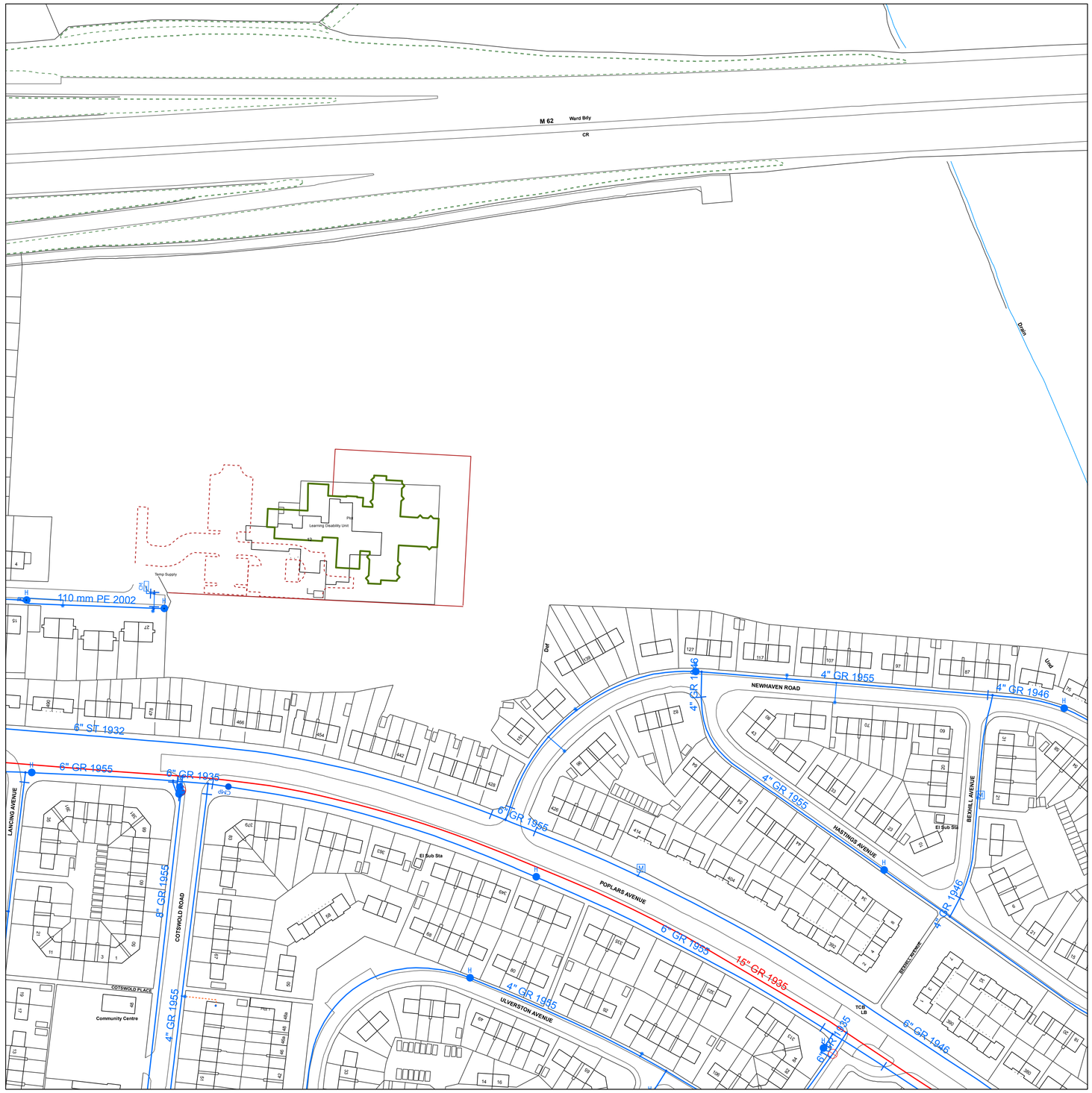
SEWER RECORDS

OS Sheet No: SJ6191NE

Printed By: Property Searches

Approximately Scale: 1: 1250 Date: 15/07/2015



Printed By: Katy Lowry

OS Sheet No: SJ6091NE

Scale: 1: 1250 Date: 15/07/2015

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	Inlet	Inlet Point
		Bulk Supply Point
FH	FH	Fire Hydrant
H	H	Hydrant
PFH	PFH	Private Fire Hydrant
		Pump
		Site Termination
		Service Start
		Service End
PM	PM	Process Meter
		Stop Tap
		Monitor Location
SP	SP	Strainer Point
AP	AP	Access Point
HB	HB	Hatch Box
IP	IP	IP Point
RM		Route Marker
SPT	SPT	Sampling Station
LB	LB	Logger Box

Property Types

Live	Proposed	
		Condition Report
PB	PB	Pipe Bridges
PT	PT	Tunnels (non carrier)
		Pumping Station
		Water Treatment Works
PC	PC	Private Treatment Works
VH	VH	Valve House
		Water Tower
SR	SR	Service Reservoir
SUP RES	SUP RES	Supply Reservoir
Inlet AP	Inlet AP	Abstraction Point
M	M	Domestic meter
CM	CM	Commercial meter
T	T	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

OS Sheet No: SJ6091NE
Scale: 1: 1250
Date: 15/07/2015

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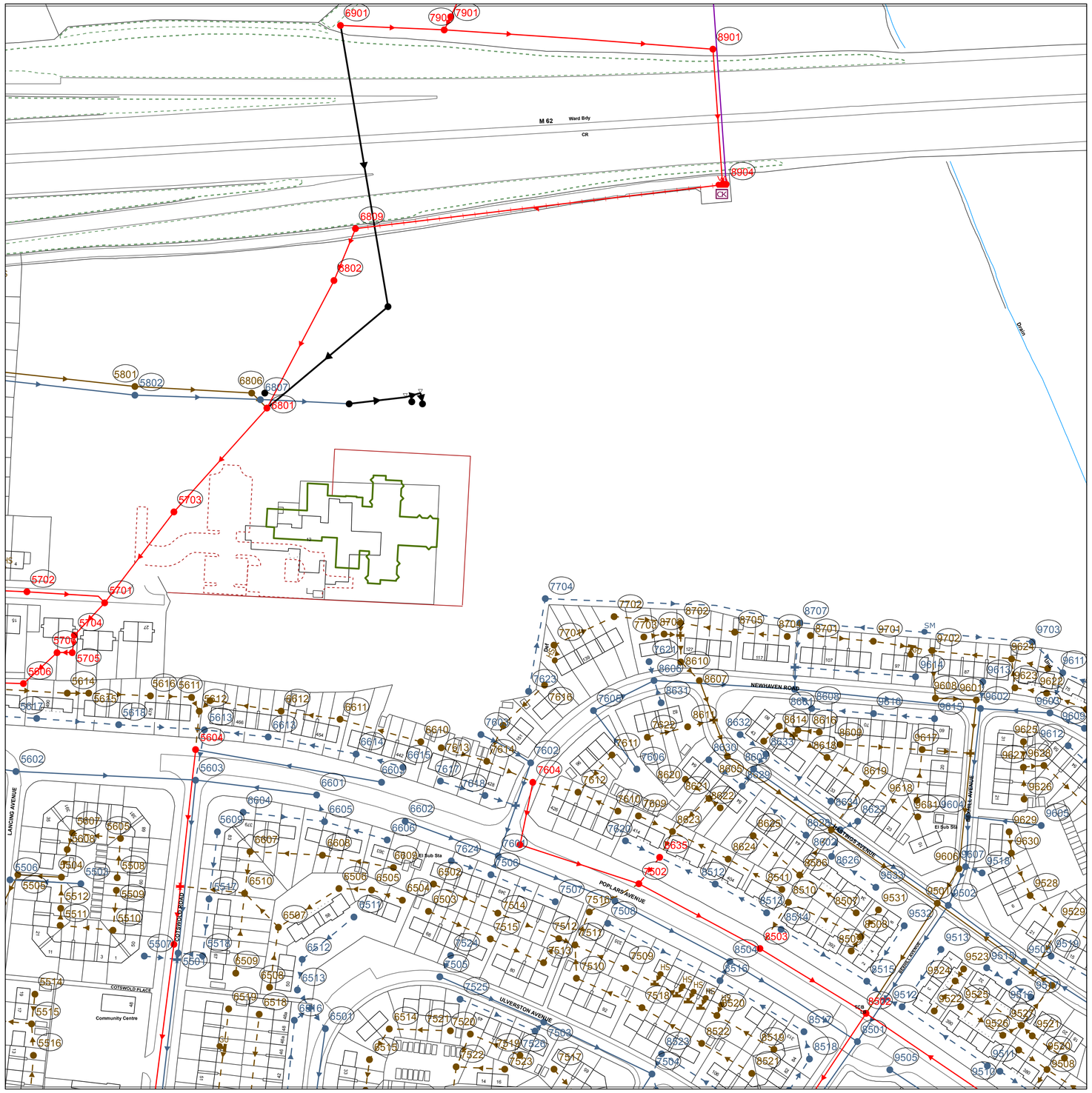
WATER MAIN RECORDS



Refno	Cover	Func	Invert	Size.x	Size.y	Shape	Matl	Length	Grad	Refno	Cover	Func	Invert	Size.x	Size.y	Shape	Matl	Length	Grad
8902		CO	0			CI	VC	1.86											

WASTE WATER SYMBOLOGY

LEGEND

MANHOLE FUNCTION

FO	Foul
SW	Surface Water
CO	Combined
OV	Overflow

SEWER SHAPE

CI	Circular	TR	Trapezoidal
EG	Egg	AR	Arch
OV	Oval	BA	Barrel
FT	Flat Top	HO	HorseShoe
RE	Rectangular	UN	Unspecified
SQ	Square		

