

APPENDIX B – BGS BOREHOLE SCAN SP52SE174

At Bicester R.A.F. Station *site, which is 5710* **SP 5910 2475**

Town or Village Bicester County Oxon Six-inch quarter sheet

Exact site E. side of Roman Way, 1650 yds NE. of the railway } (A. 1/25000 or a tracing maps very good)
 in parish of SP 5910 2446

Level of ground surface above sea-level (O.D.) c240 ft. If well starts below ground surface, state how far

Shaft 140 ft. diameter 140 ft. Bore 140 ft. Diameter of bore: at top 15 ins.; at bottom 12 ins.

Details of permanent lining tubes (internal diameters preferred) 30' x 15 in., from surface; then 12 in. to bottom, part perforated. (101' - 120') see over page

Water struck at depths of (feet) SP 52/46

Rest-level of water below top of well 3-12 * feet. Suction at 5 feet. Yield on 5 hours' test

4000 gallons per hr (with pump of capacity 110 g.p.h.); depressing water level to 110 feet below top. Time of recovery hrs. Amount normally pumped daily g.p.h. for hours.

Quality (attach copy of analysis if available)

Sunk by Richardson-Timmins, Ltd. for Mr. Richardson, Ltd. Date of well 1939

Information from T. Richardson, Ltd.

(For Survey use only). GEOLOGICAL CLASSIFICATION.	NATURE OF STRATA (and any additional remarks).	THICKNESS		DEPTH	
		Feet.	Inches.	Feet.	Inches.
	Top soil	1	6	1	6
	Brush	4	.	5	6
Cornbrash 9 ft.	Hard brush	3	.	8	6
	Light blue rock	2	.	6	6
	Light blue clay	2	.	12	6
Forest Marble 10 1/2 ft.	Blue rock and layers of clay	2	.	14	6
	Very hard grey rock	3	.	16	6
	Grey clay	3	6	21	.
	Grey hard limestone rock	5	.	26	.
White Limestone 38 1/2 ft.	Blue sandy clay	1	6	27	6
	Light limestone rock	7	6	35	.
	Grey rock	24	6	59	6
	Blue clay	1	6	61	.
Hampden Marly Beds 2 1/2 ft.	Light grey rock	2	.	63	.
	Light blue rock	1	6	64	6
	Grey rock	2	6	66	.
	Blue clay, layers of rock	14	.	81	.
Jayston Stone 20 ft.	Grey rock	5	.	86	.
	Rock with layers of clay	8	.	94	.
	Grey rock	7	.	101	.
	Fine grey sandstone	4	.	105	.
	Dark brown clay	1	6	106	6
	Fine grey sandstone	4	.	110	6
Swexford and Hook Norton Beds. 23 1/2 ft.	Hard sandstone	4	.	114	6
	Blue clay	6	6	121	.
	Hard dark grey rock	3	6	124	6
	Blue clay	6	6	131	.
	Fine grey sandstone	6	6	137	.
	Hard sandstone	3	6	140	6
	Blue clay	5	.	139	6
Upper Lias 15 1/2 ft.	Hard dark grey rock	2	6	137	.
	Blue clay	8	.	140	.

M.W.L. 12 ft. down in May 1940, 3 ft. down in Aug. 1939.

APPENDIX C – THAMES WATER SEWER RECORDS

Asset location search



Property Searches

Andrew Collins
Ridge & Partners LLP
The Cowyards The Cowyards, Blenheim Road
Oxford Road
WOODSTOCK
OX20 1QR

Search address supplied 459787 223840
Land Adjacent To Oxford Vitality
Unit 4
Longlands Road
Launton
Bicester
OX26 5AH

Your reference 5012836

Our reference ALS/ALS Standard/2020_4232200

Search date 14 August 2020

Knowledge of features below the surface is essential for every development

The benefits of this knowledge not only include ensuring due diligence and avoiding risk, but also being able to ascertain the feasibility of any development.

Did you know that Thames Water Property Searches can also provide a variety of utility searches including a more comprehensive view of utility providers' assets (across up to 35-45 different providers), as well as more focused searches relating to specific major utility companies such as National Grid (gas and electric).

Contact us to find out more.



Thames Water Utilities Ltd
Property Searches, PO Box 3189, Slough SL1 4WW
DX 151280 Slough 13



searches@thameswater.co.uk
www.thameswater-propertysearches.co.uk



0845 070 9148

Search address supplied: 459787 223840, Land Adjacent To Oxford Vitality, Unit 4, Longlands Road, Launton, Bicester, OX26 5AH

Dear Sir / Madam

An Asset Location Search is recommended when undertaking a site development. It is essential to obtain information on the size and location of clean water and sewerage assets to safeguard against expensive damage and allow cost-effective service design.

The following records were searched in compiling this report: - the map of public sewers & the map of waterworks. Thames Water Utilities Ltd (TWUL) holds all of these.

This search provides maps showing the position, size of Thames Water assets close to the proposed development and also manhole cover and invert levels, where available.

Please note that none of the charges made for this report relate to the provision of Ordnance Survey mapping information. The replies contained in this letter are given following inspection of the public service records available to this company. No responsibility can be accepted for any error or omission in the replies.

You should be aware that the information contained on these plans is current only on the day that the plans are issued. The plans should only be used for the duration of the work that is being carried out at the present time. Under no circumstances should this data be copied or transmitted to parties other than those for whom the current work is being carried out.

Thames Water do update these service plans on a regular basis and failure to observe the above conditions could lead to damage arising to new or diverted services at a later date.

Contact Us

If you have any further queries regarding this enquiry please feel free to contact a member of the team on 0845 070 9148, or use the address below:

Thames Water Utilities Ltd
Property Searches
PO Box 3189
Slough
SL1 4WW

Email: searches@thameswater.co.uk

Web: www.thameswater-propertysearches.co.uk

Waste Water Services

Please provide a copy extract from the public sewer map.

The following quartiles have been printed as they fall within Thames' sewerage area:

SP5924SW
SP5923NW
SP5923NE

Enclosed is a map showing the approximate lines of our sewers. Our plans do not show sewer connections from individual properties or any sewers not owned by Thames Water unless specifically annotated otherwise. Records such as "private" pipework are in some cases available from the Building Control Department of the relevant Local Authority.

Where the Local Authority does not hold such plans it might be advisable to consult the property deeds for the site or contact neighbouring landowners.

This report relates only to sewerage apparatus of Thames Water Utilities Ltd, it does not disclose details of cables and or communications equipment that may be running through or around such apparatus.

The sewer level information contained in this response represents all of the level data available in our existing records. Should you require any further Information, please refer to the relevant section within the 'Further Contacts' page found later in this document.

The following quartiles have not been printed as they contain no assets:

SP6023NW
SP5924SE

For your guidance:

- The Company is not generally responsible for rivers, watercourses, ponds, culverts or highway drains. If any of these are shown on the copy extract they are shown for information only.
- Any private sewers or lateral drains which are indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an 'as constructed' record. It is recommended these details be checked with the developer.

Clean Water Services

Please provide a copy extract from the public water main map.

The following quartiles have been printed as they fall within Thames' water area:

SP6023NW
SP5924SW
SP5923NW
SP5923NE

Enclosed is a map showing the approximate positions of our water mains and associated apparatus. Please note that records are not kept of the positions of individual domestic supplies.

For your information, there will be a pressure of at least 10m head at the outside stop valve. If you would like to know the static pressure, please contact our Customer Centre on 0800 316 9800. The Customer Centre can also arrange for a full flow and pressure test to be carried out for a fee.

The following quartiles have not been printed as they contain no assets:

SP5924SE

For your guidance:

- Assets other than vested water mains may be shown on the plan, for information only.
- If an extract of the public water main record is enclosed, this will show known public water mains in the vicinity of the property. It should be possible to estimate the likely length and route of any private water supply pipe connecting the property to the public water network.

Payment for this Search

Thank you for your payment covering the cost of this enquiry. We have enclosed a VAT Receipt for your records.

Further contacts:

Waste Water queries

Should you require verification of the invert levels of public sewers, by site measurement, you will need to approach the relevant Thames Water Area Network Office for permission to lift the appropriate covers. This permission will usually involve you completing a TWOSA form. For further information please contact our Customer Centre on Tel: 0845 920 0800. Alternatively, a survey can be arranged, for a fee, through our Customer Centre on the above number.

