

## APPENDIX C: THAMES WATER RECORDS

# Asset location search



## Property Searches

Cornerstone Projects LTD  
91 Market Street  
HOYLAKE  
WIRRAL  
CH47 5AA

**Search address supplied** Maria Fidelis School, North Gower Street

**Your reference** 17230

**Our reference** ALS/ALS Standard/2018\_3822165

**Search date** 25 June 2018

### Keeping you up-to-date

Knowledge of features below the surface is essential in every development. The benefits of this not only include ensuring due diligence and avoiding risk, but also being able to ascertain the feasibility for any commercial or residential project.

An asset location search provides information on the location of known Thames Water clean and/or wastewater assets, including details of pipe sizes, direction of flow and depth. Please note that information on cover and invert levels will only be provided where the data is available.



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



[searches@thameswater.co.uk](mailto:searches@thameswater.co.uk)  
[www.thameswater-propertysearches.co.uk](http://www.thameswater-propertysearches.co.uk)



0845 070 9148



**Search address supplied:** Maria Fidelis School, North Gower Street,

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](mailto:searches@thameswater.co.uk)

Web: [www.thameswater-propertysearches.co.uk](http://www.thameswater-propertysearches.co.uk)

### Waste Water Services

**Please provide a copy extract from the public sewer map.**

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.

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.**

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.

# Asset location search



## Property Searches

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

A charge will be added to your suppliers account.

# Asset location search



## Property Searches

### 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](mailto:developer.services@thameswater.co.uk)

#### Clean Water queries

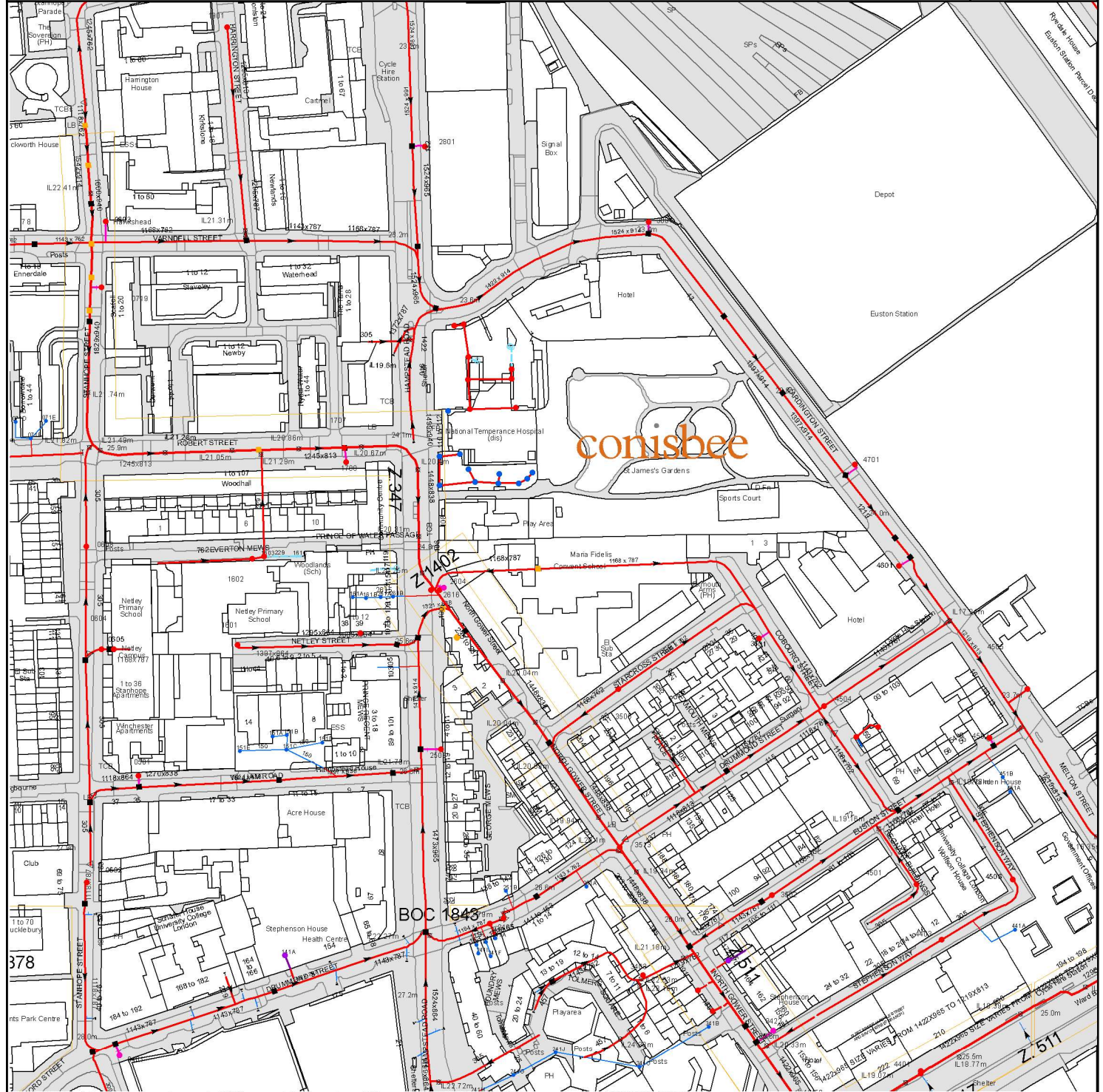
Should you require any advice concerning clean water operational issues or clean water connections, please contact:

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

Tel: 0800 009 3921  
Email: [developer.services@thameswater.co.uk](mailto:developer.services@thameswater.co.uk)



# Asset Location Search Sewer Map - ALS/ALS Standard/2018\_3822165



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
2801	n/a	n/a
2615	n/a	n/a
2616	n/a	n/a
26CF	n/a	n/a
27CA	n/a	n/a
2604	n/a	20.15
27CF	n/a	n/a
27BI	n/a	n/a
27BJ	n/a	n/a
27BG	n/a	n/a
27BE	n/a	n/a
27CB	n/a	n/a
27BF	n/a	n/a
27BD	n/a	n/a
26CE	n/a	n/a
27CJ	n/a	n/a
26CD	n/a	n/a
26CH	n/a	n/a
27CI	n/a	n/a
27CE	n/a	n/a
27CD	n/a	n/a
27CH	n/a	n/a
27CC	n/a	n/a
26CC	n/a	n/a
26CB	n/a	n/a
26CA	n/a	n/a
3801	n/a	n/a
071D	n/a	n/a
071F	n/a	n/a
071E	n/a	n/a
0608	26.17	22.37
0719	25.96	22.05
0803	n/a	n/a
1901	25.09	21.86
1602	23.76	22.3
1603	23.78	22.2
161C	n/a	n/a
1707	24.5	20.73
1708	24.56	n/a
161A	n/a	n/a
161B	n/a	n/a
261A	n/a	n/a
261B	n/a	n/a
26BI	n/a	n/a
4504	24.17	18.71
4505	23.68	18.44
3601	n/a	n/a
4601	n/a	n/a
4701	n/a	n/a
0502	27.89	23.7
0604	26.47	23.67
0605	n/a	n/a
0401	n/a	n/a
0501	n/a	n/a
1601	26.06	n/a
151E	n/a	n/a
151A	n/a	n/a
141A	n/a	n/a
151C	n/a	n/a
151B	n/a	n/a
151D	n/a	n/a
16BA	n/a	n/a
2503	n/a	n/a
3426	n/a	n/a
341B	n/a	n/a
3425	n/a	n/a
341A	n/a	n/a
3502	25.1	19.82
3422	25.42	n/a
45CD	n/a	n/a
45BE	n/a	n/a
4501	23.36	19.42
44BI	n/a	n/a
4401	25.45	n/a
4403	24.14	19.78
4502	n/a	n/a
451B	n/a	n/a
451A	n/a	n/a
4506	n/a	n/a
441A	n/a	n/a
241G	n/a	n/a
341C	n/a	n/a
241J	n/a	n/a
3403	27.64	n/a
241F	n/a	n/a
241I	n/a	n/a
241E	n/a	n/a
241C	n/a	n/a
241A	n/a	n/a
241B	n/a	n/a
2402	n/a	n/a

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Manhole Reference	Manhole Cover Level	Manhole Invert Level
2405	26.62	n/a
251B	n/a	n/a
251A	n/a	n/a
3513	26.14	19.95
3505	25.36	20.44
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## ALS Sewer Map Key

### Public Sewer Types (Operated & Maintained by Thames Water)

	<b>Foul:</b> A sewer designed to convey waste water from domestic and industrial sources to a treatment works.
	<b>Surface Water:</b> A sewer designed to convey surface water (e.g. rain water from roofs, yards and car parks) to rivers or watercourses.
	<b>Combined:</b> 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 Foul Sewer
	Gallery
	Foul Rising Main
	Surface Water Rising Main
	Combined Rising Main
	Sludge Rising Main
	Proposed Thames Water Rising Main
	Vacuum

#### 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.

### 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

- 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 500 m and the centre of the map is located at OS coordinates 529280, 182665.