SEWER MATERIAL

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

The position of underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available.
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: SJ6091NE
Scale: 1: 1250 Date: 15/07/2015
301 Nodes
Sheet 1 of 1

United Utilities
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SEWER RECORDS

OS Sheet No: SJ6091NE

Printed By: Property Searches

Approximately Scale: 1: 1250 Date: 15/07/2015

OS Sheet No: SJ6291NW

Scale: 1: 1250 Date: 15/07/2015

Printed By: Katy Lowry

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	Inlet	Inlet Point
		Bulk Supply Point
FH	FH	Fire Hydrant
H	H	Hydrant
PFH	PFH	Private Fire Hydrant
		Pump
		Site Termination
		Service Start
		Service End
PM	PM	Process Meter
		Stop Tap
		Monitor Location
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AP	AP	Access Point
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Material Types

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GI GALVANISED IRON	UN UNKNOWN
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Lining Types

CL CEMENT LINING	ERL EPOXY RESIN
TB TAR OR BITUMEN	

Insertion Types

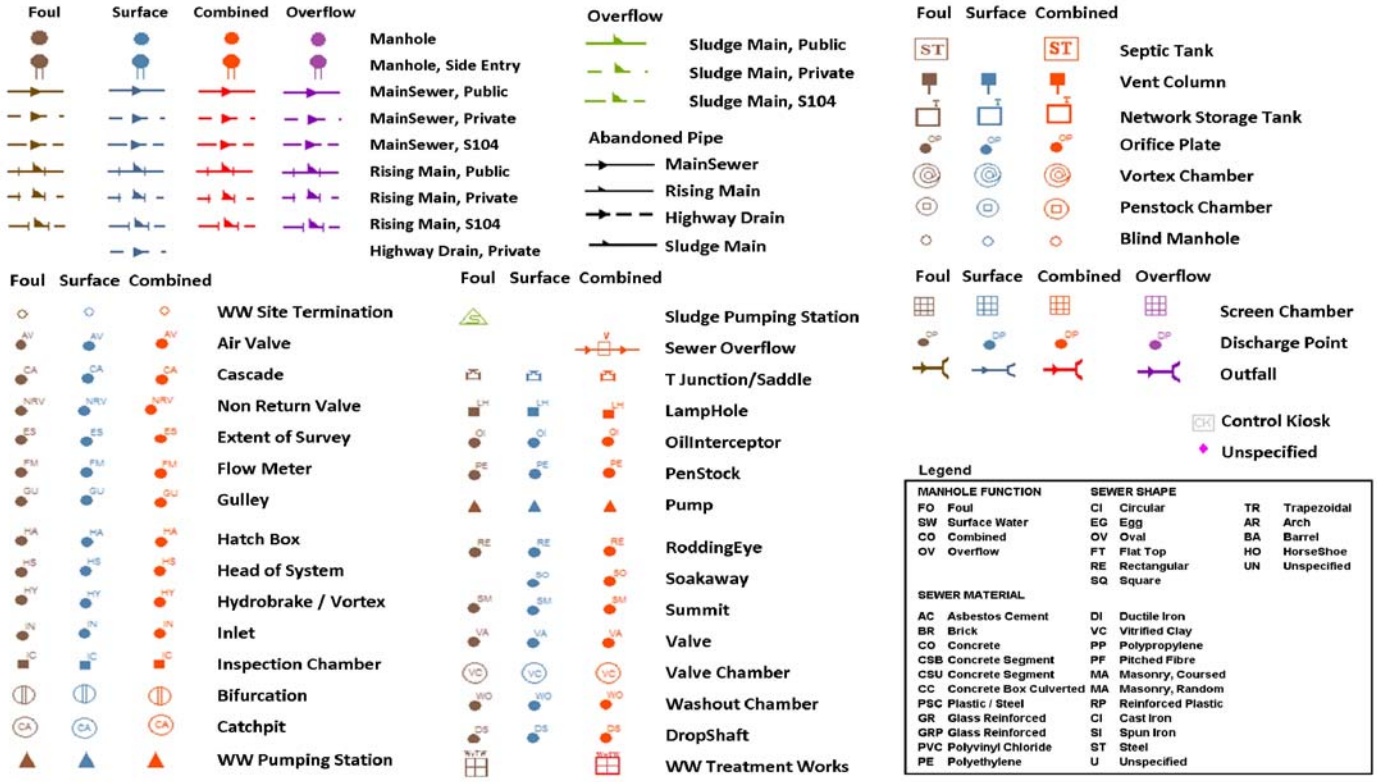
DD DIE DRAWN	MO MOLING
DR DIRECTIONAL DRILLING	PI PIPELINE
	SL SLIP LINED

OS Sheet No: SJ6291NW
Scale: 1: 1250
Date: 15/07/2015

United Utilities
helping life flow smoothly

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			
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BR	Brick	VC	Vitrified Clay
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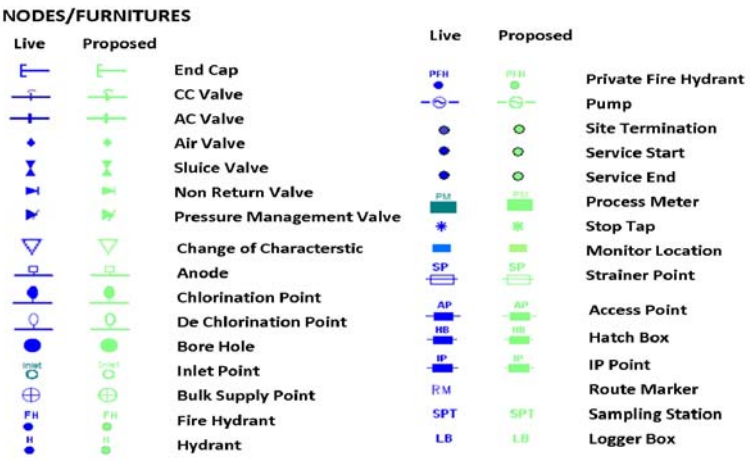
GR	Glass Reinforced	CI	Cast Iron
GRP	Glass Reinforced	SI	Spun Iron
PVC	Polyvinyl Chloride	ST	Steel
PE	Polyethylene	U	Unspecified

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	ERL	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	MOLING
PV	uPVC	PI	PIPELINE
SI	SPUN IRON	SL	SLIP LINED
ST	STEEL		
UN	UNKONWN		
PE	POLYETHYLENE		

Conditions and Information regarding water distribution apparatus

These general conditions and precautions apply to the water distribution system of United Utilities

Please ensure that a copy of these conditions is passed to your representative and contractor on site.

1. United Utilities provides approximate locations of its water mains or apparatus according to its records. These records are not necessarily accurate or complete nor do they normally show the positions of private service pipes from the mains to properties. Where service pipes are shown, a blue broken line indicates their approximate position. No person or company shall be relieved from liability for any damage caused by reason of the actual positions and/or depths being different from those indicated.
2. Special requirements relative to our apparatus may be indicated. United Utilities employees will visit any site at reasonable notice to assist in the location of its underground water apparatus and advise any precautions that may be required to obviate any damage. To arrange a visit or for further information regarding new supplies, connections, diversions, costing, future proposals for construction of company apparatus or any notification required under these General Conditions, please telephone us on **0345 746 2200** or write to United Utilities, PO Box 453, Warrington, WA5 3QN.
3. In order to achieve safe working conditions adjacent to any water apparatus the following should be observed;
   (a) All water apparatus should be located by hand digging prior to the use of mechanical excavation.

   (b) During construction work where heavy plant may have to cross the line of a water main, and the main is not under a carriageway of adequate standard of construction, crossing points should be suitably reinforced with sleepers, steel plates or a specially constructed reinforced concrete raft as necessary. These crossing points should be clearly indicated and crossing the line of the water main at other places should be prevented. United Utilities employees will advise on the type of reinforcement necessary. This is particularly important on agricultural or open land, where tilling or erosion may have significantly reduced the original cover.

   (c) No explosive should be used within 32 metres of any United Utilities apparatus without prior consultation with United Utilities.

   (d) Where it is proposed to carry out piling within 15 metres of any water main United Utilities should be consulted so that the affected main may be surveyed.

4. During any excavation, it is important that measures should be taken to ensure continued support for any water main:

   (a) Where excavation of trenches adjacent to any water main is likely to affect its support, the main must be supported to the satisfaction of United Utilities.

   (b) Where a trench is excavated crossing or parallel to the line of a water main, the backfill should be adequately compacted to prevent any settlement which could subsequently cause damage to the main. In special cases it may be necessary to provide permanent support to a main which has been exposed over the length of the excavation before back-filling and reinstatement is carried out. No back-filled concrete should contact the main.

5. No other apparatus should be laid over and along the line of a water main irrespective of clearance. A minimum clearance of 450 millimetres should be allowed between any plant being installed and an existing main, to facilitate maintenance and repair, whether the adjacent plant is parallel to or crossing the main. No manhole, chamber, or other obstruction should be built over or around a water main.

6. Where a water main is coated with special wrapping and the wrapping is damaged, even to a minor extent, United Utilities must be notified, and the excavation must be left open for ready access so that repairs can be made. In case of any material damage to the main itself causing leakage, or weakening of the mechanical strength of the pipe, the person or body responsible should immediately notify United Utilities in order that the necessary remedial work can be carried out. The full cost of the necessary remedial work will be charged to the person or body responsible for the damage.

