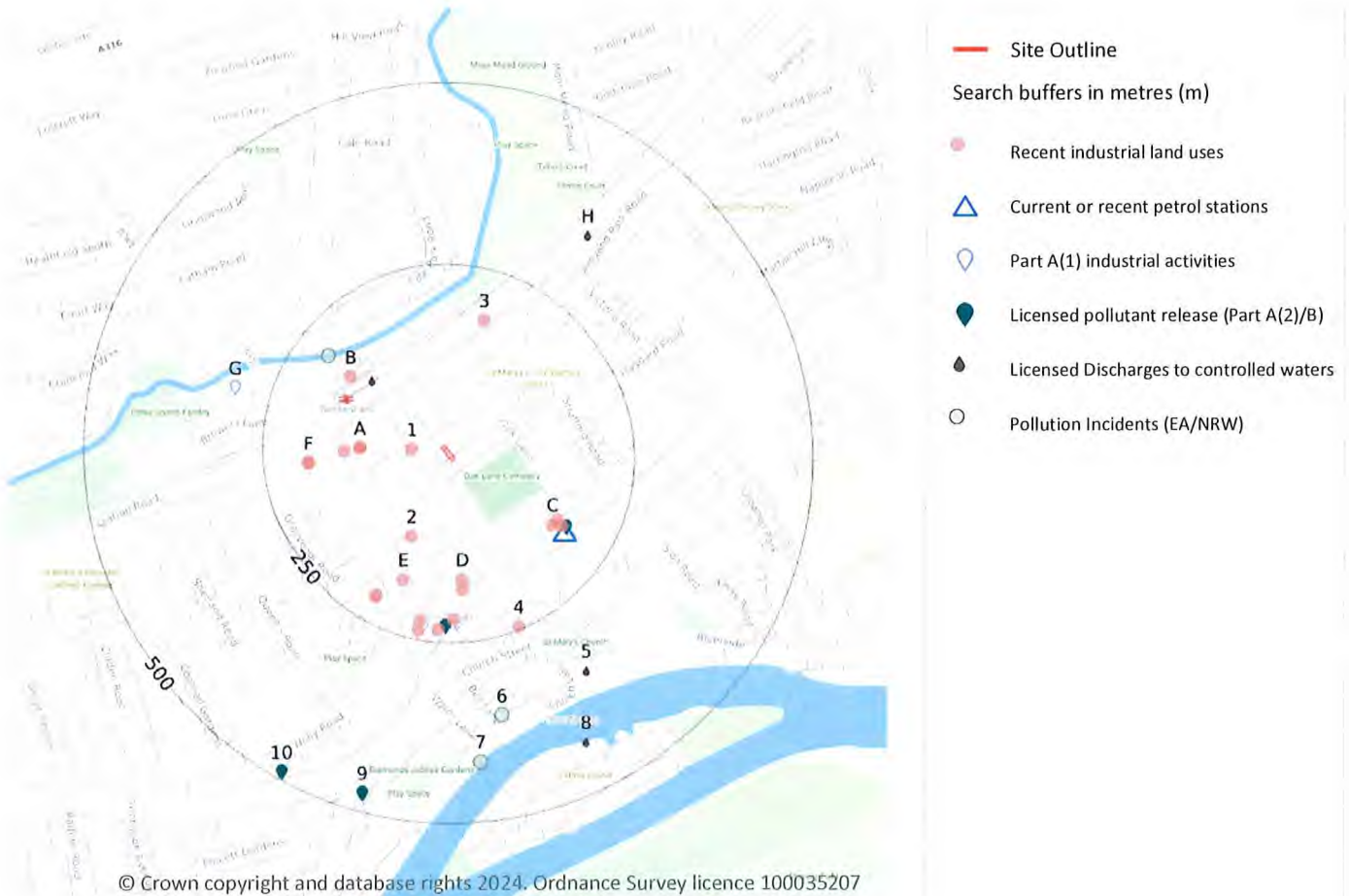


4 Current industrial land use



4.1 Recent industrial land uses

Records within 250m

27

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 42](#) >

ID	Location	Company	Address	Activity	Category
1	42m W	Richmond & Twickenham Blinds	15, Amyand Park Road, Twickenham, Greater London, TW1 3HB	Curtains and Blinds	Consumer Products
A	115m W	G B M Ltd	Regal House 70, London Road, Twickenham, Greater London, TW1 3QS	Civil Engineers	Engineering Services

ID	Location	Company	Address	Activity	Category
A	115m W	Cyan Group	Regal House 70, London Road, Twickenham, Greater London, TW1 3QS	Published Goods	Industrial Products
A	115m W	Jain International Food Ltd	Regal House 70, London Road, Twickenham, Greater London, TW1 3QS	Catering and Non Specific Food Products	Foodstuffs
2	117m SW	Electricity Sub Station	Greater London, TW1	Electrical Features	Infrastructure and Facilities
A	137m W	Macopharma	Unit 3.2d Third Floor Front Block Regal House 70, London Road, Twickenham, Greater London, TW1 3QS	Medical Equipment, Supplies and Pharmaceuticals	Industrial Products
B	161m NW	Twickenham Rail Station	Greater London, TW1	Railway Stations, Junctions and Halts	Public Transport, Stations and Infrastructure
C	163m SE	Shell Oak Lane	5-11, Richmond Road, Twickenham, Greater London, TW1 3AB	Vehicle Cleaning Services	Personal, Consumer and Other Services
D	164m S	Telephone Exchange	Greater London, TW1	Telecommunications Features	Infrastructure and Facilities
C	165m SE	Shell	5-11, Richmond Road, Twickenham, Greater London, TW1 3AB	Petrol and Fuel Stations	Road and Rail
C	175m SE	Shell Car Wash	Oak Lane Service Station 5-11, Richmond Road, Twickenham, Greater London, TW1 3AB	Vehicle Cleaning Services	Personal, Consumer and Other Services
D	176m S	Electricity Sub Station	Greater London, TW1	Electrical Features	Infrastructure and Facilities
E	176m S	Blue Gnome Computers	32, London Road, Twickenham, Greater London, TW1 3RR	Electrical Equipment Repair and Servicing	Repair and Servicing
3	181m N	Patrick Parsons	34, Candler Mews, Twickenham, Greater London, TW1 3JF	Civil Engineers	Engineering Services
F	188m W	Classic & Sports Car	First to Fourth Floors, Bridge House, 69, London Road, Twickenham, Greater London, TW1 3SP	Published Goods	Industrial Products
F	188m W	Motorsport News	69, London Road, Twickenham, Greater London, TW1 3SP	Published Goods	Industrial Products
F	188m W	Hay Market Medical	69, London Road, Twickenham, Greater London, TW1 3SP	Published Goods	Industrial Products
F	188m W	C A T	69, London Road, Twickenham, Greater London, TW1 3SP	Published Goods	Industrial Products
F	188m W	Management Today	69, London Road, Twickenham, Greater London, TW1 3SP	Published Goods	Industrial Products



ID	Location	Company	Address	Activity	Category
F	188m W	Planning	69, London Road, Twickenham, Greater London, TW1 3SP	Published Goods	Industrial Products
E	213m SW	V3 the Printing Room	37, London Road, Twickenham, Greater London, TW1 3SZ	Published Goods	Industrial Products
E	213m SW	The Printing Room	37, London Road, Twickenham, Greater London, TW1 3SZ	Published Goods	Industrial Products
D	217m S	Excelsior Cars	15-19, York Street, Twickenham, Greater London, TW1 3JZ	Vehicle Hire and Rental	Hire Services
D	223m S	Specsavers Hearcare	16-18, London Road, Twickenham, Greater London, TW1 3RR	Disability and Mobility Equipment	Consumer Products
D	232m S	Rex P C	11, York Street, Twickenham, Greater London, TW1 3JZ	Electrical Equipment Repair and Servicing	Repair and Servicing
D	237m S	Thames Audio Video	12, London Road, Twickenham, Greater London, TW1 3RR	Electrical Equipment Repair and Servicing	Repair and Servicing
4	246m S	Electricity Sub Station	Greater London, TW1	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m

1

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on [page 42 >](#)

ID	Location	Company	Address	LPG	Status
C	181m SE	SHELL	5-11, Richmond Road, Oak Lane, Twickenham, Outer London, TW1 3AB	No	Open

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m

0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.



