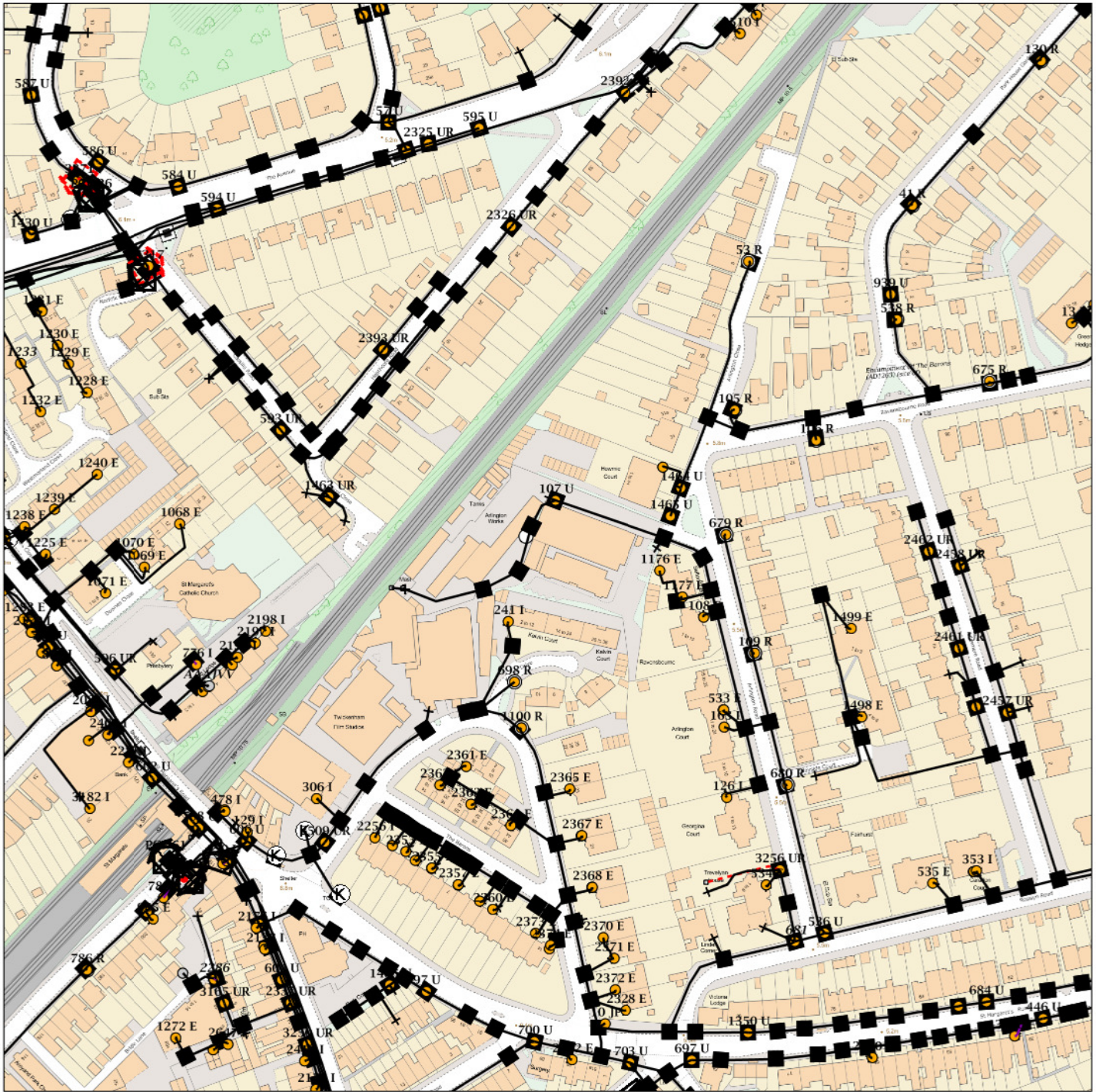


Maps by email Plant Information Reply



IMPORTANT WARNING

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

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



openreach

CLICK BEFORE YOU DIG

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

email cbyd@openreach.co.uk

ADVANCE NOTICE REQUIRED

(Office hours: Monday - Friday 08.00 to 17.00)