1. If you propose to change existing levels over water mains you will need to inform us. We will need specific locations to be identified together with precise details as to the scale of the proposed changes to existing ground levels. Changes to existing levels may require the diversion of our apparatus at your cost. However, in certain circumstances we may wish to leave our apparatus where it is. On these occasions you will usually be required to protect our apparatus by means of a concrete raft and either raise or lower any surface boxes affected.
2. Under no circumstances should our surface boxes be either buried or left in a situation where they are raised above finished ground levels. You should reuse and re-set any surface boxes affected by your works into the new surface so that they align over the water apparatus below. You will be responsible for the cost of repairing any damage to our apparatus as a result of your works.
3. Where proposals involve resurfacing, you must notify United Utilities if your excavation will be greater than 750mm in the highway and 300mm in a footpath, verge or other location.
4. For information regarding easements, deeds, grants, licences or wayleaves, please write to United Utilities Property Solutions, Coniston Buildings, Lingley Mere Business Park, Lingley Green Avenue, Great Sankey, Warrington WA5 3UU (**Tel 01925 731 365**).

Tree planting restrictions over water mains

a) Poplar and willow trees have extensive root systems and should not be planted within 10 metres of any water main.

b) The following trees and those of a similar size, whether they are deciduous or evergreen, should not be be planted within six metres of any water main:

- Ash, beech, birch, elm, horse chestnut, lime, oak, sycamore;
- Apple trees and pear trees;
- Most conifers.

c) United Utilities requires access to the route of its mains at all times to inspect for leaks and carry out surveys. We recommend that no shrubs or bushes which might obstruct or interfere with our access should be planted within one metre of the centre line of any water main.

d) There may be instances when both United Utilities and the landowner will wish to plant shrubs or bushes close to the water main for screening or other purposes. The following shallow rooting shrubs would be suitable for this purpose:

- Blackthorn, broom, cotoneaster, elder;
- Hazel, laurel, privet, quickthorn, snowberry;
- Most ornamental flowering shrubs.

e) In areas where soft fruit is grown, blackcurrant, raspberries and gooseberries may be planted close to the main, provided that a path is left clear for inspection access and surveys. United Utilities can give additional advice where required in particular circumstances.

Conditions and Information regarding wastewater network

These general conditions and precautions apply to the wastewater network of United Utilities

Please ensure that a copy of these conditions is passed to your representative and contractor on site.

1 United Utilities provides the approximate locations of its sewers according to its records. These records are not necessarily accurate or complete nor do they normally show the positions of every sewer culvert or drain, private connections from properties to the public sewers or the particulars of any private system. No person or company shall be relieved from liability for any damage caused by reason of the actual positions and/or depths being different from those indicated. The records do indicate the position of the nearest known public sewer from which the likely length of private connections can be estimated together with the need for any off site drainage rights or easements.

2 Special requirements relative to our sewers may be indicated. United Utilities employees or its contractors will visit any site at reasonable notice to assist in the location of its underground sewers and advise any precautions that may be required to obviate any damage. To arrange a visit or for further information regarding new supplies, connections, diversions, costing, or any notification required under these General Conditions, please call us on **0345 602 0406**.

3 Where public sewers are within a site which is to be developed and do not take any drainage from outside the area, they are from an operational viewpoint redundant. The developer must identify all redundant sewers affected by the development and apply to United Utilities in writing for these sewers to be formally closed. The developer shall bear all related costs of the physical abandonment work.

4 Public sewers within the site that are still live outside the area will be subject to a “Restricted Building zone”. This would normally be a surface area equivalent to the depth of the sewer measured from the centre line of the sewer on either side. No construction will be permitted within that zone. The developer should also note that deep and wide rooted trees must not be planted in close proximity to live sewers. Access to public sewers must be maintained at all times and no interference to manholes will be permitted during construction work.

5. Where there is a public sewer along the line of a proposed development/building, arrangements shall be made by the developer at his cost to divert the sewer around the development. Where this is not possible and as a last resort, a “Building Over Agreement” will need to be completed under section 18 of the Building Act 1984. The developer shall design building foundations to ensure that no additional loading is transferred to the sewer and submit such details both to the Local Authority’s Building Control Officer and to United Utilities for approval/acceptance. United Utilities on a rechargeable basis would normally undertake all aspects of design work associated with the diversion of any part of the operational wastewater network. For further advice please email wastewaterdeveloperservices@uuplc.co.uk

6. Where there is a non-main river watercourse/culvert passing through the site, the landowner has the responsibility of a riparian owner for the watercourse/culvert and is responsible for the maintenance of the fabric of the culvert and for all works involved in maintaining the unrestricted flow through it. Building over the watercourse/culvert is not recommended. The developer must contact the local authority before any works are carried out on the watercourse/culvert. Where it is necessary to discharge surface water from the site into the watercourse/culvert the developer shall make an assessment of the available capacity of the watercourse/culvert (based on a 1 in 50 year event) and ensure that the additional flow to be discharged into the watercourse/culvert will not cause any flooding. In appropriate cases, flooding may be prevented by on-site storage. The developer shall submit the relevant details required to substantiate his development proposals. Details of any outfall proposed shall also be submitted to the Environment Agency, PO Box 12, Richard Fairclough House, Knutsford Road, Warrington, Cheshire, WA4 1HT for their approval.

7. Where there is a main river watercourse/culvert passing through the site, the developer shall submit all proposals affecting the river to the Environment Agency at the address stated in paragraph 6 for approval/acceptance.

8. Your attention is drawn also to the following:

Private drains or sewers which may be within the site.

On 1 October 2011 all privately owned sewers and lateral drains which communicate with (that is drain to) an existing public sewer as at 1 July 2011 will become the responsibility of the sewerage undertaker. This includes private sewers upstream of pumping stations that have yet to transfer, but excludes lengths of sewer or drain that are the subject of an on-going appeal or which have been excluded from transfer as a result of an appeal or which are on or under land opted-out by a Crown body. The transfer specifically excludes sewers and lateral drains owned by a railway undertaker. Sewers upstream of such assets, however, are transferred. Such assets may not be recorded on the public sewer record currently as it was not a requirement to keep records of previously private sewers and drains.

Applications to make connections to the public sewer.

The developer must write to United Utilities requesting an application form that must be duly completed and returned. No works on the public sewer shall be carried out until a letter of consent is received from United Utilities.

Sewers for adoption If an agreement for the adoption of sewers under Section 104 of the Water Industry Act 1991 is being contemplated, a submission in accordance with "Sewers for Adoption", Seventh Edition, published by the Water Research Centre (2001) Plc, Henley Road, Medmenham, PO Box 16, Marlow, Buckinghamshire, SL7 2HD will be required, taking into consideration any departures from the general guide stipulated by United Utilities.

Further consultation with United Utilities.

Developers wishing to seek advice or clarification regarding sewer record information provided should contact United Utilities to arrange an appointment. A consultation fee may be charged, details of which will be made available at the time of making an appointment.

9. Combined sewers, foul sewers, surface water sewers, and pumped mains. These are shown separately in a range of colours or markings to distinguish them on our drawings, which are extracts from the statutory regional sewer map. A legend and key is provided on each extract for general use, although not all types of sewer will be shown on every extract.

Combined sewers shown coloured red carries both surface water and foul sewage, especially in areas where there is no separate surface water sewerage system.

Foul sewers coloured brown may also carry surface water and there may be no separate surface water system indicated in the immediate area. Both combined and foul sewers carry wastewater to our treatment works before it can safely be returned to the environment.

Surface water sewers coloured blue on our drawings are intended only to carry uncontaminated surface water (e.g. rainfall from roofs, etc) and they usually discharge into local watercourses. It is important for the protection of the environment and water quality that only uncontaminated surface water is connected to the surface water sewers. Improper connections to surface water sewers from sink wastes, washing machines and other domestic use of water can cause significant pollution of watercourses.

Pumped mains, rising mains and sludge mains will all be subject to pumping pressures and are neither suitable nor available for making new connections.

Highway drains, when included, show as blue and black dashed lines. Highway drains are not assets belonging to United Utilities and are the responsibility of local authorities.

1. For information regarding future proposals for construction of company apparatus please write to United Utilities, PO Box 453, Warrington, WA5 3QN.
2. For information regarding easements, deeds, grants or wayleaves please write to United Utilities Property Solutions, Coniston Buildings, Lingley Mere Business Park, Lingley Green Avenue, Great Sankey, Warrington, WA5 3UU **Tel: 01925 731 365**