4.4 Gas pipelines

Records within 500m 0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m 0

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m 0

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m 0

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m 0

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m

0

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m

2

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

Features are displayed on the Current industrial land use map on [page 42 >](#)

ID	Location	Details
G	300m W	Operator: CIRCULAR WAY LIMITED Installation Name: Proper Oils Process: ORGANIC CHEMICALS; OXYGEN CONTAINING COMPOUNDS EG ALCOHOLS Permit Number: VP3932CU Original Permit Number: VP3932CU EPR Reference: EPR/VP3932CU Issue Date: 27/06/2013 Effective Date: 27/06/2013 Last date noted as effective: 23/11/2023 Status: Surrendered
G	300m W	Operator: Proper Energy Limited Installation Name: Proper Oils Process: ORGANIC CHEMICALS; OXYGEN CONTAINING COMPOUNDS EG ALCOHOLS Permit Number: HP3832NP Original Permit Number: VP3932CU EPR Reference: - Issue Date: - Effective Date: 27/06/2013 Last date noted as effective: 21/03/2023 Status: Surrender Effective

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

4.11 Licensed pollutant release (Part A(2)/B)

Records within 500m

4

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

Features are displayed on the Current industrial land use map on [page 42 >](#)



ID	Location	Address	Details	
C	179m SE	Shell (Oak Lane), 5-11 Richmond Road, Twickenham, TW1 3AB	Process: Petrol Vapour Recovery Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
D	227m S	Sky Dry Cleaners, 13 York Street, Twickenham, TW1 3JZ	Process: Dry Cleaning Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
9	474m S	Kings Clothes Care Specialists, 45 King Street, Twickenham, TW1 3SG	Process: Dry Cleaning Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
10	490m SW	MEL Dry Cleaners, 24 Heath Road, Twickenham, TW1 4BZ	Process: Dry Cleaning Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m

0

Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

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

4.13 Licensed Discharges to controlled waters

Records within 500m

5

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

Features are displayed on the Current industrial land use map on [page 42 >](#)

ID	Location	Address	Details	
B	135m NW	2B COLE PARK ROAD, TWICKENHAM, MIDD, 2B COLE PARK ROAD, TWICKENHAM, M, IDLESEX	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: CTWC.2291 Permit Version: 1 Receiving Water: RIVER CRANE	Status: REVOKED - UNSPECIFIED Issue date: 21/03/1988 Effective Date: 21/03/1988 Revocation Date: 12/08/1996



ID	Location	Address	Details	
5	344m SE	SURFACE WATER OUTFALL, CHURCH LANE/, SURFACE WATER OUTFALL, CHURCH LA, NE/EMBANKMENT, TWICKENHAM, MIDDLE, ESEX	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: CNTW.0228 Permit Version: 1 Receiving Water: RIVER THAMES	Status: REVOKED - UNSPECIFIED Issue date: 16/01/1990 Effective Date: 16/01/1990 Revocation Date: 30/06/1991
H	350m NE	Anyand Park Road, Twickenham, Anyand Park Road, Twickenham	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: TEMP.2369 Permit Version: 2 Receiving Water: Tidal Thames	Status: VARIED UNDER EPR 2010 Issue date: 03/09/2010 Effective Date: 03/09/2010 Revocation Date: -
H	350m NE	Anyand Park Road, Twickenham, Anyand Park Road, Twickenham	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: TEMP.2369 Permit Version: 1 Receiving Water: TIDAL THAMES	Status: TEMPORARY CONSENTS (WATER ACT 1989, SECTION 113) Issue date: 02/11/1989 Effective Date: 02/11/1989 Revocation Date: 02/09/2010
8	431m SE	PALM BEACH, EEL PIE ISLAND, TWICKEN, PALM BEACH, EEL PIE ISLAND, TWIC, KENHAM, LONDON	Effluent Type: MISCELLANEOUS DISCHARGES - UNSPECIFIED Permit Number: CTWC.0573 Permit Version: 1 Receiving Water: RIVER THAMES	Status: REVOKED - UNSPECIFIED Issue date: 20/12/1985 Effective Date: 20/12/1985 Revocation Date: 16/04/1991

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m

0

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

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

4.15 Pollutant release to public sewer

Records within 500m

0

Discharges of Special Category Effluents to the public sewer.

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



4.16 List 1 Dangerous Substances

Records within 500m

0

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

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

4.17 List 2 Dangerous Substances

Records within 500m

0

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m

3

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

Features are displayed on the Current industrial land use map on [page 42 >](#)

ID	Location	Details	
B	203m NW	Incident Date: 14/08/2003 Incident Identification: 181948 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
6	357m S	Incident Date: 16/09/2001 Incident Identification: 31019 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
7	417m S	Incident Date: 24/07/2003 Incident Identification: 176346 Pollutant: Sewage Materials Pollutant Description: Other Sewage Material	Water Impact: Category 3 (Minor) Land Impact: Category 2 (Significant) Air Impact: Category 4 (No Impact)

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

4.19 Pollution inventory substances

Records within 500m

0

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.20 Pollution inventory waste transfers

Records within 500m

0

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.21 Pollution inventory radioactive waste