www.openreach.co.uk/cbyd

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KEY TO BT SYMBOLS

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

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

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

BT Ref : XEY02241E

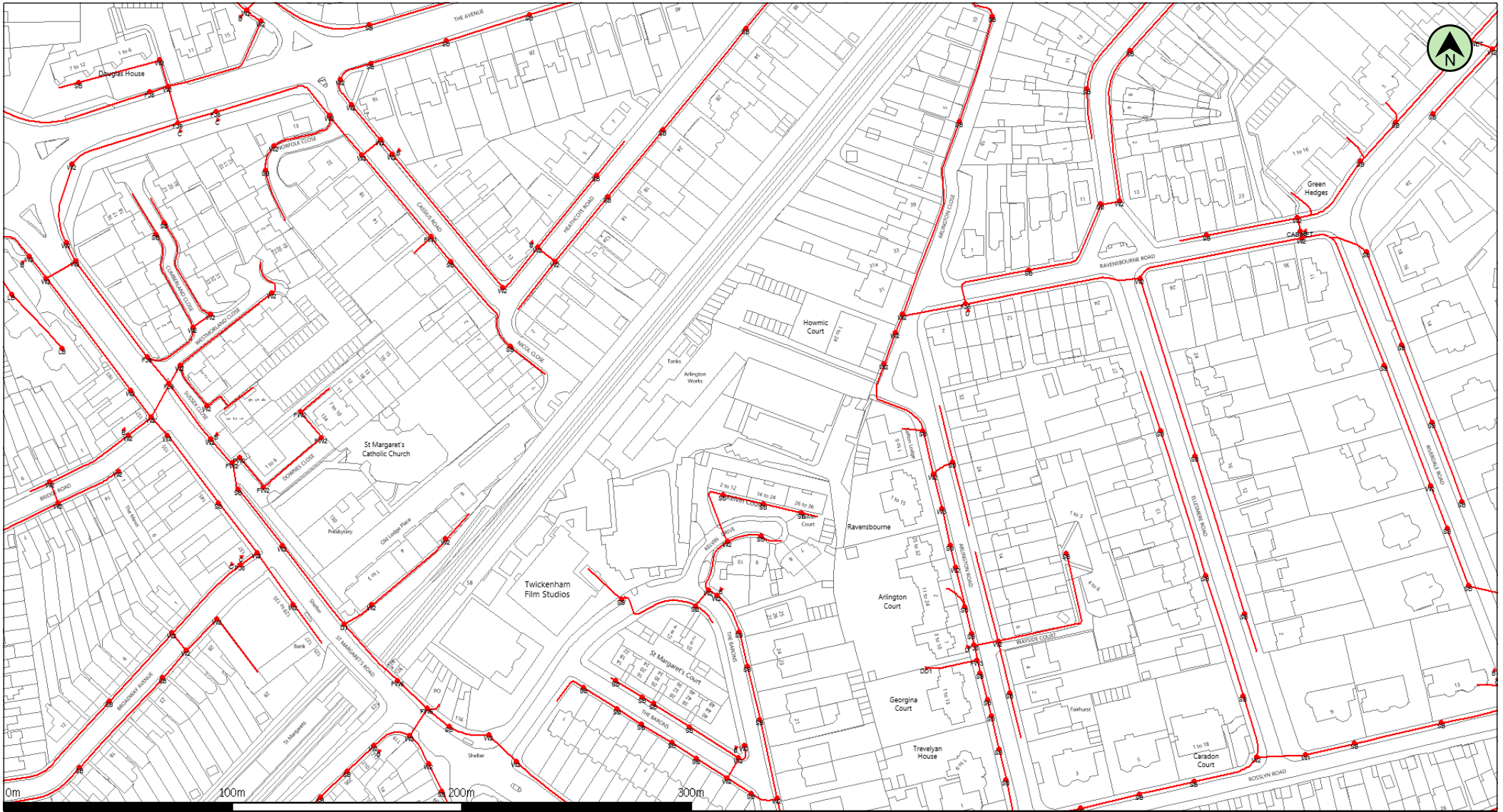
Map Reference : (centre) TQ1698574380

Easting/Northing : (centre) 516985,174380

Issued : 30/05/2018 14:24:49

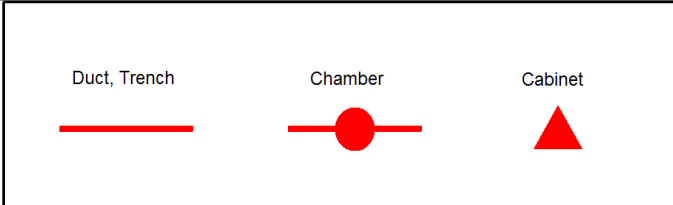
WARNING: IF PLANNED WORKS FALL INSIDE HATCHED AREA IT IS ESSENTIAL BEFORE PROCEEDING THAT YOU CONTACT THE NATIONAL NOTICE HANDLING CENTRE. PLEASE SEND E-MAIL TO: nnhc@openreach.co.uk

Appendix G
Virgin Media Records



(c) Crown copyright and database rights 2018 Ordnance Survey 100019209 Date: 06/06/18 Scale: 1:2352 Map Centre: 516985,174380 Data updated: 29/04/18 Telecoms Plan A4