APPENDIX C

Legend

CAUTION AREA

BT.CAUTION_AREA

EQUIPMENT

TABCD FIBRE, TCODE

COPPER, CABINET

476 R COPPER, DP

DUCT

A/C AERIAL

TUNNEL

DUCT

PROPOSED

A/C AERIAL

DUCT

STRUCTURE

YCODE

CABINET SHELL

SPLIT COUPLING

POLE

KIOSKS

MANHOLE

JOINTBOX

CHANGE OF STATE

DUCT TEE

PROPOSED

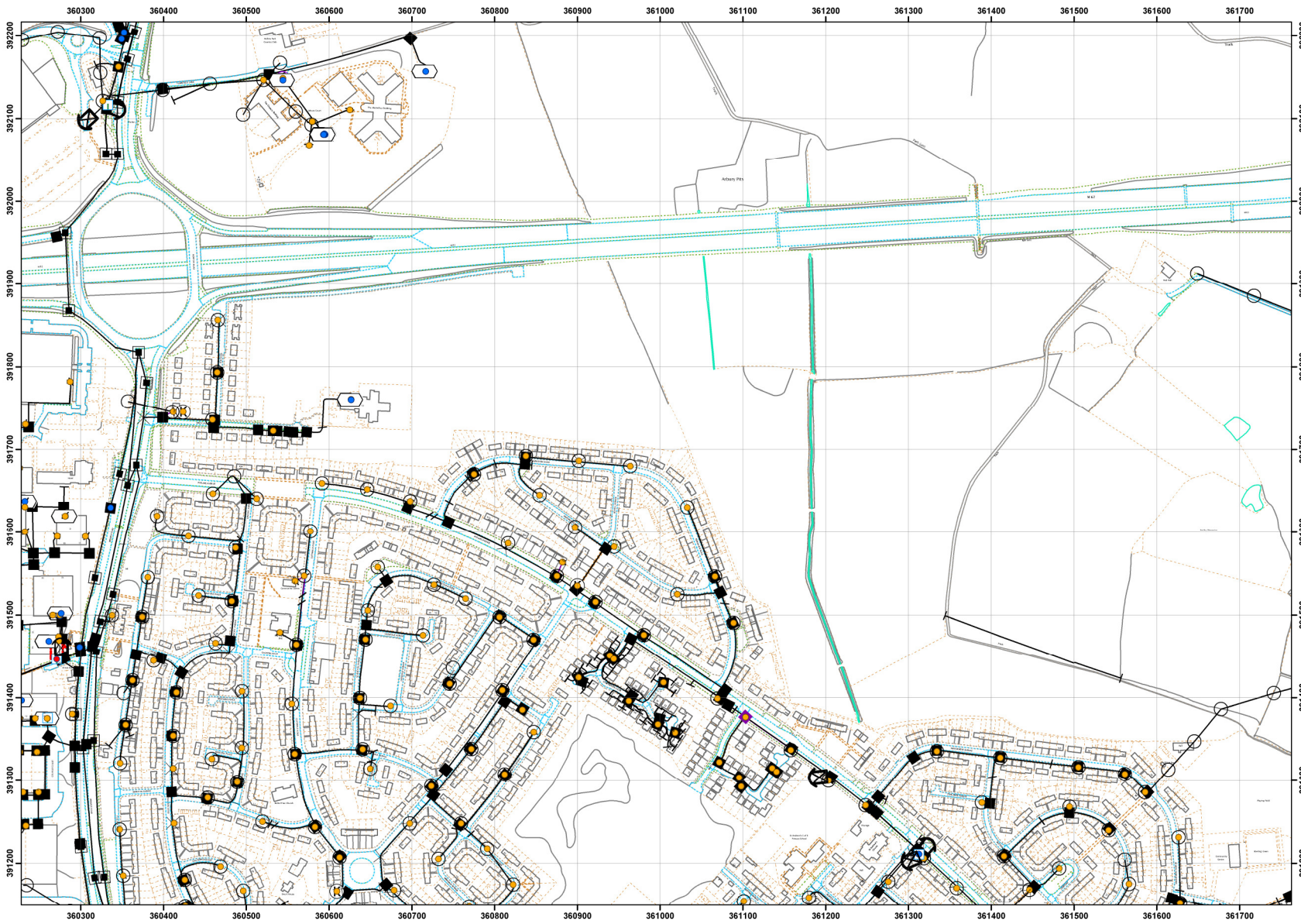
MANHOLE

JOINTBOX

DUCT TEE

Other proposed plant is shown using dashed lines.

BT symbols not listed above may be disregarded.



IMPORTANT WARNING:
Information regarding the location of BT apparatus is given for your assistance and is intend 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.

Exisiting BT plant may not be recorded.
Information valid at time of preparation.

FOR FREE ON-SITE LOCATION & MARKING SERVICE CALL THE EXCHANGE OPERATOR AND ASK FOR :-

FREEPHONE 0800 9173993
FAX 0208 3284050
NATIONAL NEWSITES 0800 616866

PLANT INFORMATION REPLY

PEEL HALL FARM, WARRINGTON

SH1

openreach
a BT Group business
BT

Legend

CAUTION AREA

BT.CAUTION_AREA

EQUIPMENT

TABCD FIBRE, TCODE

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476 R COPPER, DP

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A/C AERIAL

TUNNEL

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STRUCTURE

YCODE

CABINET SHELL

SPLIT COUPLING

POLE

KIOSKS

MANHOLE

JOINTBOX

CHANGE OF STATE

DUCT TEE

PROPOSED

MANHOLE

JOINTBOX

DUCT TEE

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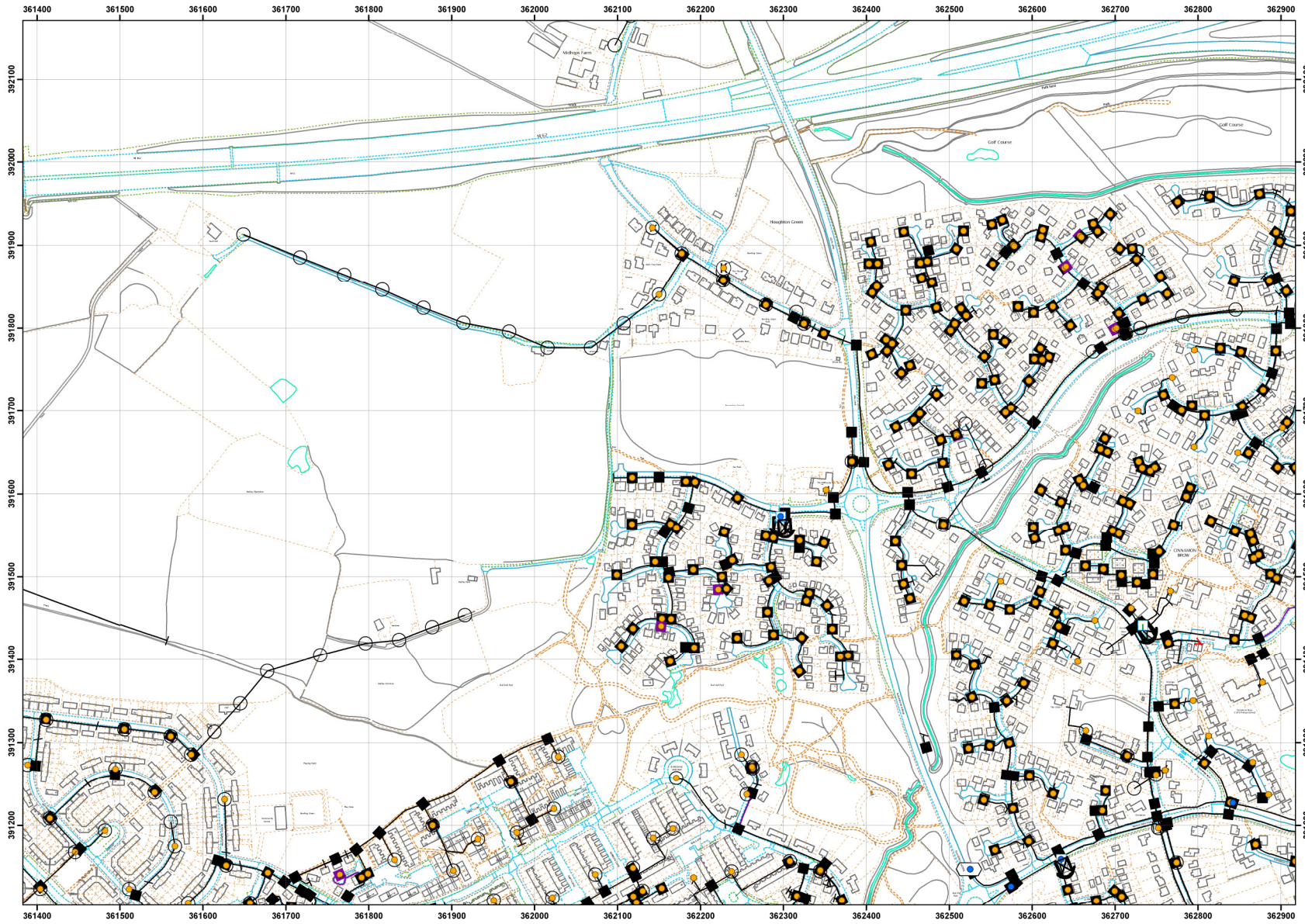

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FREEPHONE 0800 9173993
FAX 0208 3284050
NATIONAL NEWSITES 0800 616866

PLANT INFORMATION REPLY

PEEL HALL FARM, WARRINGTON

SH2

openreach
a BT Group business
BT

APPENDIX D

Plant Protection
National Grid
Block 1; Floor 1
Brick Kiln Street
Hinckley
LE10 0NA
E-mail: plantprotection@nationalgrid.com
Telephone: +44 (0)800 688588

Rachael Burke
Transport Planning Associates
32 Windsor Place
Cardiff
CF10 3BZ

National Grid Electricity Emergency Number:
0800 40 40 90*

National Gas Emergency Number:
0800 111 999*
* Available 24 hours, 7 days/week.
Calls may be recorded and monitored.

www.nationalgrid.com

Date: 30/06/2015
Our Ref: NW_TW_Z1_3SWX_164155
Your Ref:
RE: Proposed Works, Peel Hall Farm Tile 1

Thank you for your enquiry which was received on 30/06/2015.
Please note this response and any attached map(s) are valid for 28 days.

An assessment has been carried out with respect to National Grid Electricity Transmission plc's and National Grid Gas plc's apparatus. Please note it does not cover the items listed in the section "Your Responsibilities and Obligations", including gas service pipes and related apparatus.
For details of National Grid's network areas please see the National Grid website (http://www.nationalgrid.com/uk/Gas/Safety/work/) or the enclosed documentation.

As your works are at a "proposed" stage, any maps and guidance provided are for information purposes only. This is not approval to commence work. You must submit a "Scheduled Works" enquiry at the earliest opportunity and failure to do this may lead to disruption to your plans and works. National Grid will endeavour to provide an initial assessment within 14 days of receipt of a Scheduled Works enquiry and dependent on the outcome of this, further consultation may be required.