If you have any questions regarding sewer connections, budget estimates, diversions, building over issues or any other questions regarding operational issues please direct them to our service desk. Which can be contacted by writing to:

Developer Services (Waste Water)
Thames Water
Clearwater Court
Vastern Road
Reading
RG1 8DB

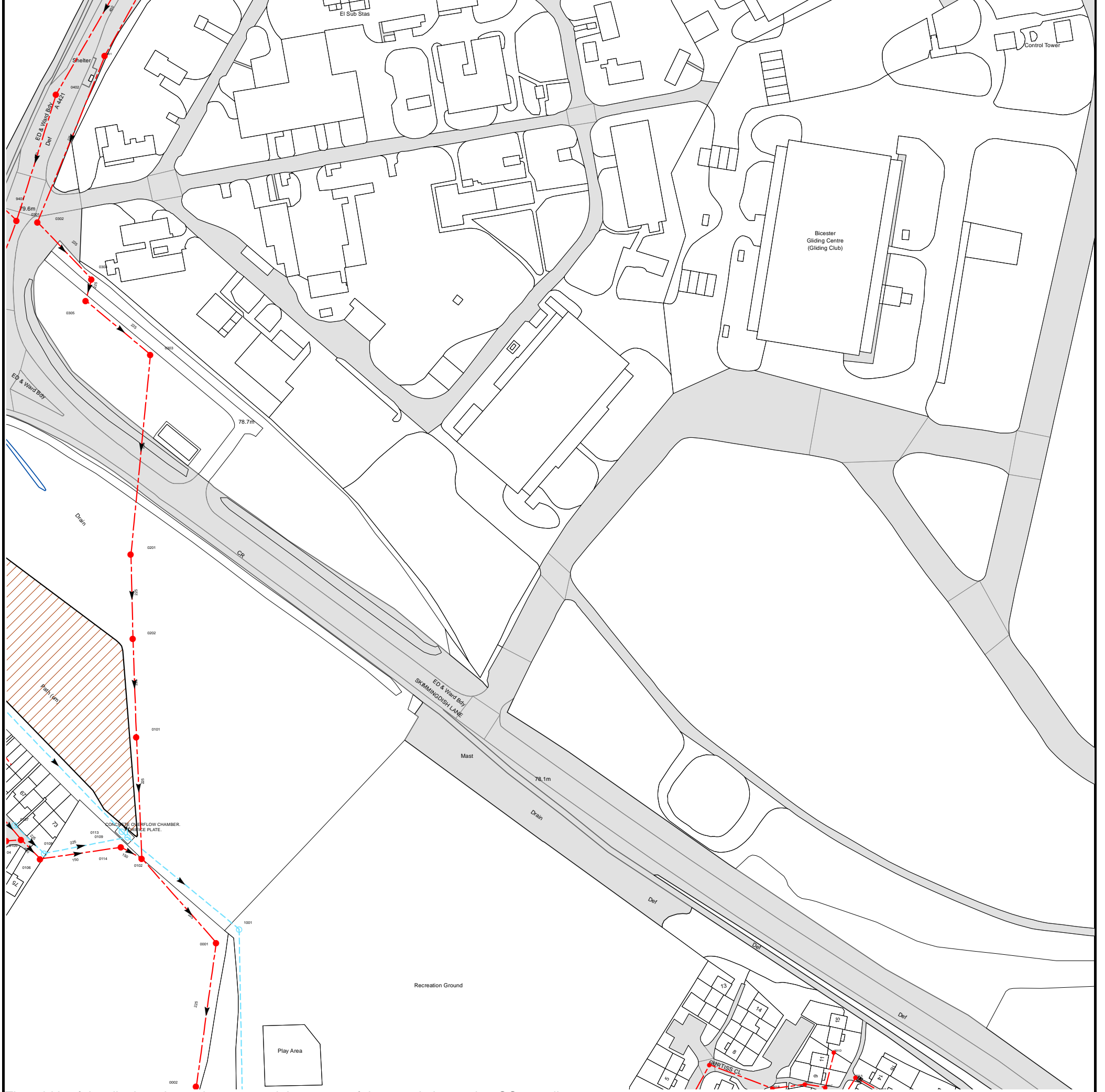
Tel: 0800 009 3921
Email: developer.services@thameswater.co.uk

Clean Water queries

Should you require any advice concerning clean water operational issues or clean water connections, please contact:

Developer Services (Clean Water)
Thames Water
Clearwater Court
Vastern Road
Reading
RG1 8DB

Tel: 0800 009 3921
Email: developer.services@thameswater.co.uk



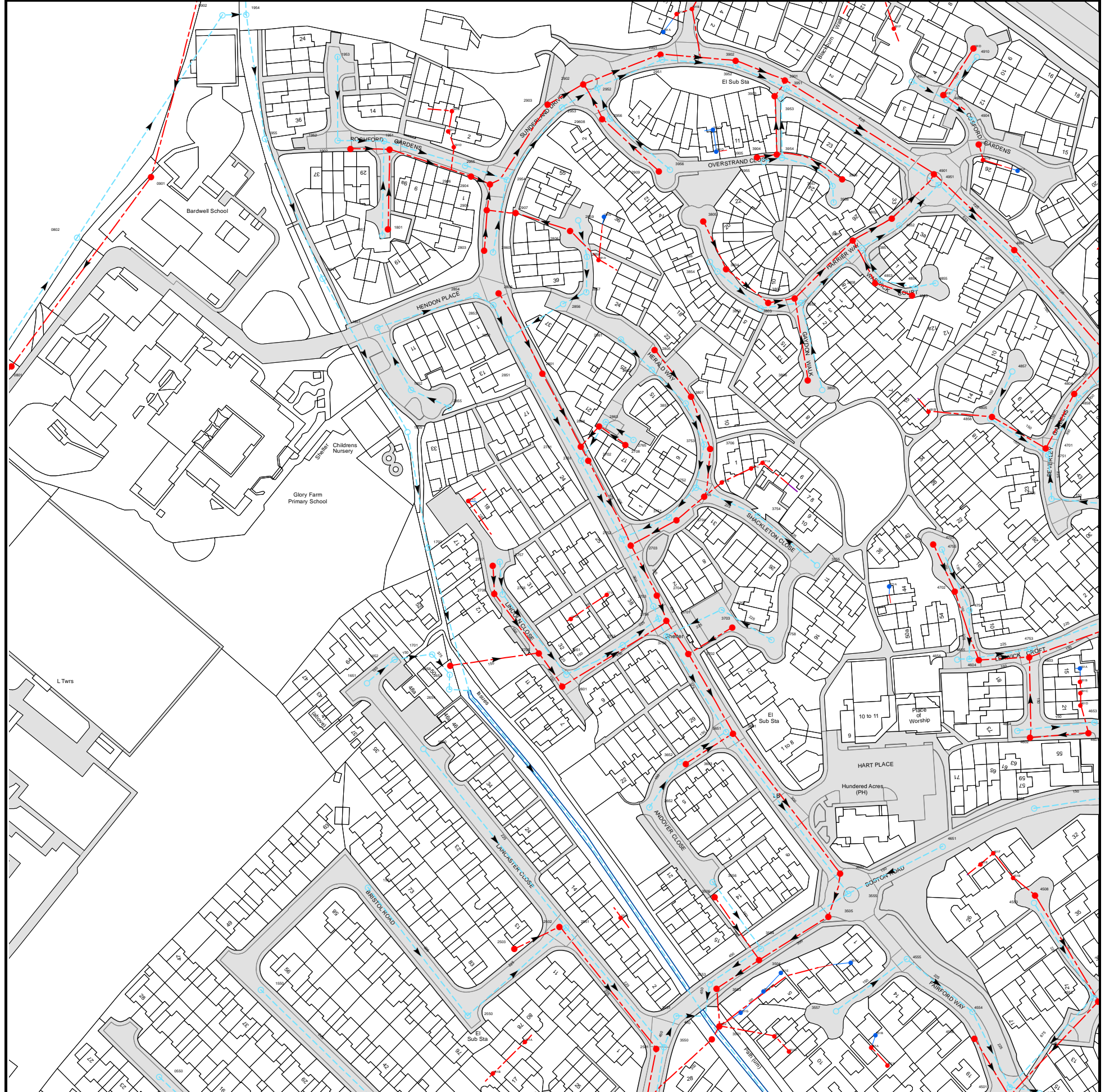
The width of the displayed area is 500m and the centre of the map is located at OS coordinates 459250,224250
The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. 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
301B	n/a	n/a
301H	n/a	n/a
301C	n/a	n/a
301D	n/a	n/a
301A	n/a	n/a
301G	n/a	n/a
0106	n/a	n/a
0102	77.87	76.65
0108	n/a	n/a
0114	n/a	n/a
0104	n/a	n/a
0105	n/a	n/a
0109	n/a	n/a
0113	n/a	n/a
0107	n/a	n/a
0101	n/a	n/a
0202	n/a	n/a
0201	n/a	n/a
0002	n/a	n/a
0001	77.72	76.44
1001	n/a	n/a
0303	n/a	n/a
0305	n/a	n/a
0304	79.42	78.28
0302	79.52	78.48
0301	79.67	78.03
0402	80.37	78.27
0401	80.61	79.04

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The width of the displayed area is 500m and the centre of the map is located at OS coordinates 459250,223750

