

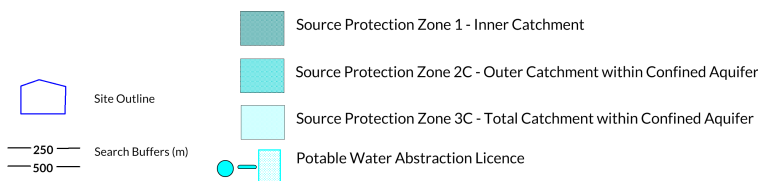
5d. Hydrogeology - Source Protection Zones within confined aquifer



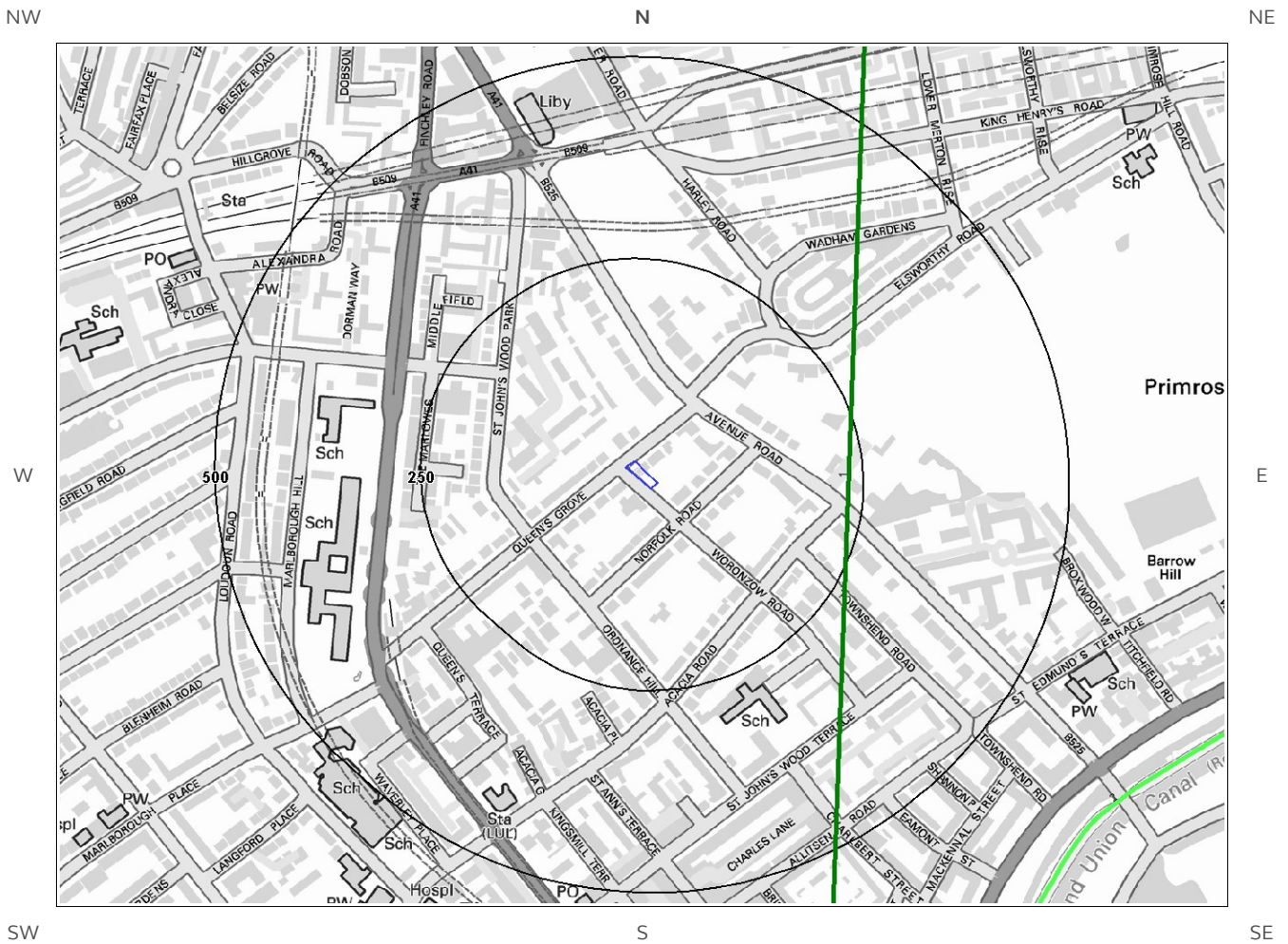
Hydrogeology Source Protection Zones



© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.



5e. Hydrology – Detailed River Network and River Quality
















Hydrology – Detailed River Network and River Quality



© Crown copyright and database rights 2015. Ordnance Survey license 100035207.