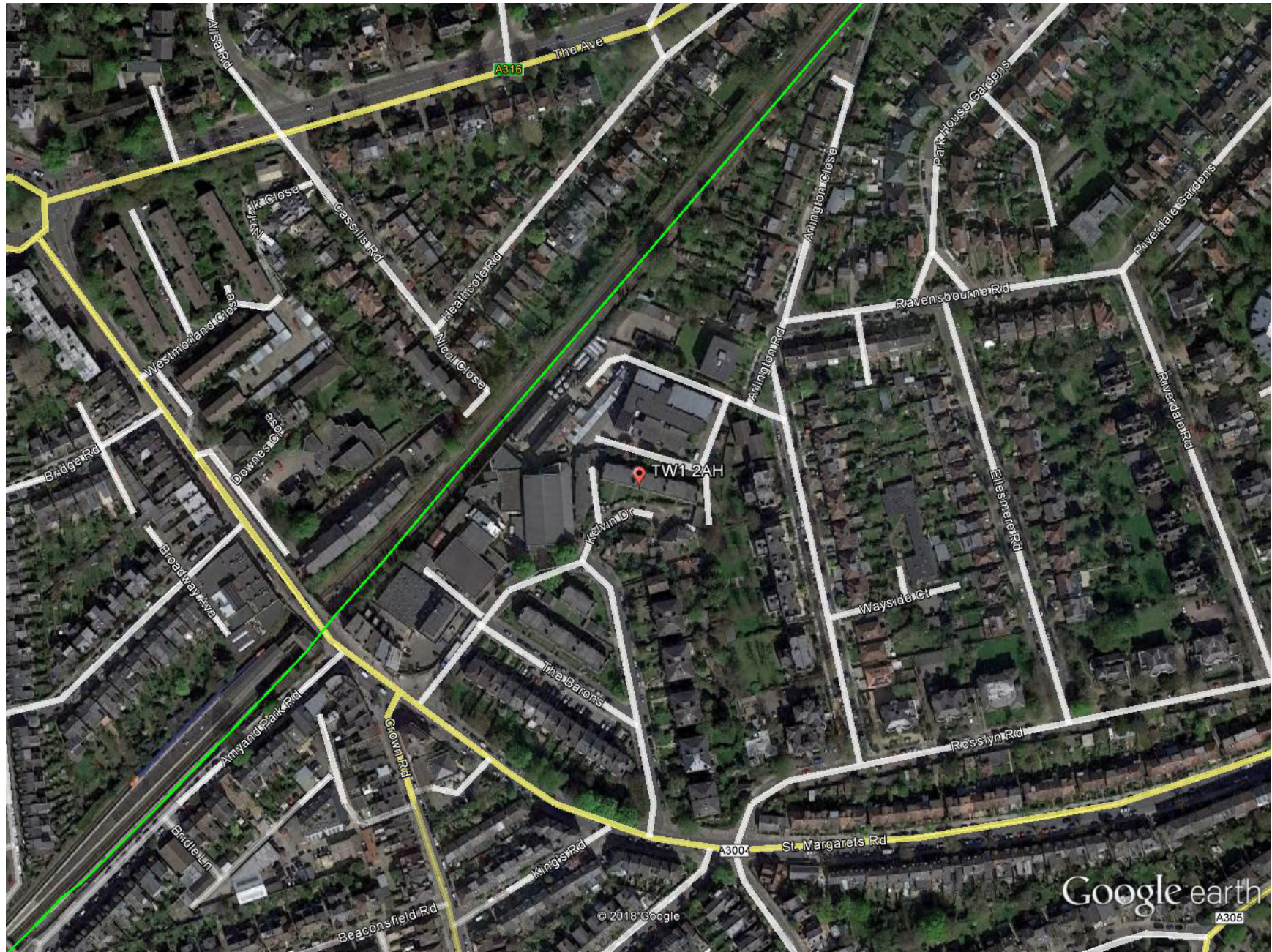
Important Information - please read The purpose of this plan is to identify Virgin Media apparatus. We have tried to make it as accurate as possible but we cannot warrant its accuracy. In addition, we caution that within Virgin Media apparatus there may be instances where mains voltage power cables have been placed inside green, rather than black ducting. Further details can be found using the "Affected Postcodes.pdf", which can be downloaded from this website. Therefore, you must not rely solely on this plan if you are carrying out any excavation or other works in the vicinity of Virgin Media apparatus. The actual position of any underground service must be verified by cable detection equipment, etc. and established on site before any mechanical plant is used. Accordingly, unless it is due to the negligence of Virgin Media, its employees or agents, Virgin Media will not have any liability for any omissions or inaccuracies in the plan or for any loss or damage caused or arising from the use of and/or any reliance on this plan. This plan is produced by Virgin Media Limited (c) Crown copyright and database rights 2018 Ordnance Survey 100019209.



stephy.jaison@virginmedia.co.uk
VM.1107210



Appendix H
CenturyLink Records



Google earth

feet
meters










Appendix I
Thames Water Potable Water Records







ALS Water Map Key

Water Pipes (Operated & Maintained by Thames Water)


- 
Distribution Main: The most common pipe shown on water maps. With few exceptions, domestic connections are only made to distribution mains.
- 
Trunk Main: A main carrying water from a source of supply to a treatment plant or reservoir, or from one treatment plant or reservoir to another. Also a main transferring water in bulk to smaller water mains used for supplying individual customers.
- 
Supply Main: A supply main indicates that the water main is used as a supply for a single property or group of properties.
- 
Fire Main: Where a pipe is used as a fire supply, the word FIRE will be displayed along the pipe.
- 
Metered Pipe: A metered main indicates that the pipe in question supplies water for a single property or group of properties and that quantity of water passing through the pipe is metered even though there may be no meter symbol shown.
- 
Transmission Tunnel: A very large diameter water pipe. Most tunnels are buried very deep underground. These pipes are not expected to affect the structural integrity of buildings shown on the map provided.
- 
Proposed Main: A main that is still in the planning stages or in the process of being laid. More details of the proposed main and its reference number are generally included near the main.