Records within 500m

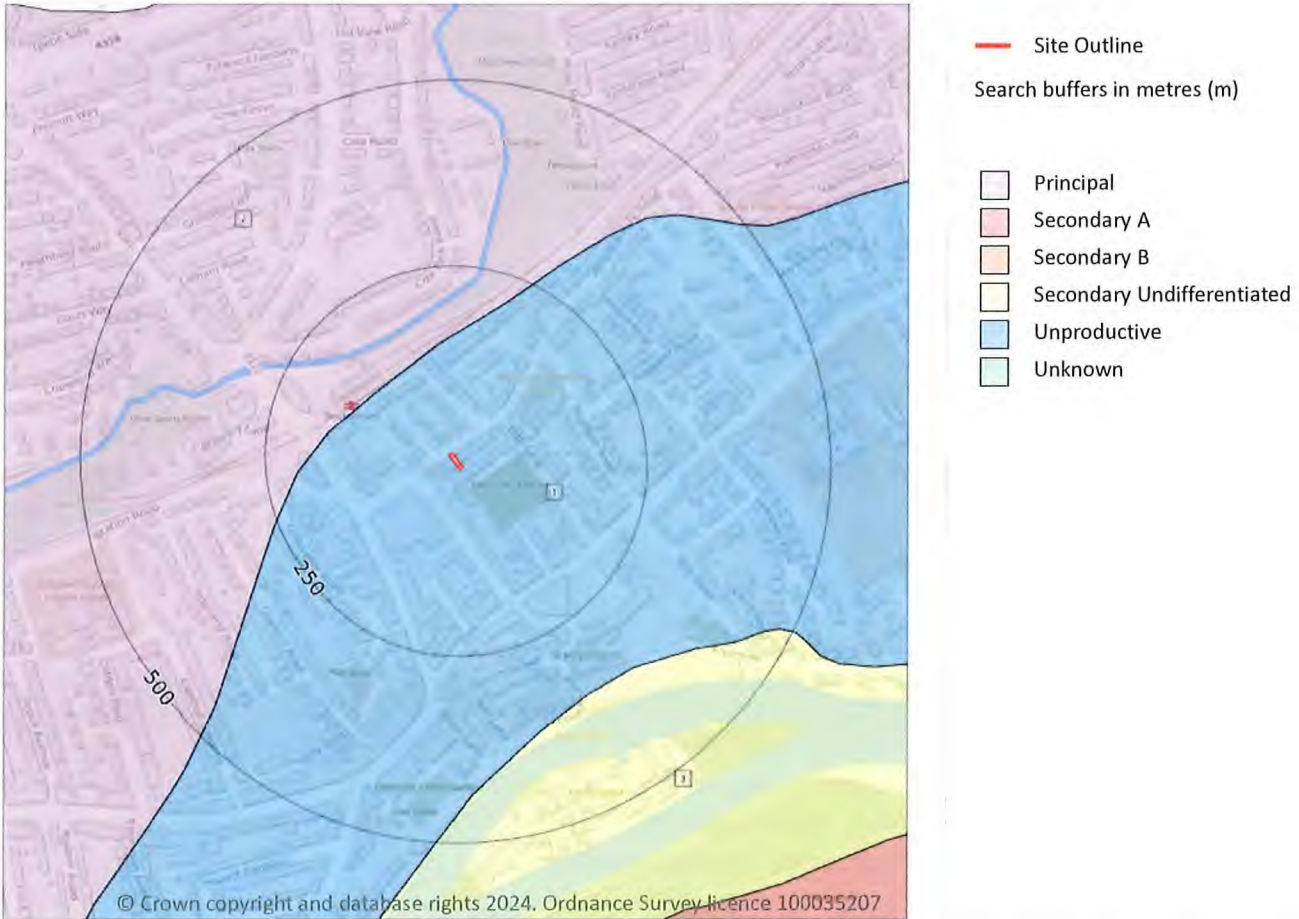
0

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.



5 Hydrogeology - Superficial aquifer



5.1 Superficial aquifer

Records within 500m

3

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 51](#) >

ID	Location	Designation	Description
1	On site	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
2	128m NW	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

ID	Location	Designation	Description
3	349m SE	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

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

Bedrock aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive

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5.2 Bedrock aquifer

Records within 500m

1

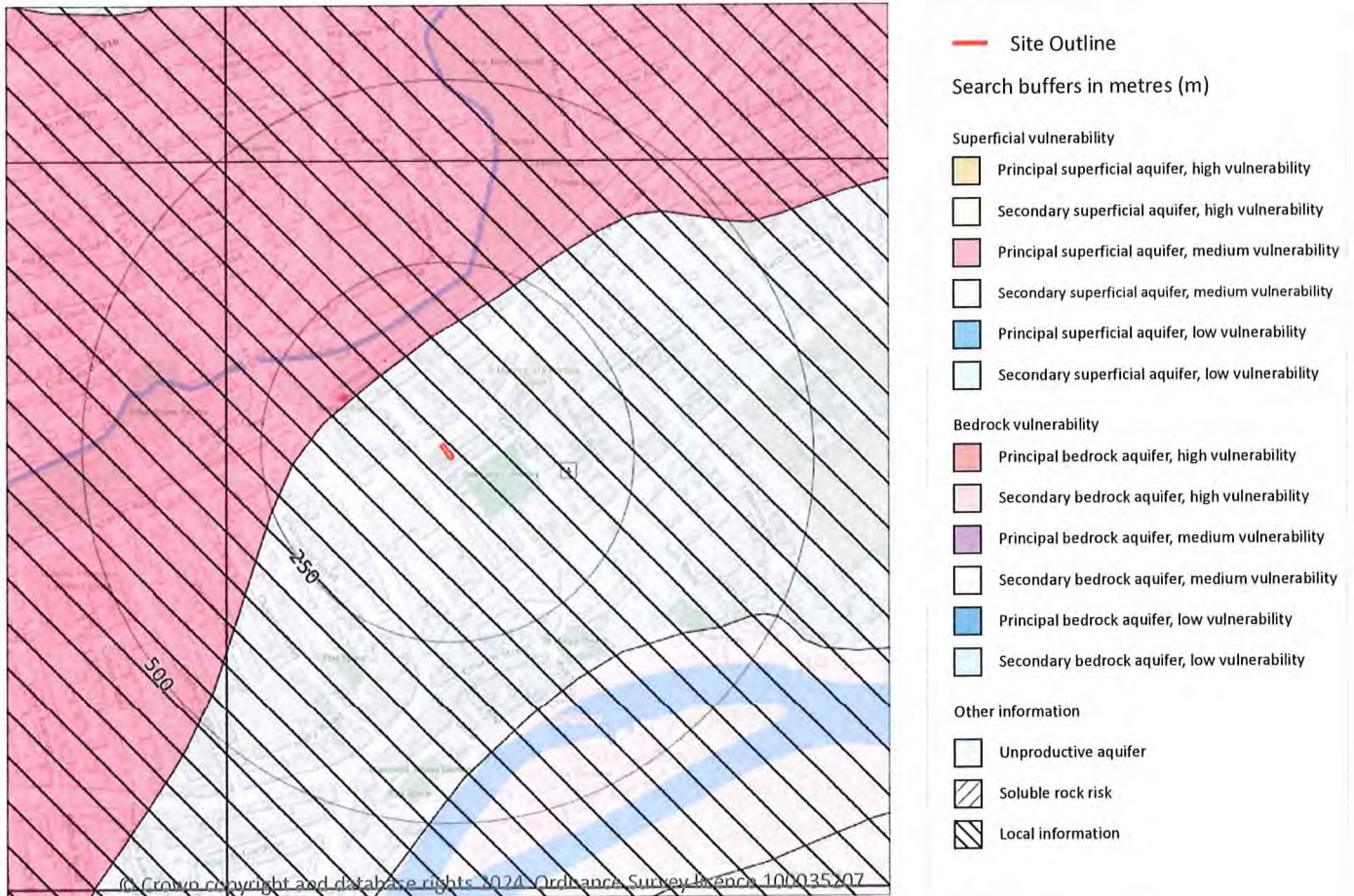
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 53](#) >

ID	Location	Designation	Description
1	On site	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

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

Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

1

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 54 >](#)

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
A	On site	Summary Classification: Unproductive aquifer (may have productive aquifer beneath) Combined classification: Unproductive Bedrock Aquifer, Unproductive Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: 300-550mm/year	Vulnerability: Unproductive Aquifer type: Unproductive Thickness: 3-10m Patchiness value: >90% Recharge potential: High	Vulnerability: Unproductive Aquifer type: Unproductive Flow mechanism: Mixed