In any event, for safety and legal reasons, works must not be carried out until a Scheduled Works enquiry has been completed and final response received.

Your Responsibilities and Obligations

The "Assessment" Section below outlines the detailed requirements that must be followed when planning or undertaking your scheduled activities at this location.

It is your responsibility to ensure that the information you have submitted is accurate and that all relevant documents including links are provided to all persons (either direct labour or contractors) working for you near National Grid's apparatus, e.g. as contained within the Construction (Design and Management) Regulations.

This assessment solely relates to National Grid Electricity Transmission plc (NGET) and National Grid Gas plc (NGG) apparatus. This assessment does **NOT** include:

- National Grid's legal interest (easements or wayleaves) in the land which restricts activity in proximity to National Grid's assets in private land. You must obtain details of any such restrictions from the landowner in the first instance and if in doubt contact National Grid.
- Gas service pipes and related apparatus
- Recently installed apparatus
- Apparatus owned by other organisations, e.g. other gas distribution operators, local electricity companies, other utilities, etc.

It is **YOUR** responsibility to take into account whether the items listed above may be present and if they could be affected by your proposed activities. Further "Essential Guidance" in respect of these items can be found on the National Grid Website (http://www.nationalgrid.com/NR/rdonlyres/6D6525F9-59EB-4825-BA89-DBD7E68882C7/51319/EssentialGuidance.pdf).

This communication does not constitute any formal agreement or consent for any proposed development work; either generally or with regard to National Grid's easements or wayleaves nor any planning or building regulations applications.

NGG and NGET or their agents, servants or contractors do not accept any liability for any losses arising under or in connection with this information. This limit on liability applies to all and any claims in contract, tort (including negligence), misrepresentation (excluding fraudulent misrepresentation), breach of statutory duty or otherwise. This limit on liability does not exclude or restrict liability where prohibited by the law nor does it supersede the express terms of any related agreements.

If you require further assistance please contact the National Grid Plant Protection team via e-mail (click here) or via the contact details at the top of this response.

Yours faithfully

National Grid Plant Protection Team

ASSESSMENT

Affected Apparatus
The National Grid apparatus that has been identified as being in the vicinity of your proposed works is:

- High or Intermediate pressure (above 2 bar) Gas Pipelines and associated equipment
- Low or Medium pressure (below 2 bar) gas pipes and associated equipment. (As a result it is highly likely that there are gas services and associated apparatus in the vicinity)

Requirements

BEFORE carrying out any work you must:

- Carefully read these requirements including the attached guidance documents and maps showing the location of National Grid apparatus.
- Contact the landowner and ensure any proposed works in private land do not infringe National Grid's legal rights (i.e. easements or wayleaves). If the works are in the road or footpath the relevant local authority should be contacted.
- Ensure that all persons, including direct labour and contractors, working for you on or near National Grid's apparatus follow the requirements of the HSE Guidance Notes HSG47 - 'Avoiding Danger from Underground Services' and GS6 – 'Avoidance of danger from overhead electric power lines'. This guidance can be downloaded free of charge at http://www.hse.gov.uk
- In line with the above guidance, verify and establish the actual position of mains, pipes, cables, services and other apparatus on site before any activities are undertaken.

GUIDANCE

High Pressure Gas Pipelines Guidance:
If working in the vicinity of a high pressure gas pipeline the following document must be followed: 'Specification for Safe Working in the Vicinity of National Grid High Pressure Gas Pipelines and Associated Installations - Requirements for Third Parties' (SSW22). This can be obtained from:
http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=33968

Dial Before You Dig Pipelines Guidance:
http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=33969

Excavating Safely - Avoiding injury when working near gas pipes:
http://www.nationalgrid.com/NR/rdonlyres/2D2EEA97-B213-459C-9A26-18361C6E0B0D/25249/Digsafe_leaflet3e2finalamends061207.pdf

Standard Guidance

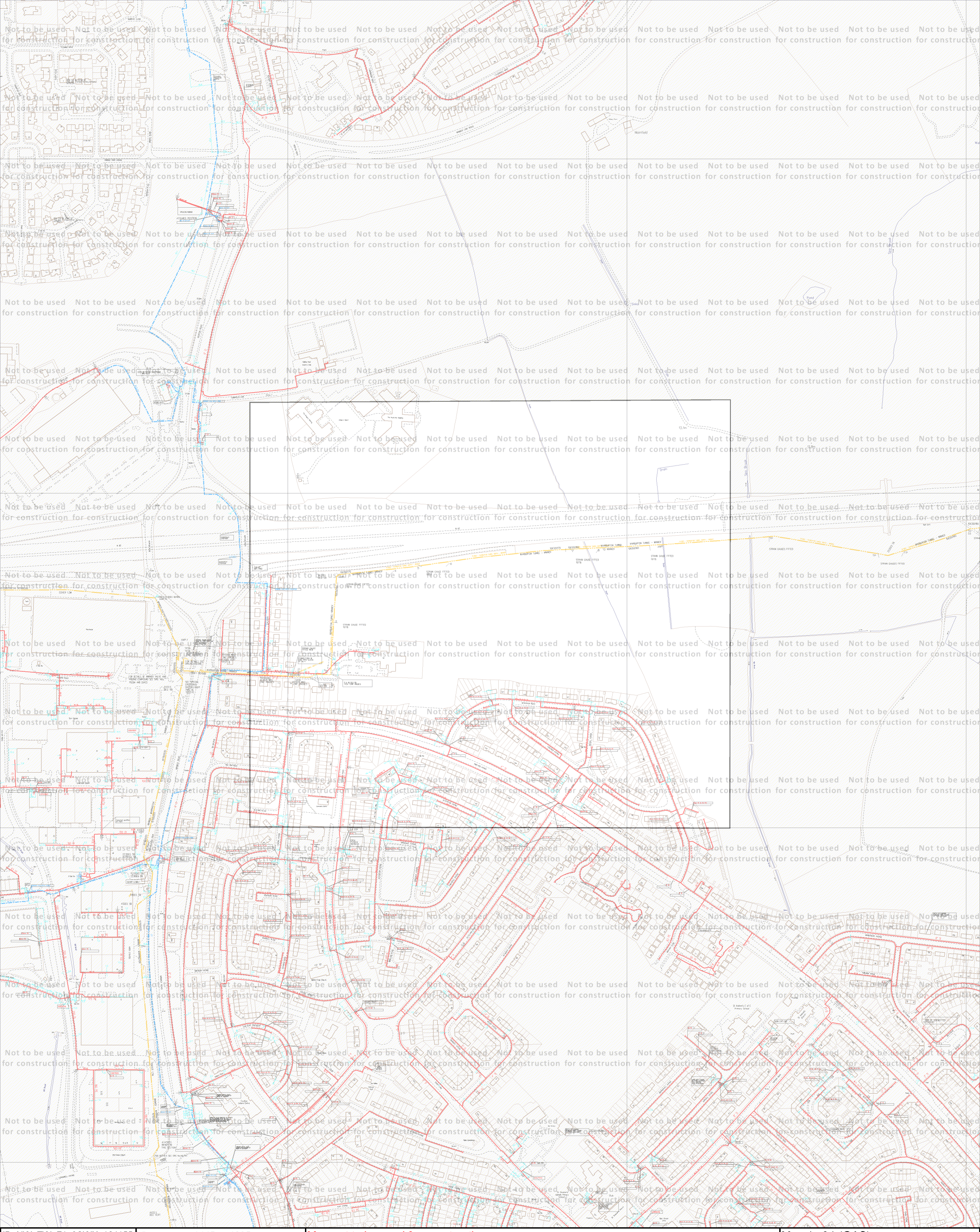
Essential Guidance document:
http://www.nationalgrid.com/NR/rdonlyres/6D6525F9-59EB-4825-BA89-DBD7E68882C7/51319/EssentialGuidance.pdf

General Guidance document:
http://www2.nationalgrid.com/WorkArea/DownloadAsset.aspx?id=35103

Excavating Safely in the vicinity of gas pipes guidance (Credit card):
http://www.nationalgrid.com/NR/rdonlyres/A3D37677-6641-476C-9DDA-E89949052829/44257/ExcavatingSafelyCreditCard.pdf

