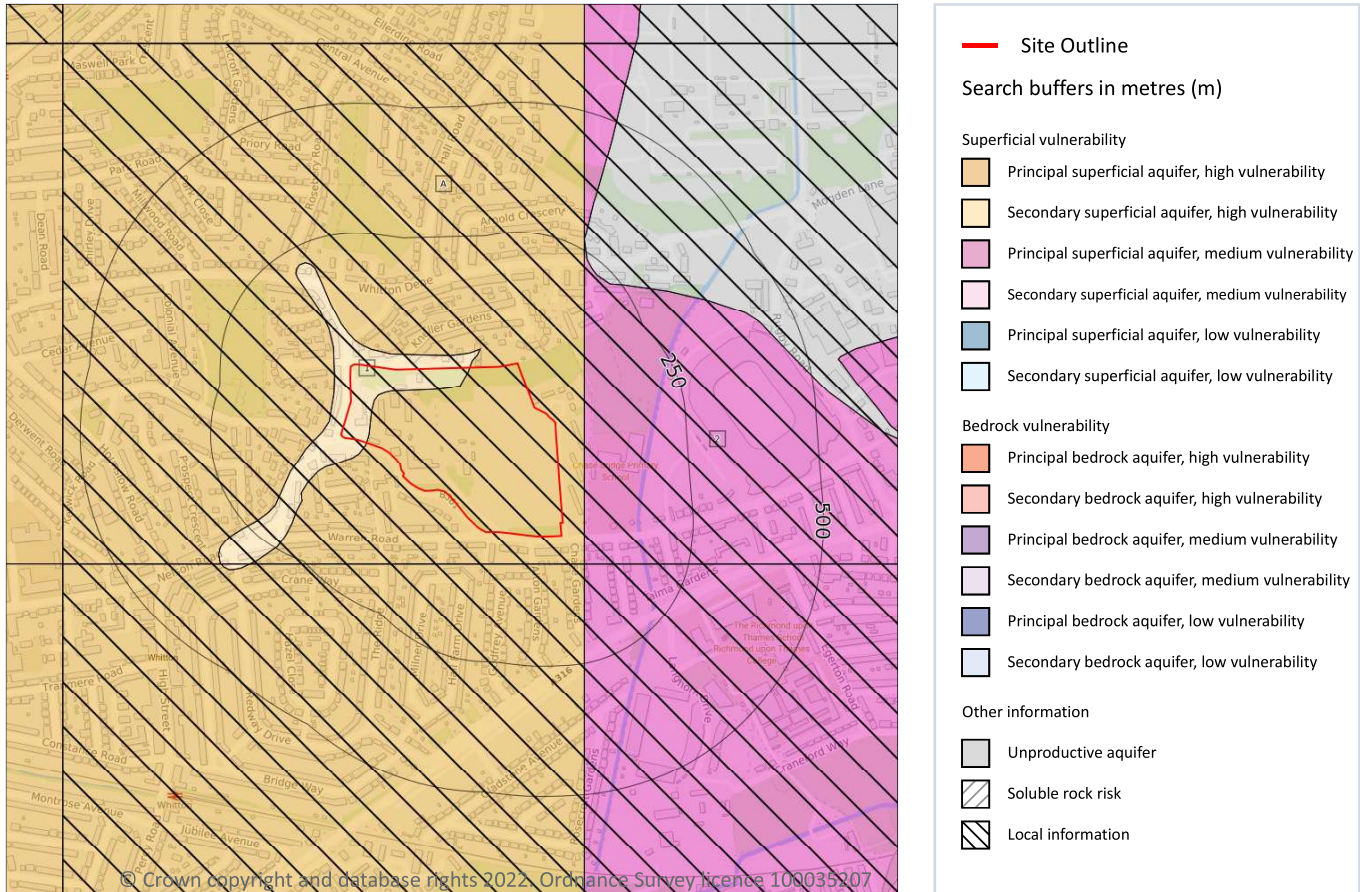


## Groundwater vulnerability



### 5.3 Groundwater vulnerability

Records within 50m

3

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on **page 43**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	<b>Summary Classification:</b> Secondary superficial aquifer - High Vulnerability <b>Combined classification:</b> Unproductive Bedrock Aquifer, Productive Superficial Aquifer	<b>Leaching class: High</b> <b>Infiltration value:</b> >70% <b>Dilution value: 300-550mm/year</b>	<b>Vulnerability: High</b> <b>Aquifer type: Secondary</b> <b>Thickness: 3-10m</b> <b>Patchiness value: &gt;90%</b> <b>Recharge potential: High</b>	<b>Vulnerability: Unproductive</b> <b>Aquifer type: Unproductive</b> <b>Flow mechanism: Mixed</b>
A	On site	<b>Summary Classification:</b> Principal superficial aquifer - High Vulnerability <b>Combined classification:</b> Unproductive Bedrock Aquifer, Productive Superficial Aquifer	<b>Leaching class: High</b> <b>Infiltration value:</b> >70% <b>Dilution value: 300-550mm/year</b>	<b>Vulnerability: High</b> <b>Aquifer type: Principal</b> <b>Thickness: 3-10m</b> <b>Patchiness value: &gt;90%</b> <b>Recharge potential: High</b>	<b>Vulnerability: Unproductive</b> <b>Aquifer type: Unproductive</b> <b>Flow mechanism: Mixed</b>