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

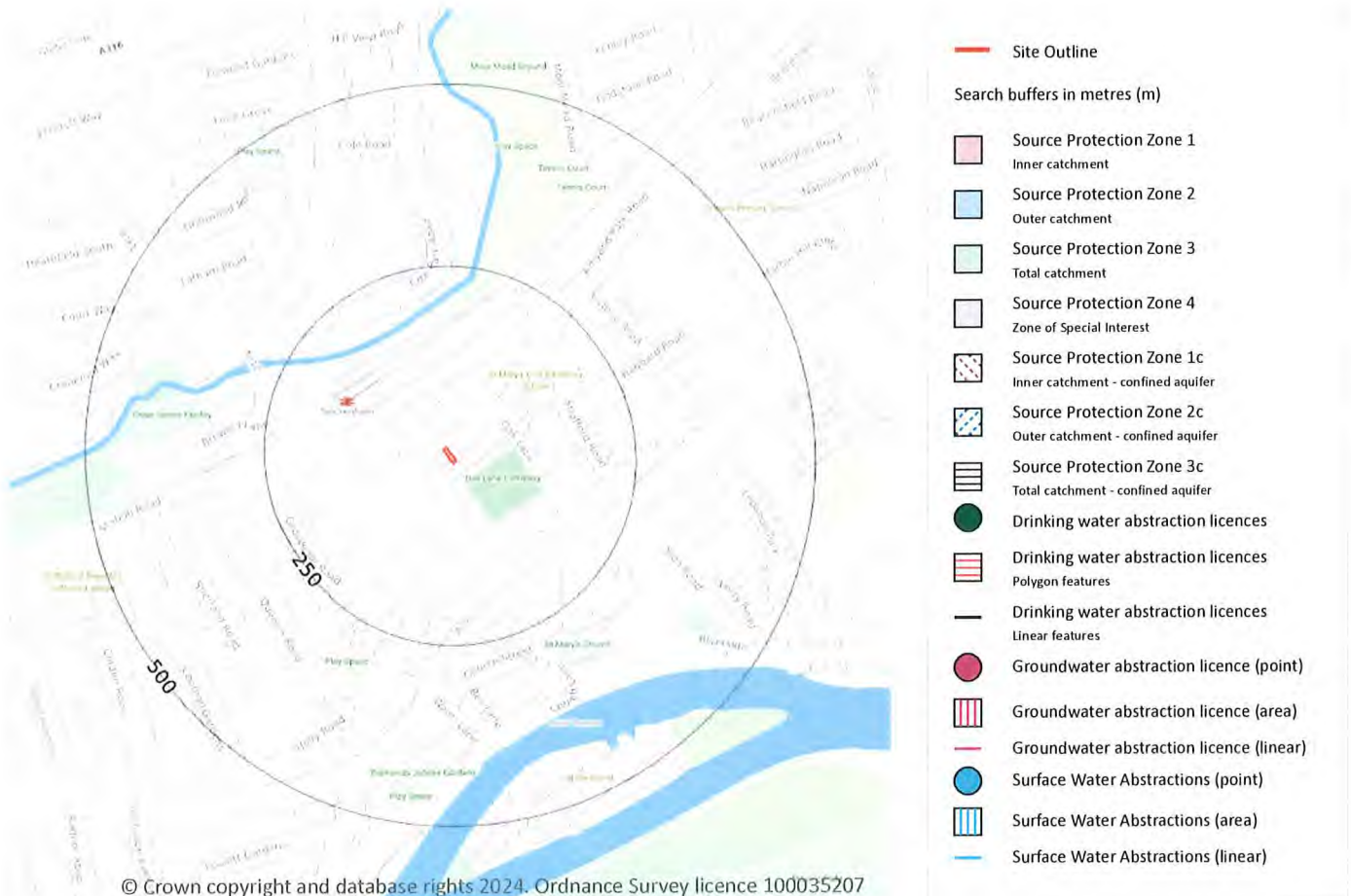
Records on site **1**

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	Highly vulnerable Principal superficial aquifer present in river terrace gravels	Principal superficial aquifer in river terrace gravels with only a thin cover of low permeability silts and/or alluvium (shown as unproductive)

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

12

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 56 >](#)

ID	Location	Details
-	1107m NE	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 ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 08/10/1982 Expiry Date: - Issue No: 100 Version Start Date: 08/10/1982 Version End Date: -
-	1362m NE	Status: Historical Licence No: TH/039/0034/003 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: THAMES GROUNDWATER Point: RIVER GRAVELS AT TWICKENHAM - POINT A Data Type: Point Name: Kier Construction Limited Easting: 517448 Northing: 174350 Annual Volume (m ³): 18144 Max Daily Volume (m ³): 432 Original Application No: - Original Start Date: 23/04/2018 Expiry Date: 31/12/2018 Issue No: 1 Version Start Date: 23/04/2018 Version End Date: -
-	1366m NE	Status: Historical Licence No: TH/039/0034/003 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: THAMES GROUNDWATER Point: RIVER GRAVELS AT TWICKENHAM - POINT D Data Type: Point Name: Kier Construction Limited Easting: 517480 Northing: 174308 Annual Volume (m ³): 18144 Max Daily Volume (m ³): 432 Original Application No: - Original Start Date: 23/04/2018 Expiry Date: 31/12/2018 Issue No: 1 Version Start Date: 23/04/2018 Version End Date: -
-	1415m NE	Status: Historical Licence No: TH/039/0034/003 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: THAMES GROUNDWATER Point: RIVER GRAVELS AT TWICKENHAM - POINT B Data Type: Point Name: Kier Construction Limited Easting: 517490 Northing: 174383 Annual Volume (m ³): 18144 Max Daily Volume (m ³): 432 Original Application No: - Original Start Date: 23/04/2018 Expiry Date: 31/12/2018 Issue No: 1 Version Start Date: 23/04/2018 Version End Date: -



ID	Location	Details
-	1421m NE	<p>Status: Historical Licence No: TH/039/0034/003 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: THAMES GROUNDWATER Point: RIVER GRAVELS AT TWICKENHAM - POINT C Data Type: Point Name: Kier Construction Limited Easting: 517521 Northing: 174347</p> <p>Annual Volume (m³): 18144 Max Daily Volume (m³): 432 Original Application No: - Original Start Date: 23/04/2018 Expiry Date: 31/12/2018 Issue No: 1 Version Start Date: 23/04/2018 Version End Date: -</p>
-	1546m E	<p>Status: Historical Licence No: 28/39/34/0008 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT THE EXILES GROUND, TWICKENHAM Data Type: Point Name: D.G.TILLES & R.H.TILLES Easting: 517840 Northing: 173860</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 15/10/1996 Expiry Date: 31-Dec-06 Issue No: 102 Version Start Date: 14/09/2001 Version End Date: -</p>
-	1546m E	<p>Status: Historical Licence No: 28/39/34/0008 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: THE EXILES GROUND, TWICKENHAM- BOREHOLE A Data Type: Point Name: D G TILLES & R H TILLES Easting: 517840 Northing: 173860</p> <p>Annual Volume (m³): 5300 Max Daily Volume (m³): 56 Original Application No: - Original Start Date: 15/10/1996 Expiry Date: 31/12/2006 Issue No: 103 Version Start Date: 24/04/2003 Version End Date: -</p>
-	1784m E	<p>Status: Active Licence No: 28/39/35/0004 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: GRAVELS AT 143 PETERSHAM ROAD, RICHMOND, SURREY Data Type: Point Name: PETERSHAM NURSERIES LIMITED Easting: 518080 Northing: 173320</p> <p>Annual Volume (m³): 2500 Max Daily Volume (m³): 27 Original Application No: - Original Start Date: 09/07/1973 Expiry Date: - Issue No: 102 Version Start Date: 15/05/2008 Version End Date: -</p>

ID	Location	Details
-	1784m E	<p>Status: Historical Licence No: 28/39/35/0004 Details: Spray Irrigation - Spray Irrigation Definition Order Direct Source: THAMES GROUNDWATER Point: GRAVELS AT 143 PETERSHAM ROAD, RICHMOND, SURREY Data Type: Point Name: PETERSHAM NURSERIES LIMITED Easting: 518080 Northing: 173320</p> <p>Annual Volume (m³): 2500 Max Daily Volume (m³): 27.28 Original Application No: - Original Start Date: 09/07/1973 Expiry Date: - Issue No: 101 Version Start Date: 11/11/2001 Version End Date: -</p>
-	1807m E	<p>Status: Historical Licence No: 28/39/35/0004 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: GRAVELS AT 143 PETERSHAM ROAD, RICHMOND, SURREY Data Type: Point Name: PETERSHAM NURSERIES LIMITED Easting: 518100 Northing: 173300</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 09/07/1973 Expiry Date: - Issue No: 100 Version Start Date: 09/07/1973 Version End Date: -</p>
-	1807m E	<p>Status: Historical Licence No: 28/39/35/0004 Details: Spray Irrigation - Spray Irrigation Definition Order Direct Source: THAMES GROUNDWATER Point: GRAVELS AT 143 PETERSHAM ROAD, RICHMOND, SURREY Data Type: Point Name: PETERSHAM NURSERIES LIMITED Easting: 518100 Northing: 173300</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 09/07/1973 Expiry Date: - Issue No: 100 Version Start Date: 09/07/1973 Version End Date: -</p>
-	1970m SE	<p>Status: Active Licence No: 28/39/35/0005 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: RICHMOND GOLF CLUB - BOREHOLE 'B' Data Type: Point Name: RICHMOND GOLF CLUB Easting: 518020 Northing: 172600</p> <p>Annual Volume (m³): 28200 Max Daily Volume (m³): 269 Original Application No: WRA/S/1299 Original Start Date: 11/02/1974 Expiry Date: - Issue No: 101 Version Start Date: 01/10/2007 Version End Date: -</p>