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)

- 4"** **Distribution Main:** The most common pipe shown on water maps. With few exceptions, domestic connections are only made to distribution mains.
- 16"** **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.
- 3" SUPPLY** **Supply Main:** A supply main indicates that the water main is used as a supply for a single property or group of properties.
- 3" FIRE** **Fire Main:** Where a pipe is used as a fire supply, the word FIRE will be displayed along the pipe.
- 3" METERED** **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.

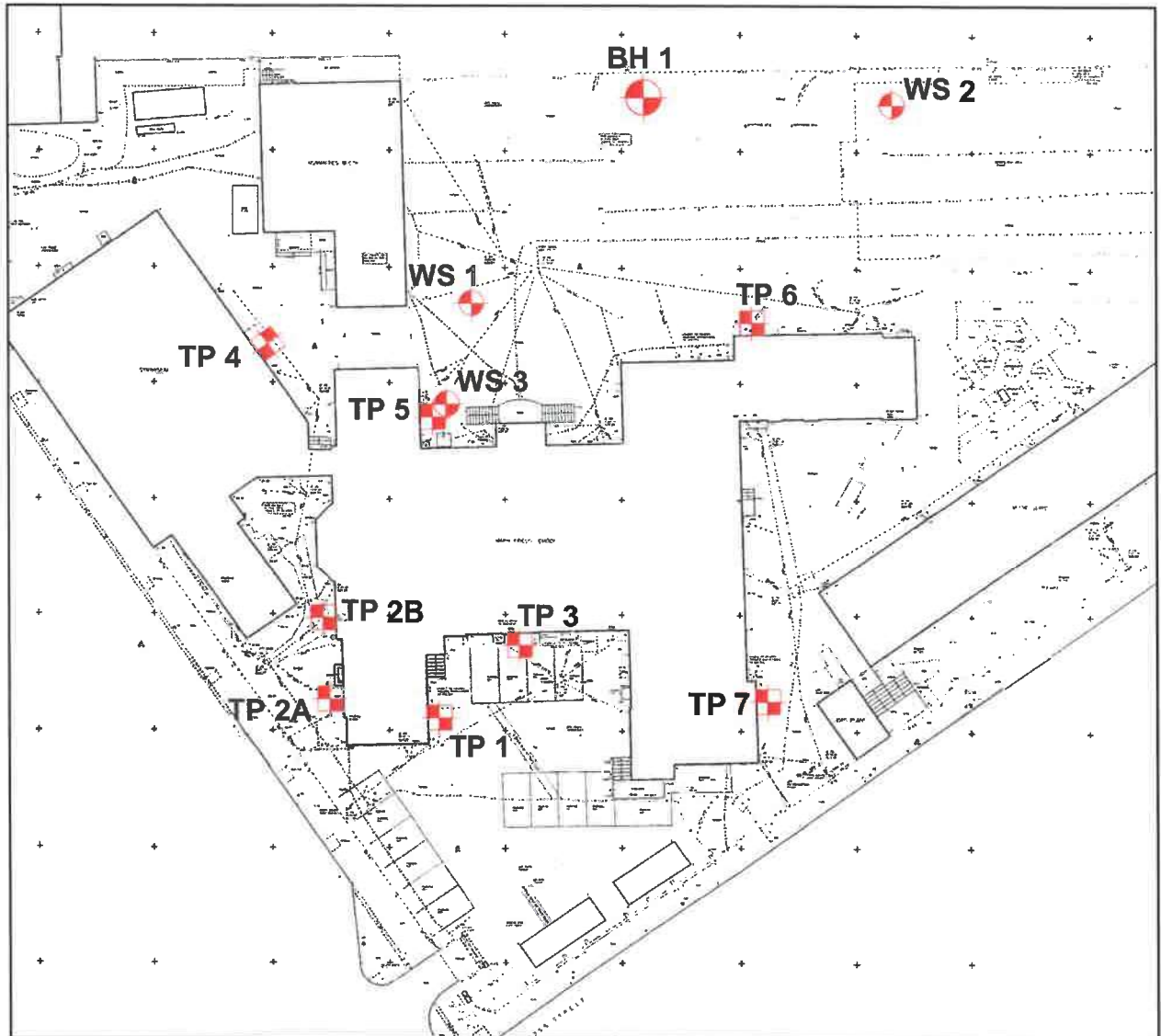


**APPENDIX D: GROUND INVESTIGATION BOREHOLE LOGS**

# Exploratory Hole Location Plan

Reproduced from a plan provided by the client.