2	41m E	<b>Summary Classification:</b> Principal superficial aquifer - Medium Vulnerability <b>Combined classification:</b> Unproductive Bedrock Aquifer, Productive Superficial Aquifer	<b>Leaching class: Intermediate</b> <b>Infiltration value:</b> >70% <b>Dilution value: 300-550mm/year</b>	<b>Vulnerability: Medium</b> <b>Aquifer type: Principal</b> <b>Thickness: 3-10m</b> <b>Patchiness value: &gt;90%</b> <b>Recharge potential: High</b>	<b>Vulnerability: Unproductive</b> <b>Aquifer type: Unproductive</b> <b>Flow mechanism: Mixed</b>

*This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.*

## 5.4 Groundwater vulnerability- soluble rock risk

Records on site

0

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

*This data is sourced from the British Geological Survey and the Environment Agency.*

## 5.5 Groundwater vulnerability- local information

Records on site

1

This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk.

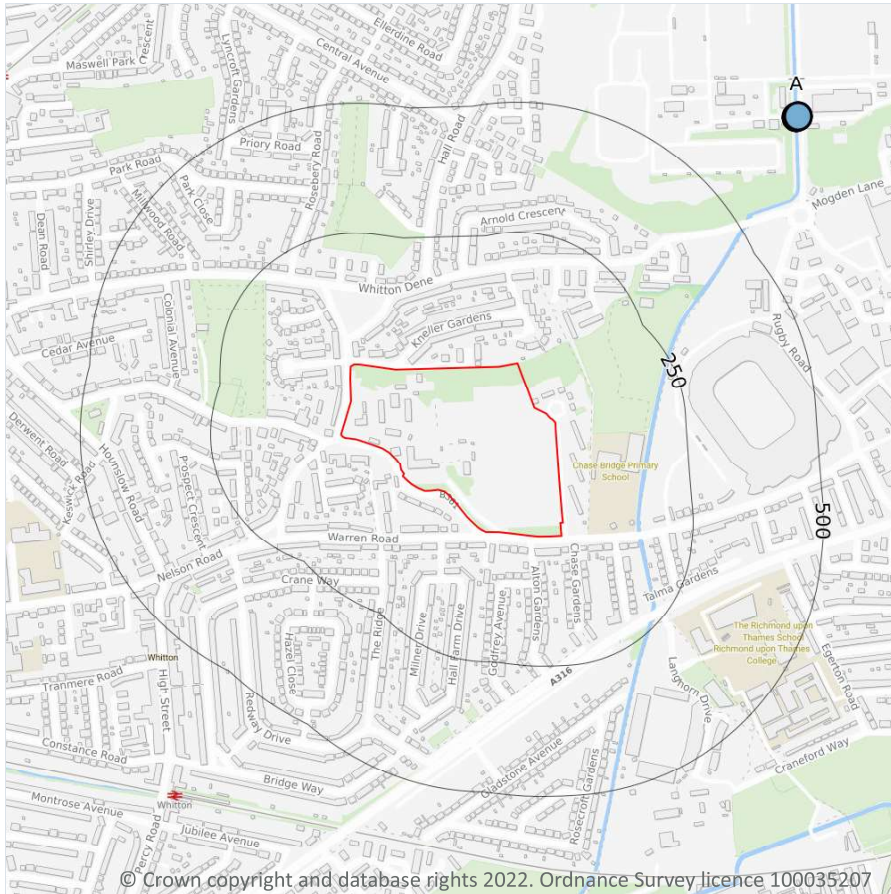


ID	Summary	Additional information
A	<b>Highly vulnerable Principal superficial aquifer present in river terrace gravels</b>	<b>Principal superficial aquifer in river terrace gravels with only a thin cover of low permeability silts and/or alluvium (shown as unproductive)</b>

*This data is sourced from the British Geological Survey and the Environment Agency.*