PIPE DIAMETER	DEPTH BELOW GROUND
Up to 300mm (12")	900mm (3')
300mm - 600mm (12" - 24")	1100mm (3' 8")
600mm and bigger (24" plus)	1200mm (4')

Valves

-  General Purpose Valve
-  Air Valve
-  Pressure Control Valve
-  Customer Valve

Hydrants








-  Single Hydrant

Meters










-  Meter

End Items

Symbol indicating what happens at the end of a water main.

-  Blank Flange
-  Capped End
-  Emptying Pit
-  Undefined End
-  Manifold
-  Customer Supply
-  Fire Supply



Operational Sites

-  Booster Station
-  Other
-  Other (Proposed)
-  Pumping Station
-  Service Reservoir
-  Shaft Inspection
-  Treatment Works
-  Unknown
-  Water Tower

Other Symbols

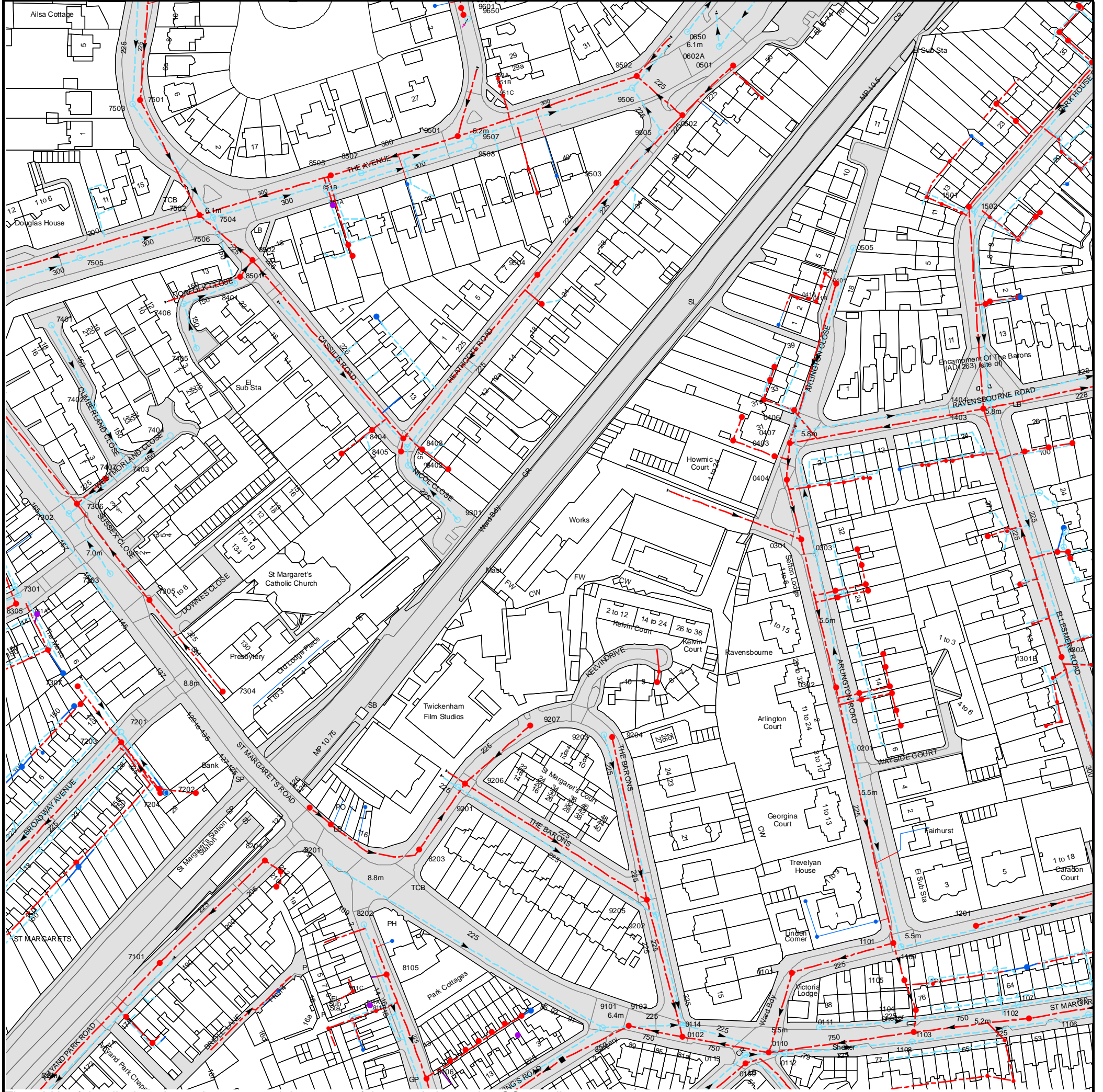
-  Data Logger

Other Water Pipes (Not Operated or Maintained by Thames Water)

-  **Other Water Company Main:** Occasionally other water company water pipes may overlap the border of our clean water coverage area. These mains are denoted in purple and in most cases have the owner of the pipe displayed along them.
-  **Private Main:** Indicates that the water main in question is not owned by Thames Water. These mains normally have text associated with them indicating the diameter and owner of the pipe.