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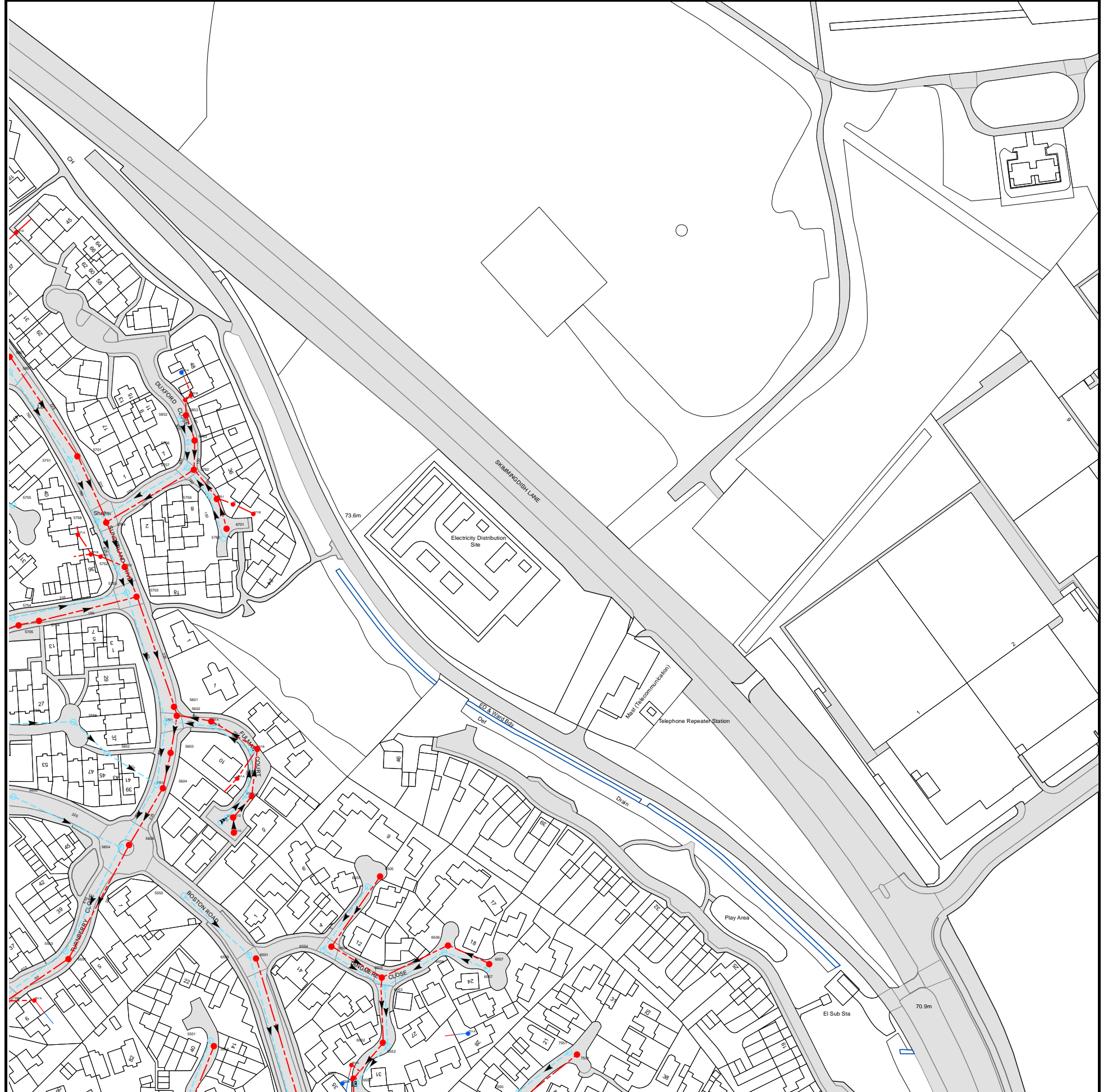
NB. Levels quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates that no survey information is available

Manhole Reference	Manhole Cover Level	Manhole Invert Level
4653	74.07	72.52
461D	n/a	n/a
461C	n/a	n/a
461B	n/a	n/a
461A	n/a	n/a
4604	73.89	72.79
4656	73.72	71.92
4655	73.96	72.71
4603	73.92	71.97
4753	74.05	72.35
4754	73.97	72.93
4702	73.89	72.66
471A	n/a	n/a
3755	n/a	n/a
4755	74	73.23
4703	74.02	71.7
4756	73.55	72.34
4751	73.8	72.2
4701	73.86	72.61
4856	74.54	73.16
4805	74.6	73.58
481B	n/a	n/a
4858	n/a	n/a
4804	73.84	72.32
3856	n/a	n/a
3806	n/a	n/a
4857	74.67	73.31
4803	n/a	n/a
4854	n/a	n/a
3808	n/a	n/a
4855	n/a	n/a
4853	n/a	n/a
4860	n/a	n/a
4801	n/a	n/a
3851	n/a	n/a
3801	n/a	n/a
4852	n/a	n/a
4802	n/a	n/a
3958	n/a	n/a
3957	n/a	n/a
4951	n/a	n/a
3906	n/a	n/a
3902	n/a	n/a
3905	n/a	n/a
3955	n/a	n/a
3903	n/a	n/a
3904	n/a	n/a
3953	n/a	n/a
3954	n/a	n/a
3901	n/a	n/a
3951	n/a	n/a
391E	n/a	n/a
391F	n/a	n/a
491F	n/a	n/a
4905	n/a	n/a
4901	n/a	n/a
491E	n/a	n/a
4902	74.27	72.99
4904	n/a	n/a
491D	n/a	n/a
4910	74.73	73.34
491C	n/a	n/a
491B	n/a	n/a
491A	n/a	n/a
2755	n/a	n/a
2708	n/a	n/a
2703	n/a	n/a
2765	n/a	n/a
2862	n/a	n/a
2753	n/a	n/a
2805	n/a	n/a
2704	n/a	n/a
2754	n/a	n/a
3756	n/a	n/a
3701	n/a	n/a
3751	n/a	n/a
3704	n/a	n/a
3857	n/a	n/a
3702	n/a	n/a
3807	n/a	n/a
3752	n/a	n/a
3753	n/a	n/a
3705	n/a	n/a
3706	n/a	n/a
3757	n/a	n/a
371B	n/a	n/a
3703	n/a	n/a
371C	n/a	n/a
3754	n/a	n/a
371A	n/a	n/a

Manhole Reference	Manhole Cover Level	Manhole Invert Level
3758	n/a	n/a
1652	75.9	74.51
1855	n/a	n/a
1852	n/a	n/a
1702	n/a	n/a
1701	76.08	74.43
2654	75.7	74.3
2855	n/a	n/a
2653	75.82	74.39
2656	75.7	74.62
271C	n/a	n/a
2707	n/a	n/a
2706	n/a	n/a
2757	n/a	n/a
2756	n/a	n/a
2851	n/a	n/a
2705	75.21	73.49
2801	n/a	n/a
2601	n/a	n/a
2651	n/a	n/a
271B	n/a	n/a
2701	n/a	n/a
2751	n/a	n/a
2702	n/a	n/a
2804	n/a	n/a
2863	n/a	n/a
271A	n/a	n/a
2752	n/a	n/a
1951	n/a	n/a
1901	n/a	n/a
291C	n/a	n/a
291B	n/a	n/a
291D	n/a	n/a
2955	n/a	n/a
2903	n/a	n/a
2953	n/a	n/a
2902	n/a	n/a
2952	n/a	n/a
29608	n/a	n/a
2956	n/a	n/a
2909	n/a	n/a
2901	n/a	n/a
2951	n/a	n/a
291A	n/a	n/a
3956	n/a	n/a
391A	n/a	n/a
391B	n/a	n/a
391C	n/a	n/a
391D	n/a	n/a
3952	n/a	n/a
1853	n/a	n/a
1801	n/a	n/a
2906	n/a	n/a
2854	n/a	n/a
2803	n/a	n/a
2905	n/a	n/a
2904	n/a	n/a
2860	n/a	n/a
2853	n/a	n/a
2802	n/a	n/a
2954	n/a	n/a
2852	n/a	n/a
2907	n/a	n/a
2856	n/a	n/a
2806	n/a	n/a
2859	n/a	n/a
2857	n/a	n/a
2858	n/a	n/a
281A	n/a	n/a
291E	n/a	n/a
2861	n/a	n/a
3805	n/a	n/a
3855	n/a	n/a
3854	n/a	n/a
3804	n/a	n/a
3858	n/a	n/a
3803	n/a	n/a
3802	n/a	n/a
3852	n/a	n/a
0801	n/a	n/a
1651	75.93	74.58
1551	75.64	74.66
1851	n/a	n/a
0802	n/a	n/a
0901	n/a	n/a
0902	n/a	n/a
1954	n/a	n/a
1955	n/a	n/a
1854	n/a	n/a
1953	n/a	n/a
1952	n/a	n/a
1902	n/a	n/a
4501	72.26	70.8

Manhole Reference	Manhole Cover Level	Manhole Invert Level
451B	n/a	n/a
4654	74.27	72.8
4602	74.2	72.05
4553	73.2	71.65
4652	74.11	72.36
4508	n/a	n/a
4452	n/a	70.89
4601	74.05	72.33
4552	72.4	70.88
4502	n/a	n/a
451A	n/a	n/a
351D	n/a	n/a
351A	n/a	n/a
4506	73.07	71
351B	n/a	n/a
4554	72.75	71.38
3557	73.37	71.93
351H	n/a	n/a
4555	73.15	71.55
3505	n/a	n/a
3555	n/a	n/a
3602	n/a	n/a
461E	n/a	n/a
461F	n/a	n/a
4651	n/a	n/a
2501	74.36	72.4
3550	74.35	72.69
3501	74.39	72.46
351C	n/a	n/a
3502	n/a	n/a
3551	74.36	72.52
351G	n/a	n/a
351F	n/a	n/a
3503	n/a	n/a
3553	n/a	n/a
351E	n/a	n/a
3504	n/a	n/a
3554	n/a	n/a
3506	n/a	n/a
3556	n/a	n/a
2652	n/a	n/a
3603	n/a	n/a
3652	n/a	n/a
3601	n/a	n/a
3651	n/a	n/a
1650	75.49	74.53
2550	75.19	73.67
251B	n/a	n/a
2503	75.06	73.66
251A	n/a	n/a
2502	74.79	73.48
2551	74.76	73.13
251C	n/a	n/a
0550	76.63	75.2
1550	75.62	74.47