-  Primary River
-  Secondary River
-  Tertiary River
-  Lake/Reservoir
-  Underground River (inferred)
-  General Quality Assessment: Biology
-  General Quality Assessment: Chemistry
-  Canal
-  Canal Tunnel
-  Culvert
-  Multiple Channel Culvert
-  Underground River (Potential Sewer)
-  Underground River (local knowledge)

5. Hydrogeology and Hydrology

5.1 Aquifer within Superficial Deposits

Are there records of strata classification within the superficial geology at or in proximity to the property? No

Database searched and no data found.

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviroinsight User Guide.

5.2 Aquifer within Bedrock Deposits

Are there records of strata classification within the bedrock geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviroinsight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (5b):

ID	Distance (m)	Direction	Designation	Description
1	0.0	On Site	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

5.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site? Yes

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (5b):

ID	Distance (m)	Direction	NGR	Name	Details
2A	526.0	N	526750 184261	LONDON BOROUGH OF CAMDEN	Licence No: TH/039/0039/087 Details: Spray Irrigation - Direct Direct Source: Thames Groundwater Point: Swiss Cottage Open Space- Borehole Data Type: Point Annual Volume (m³): 10512 Max Daily Volume (m³): 28.8 Original Application No: NPS/WR/014567 Original Start Date: 5/12/2013 Expiry Date: 31/3/2025 Issue No: 1 Version Start Date: 5/12/2013 Version End Date:

ID	Distance (m)	Direction	NGR	Name	Details
3A	526.0	N	526750 184261	LONDON BOROUGH OF CAMDEN	Licence No: TH/039/0039/087 Details: Lake & Pond Throughflow Direct Source: Thames Groundwater Point: Swiss Cottage Open Space- Borehole Data Type: Point Annual Volume (m³): 10512 Max Daily Volume (m³): 28.8 Original Application No: NPS/WR/014567 Original Start Date: 5/12/2013 Expiry Date: 31/3/2025 Issue No: 1 Version Start Date: 5/12/2013 Version End Date:
4A	526.0	N	526750 184261	LONDON BOROUGH OF CAMDEN	Licence No: TH/039/0039/087 Details: General Washing/Process Washing Direct Source: Thames Groundwater Point: Swiss Cottage Open Space- Borehole Data Type: Point Annual Volume (m³): 10512 Max Daily Volume (m³): 28.8 Original Application No: NPS/WR/014567 Original Start Date: 5/12/2013 Expiry Date: 31/3/2025 Issue No: 1 Version Start Date: 5/12/2013 Version End Date:
Not shown	532.0	N	526800 184280	LONDON BOROUGH OF CAMDEN	Licence No: 28/39/39/0219 Details: Spray Irrigation - Direct Direct Source: Thames Groundwater Point: Swiss Cottage Open Space- Borehole Data Type: Point Annual Volume (m³): 10512 Max Daily Volume (m³): 28.8 Original Application No: WRA/N/1407 Original Start Date: 12/8/2005 Expiry Date: 31/3/2013 Issue No: 1 Version Start Date: 1/4/2008 Version End Date:
Not shown	710.0	E	527636 183697	THAMES WATER UTILITIES LTD	Licence No: TH/039/0039/058 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Borehole At Barrow Hill Data Type: Point Annual Volume (m³): 631000 Max Daily Volume (m³): 2000 Original Application No: NPS/WR/009229 Original Start Date: 1/4/2013 Expiry Date: 31/3/2025 Issue No: 1 Version Start Date: 1/4/2013 Version End Date:
Not shown	714.0	E	527640 183690	THAMES WATER UTILITIES LTD	Licence No: 28/39/39/0202 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Barrow Hill Pumping Station - Borehole Data Type: Point Annual Volume (m³): 631000 Max Daily Volume (m³): 2000 Original Application No: WRA/2/2(24) Original Start Date: 26/9/2002 Expiry Date: 31/3/2007 Issue No: 1 Version Start Date: 26/9/2002 Version End Date:
Not shown	714.0	E	527640 183690	THAMES WATER UTILITIES LTD	Licence No: 28/39/39/0231 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Barrow Hill Pumping Station - Borehole Data Type: Point Annual Volume (m³): 631000 Max Daily Volume (m³): 2000 Original Application No: WRA/R/1026 Original Start Date: 1/4/2007 Expiry Date: 31/3/2013 Issue No: 1 Version Start Date: 1/4/2007 Version End Date:
Not shown	1122.0	E	528000 183400	ZOOLOGIC AL SOCIETY OF LONDON	Licence No: 28/39/39/0035 Details: Animal Watering & General Use in non Farming situations Direct Source: Thames Groundwater Point: Borehole At Regent's Park, London Nw1 Data Type: Point Annual Volume (m³): 681.9 Max Daily Volume (m³): 59 Original Application No: - Original Start Date: 4/4/1966 Expiry Date: - Issue No: 100 Version Start Date: 4/4/1966 Version End Date:
Not shown	1211.0	SE	527420 182620	WOOD MANAGEM ENT TRUSTEES LTD	Licence No: 28/39/39/0115 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Thames Groundwater Point: Two Boreholes At Abbey Lodge, Park Road, London Nw8 Data Type: Point Annual Volume (m³): 28640 Max Daily Volume (m³): 100 Original Application No: - Original Start Date: 5/9/1966 Expiry Date: - Issue No: 100 Version Start Date: 28/11/1991 Version End Date:

ID	Distance (m)	Direction	NGR	Name	Details
Not shown	1211.0	SE	527420 182620	ABBEY LODGE RTM COMPANY LIMITED	Licence No: 28/39/39/0115 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Thames Groundwater Point: Abbey Lodge, Park Road, London Nw8-two Boreholes Data Type: Point Annual Volume (m³): 28640 Max Daily Volume (m³): 100 Original Application No: - Original Start Date: 5/9/1966 Expiry Date: - Issue No: 101 Version Start Date: 1/6/2006 Version End Date:
Not shown	1846.0	SE	527800 182100	ABBEY NATIONAL PLC	Licence No: 28/39/39/0070 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Thames Groundwater Point: Borehole At Abbey House, Baker Street, London Nw1 Data Type: Point Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 13/6/1966 Expiry Date: - Issue No: 101 Version Start Date: 2/5/2000 Version End Date:
Not shown	1870.0	SE	527850 182100	BASKERVILLE ESTATES (GP) LIMITED	Licence No: 28/39/39/0070 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Thames Groundwater Point: Abbey House, Baker Street- Borehole Data Type: Point Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 13/6/1966 Expiry Date: - Issue No: 102 Version Start Date: 19/12/2003 Version End Date:
Not shown	1934.0	SE	527800 182000	BELLNORTH LIMITED	Licence No: 28/39/39/0021 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Thames Groundwater Point: Two Boreholes At Dorset House, Gloucester Place, London. W1 Data Type: Point Annual Volume (m³): 56370 Max Daily Volume (m³): 318 Original Application No: - Original Start Date: 13/12/1965 Expiry Date: - Issue No: 101 Version Start Date: 10/1/1994 Version End Date:
Not shown	1934.0	SE	527800 182000	Dorset House Residential Limited	Licence No: 28/39/39/0021 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Thames Groundwater Point: Dorset House, London- 2 Boreholes Data Type: Point Annual Volume (m³): 56370 Max Daily Volume (m³): 318 Original Application No: NPS/WR/017647 Original Start Date: 13/12/1965 Expiry Date: - Issue No: 103 Version Start Date: 20/11/2014 Version End Date:

5.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 2000m of the study site?

Yes

The following Surface Water Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (5b):

ID	Distance (m)	Direction	NGR	Name	Details
Not shown	1269.0	S	527050 182460	Canal and River Trust	Licence No: 28/39/39/0164 Details: Non-Evaporative Cooling Direct Source: Thames Surface Water - Non Tidal Point: St John's Wood, London - Regents Canal Data Type: Point Annual Volume (m³): 7010000 Max Daily Volume (m³): 19520 Application No: - Original Start Date: 18/7/1980 Expiry Date: - Issue No: 101 Version Start Date: 17/12/2007 Version End Date:

ID	Distance (m)	Direction	NGR	Name	Details
Not shown	1590.0	E	528490 184020	BRITISH WATERWAYS BOARD	Licence No: 28/39/39/0173 Details: Non-Evaporative Cooling Direct Source: Thames Surface Water - Non Tidal Point: Oval Road, Camden - Grand Union Regents Canal Data Type: Point Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 8/12/1994 Expiry Date: - Issue No: 100 Version Start Date: 8/12/1994 Version End Date:
Not shown	1600.0	E	528500 184020	Canal and River Trust	Licence No: 28/39/39/0164 Details: Non-Evaporative Cooling Direct Source: Thames Surface Water - Non Tidal Point: Southampton Bridge, London, Nw8 - Regents Canal Data Type: Point Annual Volume (m³): 7010000 Max Daily Volume (m³): 19520 Application No: - Original Start Date: 18/7/1980 Expiry Date: - Issue No: 101 Version Start Date: 17/12/2007 Version End Date:

5.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site?