Appendix J
Thames Water Foul Sewer Records

Asset Location Search Sewer Map - ALS/ALS Standard/2018 3804877



The width of the displayed area is 500 m and the centre of the map is located at OS coordinates 516945,174378

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Based on the Ordnance Survey Map with the Sanction of the controller of H.M. Stationery Office, License no. 100019345 Crown Copyright Reserved.

NB. Levels quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates that no survey information is available

Manhole Reference	Manhole Cover Level	Manhole Invert Level
15NK	n/a	n/a
151A	n/a	n/a
15NL	n/a	n/a
15NE	n/a	n/a
15KF	n/a	n/a
16NH	n/a	n/a
16NJ	n/a	n/a
16NC	n/a	n/a
16NK	n/a	n/a
16NL	n/a	n/a
16ND	n/a	n/a
16NM	n/a	n/a
12NK	n/a	n/a
13ML	n/a	n/a
13NC	n/a	n/a
13MK	n/a	n/a
13JN	n/a	n/a
1301B	5.59	4.8
1302	5.62	4.3
13NL	n/a	n/a
13NH	n/a	n/a
13LE	n/a	n/a
15LN	n/a	n/a
15MH	n/a	n/a
15MF	n/a	n/a
151D	n/a	n/a
15ME	n/a	n/a
15LM	n/a	n/a
1501	7.4	4.63
151C	n/a	n/a
1502	7.24	4.19
151B	n/a	n/a
1403	5.85	4.36
14NE	n/a	n/a
14NK	n/a	n/a
1404	5.83	3.24
15KM	n/a	n/a
14NL	n/a	n/a
15LF	n/a	n/a
15KC	n/a	n/a
15JN	n/a	n/a
14NM	n/a	n/a
15LH	n/a	n/a
15LC	n/a	n/a
14NH	n/a	n/a
15LJ	n/a	n/a
15LK	n/a	n/a
15NJ	n/a	n/a
15NC	n/a	n/a
141A	n/a	n/a
14LH	n/a	n/a
14LF	n/a	n/a
14LE	n/a	n/a
14LD	n/a	n/a
14LC	n/a	n/a
14KH	n/a	n/a
14MH	n/a	n/a
13JJ	n/a	n/a
13JH	n/a	n/a
13JC	n/a	n/a
14KD	n/a	n/a
14MN	n/a	n/a
14KE	n/a	n/a
13LH	n/a	n/a
13KF	n/a	n/a
13KD	n/a	n/a
13LC	n/a	n/a
13KM	n/a	n/a
13KH	n/a	n/a
13KJ	n/a	n/a
14KF	n/a	n/a
1106	5.11	3.64
11LJ	n/a	n/a
11LK	n/a	n/a
1101	5.43	3.25
011A	n/a	n/a
1201	5.37	3.19
021B	n/a	n/a
021A	n/a	n/a
0201	5.35	4.06
12NH	n/a	n/a
12NL	n/a	n/a
13HK	n/a	n/a
03NK	n/a	n/a
03ML	n/a	n/a
03NE	n/a	n/a
13HJ	n/a	n/a
0302	5.86	3.59
13HH	n/a	n/a
13ND	n/a	n/a
03NF	n/a	n/a

Manhole Reference	Manhole Cover Level	Manhole Invert Level
03NH	n/a	n/a
13MH	n/a	n/a
13MD	n/a	n/a
03MD	n/a	n/a
03LE	n/a	n/a
03ME	n/a	n/a
03LK	n/a	n/a
03LL	n/a	n/a
13LN	n/a	n/a
13LK	n/a	n/a
0102	6.23	2.87
0114	6.16	4.1
0109	5.48	2.81
0113	5.63	4.04
0110	5.48	2.16
0112	5.38	3.94
0101	5.56	2.89
0111	5.3	4.09
1109	5.39	3.79
1105	5.47	3
1108	5.1	3.75
1103	5.27	2.24
1104	5.55	2.94
11HF	n/a	n/a
111A	n/a	n/a
11NL	n/a	n/a
11KD	n/a	n/a
11KC	n/a	n/a
111C	n/a	n/a
111D	n/a	n/a
1107	5.21	3.86
11MD	n/a	n/a
1102	n/a	2.31
81NL	n/a	n/a
91ML	n/a	n/a
91MM	n/a	n/a
91MN	n/a	n/a
91NC	n/a	n/a
9101	6.58	4.45
9103	6.7	2.06
63KJ	n/a	n/a
6305	6.28	3.48
7301	6.25	4.22
72NM	n/a	n/a
731A	n/a	n/a
721A	n/a	n/a
73NC	n/a	n/a
73NF	n/a	n/a
72KM	n/a	n/a
73MK	n/a	n/a
73NK	n/a	n/a
72ML	n/a	n/a
7307	n/a	n/a
72MH	n/a	n/a
73NM	n/a	n/a
7201	6.81	4.37
7203	6.85	3.4
7305	7.22	4.28
72KF	n/a	n/a
7204	6.35	4.34
72KL	n/a	n/a
7202	6.3	4.55
72KH	n/a	n/a
91ND	n/a	n/a
91NM	n/a	n/a
811B	n/a	n/a
811A	n/a	n/a
811C	n/a	n/a
811D	n/a	n/a
8105	8.08	5.36
811F	n/a	n/a
8202	8.49	5.62
9202	6.1	4.3
9205	6.23	3
82NM	n/a	n/a
82NK	n/a	n/a
8201	n/a	n/a
8204	9.62	4.38
8203	7.49	3.58
821C	n/a	n/a
821B	n/a	n/a
821A	n/a	n/a
9201	6.77	4.71
9206	6.73	3.38
9204	6.18	3.28
9203	6.24	4.67
9207	6.3	3.53
7304	7.16	4.8
93NL	n/a	n/a
93NK	n/a	n/a
71ND	n/a	n/a
71NE	n/a	n/a
7101	7.01	3.83