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The width of the displayed area is 500m and the centre of the map is located at OS coordinates 459750,223750

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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
6503	n/a	n/a
6557	n/a	n/a
6507	n/a	n/a
6501	n/a	n/a
6550	n/a	n/a
6556	n/a	n/a
6554	n/a	n/a
6504	n/a	n/a
6506	n/a	n/a
5550	n/a	n/a
6555	n/a	n/a
6505	n/a	n/a
5654	73.28	71.07
5605	73.18	69.18
661C	n/a	n/a
561C	n/a	n/a
661H	n/a	n/a
661D	n/a	n/a
661E	n/a	n/a
661G	n/a	n/a
5604	73.08	70.11
5653	73.07	71.09
661A	n/a	n/a
5652	73.72	71.92
5603	73.2	70.26
661F	n/a	n/a
661B	n/a	n/a
5758	n/a	n/a
571C	n/a	n/a
5764	n/a	n/a
5752	73.67	71.27
5702	73.65	70.6
5753	73.7	71.25
5703	73.7	70.55
5651	73.37	71.17
5601	73.47	70.32
5602	73.32	70.32
5852	n/a	n/a
581A	n/a	n/a
581C	n/a	n/a
5853	n/a	n/a
5757	n/a	n/a
5756	n/a	n/a
581B	n/a	n/a
5762	n/a	n/a
5763	n/a	n/a
5759	n/a	n/a
561A	n/a	n/a
561B	n/a	n/a
5761	n/a	n/a
5760	n/a	n/a
6701	n/a	n/a
671A	n/a	n/a
671B	n/a	n/a
5656	73.71	72.13
5705	74.12	71.32
5704	74.05	71.15
5754	74.13	71.98
571B	n/a	n/a
571A	n/a	n/a
5755	73.38	72.58
5751	73.41	71.45
5701	73.38	70.88
5851	73.65	71.57
5801	73.66	71.09
581D	n/a	n/a
7550	n/a	n/a
7551	n/a	n/a
7501	n/a	n/a
5551	n/a	n/a
5554	n/a	n/a
651B	n/a	n/a
651A	n/a	n/a
6557	n/a	n/a
6551	n/a	n/a
6502	n/a	n/a
6553	n/a	n/a
6552	n/a	n/a
751A	n/a	n/a
5655	73.77	71.9
551A	n/a	n/a
5553	72.54	70.01
5501	72.36	69.84

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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.

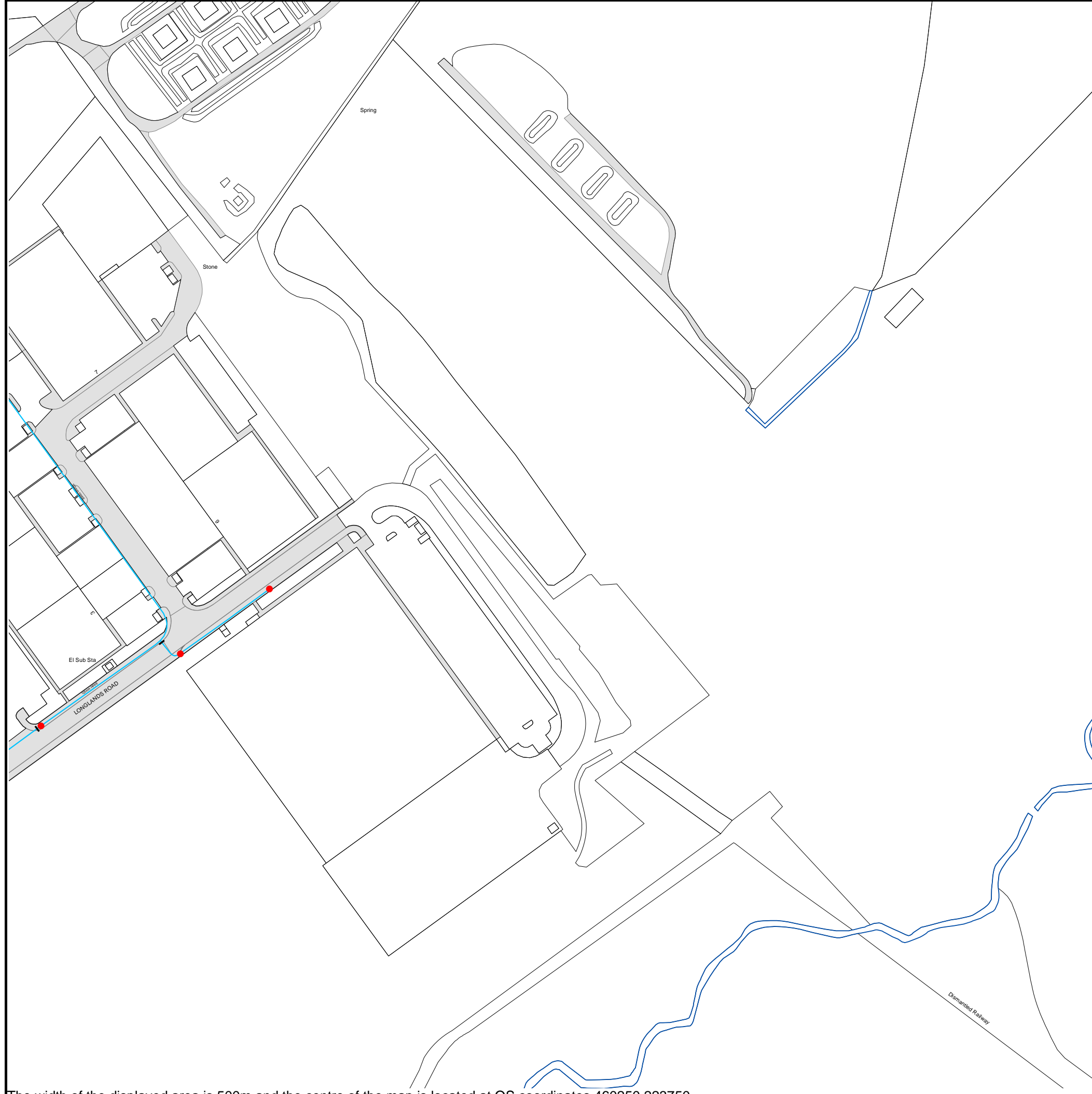
-  Agreement
-  Operational Site
-  Chamber
-  Tunnel
-  Conduit Bridge

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

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

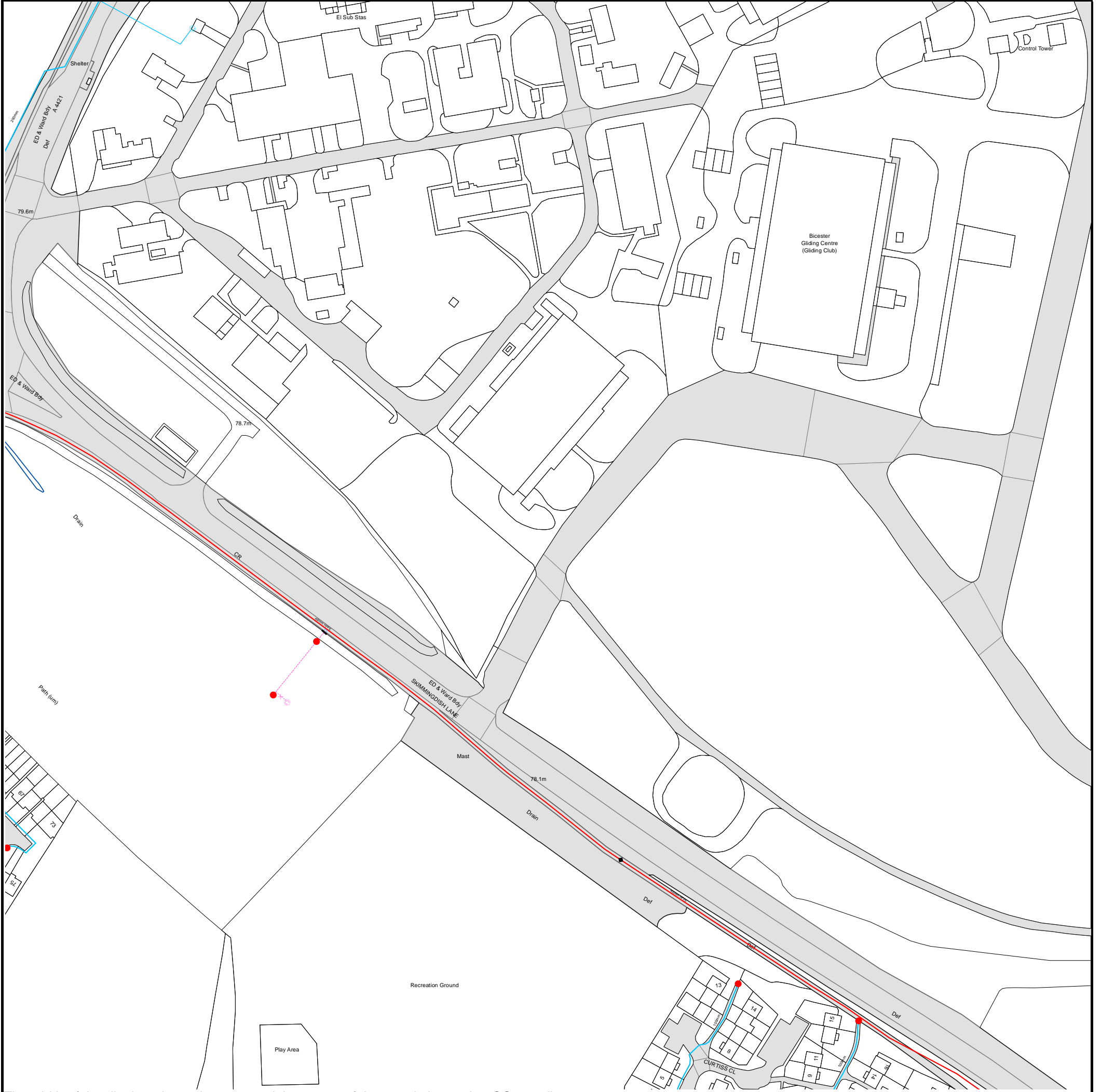
Notes:

- 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.