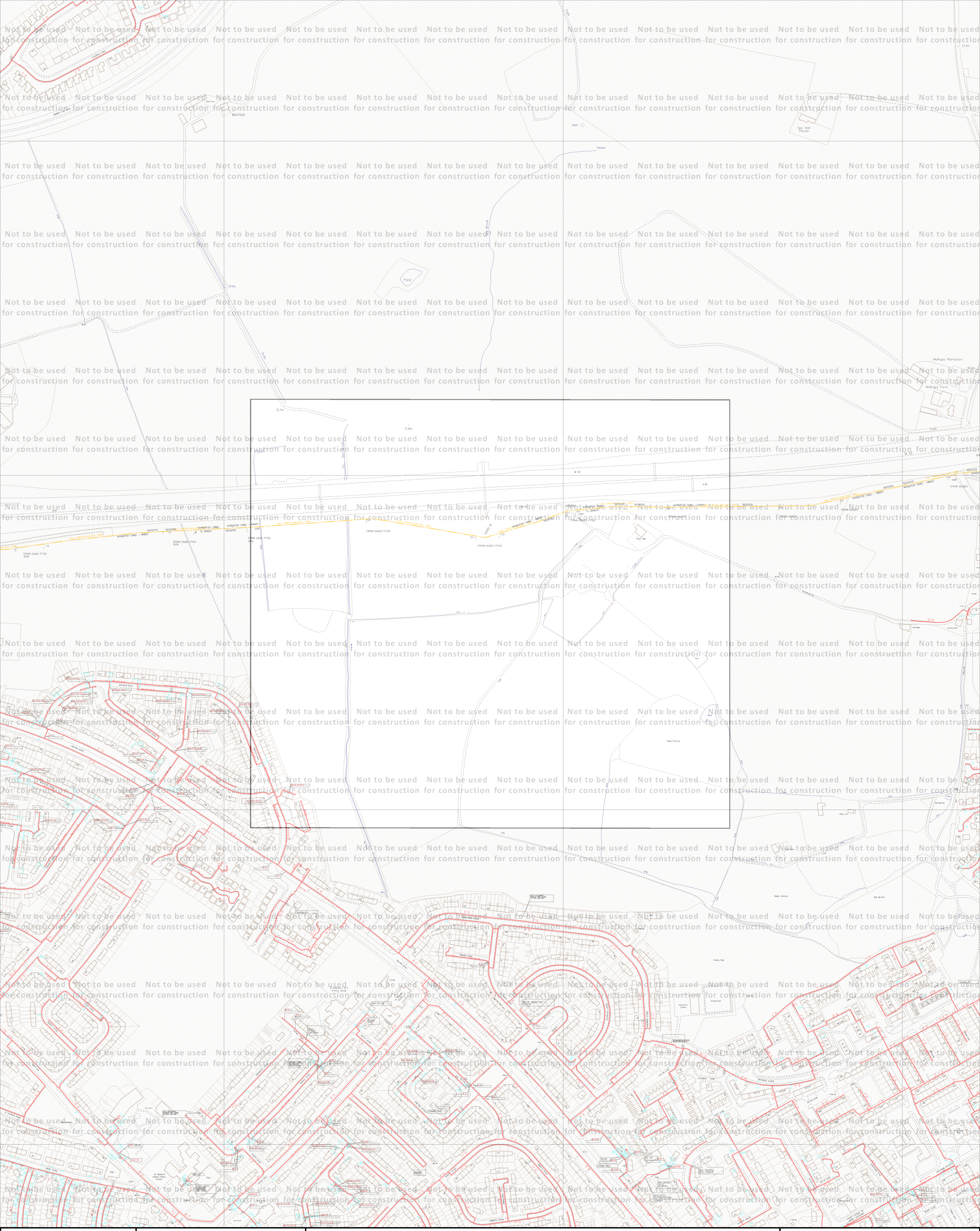
Excavating Safely in the vicinity of electricity cables guidance (Credit card):
http://www.nationalgrid.com/NR/rdonlyres/35DDEC6D-D754-4BA5-AF3C-D607D05A25C2/44858/ExcavatingSafelyCreditCardelectricitycables.pdf

Copies of all the Guidance Documents can also be downloaded from the National Grid Website:
http://www.nationalgrid.com/uk/Gas/Safety/work/downloads/



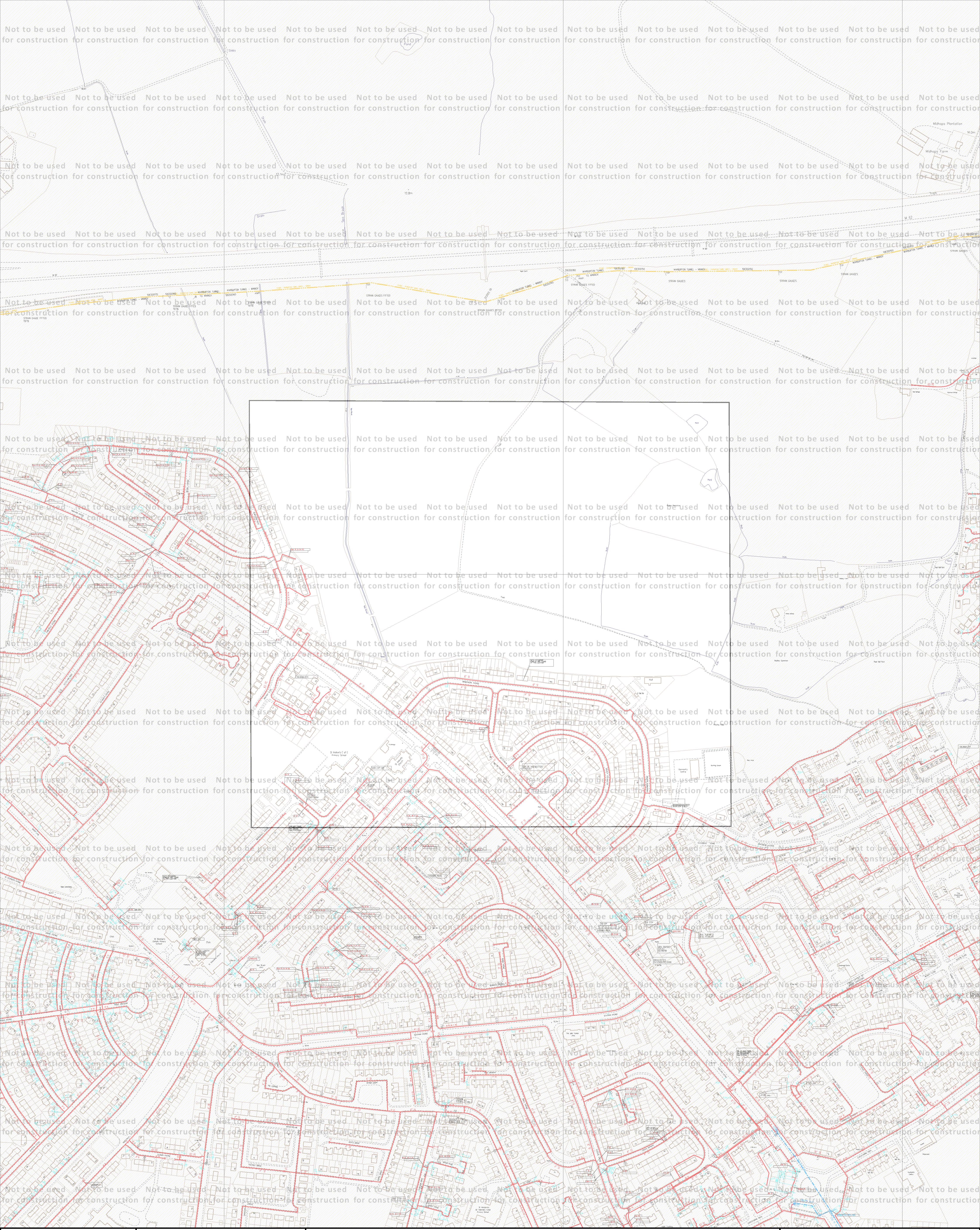
ID: NW_TW_Z1_3SWX_164155	View extent: 1445m, 1835m	Map not to be used for construction	Map 1 of 1 (GAS)
USER: rachael.burke@tpa.uk.com	LP MAINS MP MAINS IP MAINS LHP MAINS NHP MAINS	This plan shows those pipes owned by National Grid Gas plc in its role as a Licensed Gas Transporter (GT). Gas pipes owned 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.	MAPS Plot Server Version 1.8.0
DATE: 30/06/2015	0m — 100m Approximate scale 1:5000 on A3 Colour Portrait		nationalgrid
DATA DATE: 28/06/2015			Requested by: Transport Planning Associates
REF:			This plan is reproduced from or based on the OS map by National Grid Gas plc, with the sanction of the controller of HM Stationery Office. Crown Copyright Reserved. Ordnance Survey Licence number 100024886
MAP REF: SJ6091 CENTRE: 360798, 391820			