Manhole Reference	Manhole Cover Level	Manhole Invert Level
81NC	n/a	n/a
81NF	n/a	n/a
81ML	n/a	n/a
81NJ	n/a	n/a
8106	7.56	5.11
911C	n/a	n/a
04NF	n/a	n/a
04NH	n/a	n/a
04NK	n/a	n/a
041E	n/a	n/a
0404	5.59	3.83
0403	5.58	3.87
04MH	n/a	n/a
0407	5.67	3.51
04ND	n/a	n/a
0406	5.67	4.03
041C	n/a	n/a
0301	5.51	3.76
041A	n/a	n/a
04LF	n/a	n/a
04KC	n/a	n/a
0303	5.26	3.71
041B	n/a	n/a
041D	n/a	n/a
051A	n/a	n/a
04KD	n/a	n/a
0401	n/a	n/a
04KE	n/a	n/a
0505	6.18	4.72
03LN	n/a	n/a
03LM	n/a	n/a
04KF	n/a	n/a
04KH	n/a	n/a
9301	4.65	3.78
84NJ	n/a	n/a
84NH	n/a	n/a
04NL	n/a	n/a
04NM	n/a	n/a
04NE	n/a	n/a
94NK	n/a	n/a
9504	5.2	4.2
95NE	n/a	n/a
9503	5.7	4.05
951F	n/a	n/a
95MN	n/a	n/a
9508	5.26	2.52
9507	5.41	2.24
9501	5.35	3.77
9505	5.82	2.53
0502	6.09	4.01
051D	n/a	n/a
951C	n/a	n/a
9506	5.89	2.09
951B	n/a	n/a
051C	n/a	n/a
951A	n/a	n/a
9502	5.69	3.9
0501	6.48	5.41
0602A	6.17	4.67
0650	5.76	n/a
9650	5.48	2.98
9601	5.48	n/a
9602	5.57	3.38
861C	n/a	n/a
7303	7.31	4.98
7403	7.12	5.8
7503	6.78	4.26
7501	6.73	3.96
7404	7.29	6.18
7406	7.12	6.05
7405	7.34	6.23
7502	6.22	3.81
7504	6.18	2.55
7506	n/a	n/a
8401	6.52	5.78
8501	6.13	5.09
8502	6.07	3.79
851B	5.38	3.53
8505	n/a	3.68
851A	n/a	n/a
84ML	n/a	n/a
85MF	n/a	n/a
85MH	n/a	n/a
8507	5.45	2.3
84MK	n/a	n/a
84LM	n/a	n/a
8405	5.23	n/a
8404	5.33	3.96
8403	5.21	3.13
851C	n/a	n/a
8402	5.22	3.63
7401	7.3	6.87
7302	6.96	4.87



















Manhole Reference	Manhole Cover Level	Manhole Invert Level
7306	7.13	5.34
7505	6.77	2.6
7402	7.37	6.23
7407	6.86	4.04

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.








ALS Sewer Map Key

Public Sewer Types (Operated & Maintained by Thames Water)

-  **Foul:** A sewer designed to convey waste water from domestic and industrial sources to a treatment works.
-  **Surface Water:** A sewer designed to convey surface water (e.g. rain water from roofs, yards and car parks) to rivers or watercourses.
-  **Combined:** A sewer designed to convey both waste water and surface water from domestic and industrial sources to a treatment works.
-  Trunk Surface Water
-  Trunk Foul
-  Storm Relief
-  Trunk Combined
-  Vent Pipe
-  Bio-solids (Sludge)
-  Proposed Thames Surface Water Sewer
-  Proposed Thames Water Foul Sewer
-  Gallery
-  Foul Rising Main
-  Surface Water Rising Main
-  Combined Rising Main
-  Sludge Rising Main
-  Proposed Thames Water Rising Main
-  Vacuum





Sewer Fittings

A feature in a sewer that does not affect the flow in the pipe. Example: a vent is a fitting as the function of a vent is to release excess gas.

-  Air Valve
-  Dam Chase
-  Fitting
-  Meter
-  Vent Column




Operational Controls

A feature in a sewer that changes or diverts the flow in the sewer. Example: A hydrobrake limits the flow passing downstream.