The width of the displayed area is 500m and the centre of the map is located at OS coordinates 460250,223750
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.

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The width of the displayed area is 500m and the centre of the map is located at OS coordinates 459250,224250

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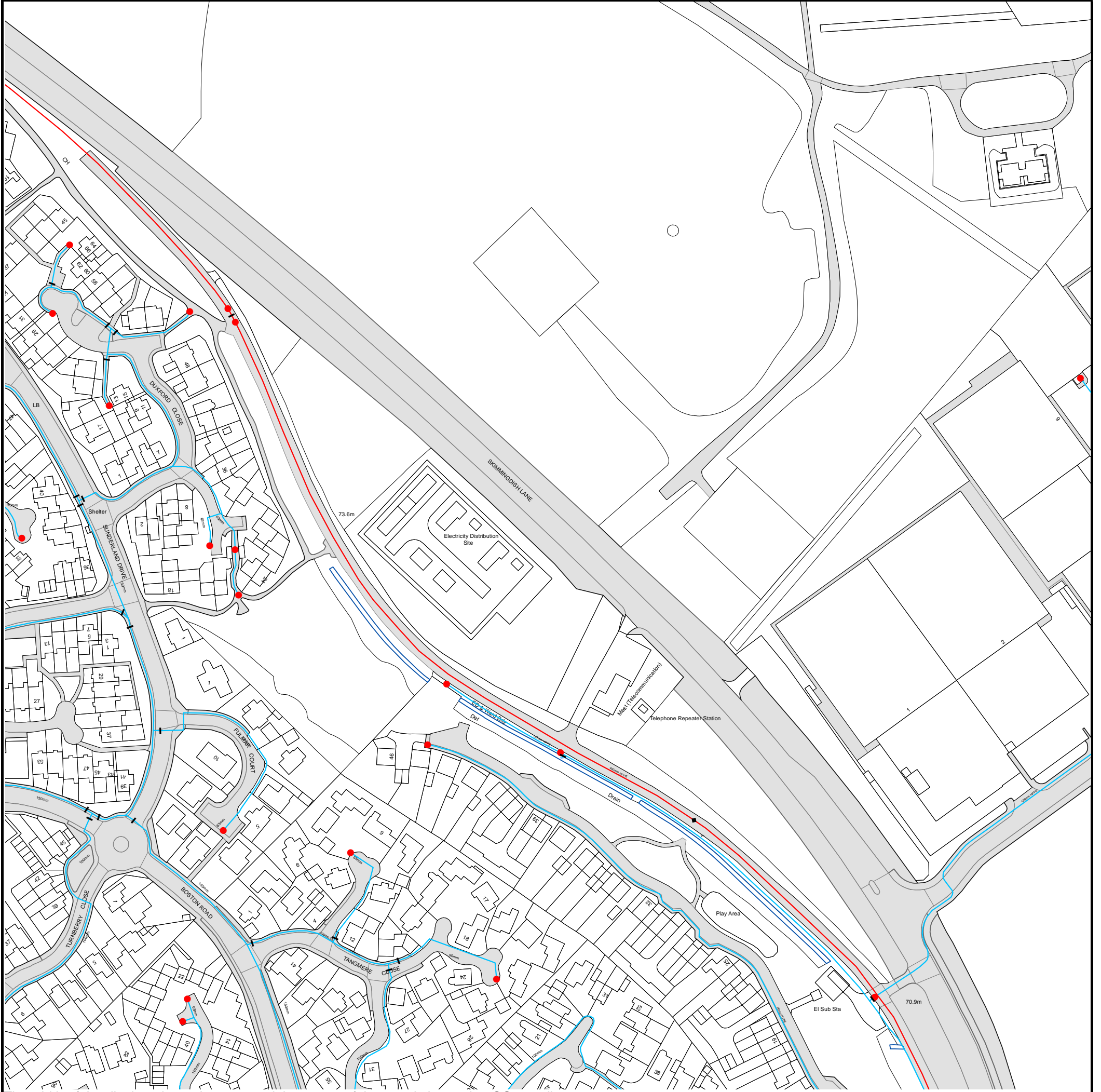
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The width of the displayed area is 500m and the centre of the map is located at OS coordinates 459250,223750

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.

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The width of the displayed area is 500m and the centre of the map is located at OS coordinates 459750,223750








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.

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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.

Terms and Conditions

All sales are made in accordance with Thames Water Utilities Limited (TWUL) standard terms and conditions unless previously agreed in writing.

1. All goods remain in the property of Thames Water Utilities Ltd until full payment is received.
2. Provision of service will be in accordance with all legal requirements and published TWUL policies.
3. All invoices are strictly due for payment 14 days from due date of the invoice. Any other terms must be accepted/agreed in writing prior to provision of goods or service, or will be held to be invalid.
4. Thames Water does not accept post-dated cheques-any cheques received will be processed for payment on date of receipt.
5. In case of dispute TWUL's terms and conditions shall apply.
6. Penalty interest may be invoked by TWUL in the event of unjustifiable payment delay. Interest charges will be in line with UK Statute Law 'The Late Payment of Commercial Debts (Interest) Act 1998'.
7. Interest will be charged in line with current Court Interest Charges, if legal action is taken.
8. A charge may be made at the discretion of the company for increased administration costs.

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We publish several Codes of Practice including a guaranteed standards scheme. You can obtain copies of these leaflets by calling us on 0800 316 9800

If you are unhappy with our service you can speak to your original goods or customer service provider. If you are not satisfied with the response, your complaint will be reviewed by the Customer Services Director. You can write to her at: Thames Water Utilities Ltd. PO Box 492, Swindon, SN38 8TU.

If the Goods or Services covered by this invoice falls under the regulation of the 1991 Water Industry Act, and you remain dissatisfied you can refer your complaint to Consumer Council for Water on 0121 345 1000 or write to them at Consumer Council for Water, 1st Floor, Victoria Square House, Victoria Square, Birmingham, B2 4AJ.

Ways to pay your bill

Credit Card	BACS Payment	Telephone Banking	Cheque
<p>Call 0845 070 9148 quoting your invoice number starting CBA or ADS / OSS</p>	<p>Account number 90478703 Sort code 60-00-01 A remittance advice must be sent to: Thames Water Utilities Ltd., PO Box 3189, Slough SL1 4WW. or email ps.billing@thameswater.co.uk</p>	<p>By calling your bank and quoting: Account number 90478703 Sort code 60-00-01 and your invoice number</p>	<p>Made payable to 'Thames Water Utilities Ltd' Write your Thames Water account number on the back. Send to: Thames Water Utilities Ltd., PO Box 3189, Slough SL1 4WW or by DX to 151280 Slough 13</p>

Thames Water Utilities Ltd Registered in England & Wales No. 2366661 Registered Office Clearwater Court, Vastern Rd, Reading, Berks, RG1 8DB.

INVOICE



Andrew Collins
Ridge & Partners LLP

Oxford Road
Woodstock
OX20 1QR

Thames Water Utilities Ltd.
PO Box 3189
Slough
SL1 4WW

Customer Reference: 5012836	Invoice No: ADS20405852
	Our Ref: ALS/ALS Standard/2020_4232200
Customer Number: ADS119185	Posting Date: 14-08-2020
Purchase Order No:	Due Date: 28-08-2020

Search Address Supplied: 459787 223840, Land Adjacent To Oxford Vitality, Unit 4, Longlands Road, Launton, Bicester, OX26 5AH

Description of Charges	Qty	Unit Price	VAT (20%)	Amount (Inc VAT)
Asset Location Search	1	£49.80	£9.96	£59.76

Thank you for your payment of 000000,111111 £59.76

OUTSTANDING AMOUNT (Inc. VAT) £0.00

Please send any outstanding amount to Thames Water Utilities Ltd., PO Box 3189, Slough SL1 4WW.

For queries please contact the Property Searches Customer Support Team on Tel: 0845 070 9148.