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 56](#) >

ID	Location	Details
-	1535m NW	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 ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: - Expiry Date: 31/08/2009 Issue No: 1 Version Start Date: 17/08/1999 Version End Date: -
-	1535m NW	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 ³): - Max Daily Volume (m ³): 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: -
-	1535m NW	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 ³): - Max Daily Volume (m ³): 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: -

ID	Location	Details
-	1536m NW	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 ³): 1752000 Max Daily Volume (m ³): 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: -
-	1536m NW	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 ³): 1752000 Max Daily Volume (m ³): 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: -
-	1536m NW	Status: Historical 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 ³): 1752000 Max Daily Volume (m ³): 7200 Original Application No: NPS/WR/009215 Original Start Date: 01/04/2013 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 01/04/2013 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m

0

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.

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



5.9 Source Protection Zones

Records within 500m

0

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)

Records within 500m

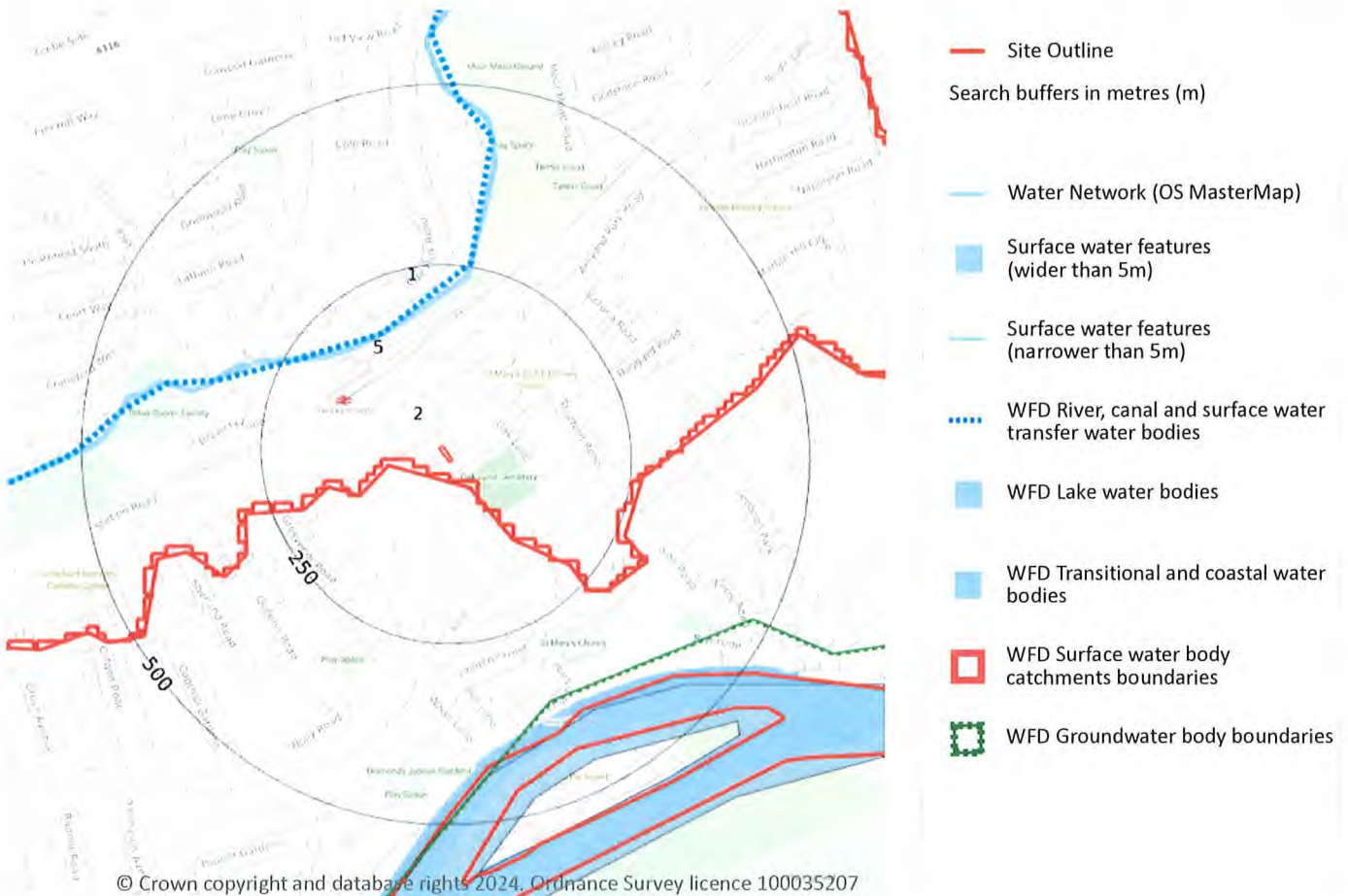
0

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



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 63](#) >

ID	Location	Type of water feature	Ground level	Permanence	Name
5	176m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Crane

This data is sourced from the Ordnance Survey.



6.2 Surface water features

Records within 250m

1

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

Features are displayed on the Hydrology map on [page 63](#) >

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site

1

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on [page 63](#) >

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	On site	River	Crane	GB106039023030	Crane Rivers and Lakes	London

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

6.4 WFD Surface water bodies

Records identified

1

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on [page 63](#) >

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
6	176m NW	River	Crane	GB106039023030 ↗	Moderate	Fail	Moderate	2019

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



6.5 WFD Groundwater bodies

Records on site **1**

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on [page 63 >](#)

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
2	On site	Lower Thames Gravels	GB40603G000300 ↗	Poor	Good	Poor	2019