-  Control Valve
-  Drop Pipe
-  Ancillary
-  Weir






End Items

End symbols appear at the start or end of a sewer pipe. Examples: an Undefined End at the start of a sewer indicates that Thames Water has no knowledge of the position of the sewer upstream of that symbol, Outfall on a surface water sewer indicates that the pipe discharges into a stream or river.

-  Outfall
-  Undefined End
-  Inlet






Other Symbols

Symbols used on maps which do not fall under other general categories








-  /  Public/Private Pumping Station
-  Change of characteristic indicator (C.O.C.I.)
-  Invert Level
-  Summit

Areas

Lines denoting areas of underground surveys, etc.

-  Agreement
-  Operational Site
-  Chamber
-  Tunnel
-  Conduit Bridge

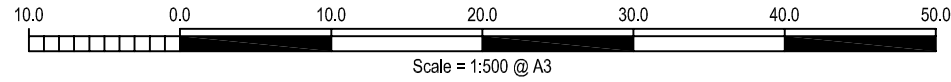
Other Sewer Types (Not Operated or Maintained by Thames Water)

-  Foul Sewer
-  Surface Water Sewer
-  Combined Sewer
-  Gully
-  Culverted Watercourse
-  Proposed
-  Abandoned Sewer

Notes:

- 1) All levels associated with the plans are to Ordnance Datum Newlyn.
- 2) All measurements on the plans are metric.
- 3) Arrows (on gravity fed sewers) or flecks (on rising mains) indicate direction of flow.
- 4) Most private pipes are not shown on our plans, as in the past, this information has not been recorded.
- 5) 'na' or '0' on a manhole level indicates that data is unavailable.
- 6) The text appearing alongside a sewer line indicates the internal diameter of the pipe in millimetres. Text next to a manhole indicates the manhole reference number and should not be taken as a measurement. If you are unsure about any text or symbology present on the plan, please contact a member of Property Insight on 0845 070 9148.

Appendix K
Outline Foul Water Drainage Strategy



NOTES

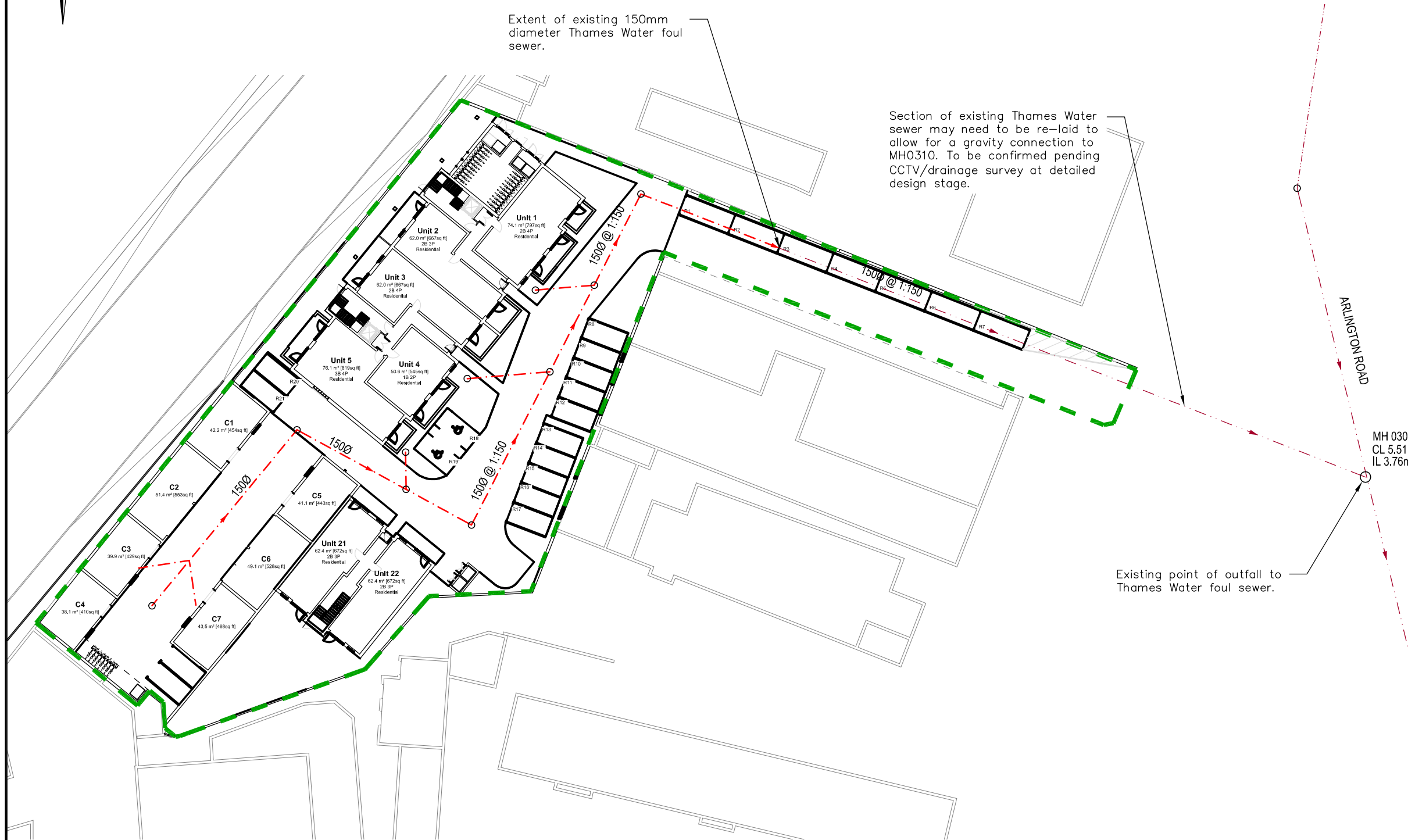
1. This drawing is to be read in conjunction with all relevant documents and specifications.
 2. Dimensions are not to be scaled.
- Source: Brookes Architect's drawing number 4786/3/10/P4.