VAT Reg. No GB 537456915



APPENDIX D – OUTLINE DRAINAGE STRATEGY



IMAGE 1 - TYPICAL EXAMPLE OF PERMEABLE PAVING



IMAGE 2 - TYPICAL EXAMPLE OF AN INFILTRATION BASIN

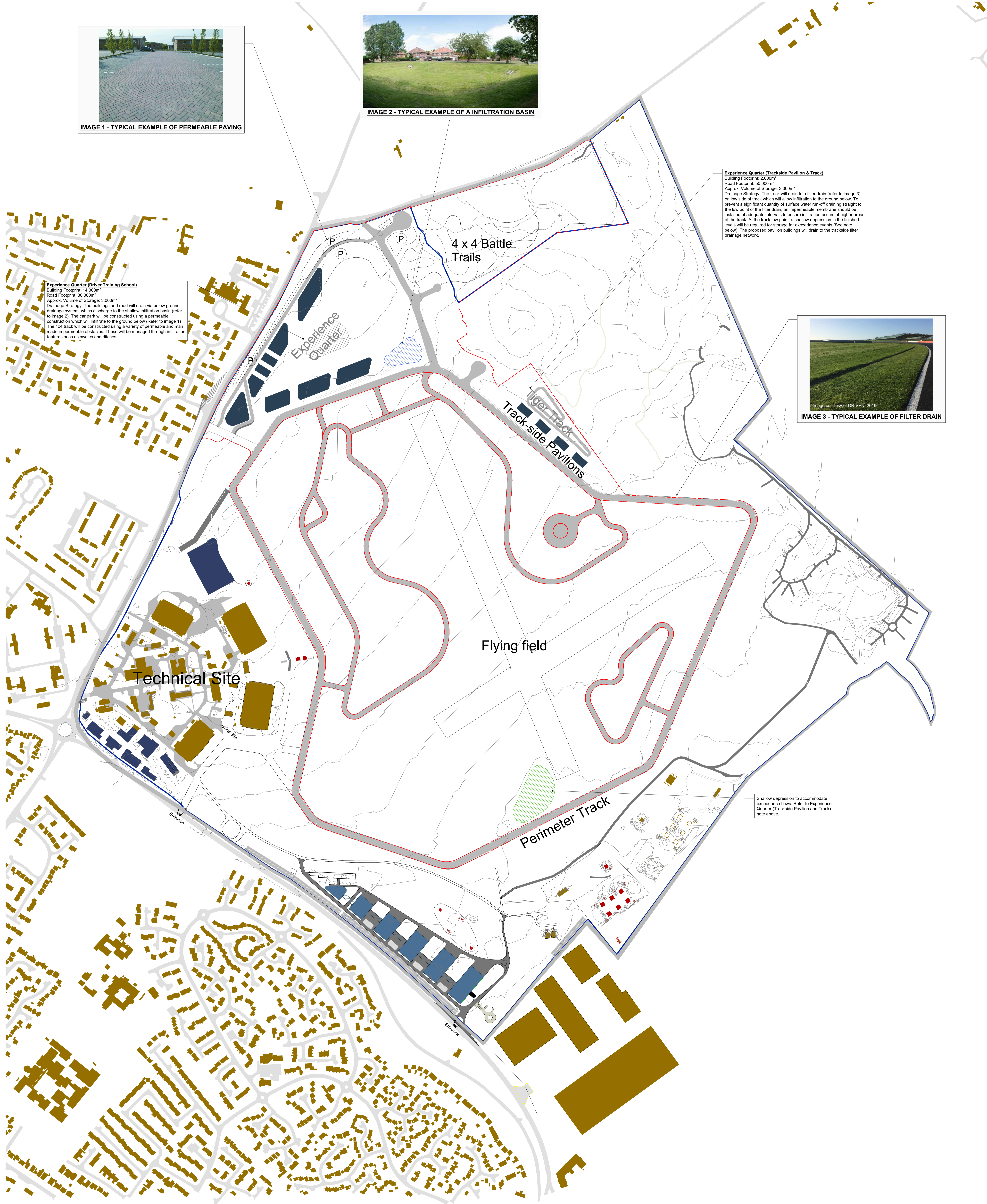
Experience Quarter (Trackside Pavilion & Track)
 Building Footprint: 2,000m²
 Road Footprint: 50,000m²
 Approx. Volume of Storage: 3,000m³
 Drainage Strategy: The track will drain to a filter drain (refer to image 3) on low side of track which will allow infiltration to the ground below. To prevent a significant quantity of surface water run-off draining straight to the low point of the filter drain, an impermeable membrane should be installed at adequate intervals to ensure infiltration occurs at higher areas of the track. At the track low point, a shallow depression in the finished levels will be required for storage for exceedance events (See note below). The proposed pavilion buildings will drain to the trackside filter drainage network.

Experience Quarter (Driver Training School)
 Building Footprint: 14,000m²
 Road Footprint: 30,000m²
 Approx. Volume of Storage: 3,000m³
 Drainage Strategy: The buildings and road will drain via below ground drainage systems, which discharge to the shallow infiltration basin (refer to image 2). The car park will be constructed using a permeable construction which will infiltrate to the ground below (Refer to image 1). The 4x4 track will be constructed using a variety of permeable and man made impermeable obstacles. These will be managed through infiltration features such as swales and ditches.



IMAGE 3 - TYPICAL EXAMPLE OF FILTER DRAIN
 Image courtesy of DRIVEN, 2019

Shallow depression to accommodate exceedance flows. Refer to Experience Quarter (Trackside Pavilion and Track) note above.



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- ANY DISCREPANCIES MUST BE REPORTED TO THE ORIGINATOR.
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COM REGULATIONS 2015 SIGNIFYANT OR HIGH CONSEQUENCE RISKS AND RISKS WHICH ARE DIFFICULT TO MANAGE ARE IDENTIFIED ON THIS DRAWING USING THE FOLLOWING SYMBOL IDENTIFIED TO THE RIGHT WITH BRIEF ACCOMPANYING TEXT. FOR FURTHER DETAILS OF THE RISKS IDENTIFIED BY DESIGNATION, REFERENCE SHOULD BE MADE TO COM HAZARD REGISTER.

REV	DESCRIPTION	DATE	DRAWN
-	FIRST ISSUE	27/11/2020	BN

CLIENT: **BICESTER MOTION**

IN ASSOCIATION WITH:

PROJECT: **BICESTER MOTION EXPERIENCE QUARTER CENTRE**

TITLE: **SURFACE WATER DRAINAGE STRATEGY**

ENG: BN, SW
 CSE: SW
 ICS: SW
 SCALE: 1:2500 @ A0
 INITIAL ISSUE: 27/11/2020

STATUS: **PLANNING**

DRAWING NO.: 5013504.RDG
 PROJECT: 5013504
 ORG: RDG
 ZONE: XX
 LEVEL: ST
 TYPE: PL
 ROLE: C
 NUMBER: 0501

ORIGINATOR: **RIDGE**
 PROPERTY & CONSTRUCTION CONSULTANTS

THE COWWARDS
 BLENHEIM PARK
 OXFORD ROAD
 WOODSTOCK, OX20 1QR

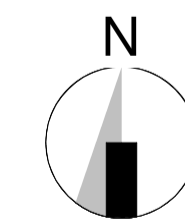
TEL: 01993 815500
 WWW.RIDGE.CO.UK

APPENDIX E – ARCHITECTS SITE LAYOUT



KEY:

- - - - Application Boundary
- - - - Ownership Boundary
- - - - SAM
- Indicative Massing



Experience Quarter - Indicative Layout Plan

PLANNING

DRAWN BY: JY CHECKED BY: AH
 PROJECT: 5002854-RDG-Z01-ST-PL-A-0030 REV: H 15/04/2019
 SCALE 1 : 5000 @ A1

REV	DESCRIPTION	DATE	BY	CHKD
H	Text Notes Update	08/12/2020	JY	LS
G	Car park Update	16/11/2020	JY	LS
F	Application Boundary Line, Buckingham Road Entrance Update	12/11/2020	JY	LS
E	Runway & Tracks Update	29/09/2020	JY	LS
D	Status and Graphic Update	11/02/2020	JY	AH
C	Track naming updated	01/08/2019	JY	AH
B	Application boundary line and ownership boundary line updated	03/07/2019	JY	AH
A	Application boundary line updated	25/06/2019	JY	AH

DATE	BY	CHKD
08/12/2020	JY	LS
16/11/2020	JY	LS
12/11/2020	JY	LS
29/09/2020	JY	LS
11/02/2020	JY	AH
01/08/2019	JY	AH
03/07/2019	JY	AH
25/06/2019	JY	AH



THE COWARDS
 BLENHEIM PARK, OXFORD ROAD
 WOODSTOCK
 OX20 1QR

TEL NO: 01993815000
 WWW.RIDGE.CO.UK

**APPENDIX F – SUPPLEMENTARY GROUNDWATER MONITORING
INVESTIGATION, AUGUST 2019**



Our Ref: DL/19-07-05

Bicester Heritage
Buckingham Road
Bicester
Oxon OX27 8AL

4 Church Street
Maids Moreton
MK18 1QE

01280 816409
07858 367 125
Info@geo-integrity.co.uk
www.geo-integrity.co.uk

12 August 2019

For the attention of Mr Jonty Ashworth

Dear Jonty,

SUPPLEMENTARY GROUNDWATER MONITORING INVESTIGATION – New Technical Site, Bicester Heritage, Launton, Bicester, OX26 5HA.

INTRODUCTION

Following comments and further discussions on the Condition 8 of the Planning Application 18/01333/F, from Mr Samuel Pocock, Planning Advisor of the Environment Agency, which requested *“that before condition 8 is discharged that groundwater quality is determined for the site by taking some water samples from the Cornbrash aquifer. We are concerned that the previous uses of the site have potentially impacted upon groundwater quality”*.