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

7 River and coastal flooding



7.1 Risk of flooding from rivers and the sea

Records within 50m

0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

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



7.2 Historical Flood Events

Records within 250m

0

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

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

7.3 Flood Defences

Records within 250m

2

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

Features are displayed on the River and coastal flooding map on [page 66](#) >

ID	Location	Update
A	171m NW	08/11/2022
A	182m NW	08/11/2022

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

7.4 Areas Benefiting from Flood Defences

Records within 250m

0

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

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

7.5 Flood Storage Areas

Records within 250m

0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

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



River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m

0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

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

7.7 Flood Zone 3

Records within 50m

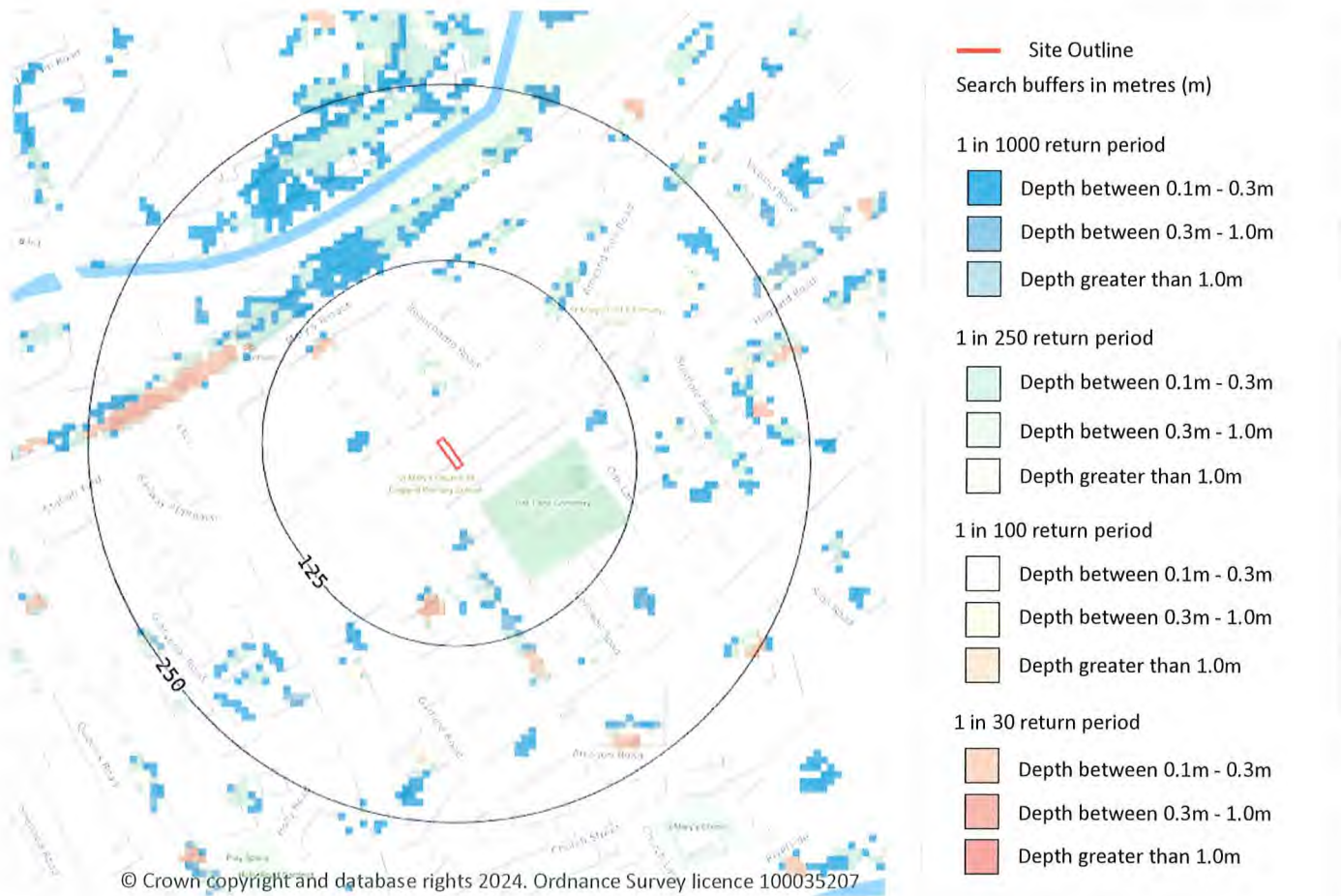
0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

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



8 Surface water flooding



8.1 Surface water flooding

Highest risk on site

Negligible

Highest risk within 50m

1 in 100 year, 0.1m - 0.3m

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on [page 69 >](#)

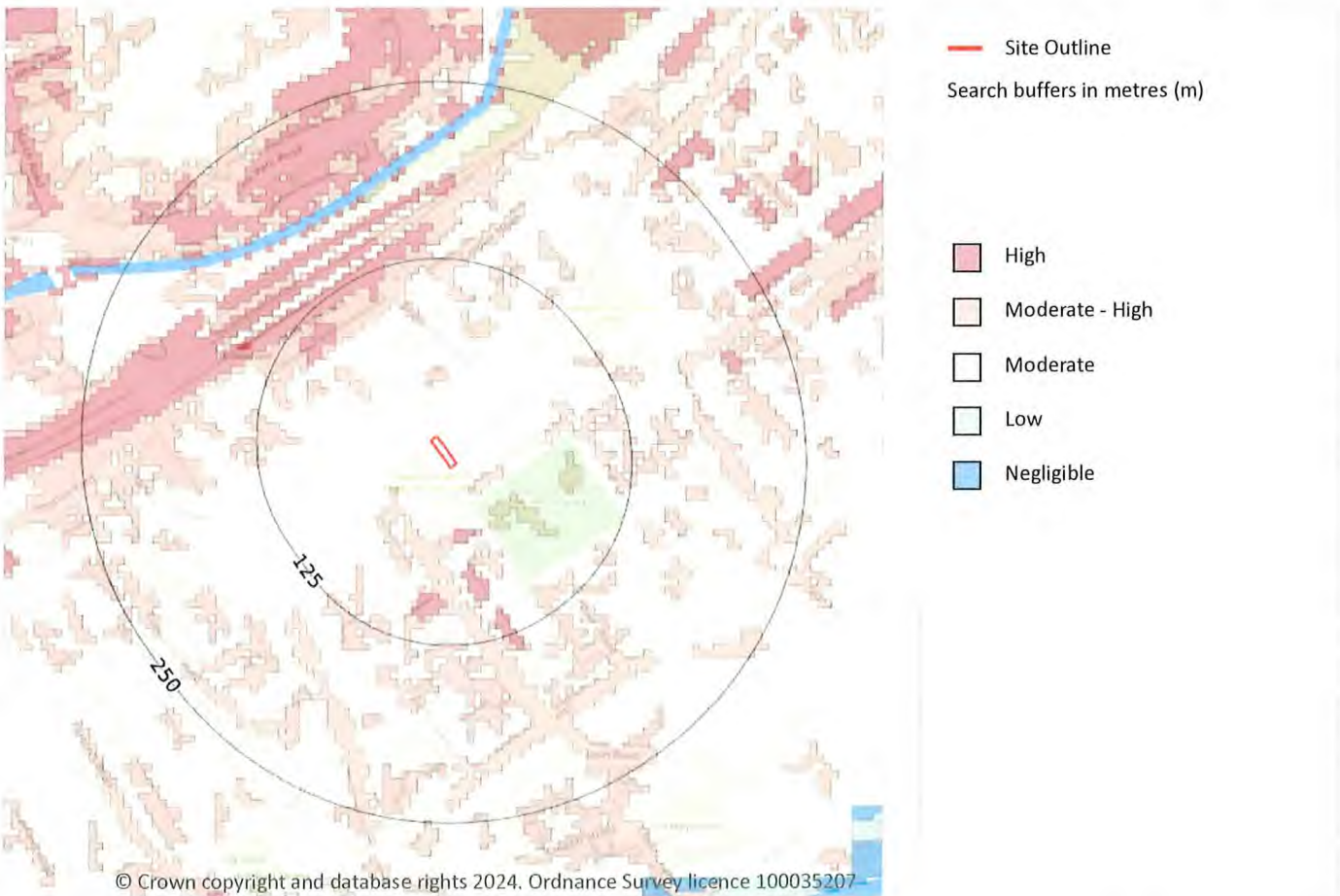
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Negligible
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambient Risk Analytics.