KEY

- Application site boundary
- - - - - Existing Thames Water foul sewer
- - - - - Proposed foul water sewer

Extent of existing 150mm diameter Thames Water foul sewer.

Section of existing Thames Water sewer may need to be re-laid to allow for a gravity connection to MH0310. To be confirmed pending CCTV/drainage survey at detailed design stage.



Existing point of outfall to Thames Water foul sewer.

FOUL WATER DRAINAGE STRATEGY

1. The peak flow from 24 residential units and 610sqm of commercial/office space has been calculated to be 1.15l/s, in accordance with the methodology provided within Sewers for Adoption.
2. It is proposed to discharge the foul water from site by gravity into the Thames Water foul water sewer located within Arlington Road.
3. All new foul water infrastructure will be designed in accordance with Sewers for Adoption with the intention that it would be adopted by Thames Water.

P1	Preliminary issue.	28/06/18	JH
Rev.	Description	Date	Chkd



Glanville
 Cornerstone House
 62 Foxhall Road, Didcot
 Oxon, OX11 7AD
 Tel: (01235) 515550 Fax: (01235) 817799
 postbox@glanvillegroup.com www.glanvillegroup.com

Client :
Sharpe Refinery Service Ltd

Project :
**Arlington Works,
 Twickenham,
 TW1 2BB**

Title :
Outline Foul Water Drainage Strategy

Project Engineer :	M. Walton	Scale :	1:500 @ A3
Project Director :	J. Hanlon	Date :	June 2018
Status :	PRELIMINARY		

Drawing No.	8180559/SK01	Rev	P1
-------------	--------------	-----	----

Appendix L
Thames Water Pre-Planning Enquiry



Mr J Hanlon
Glanville Consultants
62 Foxhall Rd
Didcot
Oxon
OX11 7AD



Our ref: DS6049763



0800 009 3921

Monday to Friday, 8am to 5pm

18TH June 2018

Pre-planning enquiry: Wastewater Capacity check

Dear Mr Hanlon

Thank you for providing details on your development with the Pre-Planning application dated 8th June 18' for Arlington Works Twickenham TW1 2BB { Brownfeild site of 680m2 of commercial area developed to :- 18 houses + 6 flats + 656 m2 offices}.

Foul

If your proposals progress in line with the details you've provided as above, we're pleased to confirm that there will be sufficient sewerage capacity to serve your foul discharges from your development.

Surface Water

In considering your surface water needs, we support the use of sustainable drainage on development sites.

The surface water drainage strategy should follow policy 5.13 of the London Plan. Typically greenfield run off rates of 5l/s/ha should be aimed for using the drainage hierarchy. The hierarchy lists the preference for surface water disposal as follows; Store Rainwater for later use > Use infiltration techniques, such as porous surfaces in non-clay areas > Attenuate rainwater in ponds or open water features for gradual release > Discharge rainwater direct to a watercourse > Discharge by storing and attenuating rainwater direct to a surface water sewer/drain > Discharge by storing and attenuating rainwater to the combined sewer.

Please refer to the attached document titled "Planning your wastewater" attached to this letter, specifically to notes relating to surface water. Also I would advise you to liaise with the LA and discuss their criteria regarding surface water discharges in that area and adhere to their stipulation. If you agree & adhere to a LA stipulation then TW will be able to accommodate that agreed discharge.

This confirmation is valid for 12 months or for the life of any planning approval that this information is used to support, to a maximum of three years.

Please note that you must keep us informed of any changes to your design – for example, an increase in the number or density of homes. Such changes could mean there is no longer sufficient sewerage capacity.

What happens next?

Please make sure you submit your connection application, when you are ready, giving us at least 21 days' notice of the date you wish to make your new connection/s.

If you've any further questions, please contact me.

Yours sincerely

Siva Sivarajan

Developer Services- Wastewater Adoptions Engineer
Office:0203 577 7752 Mobile: 07747842608
siva.sivarajan@thameswater.co.uk

Thames Water Utilities Ltd, Clearwater Court, Vastern Road, Reading, Berkshire, RG1 8DB
Find us online at developers.thameswater.co.uk



TW internal ref: DTS 58243



Cornerstone House, 62 Foxhall Road,
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- Structural Engineering
- Civil Engineering
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- Geomatics (Land Surveying)
- Building Surveying
- CDM Consultants