In order to obtain groundwater samples, three supplementary boreholes were drilled down into the rock-head Cornbrash Formation across the site, until refusal on rock-quality strata was met. Siteworks were undertaken during the week commencing the on the 29th July 2019.

The objectives of this investigation and report were to purge groundwater samples from each of the supplementary boreholes at the site, in order to conduct chemical laboratory data on the composition of the underlying groundwater.

Testing was undertaken in line with the recommendations from Mr Samuel Pocock of the Environment Agency:- *“We would recommend you consider a suite of dissolved metals (iron, Zinc, Copper, etc) In addition, given the industrial history and use as an airfield, we would recommend some hydrocarbon analysis, TPH, BTEX, PAHs”*.

Previous Investigation:-

Previously as part of Bicester Heritage’s Due diligence work, Geo-Integrity conducted a Phase 1 Desk Study & Phase 2 Site Investigation Report at the site, Report No 18-08-08 issue 3 Final, dated November 2018. Therefore this supplementary letter report should be read in conjuncture with the Ground Investigation Report, and is intended to supplement the previously gathered dataset and analysis.

At the time of the previous investigation no groundwater was encountered within the underlying Cornbrash Limestone. The siteworks were however undertaken at the end of the summer of 2018, after an extended period of unseasonal low rainfall.

SUPPLEMENTARY SITEWORK INFORMATION

The three supplementary boreholes were located across the site:-

Borehole Number	Location	Groundwater level	Easting/Northing
WS 1B	Western Area	1.40m bgl	459037/ 224353
WS 2B	Central Area	1.70m bgl	459098/ 224314
WS 5B	Eastern Area	2.02m bgl	459224/ 224224

LABORATORY TESTING

Groundwater samples were obtained from each of the boreholes, on the 5th of August 2019, and were tested for a suite which included Metals, TPHs, BTEX, PAHs and water hardness.






Of each of the samples tested, none of the contaminants tested for recorded values in excess of the relevant UKDWS or EQS values. The full results are enclosed.

UPDATED ASSESSMENT OF THE RISK TO CONTROLLED WATERS

Based on the results of the initial investigation (2018), the supplementary testing, and the information provided by the Environment Agency the following updated assessment has been compiled:-

The assessment of risks to controlled waters follows guidance provided by the Environment Agency and DEFRA in association with the Contaminated Land (England) Regulations 2000 (SI 2000/227). This guidance is Environment Agency's Remedial Targets Methodology Hydrogeological risk assessment for contaminated land (2006), as such these procedures have been followed.

Whilst some background levels of metals, TPHs and PAHs have been identified at the site within the variable Made Ground, It is considered that there is no elevated risk of Controlled Waters pollution from development at this site, due to the following mitigating factors:-

-  Supplementary Groundwater testing has demonstrated that there are no elevated levels of contamination within the underlying groundwater at the site, and that levels are consistent with "clean" uncontaminated groundwater.
-  Encountered levels in the near-surface soil are below that of concern from a Human Health perspective
-  There are no identified, current, significant sources of pollution at the site (i.e leaking tanks),
-  The proposed development is to include many impermeable structures and hardstanding areas (effectively reducing the infiltration and migration of the determinants).
-  The site is recorded to be located outside of any Source Protection Zones.

- There have been no recorded pollution incidents to controlled waters within the surrounding area of the site.

Comments

The supplementary information and analysis undertaken as part of this investigation, demonstrates that controlled waters are not at any significant risk from development at the site, and that the previous uses of the site have not impacted upon groundwater quality.

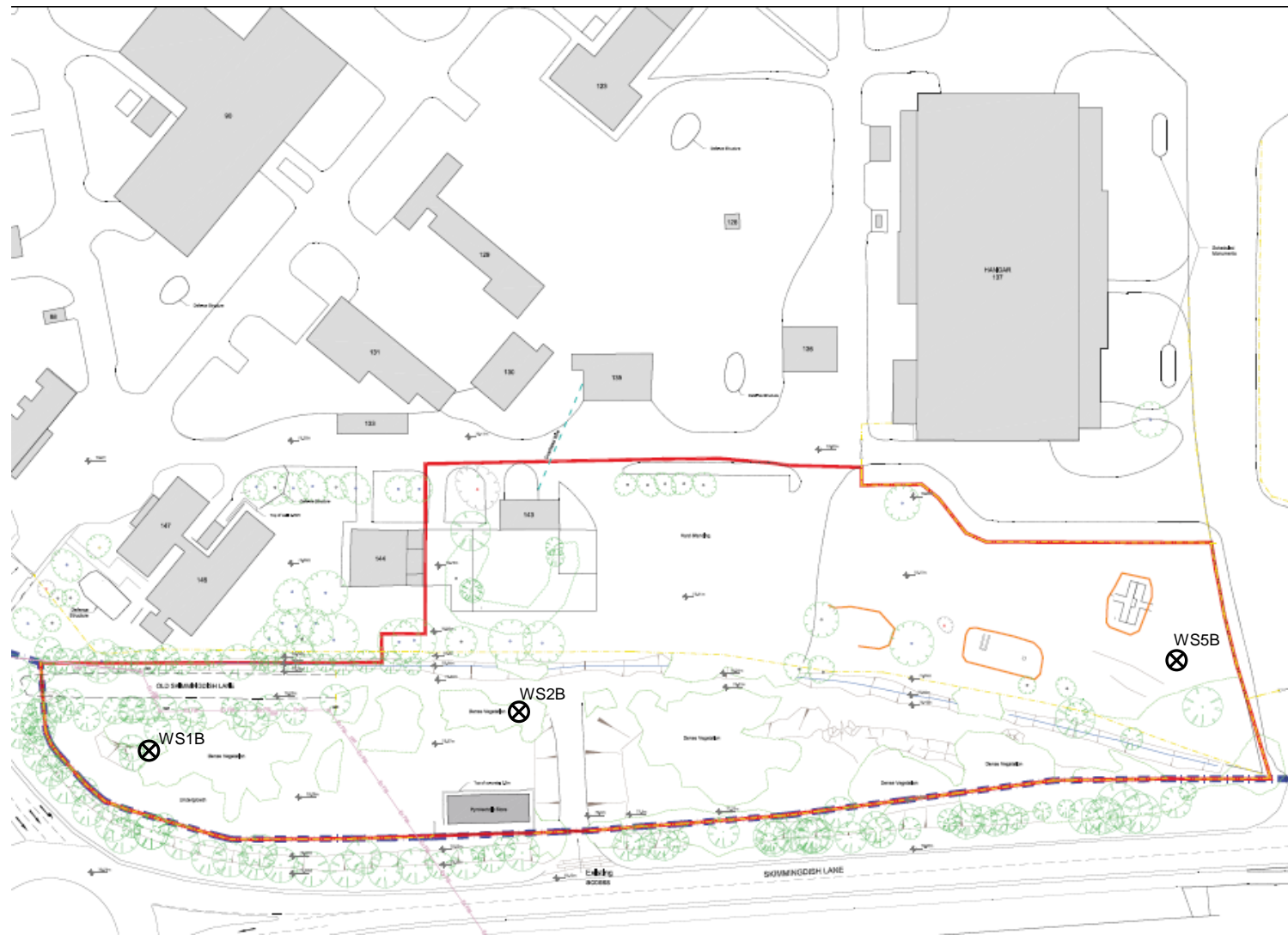
The Environment Agency is the regulatory body charged with protection of controlled waters and is a consultee in the planning process. Therefore we recommend that the conclusions of this report are agreed with the Environment Agency at the earliest stage, to reduce any further delays to the development.

We trust this information is satisfactory to you. In the event of any queries please contact us.

Yours sincerely



Danny Lusardi
Senior Engineering Geologist, Geo-Integrity Ltd.



Key

 Groundwater Installation Standpipe



4 Church Street
Maids Moreton
MK18 1QE

Tel:- 01280 816409
Mob:- 07858 367 125
www. geo-integrity.co.uk

Exploratory Hole Location Plan

SITE:- New Technical Site,
Bicester Heritage, OX26 5HA

JOB NO.:- 19-07-05

CLIENT:-
Bicester Heritage

Drawn DL	Checked MB
-------------	---------------

Existing



CONTINUOUS TUBE WS 1-B

INTEGRITY

PROJECT NUMBER 19-07-05	DRILLING DATE 29/7/19	EASTINGS 459037
PROJECT NAME BICESTER HERITAGE	TOTAL DEPTH 2.9m	NORTHINGS 224353
CLIENT BICESTER HERITAGE	DIAMETER 100mm-60mm	SURFACE LEVEL 79.01m AOD
	GROUNDWATER 1.30m bgl	