Yes

The following Potable Water Abstraction Licences records are represented as points, lines and regions on the SPZ and Potable Water Abstraction Licences Map (5c):

ID	Distance (m)	Direction	NGR	Name	Details
Not shown	710.0	E	527636 183697	THAMES WATER UTILITIES LTD	Licence No: TH/039/0039/058 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Borehole At Barrow Hill Data Type: Point Annual Volume (m³): 631000 Max Daily Volume (m³): 2000 Original Application No: NPS/WR/009229 Original Start Date: 1/4/2013 Expiry Date: 31/3/2025 Issue No: 1 Version Start Date: Version End Date:
Not shown	714.0	E	527640 183690	THAMES WATER UTILITIES LTD	Licence No: 28/39/39/0202 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Barrow Hill Pumping Station - Borehole Data Type: Point Annual Volume (m³): 631000 Max Daily Volume (m³): 2000 Original Application No: WRA/2/2(24) Original Start Date: 26/9/2002 Expiry Date: 31/3/2007 Issue No: 1 Version Start Date: Version End Date:
Not shown	714.0	E	527640 183690	THAMES WATER UTILITIES LTD	Licence No: 28/39/39/0231 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Barrow Hill Pumping Station - Borehole Data Type: Point Annual Volume (m³): 631000 Max Daily Volume (m³): 2000 Original Application No: WRA/R/1026 Original Start Date: 1/4/2007 Expiry Date: 31/3/2013 Issue No: 1 Version Start Date: Version End Date:

ID	Distance (m)	Direction	NGR	Name	Details
Not shown	1211.0	SE	527420 182620	ABBEY LODGE RTM COMPANY LIMITED	Licence No: 28/39/39/0115 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Thames Groundwater Point: Abbey Lodge, Park Road, London Nw8-two Boreholes Data Type: Point Annual Volume (m³): 28640 Max Daily Volume (m³): 100 Original Application No: - Original Start Date: 5/9/1966 Expiry Date: - Issue No: 101 Version Start Date: - Version End Date: -
Not shown	1211.0	SE	527420 182620	WOOD MANAGEMENT TRUSTEES LTD	Licence No: 28/39/39/0115 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Thames Groundwater Point: Two Boreholes At Abbey Lodge, Park Road, London Nw8 Data Type: Point Annual Volume (m³): 28640 Max Daily Volume (m³): 100 Original Application No: - Original Start Date: 5/9/1966 Expiry Date: - Issue No: 100 Version Start Date: - Version End Date: -
Not shown	1846.0	SE	527800 182100	ABBEY NATIONAL PLC	Licence No: 28/39/39/0070 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Thames Groundwater Point: Borehole At Abbey House, Baker Street, London Nw1 Data Type: Point Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 13/6/1966 Expiry Date: - Issue No: 101 Version Start Date: - Version End Date: -
Not shown	1870.0	SE	527850 182100	BASKERVILLE ESTATES (GP) LIMITED	Licence No: 28/39/39/0070 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Thames Groundwater Point: Abbey House, Baker Street-Borehole Data Type: Point Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 13/6/1966 Expiry Date: - Issue No: 102 Version Start Date: - Version End Date: -
Not shown	1934.0	SE	527800 182000	Dorset House Residential Limited	Licence No: 28/39/39/0021 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Thames Groundwater Point: Dorset House, London- 2 Boreholes Data Type: Point Annual Volume (m³): 56370 Max Daily Volume (m³): 318 Original Application No: NPS/WR/017647 Original Start Date: 13/12/1965 Expiry Date: - Issue No: 103 Version Start Date: - Version End Date: -
Not shown	1934.0	SE	527800 182000	BELKNORTH LIMITED	Licence No: 28/39/39/0021 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Thames Groundwater Point: Two Boreholes At Dorset House, Gloucester Place, London. W1 Data Type: Point Annual Volume (m³): 56370 Max Daily Volume (m³): 318 Original Application No: - Original Start Date: 13/12/1965 Expiry Date: - Issue No: 101 Version Start Date: - Version End Date: -

5.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site?

Yes

The following Source Protection Zones records are represented on the SPZ and Potable Water Abstraction Map (5c):

ID	Distance (m)	Direction	Type	Description
2	0.0	On Site	2	Outer catchment
1	428.0	E	1	Inner catchment

5.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site?

No

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

5.8 Groundwater Vulnerability and Soil Leaching Potential

Is there any Environment Agency information on groundwater vulnerability and soil leaching potential within 500m of the study site?

No

Database searched and no data found.

5.9 River Quality

Is there any Environment Agency information on river quality within 1500m of the study site?

No

5.9.1 Biological Quality:

Database searched and no data found.

5.9.2 Chemical Quality:

Database searched and no data found.

5.10 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site?

Yes

The following Detailed River Network records are represented on the Hydrology Map (5e):

ID	Distance (m)	Direction	Details	
1	232.0	E	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined

5.11 Surface Water Features

Are there any surface water features within 250m of the study site?

No

Database searched and no data found.

6. Environment Agency Risk of Flooding from Rivers and the Sea (RoFRaS) Map



Environment Agency Risk of Flooding From Rivers and the Sea (RoFRaS)

Mapping sourced from



© Crown copyright and database rights 2015.
Ordnance Survey license 100035207.