Valve | Depth of Cover | Syphon | Diameter Change | Material Change

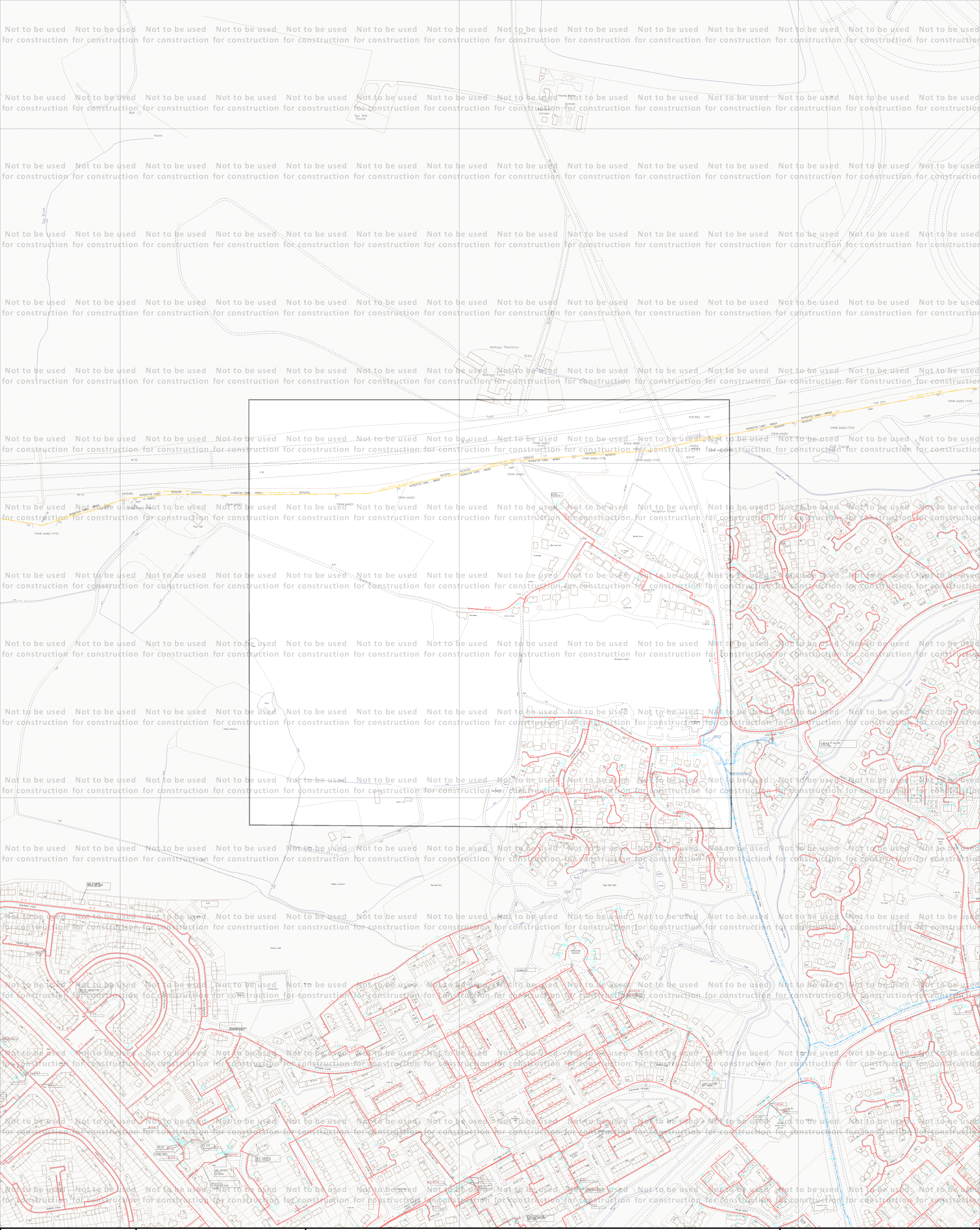


ID: NW_TW_Z1_3SWX_164158	View extent: 1445m, 1835m	Map not to be used for construction	Map 1 of 1 (GAS)
USER: rachael.burke@tpa.uk.com	LP MAINS MP MAINS IP MAINS LHP MAINS NHP MAINS	This plan shows those pipes owned by National Grid Gas plc in its role as a Licensed Gas Transporter (GT). Gas pipes owned 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.	MAPS Plot Server Version 1.8.0
DATE: 30/06/2015	0m — 100m Approximate scale 1:5000 on A3 Colour Portrait		nationalgrid
DATA DATE: 28/06/2015			Requested by: Transport Planning Associates
REF:			This plan is reproduced from or based on the OS map by National Grid Gas plc, with the sanction of the controller of HM Stationery Office. Crown Copyright Reserved. Ordnance Survey Licence number 100024886
MAP REF: SJ6191 CENTRE: 361392, 391793			

Valve | Depth of Cover | Syphon | Diameter Change | Material Change



ID: NW_TW_Z1_3SWX_164159	View extent: 1445m, 1835m	Map not to be used for construction	Map 1 of 1 (GAS)
USER: rachael.burke@tpa.uk.com DATE: 30/06/2015 DATA DATE: 28/06/2015 REF: MAP REF: SJ6191 CENTRE: 361392, 391441	LP MAINS MP MAINS IP MAINS LHP MAINS NHP MAINS 0m 100m Approximate scale 1:5000 on A3 Colour Portrait	This plan shows those pipes owned by National Grid Gas plc in its 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.	MAPS Plot Server Version 1.8.0 nationalgrid Requested by: Transport Planning Associates This plan is reproduced from or based on the OS map by National Grid Gas plc, with the sanction of the controller of HM Stationery Office. Crown Copyright Reserved. Ordnance Survey Licence number 100024886
Valve / Depth of Cover / Syphon / Diameter Change / Material Change			



ID: NW_TW_Z1_3SWX_164160	View extent: 1445m, 1835m	Map not to be used for construction	Map 1 of 1 (GAS)
USER: rachael.burke@tpa.uk.com	LP MAINS	This plan shows those pipes owned by National Grid Gas plc in its 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.	MAPS Plot Server Version 1.8.0
DATE: 30/06/2015	MP MAINS		nationalgrid
DATA DATE: 28/06/2015	IP MAINS		
REF:	LHP MAINS		
	NHP MAINS		Requested by: Transport Planning Associates
MAP REF: SJ6291 CENTRE: 362046, 391775	0m 100m Approximate scale 1:5000 on A3 Colour Portrait		

Valve | Depth of Cover | Syphon | Diameter Change | Material Change

APPENDIX E

N
W E
S

Issues
Spa Brook
Pond
Sinks
Track
Track
Midhops Plantation
Midhops Farm
Issues
Track
Drain
Track
13.1m
Path (um)
12.8m
Spa Brook
Arbury Pits
FB
M 62
CR
M 62
Drain
Houghton Green

3 x 0.05 CU 11kV
3 x 0.05 CU 11kV

03/6092/019/P-CELL SITE DELPH LANE
03/6092/005/ -DELPH HOSPITAL
03/6292/007/F-FUSE
03/6292/006/P-DELPH LANE STABLES
03/6292/002/P-DELTH LANE SOUTH
03/6191/005/P-PEEL HALL
03/6291/020/ -MILL LANE EAST
GSS-SJ6091/022 BIRCH AVENUE LDU
03/6091/005/ -BIRCH AVENUE
03/6091/004/ -POPLARS AVENUE NORTH
03/6191/010/F-FUSE
03/6291/014/ -CINNAMON BROW NO 201
03/6191/006/P-WOODSIDE FARM
03/6291/019/ -COLDSTREAM CLOSE
03/6191/008/P-RADLEY COTTAGE
03/6291/018/ -PEEL HALL SITE B
03/6191/013/ -POPLARS AVENUE
03/6091/006/ -ULVERSTON AVENUE
REL-SJ6191/012 PMR WINDERMERE AVE NOJA
03/6191/003/ -WINDERMERE AVENUE
03/6091/003/ -CLEVELAND ROAD

The position and depths of underground and overhead apparatus as indicated on this plan are approximate and are intended for guidance only. The depths may have changed if the land surface levels have altered. You are also informed that the plan may not show, or may inaccurately show, individual property services and services to street lighting installations. The onus of locating the apparatus precisely before commencing any excavations or other works in the immediate vicinity therefore rests entirely upon the person undertaking or responsible for those works. Before any such works are undertaken the precise location of the apparatus and cables should therefore be ascertained by suitable means. In the event of an emergency or for further assistance please contact 0800-092-9290 (ScottishPower area) or 0800-001-5400 (SP Manweb area).

SP ENERGY NETWORKS
On behalf of SP Manweb plc

SP Manweb plc
Registered Office: c/o PowerSystems
3 Prenton Way, Prenton, CH43 3ET
Registered in England and Wales No 2366937

OVERHEAD LINE
UNDERGROUND CABLES
In Use
Out of Use
Assumed route
VOLTAGE COLOUR KEY
EHV 132kV BLUE
33kV GREEN
HV RED
LV BROWN

Where cables have been laid SINCE 1 OCTOBER 1988, the following depths in mm apply (to the tops of cables or ducts) UNLESS OTHERWISE SHOWN, but see comments.
(TO TOP OF CABLE, ADD 75mm FOR BOTTOM OF TRENCH)

	EHV	HV	LV
IN FOOTPATHS :	775	600	450
ACROSS ROADS :	775	700	600
ALONG ROADS :	775	700	600
AGRICULTURAL :	910	910	910

Your attention is drawn to the Health and Safety Executive Booklet HSG47, available from HSE.

DATE 02/07/2015
SCALE 1 : 5,000
MAP REFERENCE 361,455 391,828

0 15 30 60 90 120
Metres

LOOK OUT! LOOK UP!

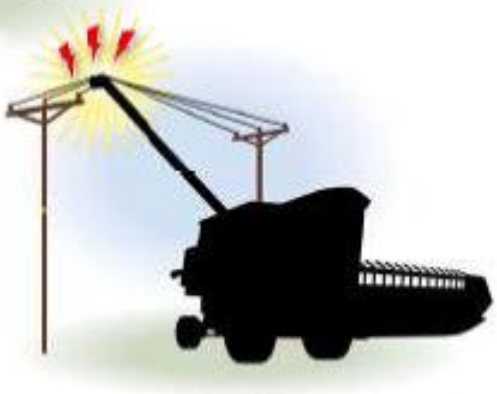
Follow the advice in HSE Guidance Note GS6 ‘Avoidance of Danger from Overhead Electric Power Lines’

Keep overhead lines in view when unloading

Carry long objects in a horizontal position near overhead lines

Don’t tip under overhead lines and don’t drive along with tipper raised

Check falling distance before felling trees



Check maximum height and reach of your own and contractors machinery

Look out for the Danger of Death sign – it means what it says. If in doubt contact us for free safety advice.

Calls to 03 numbers cost no more than a national rate call to an 01 or 02 number and must count towards any inclusive minutes in the same way as 01 and 02 calls. These rules apply to calls from any type of line including mobile, BT, other fixed line or payphone.

Visit: **www.spenergynetworks.com**
Email: **customer.care@sppowersystems.com**
General Network Enquiries (England, Wales & Scotland): **0845 273 4444 / 0330 10 10 444**
Power Loss & Emergencies (England & Wales): **0800 001 5400 / 0330 10 10 400**
Power Loss & Emergencies (Scotland): **0800 092 9290 / 0330 10 10 222**

SP ENERGY NETWORKS

WATCH OUT! THERE'S A CABLE ABOUT!

Follow the advice in HSE Guidance Note HSG47 'Avoiding Danger from Underground Services'

REMEMBER

Houses, offices, shops, factories and street furniture all have electric cables supplying them.