COMMENTS Logged to BS14688:2013	LOGGED BY DL
	CHECKED BY MB

Samples	Groundwater	Depth (m)	Graphic Log	Material Description	SPT/kN/m ² (HV)	Well Diagram	Depth (m)
				TOPSOIL Soft brown sandy CLAY. With wood fragments and roots.			
D		0.2		CORNBRASH FORMATION - WEATHERED Firm brown silty slightly sandy gravelly CLAY. Gravel is fine to coarse angular of limestone.			0.2
D		0.4					0.4
		0.6		CORNBRASH FORMATION Brownish grey slightly silty slightly sandy gravelly cobbles of fossiliferous LIMESTONE.	N=<50		0.6
		0.8					0.8
B		1.0		CORNBRASH FORMATION Recovered as: Brownish grey silty gravel of LIMESTONE.			1.0
		1.2					1.2
		1.4					1.4
		1.6					1.6
		1.8					1.8
		2.0					2.0
		2.2					2.2
		2.4		FOREST MARBLE FORMATION - MUDSTONE Stiff grey silty CLAY.			2.4
		2.6					2.6
		2.8		FOREST MARBLE FORMATION - LIMESTONE Recovered as light brownish grey silty gravel of limestone.			2.8
				Termination Depth at:2.9 m In rock quality strata, after 45m of no penetration >=3mm.	N=<50		



CONTINUOUS TUBE WS 2-B

INTEGRITY

PROJECT NUMBER 19-07-05	DRILLING DATE 29/7/19	EASTINGS 459098
PROJECT NAME BICESTER HERITAGE	TOTAL DEPTH 2.40m	NORTHINGS 224314
CLIENT BICESTER HERITAGE	DIAMETER 100mm-60mm	
	GROUNDWATER 1.40m bgl	

COMMENTS Logged to BS14688:2013	LOGGED BY DL
	CHECKED BY MB

Samples	Groundwater	Depth (m)	Graphic Log	Material Description	SPT/kN/m ² (HV)	Well Diagram	Depth (m)
		0.0		TOPSOIL Soft brown sandy CLAY. With wood fragments and roots.			0.0
D		0.2		CORNBRASH FORMATION - WEATHERED Firm brown silty slightly sandy gravelly CLAY. Gravel is fine to coarse angular of limestone.			0.2
D		0.4					0.4
		0.6		CORNBRASH FORMATION Brownish grey slightly silty slightly sandy gravelly cobbles of fossiliferous LIMESTONE.	N=<50		0.6
		0.8					0.8
B		1.0		CORNBRASH FORMATION Recovered as: Brownish grey silty gravel of LIMESTONE.			1.0
		1.2					1.2
		1.4					1.4
		1.6					1.6
		1.8					1.8
		2.0			N=<50		2.0
		2.2					2.2
		2.4		Termination Depth at:2.4 m In rock quality strata, after 45m of no penetration >/=3mm.	N=>50		2.4
		2.6					2.6
		2.8					2.8



CONTINUOUS TUBE WS 5-B

INTEGRITY

PROJECT NUMBER 19-07-05	DRILLING DATE 29/7/19	EASTINGS 459224
PROJECT NAME BICESTER HERITAGE	TOTAL DEPTH 2.30m	NORTHINGS 224224
CLIENT BICESTER HERITAGE	DIAMETER 100mm-60mm	
	GROUNDWATER dry	

COMMENTS Logged to BS14688:2013	LOGGED BY DL
	CHECKED BY MB

Samples	Groundwater	Depth (m)	Graphic Log	Material Description	SPT/kN/m ² (HV)	Well Diagram	Depth (m)
D		0.2		TOPSOIL Soft brown sandy CLAY. With wood fragments and roots.			0.2
D		0.4		CORNBRASH FORMATION - WEATHERED Firm brown silty slightly sandy gravelly CLAY. Gravel is fine to coarse angular of limestone.			0.4
		0.6					0.6
		0.8			N=38		0.8
B		1.0		CORNBRASH FORMATION Recovered as: Brownish grey silty gravel of LIMESTONE.			1.0
		1.2				1.2	
		1.4				1.4	
		1.6				1.6	
		1.8				1.8	
		2.0			N=<50	2.0	
		2.2		FOREST MARBLE FORMATION - MUDSTONE Stiff grey silty CLAY.		2.2	
		2.2		FOREST MARBLE FORMATION - LIMESTONE Recovered as light brownish grey silty gravel of limestone.	N=>50	2.2	
		2.4		Termination Depth at:2.3 m In rock quality strata, after 45m of no penetration >/=3mm.		2.4	
		2.6				2.6	
		2.8				2.8	



Final Report

Report No.: 19-26422-1

Initial Date of Issue: 09-Aug-2019

Client: Geo Integrity

Client Address: 4 Church Street
Maids Moreton
Bucks
MK18 1QE

Contact(s): Danny Lusardi

Project: Bicester Heritage, New Technical Site

Quotation No.: Q18-13722 **Date Received:** 07-Aug-2019

Order No.: **Date Instructed:** 07-Aug-2019

No. of Samples: 3

Turnaround (Wkdays): 3 **Results Due:** 09-Aug-2019

Date Approved: 09-Aug-2019

Approved By:



Details: Martin Dyer, Laboratory Manager

Client: Geo Integrity	Chemtest Job No.:				19-26422	19-26422	19-26422
Quotation No.: Q18-13722	Chemtest Sample ID.:				869357	869358	869359
	Sample Location:				WS1B	WS2B	WS5B
	Sample Type:				WATER	WATER	WATER
	Top Depth (m):				1.4	2.02	1.7
	Date Sampled:				05-Aug-2019	05-Aug-2019	05-Aug-2019
Determinand	Accred.	SOP	Units	LOD			
Chemical Oxygen Demand	U	1100	mg O2/l	10	22	110	25
Calcium	U	1415	mg/l	5.0	120	110	77
Potassium	U	1415	mg/l	0.50	3.2	14	4.6
Magnesium	U	1415	mg/l	0.50	4.8	8.5	2.5
Sodium	U	1415	mg/l	0.50	32	50	54
Total Hardness as CaCO3	U	1270	mg/l	15	320	300	200
Arsenic (Dissolved)	U	1450	µg/l	1.0	3.3	2.5	1.3
Boron (Dissolved)	U	1450	µg/l	20	230	360	180
Barium (Dissolved)	U	1450	µg/l	5.0	36	41	26
Cadmium (Dissolved)	U	1450	µg/l	0.080	< 0.080	< 0.080	< 0.080
Chromium (Dissolved)	U	1450	µg/l	1.0	1.6	3.2	2.3
Copper (Dissolved)	U	1450	µg/l	1.0	< 1.0	2.7	1.4
Iron (Dissolved)	N	1450	µg/l	20	270	230	180
Mercury (Dissolved)	U	1450	µg/l	0.50	< 0.50	< 0.50	< 0.50
Nickel (Dissolved)	U	1450	µg/l	1.0	2.3	2.9	1.6
Lead (Dissolved)	U	1450	µg/l	1.0	< 1.0	< 1.0	< 1.0
Selenium (Dissolved)	U	1450	µg/l	1.0	< 1.0	2.4	5.1
Zinc (Dissolved)	U	1450	µg/l	1.0	2.1	< 1.0	2.1
TPH >C6-C10	N	1670	µg/l	0.10	< 0.10	< 0.10	< 0.10
TPH >C10-C21	N	1670	µg/l	0.10	< 0.10	< 0.10	< 0.10
TPH >C21-C40	N	1670	µg/l	0.10	< 0.10	< 0.10	< 0.10
Total TPH >C6-C40	U	1670	µg/l	10	< 10	< 10	< 10
Naphthalene	U	1700	µg/l	0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	U	1700	µg/l	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	U	1700	µg/l	0.10	< 0.10	< 0.10	< 0.10
Fluorene	U	1700	µg/l	0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	U	1700	µg/l	0.10	< 0.10	< 0.10	< 0.10
Anthracene	U	1700	µg/l	0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	U	1700	µg/l	0.10	< 0.10	< 0.10	< 0.10
Pyrene	U	1700	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene	U	1700	µg/l	0.10	< 0.10	< 0.10	< 0.10
Chrysene	N	1700	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	U	1700	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	U	1700	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	U	1700	µg/l	0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1700	µg/l	0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	U	1700	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	U	1700	µg/l	0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	1700	µg/l	2.0	< 2.0	< 2.0	< 2.0
Benzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0

Project: Bicester Heritage, New Technical Site

Client: Geo Integrity	Chemtest Job No.:				19-26422	19-26422	19-26422
Quotation No.: Q18-13722	Chemtest Sample ID.:				869357	869358	869359
	Sample Location:				WS1B	WS2B	WS5B
	Sample Type:				WATER	WATER	WATER
	Top Depth (m):				1.4	2.02	1.7
	Date Sampled:				05-Aug-2019	05-Aug-2019	05-Aug-2019
Determinand	Accred.	SOP	Units	LOD			
Toluene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
o-Xylene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0

SOP	Title	Parameters included	Method summary
1100	Chemical Oxygen Demand	Chemical Oxygen demand (COD)	Dichromate oxidation of organic matter in sample followed by colorimetric determination of residual Cr[VI].
1270	Total Hardness of Waters	Total hardness	Calculation applied to calcium and magnesium results, expressed as mg l ⁻¹ CaCO ₃ equivalent.
1415	Cations in Waters by ICP-MS	Sodium; Potassium; Calcium; Magnesium	Direct determination by inductively coupled plasma - mass spectrometry (ICP-MS).
1450	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1670	Total Petroleum Hydrocarbons (TPH) in Waters by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO	Pentane extraction / GC FID detection
1700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenzo[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
1760	Volatile Organic Compounds (VOCs) in Waters by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics. (cf. USEPA Method 8260)	Automated headspace gas chromatographic (GC) analysis of water samples with mass spectrometric (MS) detection of volatile organic compounds.

Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt

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

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com



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