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Not To Scale

## Key

Cable Percussive Borehole



Window Sample Borehole



Foundation Inspection Pit



**Project :** Maria Fidelis Lower School,  
London NW1

**Client :** Camden Council

**GROUND  
ENGINEERING  
LIMITED**

Peterborough

Tel : 01733 566566

**Project No.  
C14593**

# GROUND ENGINEERING

L I M I T E D  
Tel: 01733-566566  
www.groundengineering.co.uk

Site: MARIA FIDELIS LOWER SCHOOL, LONDON NW1

conisbee  
BOREHOLE  
BH1

Date: 22/10/18

Hole Size: 150mm dia to 15.00m

Ground Level: 24.75m. O.D.

Samples and in-situ Tests			(Date)	Inst.	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Blows	Casing					
0.10-0.30	B1				MADE GROUND - ASPHALT.		0.10	24.65
0.30-0.80	B2				MADE GROUND - Brown and dark brown, silty SAND AND GRAVEL. Gravel of flint, brick, asphalt, concrete and asbestos containing material fragments.			
1.00-1.20	B3						1.00	23.75
1.20-1.30	B4				MADE GROUND - Soft, brown, light brown and dark brown mottled, slightly sandy, slightly gravelly, silty CLAY. Gravel of flint, brick, mortar, limestone and coal fragments.			
1.35-1.65	C						1.50	23.25
1.30-1.50	B5							
1.50-1.80	B6				Firm, brown, orange brown and grey mottled, silty CLAY with occasional gravel size calcareous concretions. (HIGHLY WEATHERED LONDON CLAY)	x x		
2.00-2.45	U1	35	2.00		Firm, closely fissured, brown CLAY with grey stained fissures.	x x	2.00	22.75
2.45	D1							
3.00-3.45	U2	35	2.50		(WEATHERED LONDON CLAY)			
3.45	D2							
4.10-4.55	U3	45	2.50		...becoming stiff with occasional selenite crystals from 4.00m depth.			
4.55	D3				...weak, orange brown, argillaceous, concretionary limestone at 4.60m depth.			
4.70-4.85	B7							
5.00-5.45	U4	47	2.50					
5.45	D4						5.40	19.35
6.10-6.55	U5	50	2.50		Stiff, closely fissured, grey brown CLAY with rare gravel size pyrite nodules and rare dendrites of manganese oxide.			
6.55	D5							
7.00-7.45	U6	50	2.50					
7.45	D6							
8.00	D7				(LONDON CLAY)			
8.50-8.95	U7	55	2.50					
8.95	D8							
9.50	D9							
10.00-10.45	U8	60	2.50				10.00	14.75

REMARKS 1. Excavating a pit from 0.00m to 1.20m for 1.25 hours  
2. Borehole cased to 2.50m depth  
3. Gas monitoring standpipe installed to 7.00m depth

Project No  
14593

Scale 1:50  
Page 1/2

KEY  
D - Disturbed Sample  
B - Bulk Sample  
U - Undisturbed Sample  
W - Water Sample  
S/C - SPT Spoon/Cone  
Water Strike  
Water Rise  
N/\* - SPT Blows for 0.3m or given penetration  
ES - Environmental Sample  
V - Vane Shear Test  
Cohesion ( ) kPa  
Level on completion  
Level casing withdrawn  
Standpipe Level

Groundwater Strikes					Groundwater Observations			
Depth m					Depth m			
No Struck	Rose to	Rate	Cased	Sealed	Date	Hole	Casing	Water
					22/10/18	15.00	2.50	dry
					22/10/18	15.00	0.00	dry
					07/11/18	7.00		dry
					14/11/18	7.00		dry
					21/11/18	7.00		dry



GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk			Site: MARIA FIDELIS LOWER SCHOOL, LONDON NW1		WINDY SAMPLE WS1		
Date: 23/10/18			Hole Size: 87mm dia to 2.00m 77mm dia to 3.00m 57mm dia to 5.45m		Ground Level: 25.00m. O.D.		
Samples and in-situ Tests			(Date)	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result	Water				
0.30	D1			MADE GROUND - ASPHALT.		0.10	24.90
0.60	D2			MADE GROUND - Dark brown, slightly silty SAND AND GRAVEL with occasional cobbles of brick. Gravel of brick, asphalt, concrete and mortar fragments.		0.40	24.60
0.90	D3			MADE GROUND - Soft, brown, orange brown, dark brown and dark grey mottled, slightly gravelly, silty CLAY with occasional oyster shell fragments. Gravel of flint, brick, glass and ash fragments.			
1.10	D4						
1.20	D5						
1.20-2.00	U1					1.40	23.60
1.35-1.65	S	N7					
2.00-3.00	U2			Stiff, brown and orange brown mottled, slightly gravelly, silty CLAY. Gravel of sub-angular to rounded flint and limestone.		1.80	23.20
2.30	V1	(94)		(HEAD DEPOSIT)		2.10	22.90
2.60	V2	(103)		Stiff, brown, orange brown and grey mottled, silty CLAY with rare calcareous concretions.			
2.90	V3	(103)		(HIGHLY WEATHERED LONDON CLAY)			
3.00-4.00	U3			Stiff, closely fissured, brown CLAY with grey stained fissures and rare orange brown silt partings.			
3.20	V4	(108)					
3.50	V5	(104)		(WEATHERED LONDON CLAY)			
3.80	V6	(118)		...with occasional selenite crystals from 3.60m depth.			
4.00-5.00	U4						
5.00	D6						
5.15-5.45	S	N25				5.45	19.55
				Hole completed at 5.45m depth			

REMARKS 1. Starter pit excavated from 0.00m to 1.20m depth						Project No 14593	
						Scale 1:50	Page 1/1

KEY		Groundwater Strikes					Groundwater Observations			
		Depth m					Depth m			
No	Struck	Rose to	Rate	Cased	Sealed	Date	Hole	Casing	Water	
						23/10/18	5.45		dry	

D - Disturbed Sample	J - Jar Sample
B - Bulk Sample	M - Mackintosh Probe
U - Undisturbed Sample	V - Vane Shear Test
W - Water Sample	Cohesion ( ) kPa
W Water Strike	P ( ) - Hand Penetrometer
Wc Depth to Water on completion	Cohesion ( ) kPa
	Standpipe Level



**GROUND  
ENGINEERING**  
L I M I T E D  
Tel: 01733-566566  
www.groundengineering.co.uk

Site: MARIA FIDELIS LOWER SCHOOL, LONDON NW1

Date: 23/10/18

Hole Size: 87mm dia to 2.00m  
77mm dia to 3.00m  
57mm dia to 5.45m

Ground Level: 24.60m. O.D.

Samples and in-situ Tests			(Date)	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result	Water				
0.30-0.70	B1			MADE GROUND - ASPHALT.		0.10	24.50
0.30	D1			MADE GROUND - Brown and dark brown, silty SAND AND GRAVEL with rare cobbles of brick. Gravel of brick, flint, asphalt, pottery, mortar and slag fragments.			
0.50	D2						
0.70	D3						
1.10	D4					1.40	23.20
1.20	D5						
1.20-2.00	U1						
1.35-1.65	S	N5		MADE GROUND - Soft, dark brown, slightly sandy, slightly gravelly, silty CLAY. Gravel of flint, brick, pottery, coal and ash fragments.			
2.00	D6					2.20	22.40
2.00-3.00	U2						
2.15-2.45	S	N7		Stiff, brown, orange brown and grey mottled, silty CLAY with occasional part decayed roots and orange brown silt partings. (HIGHLY WEATHERED LONDON CLAY)	* — *	2.60	22.00
3.00-4.00	U3			Stiff, closely fissured, brown CLAY with grey stained fissures, occasional orange brown staining to 3.70m depth and rare pyrite nodules.	X		
3.15	V1	(86)			X		
3.50	V2	(102)		(WEATHERED LONDON CLAY)	X		
3.90	V3	(121)		...with occasional selenite crystals from 4.00m depth.	X		
4.00-5.00	U4				X		
4.20	V4	(110)			X		
4.50	V5	(124)		...50mm thick, very weak, orange brown and red brown, argillaceous concretionary limestone at 4.70m depth.	X		
4.90	V6	(122)			X		
5.00	D7				X		
5.15-5.45	S	N22			X	5.45	19.15
				Hole completed at 5.45m depth			

REMARKS 1. Starter pit excavated from 0.00m to 1.20m depth

Project No  
14593

Scale 1:50 Page 1/1

KEY

D - Disturbed Sample J - Jar Sample  
B - Bulk Sample M - Mackintosh Probe  
U - Undisturbed Sample V - Vane Shear Test  
W - Water Sample Cohesion ( ) kPa  
W Water Strike P ( ) - Hand Penetrometer  
Wc Depth to Water Cohesion ( ) kPa  
on completion Ws Standpipe Level

Groundwater Strikes

Depth m					
No	Struck	Rose to	Rate	Cased	Sealed

Groundwater Observations

Depth m			
Date	Hole	Casing	Water
23/10/18	5.45		dry