## Abstractions and Source Protection Zones



### 5.6 Groundwater abstractions

Records within 2000m

4

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 46**

ID	Location	Details	
-	1115m NW	Status: Historical Licence No: 28/39/37/0006 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'B' AT 31 CROSS LANCES ROAD, HOUNSLOW Data Type: Point Name: ENVIROTECH DEVELOPMENTS LIMITED Easting: 513700 Northing: 175100	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 27/02/1984 Expiry Date: - Issue No: 100 Version Start Date: 27/02/1984 Version End Date: -
-	1115m NW	Status: Historical Licence No: 28/39/37/0006 Details: Process water Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'B' AT 31 CROSS LANCES ROAD, HOUNSLOW Data Type: Point Name: ENVIROTECH DEVELOPMENTS LIMITED Easting: 513700 Northing: 175100	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 27/02/1984 Expiry Date: - Issue No: 100 Version Start Date: 27/02/1984 Version End Date: -
-	1708m N	Status: Historical Licence No: 28/39/37/0008 Details: Pollution Remediation Direct Source: THAMES GROUNDWATER Point: POINT 'A' AT BROADWAY SERVICE STATION, HOUNSLOW, MIDDLESEX Data Type: Point Name: TOTALFINAELF UK LTD Easting: 514740 Northing: 176090	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 28/03/2002 Expiry Date: 31/03/2005 Issue No: 1 Version Start Date: 28/03/2002 Version End Date: -
-	1884m E	Status: Historical Licence No: 28/39/34/0006 Details: Lake & Pond Throughflow Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT ST. MARGARET'S LAKE, TWICKENHAM Data Type: Point Name: ST MARGARETS RES GROUNDS Easting: 516800 Northing: 174600	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 08/10/1982 Expiry Date: - Issue No: 100 Version Start Date: 08/10/1982 Version End Date: -

*This data is sourced from the Environment Agency and Natural Resources Wales.*



## 5.7 Surface water abstractions

Records within 2000m

6

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 46**

ID	Location	Details	
A	712m NE	Status: Historical Licence No: TH/039/0037/001 Details: Non-Evaporative Cooling Direct Source: THAMES SURFACE WATER - NON TIDAL Point: DUKE OF NORTHUMBERLAND RIVER - MOGDEN SEWAGE TREATMENT WORKS Data Type: Point Name: THAMES WATER UTILITIES LTD Easting: 515406 Northing: 174858	Annual Volume (m <sup>3</sup> ): 1,752,000 Max Daily Volume (m <sup>3</sup> ): 7200 Original Application No: - Original Start Date: 12/08/2009 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 12/08/2009 Version End Date: -
A	712m NE	Status: Historical Licence No: TH/039/0037/001 Details: General Use Relating To Secondary Category (Low Loss) Direct Source: THAMES SURFACE WATER - NON TIDAL Point: DUKE OF NORTHUMBERLAND RIVER - MOGDEN SEWAGE TREATMENT WORKS Data Type: Point Name: THAMES WATER UTILITIES LTD Easting: 515406 Northing: 174858	Annual Volume (m <sup>3</sup> ): 1,752,000 Max Daily Volume (m <sup>3</sup> ): 7200 Original Application No: - Original Start Date: 12/08/2009 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 12/08/2009 Version End Date: -
A	712m NE	Status: Active Licence No: TH/039/0037/004 Details: General Use Relating To Secondary Category (Low Loss) Direct Source: THAMES SURFACE WATER - NON TIDAL Point: DUKE OF NORTHUMBERLAND RIVER - MOGDEN SEWAGE TREATMENT WORKS Data Type: Point Name: Thames Water Utilities Ltd Easting: 515406 Northing: 174858	Annual Volume (m <sup>3</sup> ): 1,752,000 Max Daily Volume (m <sup>3</sup> ): 7,200 Original Application No: - Original Start Date: 01/04/2013 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 01/04/2013 Version End Date: -



ID	Location	Details	
A	716m NE	Status: Historical Licence No: 28/39/37/0007 Details: Non-Evaporative Cooling Direct Source: THAMES SURFACE WATER - NON TIDAL Point: MOGDEN SEWAGE TREATMENT WORKS, ISLEWORTH Data Type: Point Name: THAMES WATER UTILITIES LTD Easting: 515410 Northing: 174860	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: - Expiry Date: 31/08/2009 Issue No: 1 Version Start Date: 17/08/1999 Version End Date: -
A	716m NE	Status: Historical Licence No: 28/39/37/0007 Details: Non-Evaporative Cooling Direct Source: THAMES SURFACE WATER - NON TIDAL Point: D.OF NORTHUMBERLAND- MOGDEN SEWAGE TREATMENT WRKS, ISLEWORTH Data Type: Point Name: THAMES WATER UTILITIES LTD Easting: 515410 Northing: 174860	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): 7200 Original Application No: - Original Start Date: 17/08/1999 Expiry Date: 31/08/2009 Issue No: 1 Version Start Date: 17/08/1999 Version End Date: -
A	716m NE	Status: Historical Licence No: 28/39/37/0007 Details: General Use Relating To Secondary Category (Low Loss) Direct Source: THAMES SURFACE WATER - NON TIDAL Point: D.OF NORTHUMBERLAND- MOGDEN SEWAGE TREATMENT WRKS, ISLEWORTH Data Type: Point Name: THAMES WATER UTILITIES LTD Easting: 515410 Northing: 174860	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): 7200 Original Application No: - Original Start Date: 17/08/1999 Expiry Date: 31/08/2009 Issue No: 1 Version Start Date: 01/01/2007 Version End Date: -