CHECK PLANS

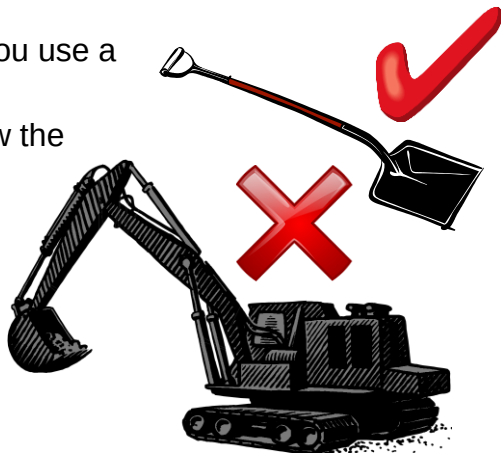
Ensure current cable records are on site.
Carry out a risk assessment in accordance with HSG47.
Be aware that not all cables are shown on plans.

USE CABLE LOCATIONS

Before every use of CAT and Genny make sure they are calibrated and working properly.
Check plans by tracing cables and marking their position using paint, crayon, chalk or pegs.
Always scan the area you intend to excavate before you start to dig.

NOW DIG SAFELY

- Hand-dig trial holes to find the exact position of cables **before** you use a mechanical excavator.
- Be aware that cables can be found at any depth, even just below the surface.
- If you find a cable embedded in concrete **do not** attempt to break it out. Contact us to ensure it is de-energised.
- If you cannot find cables shown on the plans **never assume** they are not there – contact us.
- If you damage a cable vacate the excavation, immediately phone out emergency number and keep everybody clear.



Visit www.spenergynetworks.com/safety/saferexcavations or contact us for free safety advice

Calls to 03 numbers cost no more than a national rate call to an 01 or 02 number and must count towards any inclusive minutes in the same way as 01 and 02 calls. These rules apply to calls from any type of line including mobile, BT, other fixed line or payphone.

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Power Loss & Emergencies (England & Wales): **0800 001 5400 / 0330 10 10 400**
Power Loss & Emergencies (Scotland): **0800 092 9290 / 0330 10 10 222**

SP ENERGY NETWORKS

Graham, Paul

From: Whipp, Matthew [Matthew.Whipp2@spenergynetworks.co.uk]
Sent: 08 September 2015 13:01
To: Graham, Paul
Subject: QAS183943 Budget Quote Peel Hall farm, Warrington, WA20TA
Attachments: SUB-03-017 Issue 3 - Civil Eng Spec July 09 Y Type Sub.pdf; D__Documentum_dmcl_0000dfd6_cb266a0a.hst_800f4e5f_SP4067239 Model (1.pdf

Hi Paul,

Regarding the above please see budget cost for the assumed loads below

1226 gas heated domestic plots (average of 1.5kVA per plot)
Care home 400kVA, employment
Employment area 500kVA,
School 200kVA
Small supermarket 300kVA
Site assumed total 3239kVA

Estimated 33kV POC on Poplars Avenue
Single primary substation to be installed on site, primary building to be constructed by the developer – drawing attached but they are designed to spec on each development, the attached is an example
7 x Secondary substations to be installed on site, substation buildings to be constructed by the developer – spec drawing attached
High Voltage & Low Voltage Infrastructure from substation to service the site

Primary £1.2 million
33kv Works £250,000
Secondary substations £490,000
High Voltage works £150,000
Low Voltage works £1.5million (based on average of £1,100 per plot)

Total budget cost £3,590,000 – Costs can be formalised on application for a formal quotation
Reinforcement to be identified on POC application
All based on a LAY ONLY for SP on site

This estimate is based on the above however will need to be confirmed on an application for a formal POC which will also identify if any reinforcement is required

In order to do that you will need to provide a more detailed design layout

If you require any further information please let me know

Matthew Whipp
Project Coordinator
SP Network Connections

Dalton Way
Middlewich
CW10 0HU

Tel: 07753624299
E-mail: Matthew.Whipp2@spenergynetworks.co.uk
http://www.spenergynetworks.co.uk/

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APPENDIX F

Our ref: 10181BC
Energetics Contact: Chris Russett
E: chris.russett@energetics-uk.com

Energetics Networked Energy
LG2 The Brew House
Greenalls Avenue
Warrington
WA4 6HL

t: 01925 635 727
f: 01925 624 169

e: info@energetics-uk.com

Mr Paul Graham
Transport Planning Associates
32 Windsor Place
Cardiff
CF10 3BZ

29th October 2015

Dear Mr Paul Graham,

Budget Report
Peel Hall Farm, Warrington (1300 units)

With reference to the above development site and the provision of utility services, we now have the pleasure in presenting the following for your consideration.

We have prepared our report to your correspondence to date. While producing this information we have made certain assumptions in relation to an appropriate utility strategy prior to any formal confirmation of upstream network conditions etc.

A brief summary of our proposal, including project responsibilities is provided overleaf.

We trust this information is of interest and we look forward to hearing from you. Should you wish to discuss any aspect in greater detail please do not hesitate to contact me on the contact email address above.

At times appropriate to your project proceeding, we would welcome the opportunity to develop a formal design and price for your consideration.

Yours sincerely,

Chris Russett

For Dave Shaw
Manager (North Region)
Engineering Design, Sales & Business Development

Technical Summary

Should your site clearance works be in advance of any Energetics new connections activities (or by others), such diverted mains may present viable point(s) of connection.

The following summary is based on the information you have provided to date. Please note this budget cost excludes the infrastructure and connections to the commercial units as requested by the developer, at this time.

In conjunction with existing utility records and our interpretation of such; we have included estimated non-contestable costs for the point(s) of connection to the existing host networks and assumed these connections to be at the following locations:

Gas: An MP CSEP to the existing host (NG 12" ST MP) main on the west footpath of Mill Lane.

Electric: 11kV POC on the entrance spine road junction with Radley lane via the existing SP Manweb network.

Water: POC to the existing host (6" Trunk main) opposite the site entrance on Poplars Avenue with a 315mm Link to the 300mm DI main opposite the proposed site entrance on Mill lane.

Any potential upstream reinforcement work/costs could only be determined following a formal application/response.

Elec Proposed:

It would be our intention to design, install, test and commission 4no. "Y" Type11kV-400/230V secondary sub-station capable of supporting your development load. (Suitable location TBC). Thereafter, we would design, install, test and commission the associated low voltage infrastructure and connections.

Elec Existing:

Host DNO 11kV /LV cable assets appear to cross the development footprint. Rather than be abandoned, we would predict that this/these asset(s) may require to be relocated/diverted to retain the existing network configuration arrangements. Energetics would be interested in undertaking these invited non-contestable electrical activities at such times as alternative routes and programmes become available. As such, the associated cost(s) for such are excluded at this stage.

Gas Proposed:

It would be our intention to design, install, test and commission 3no. MP-LP gas governors. (Suitable locations TBC). Thereafter, we would also design, install, test and commission the associated low pressure infrastructure and connections.

Gas Existing:

Host GT (High pressure) network assets appear to cross from the development footprint from the west to the east. Rather than be abandoned, we would predict that this/these asset(s) may require to be re-located/diverted to retain the existing network configuration arrangements. These works must be carried

out directly by the host GT and would be remote to Energetics activities. As such, these costs have been excluded from this exercise.

Water Proposed:

With Energetics acting as an SLO we would design, install, test and commission all water infrastructure and connections. At this stage, and subject to any future recommendations via your Site Investigation Report, we have assumed that any contamination/remediation strategy would allow for the use of HPPE/MDPE Pipe solution throughout.

Water Authority costs and charges would be as published. These have been estimated and included within our budgetary figure below. Any associated water asset values would be managed accordingly at times appropriate to the project and would generally be directly payable to Energetics.

Water Existing:

Host Water Authority assets appear to cross the development footprint. Rather than be abandoned, we would predict that this/these asset(s) may require to be re-located/diverted to retain the existing network configuration arrangements. These works would be carried out directly by the host Water Authority and would be remote to Energetics activities. As such, these costs have been excluded from this exercise.

Summary of General Responsibilities

Description	Energetics D&B	Developer/Others
Water authority statutory costs & charges (including 1300 UU infrastructure charges)	✓	
Design Approvals	✓	
Manage & co-ordinate non-contestable POC works	✓	
On-site excavation works (based on unmade conditions throughout)	✓	
Provision of sand (for the purpose of bedding & cover)	✓	
Off-site works/POC excavations and reinstatement	✓	
Permanent reinstatement (on-site)		✓
Sub-station plinths and Gas Governor plinths		✓
GRP Substation Enclosure (4no.)	✓	

Based on the information available to-date, the following points identify certain exclusions and assumptions we have made in producing this information:

- Network capacity being available at such times as your development progresses.
- Non-contaminated conditions throughout.
- Suitable routes, access arrangements, plant & equipment locations are made available to our specification and satisfaction, as required.
- Costs/timescales associated with any legal consents / acquisitions related to this project.
- Non-contestable costs such as: network analysis, deviation, disconnection, abandonment,reinforcement or repairs of any existing assets are excluded from these costs. For all utilities, the actual non-contestable costs and charges would be fully rechargeable to the developer within any future formal offer.
- Unless otherwise specified this report does not allow for any disturbing loads, harmonic emissions or any means of generation which do not satisfy the conditions of P28, G5/4, G59 & G83.
- Our report does not allow for any gas compression equipment to be connected to the outlet pipe work such as Compressors / Boosters / CHP Plants etc.
- The connection of any temporary or street lighting/control pillar supplies would be subject to further consideration and offer(s).

Budget Costs

At this stage we would suggest to budget in the region of **£2,100,000** to cover the utilities work(s) described above. It should be understood that this is not an offer to do work or accept as contractual and is provided for your information only.