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 5.8 Potable abstractions

**Records within 2000m**

**1**

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 46**



ID	Location	Details	
-	1115m NW	Status: Historical Licence No: 28/39/37/0006 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'B' AT 31 CROSS LANCES ROAD, HOUNSLOW Data Type: Point Name: ENVIROTECH DEVELOPMENTS LIMITED Easting: 513700 Northing: 175100	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 27/02/1984 Expiry Date: - Issue No: 100 Version Start Date: 27/02/1984 Version End Date: -

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 5.9 Source Protection Zones

<b>Records within 500m</b>	<b>0</b>
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Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

## 5.10 Source Protection Zones (confined aquifer)

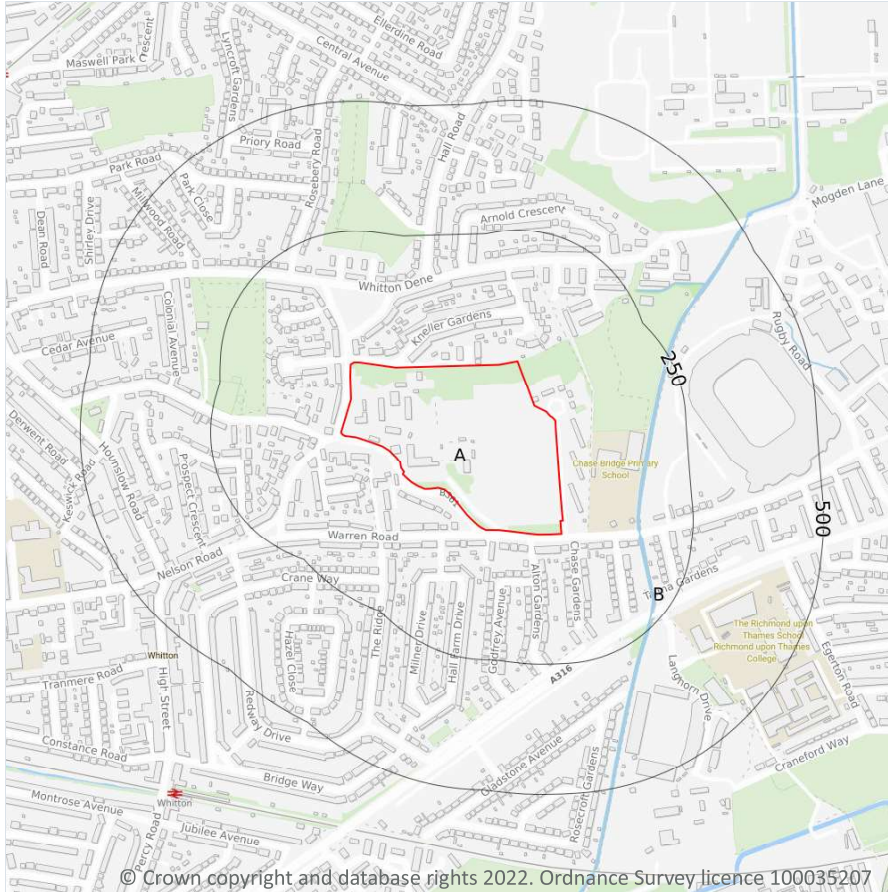
<b>Records within 500m</b>	<b>0</b>
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Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

*This data is sourced from the Environment Agency and Natural Resources Wales.*



## 6 Hydrology



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- Site Outline
- Search buffers in metres (m)
- Water Network (OS MasterMap)
- Surface water features (wider than 5m)
- Surface water features (narrower than 5m)
- ⋯ WFD River, canal and surface water transfer water bodies
- WFD Lake water bodies
- WFD Transitional and coastal water bodies
- WFD Surface water body catchments boundaries
- WFD Groundwater body boundaries

### 6.1 Water Network (OS MasterMap)

Records within 250m

1

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on **page 51**

ID	Location	Type of water feature	Ground level	Permanence	Name
B	144m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Duke of Northumberland's River

*This data is sourced from the Ordnance Survey.*