9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Moderate

Highest risk within 50m

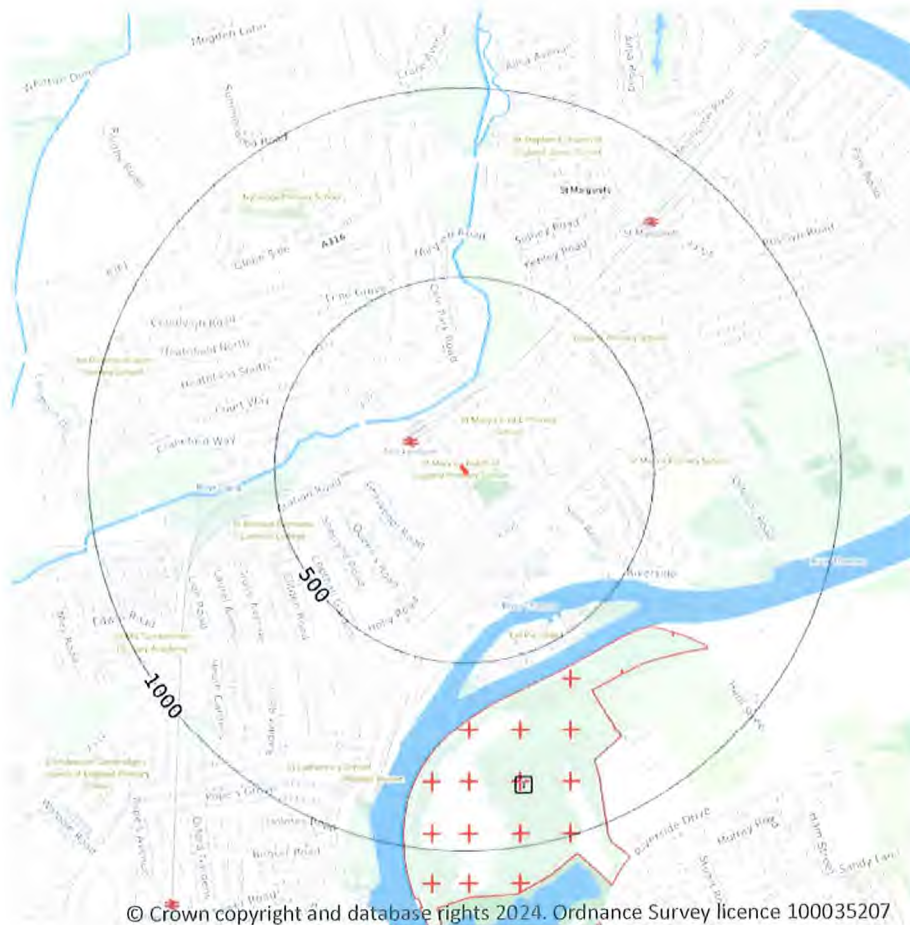
High

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on [page 71](#) >

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- / Sites of Special Scientific Interest (SSSI)
- + Special Areas of Conservation (SAC)
- X National Nature Reserves (NNR)
- + Local Nature Reserves (LNR)

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10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

1

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

Features are displayed on the Environmental designations map on [page 72](#) >

ID	Location	Name	Data source
-	1931m E	Richmond Park	Natural England

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m

0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.3 Special Areas of Conservation (SAC)

Records within 2000m

1

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

Features are displayed on the Environmental designations map on [page 72 >](#)

ID	Location	Name	Features of interest	Habitat description	Data source
-	1931m E	Richmond Park	Stag beetle.	Dry grassland, Steppes; Broad-leaved deciduous woodland; Inland water bodies (Standing water, Running water); Bogs, Marshes, Water fringed vegetation, Fens; Humid grassland, Mesophile grassland; Improved grassland; Heath, Scrub, Maquis and Garrigue, Phygrana; Mixed woodland	Natural England

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.4 Special Protection Areas (SPA)

Records within 2000m

0

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.



10.5 National Nature Reserves (NNR)

Records within 2000m

1

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

Features are displayed on the Environmental designations map on [page 72 >](#)

ID	Location	Name	Data source
-	1931m E	Richmond Park	Natural England

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.6 Local Nature Reserves (LNR)

Records within 2000m

3

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

Features are displayed on the Environmental designations map on [page 72 >](#)

ID	Location	Name	Data source
1	578m SE	Ham Lands	Natural England
2	1246m S	Ham Lands	Natural England
-	1881m N	Isleworth Ait	Natural England

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.7 Designated Ancient Woodland

Records within 2000m

0

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.



10.8 Biosphere Reserves

Records within 2000m

0

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.9 Forest Parks

Records within 2000m

0

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m

0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.11 Green Belt

Records within 2000m

0

Areas designated to prevent urban sprawl by keeping land permanently open.

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m

0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.



10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

This data is sourced from Natural England and Natural Resources Wales.

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m

0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m

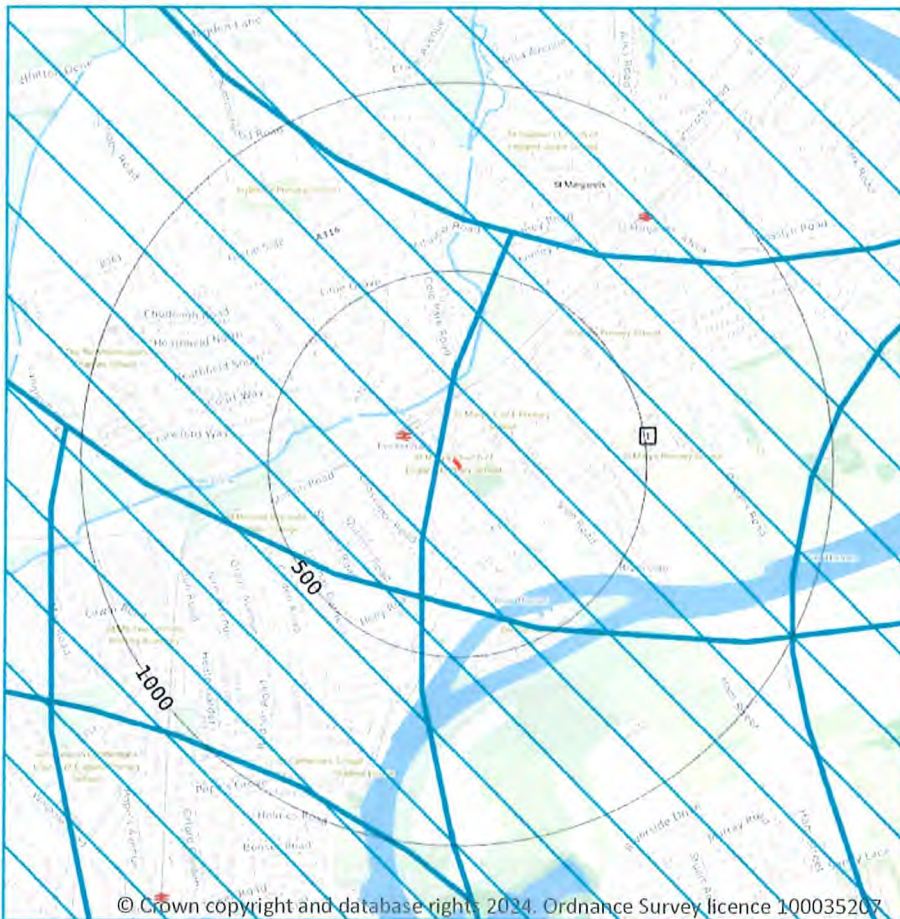
0

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

This data is sourced from Natural England and Natural Resources Wales.



SSSI Impact Zones and Units



- Site Outline
- Search buffers in metres (m)
- SSSI Impact Risk Zones
- SSSI Units
- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site

1

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on [page 77](#) >

ID	Location	Type of developments requiring consultation
1	On site	<p>Infrastructure - Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.</p> <p>Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.</p> <p>Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t).</p> <p>Combustion - General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.</p> <p>Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.</p> <p>Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.</p> <p>Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.</p> <p>Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.</p>

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m

1

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

Features are displayed on the SSSI Impact Zones and Units map on [page 77](#) >

ID: -
 Location: 1931m E
 SSSI name: Richmond Park
 Unit name: Petersham Park
 Broad habitat: Acid Grassland - Lowland
 Condition: Unfavourable - Recovering
 Reportable features:

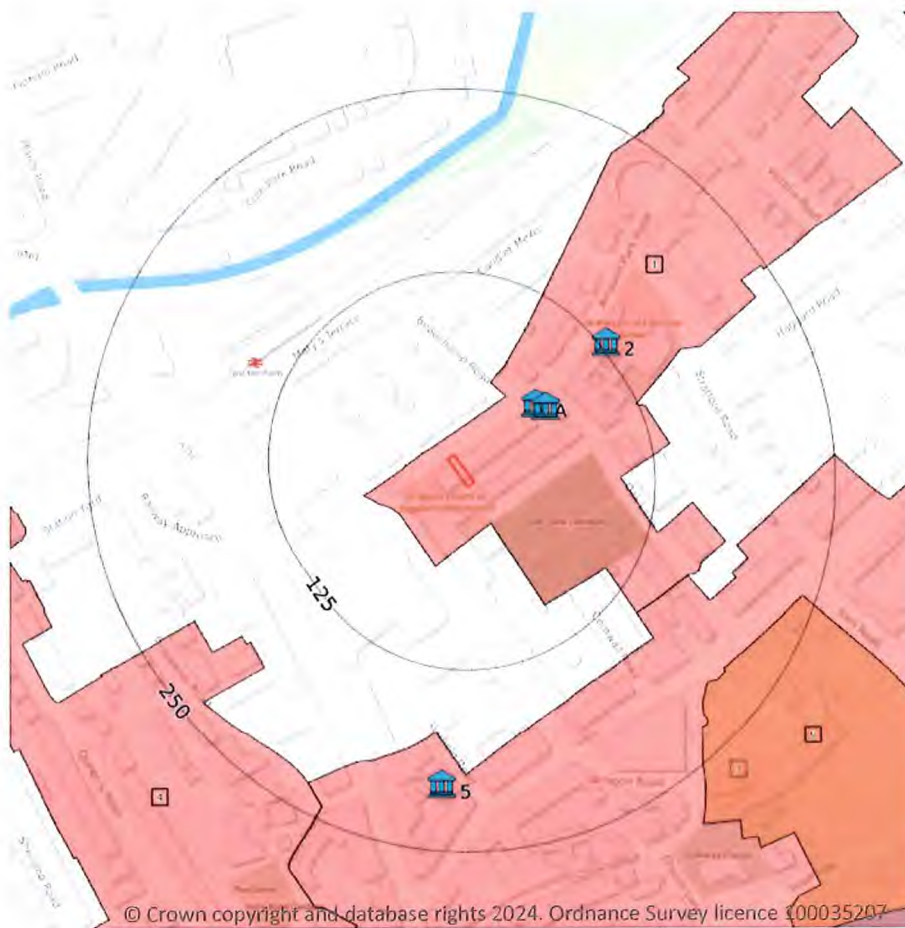
Feature name	Feature condition	Date of assessment
Invert. assemblage A211 heartwood decay	Favourable	27/10/2010
Invert. assemblage A212 bark and sapwood decay	Favourable	27/10/2010
Invert. assemblage A213 fungal fruiting body	Favourable	27/10/2010



Feature name	Feature condition	Date of assessment
Lowland dry acid grassland (U1b,c,d,f)	Unfavourable - Recovering	27/10/2010
Lowland dry acid grassland (U4/20)	Unfavourable - Recovering	27/10/2010
S1083 Stag beetle, <i>Lucanus cervus</i>	Favourable	27/10/2010

This data is sourced from Natural England and Natural Resources Wales.

11 Visual and cultural designations



- Site Outline
- Search buffers in metres (m)
- Listed buildings
- Conservation areas
- Conservation areas - no data
- National Parks
- Areas of Outstanding Natural Beauty
- Registered parks and gardens
- Scheduled Monuments
- World Heritage Sites

11.1 World Heritage Sites

Records within 250m

0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.3 National Parks

Records within 250m

0

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

11.4 Listed Buildings

Records within 250m

4

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.

Features are displayed on the Visual and cultural designations map on [page 80](#) >

ID	Location	Name	Grade	Reference Number	Listed date
A	66m NE	Grove Cottage	II	1387750	26/07/1999
A	71m NE	Devoncroft	II	1261471	17/11/1986
2	130m NE	60, Amyand Park Road	II	1080860	25/06/1983
5	204m S	Twickenham Library	II	1400831	23/06/2011

This data is sourced from Historic England, Cadw and Historic Environment Scotland.



11.5 Conservation Areas

Records within 250m

3

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

Features are displayed on the Visual and cultural designations map on [page 80 >](#)

ID	Location	Name	District	Date of designation
1	On site	Amyand Park Road	Richmond upon Thames	14/06/1988
3	143m SE	Twickenham Riverside	Richmond upon Thames	14/01/1969
4	184m SW	Queen's Road (Twickenham)	Richmond upon Thames	14/06/1988

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.6 Scheduled Ancient Monuments

Records within 250m

0

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.7 Registered Parks and Gardens

Records within 250m

1

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

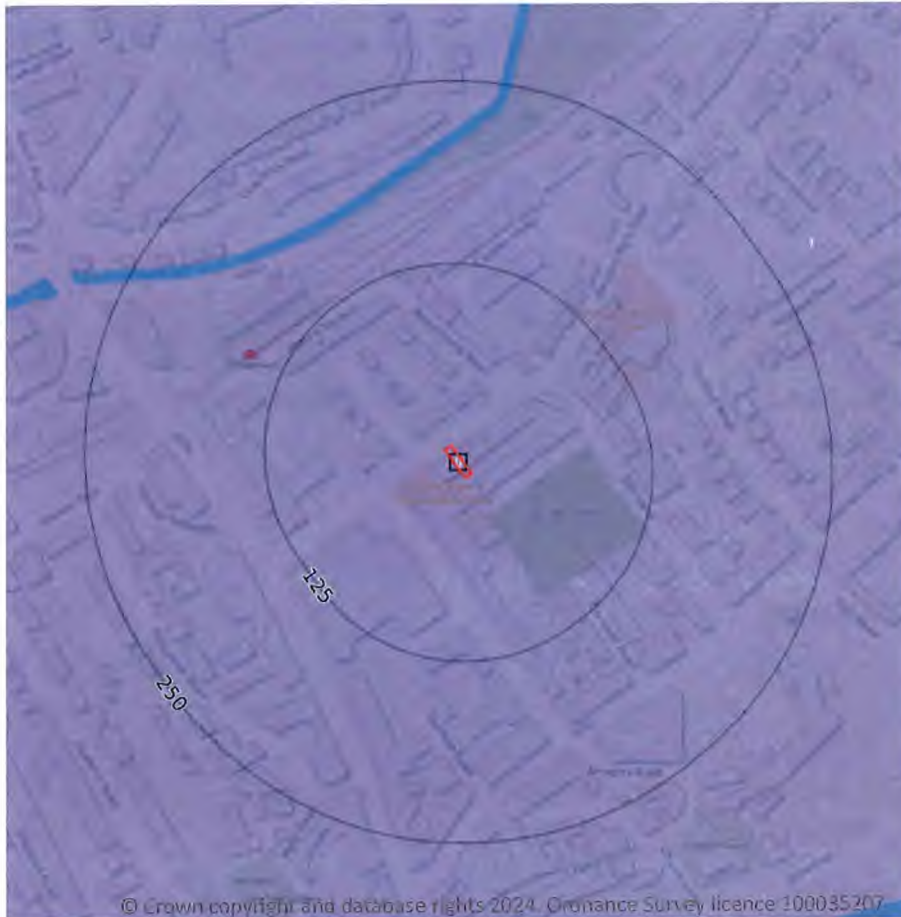
Features are displayed on the Visual and cultural designations map on [page 80 >](#)

ID	Location	Name	Grade
6	212m SE	York House	II



This data is sourced from Historic England, Cadw and Historic Environment Scotland.

12 Agricultural designations



- Site Outline
- Search buffers in metres (m)
- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- ▨ Tree felling licences
- ▨ Open Access land

12.1 Agricultural Land Classification

Records within 250m

1

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on [page 84](#) >

ID	Location	Classification	Description
1	On site	Urban	-

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m

0

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

This data is sourced from Natural England and Natural Resources Wales.

12.3 Tree Felling Licences

Records within 250m

0

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m

0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

0

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

This data is sourced from Natural England.



13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m 0

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m 0

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m 0

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

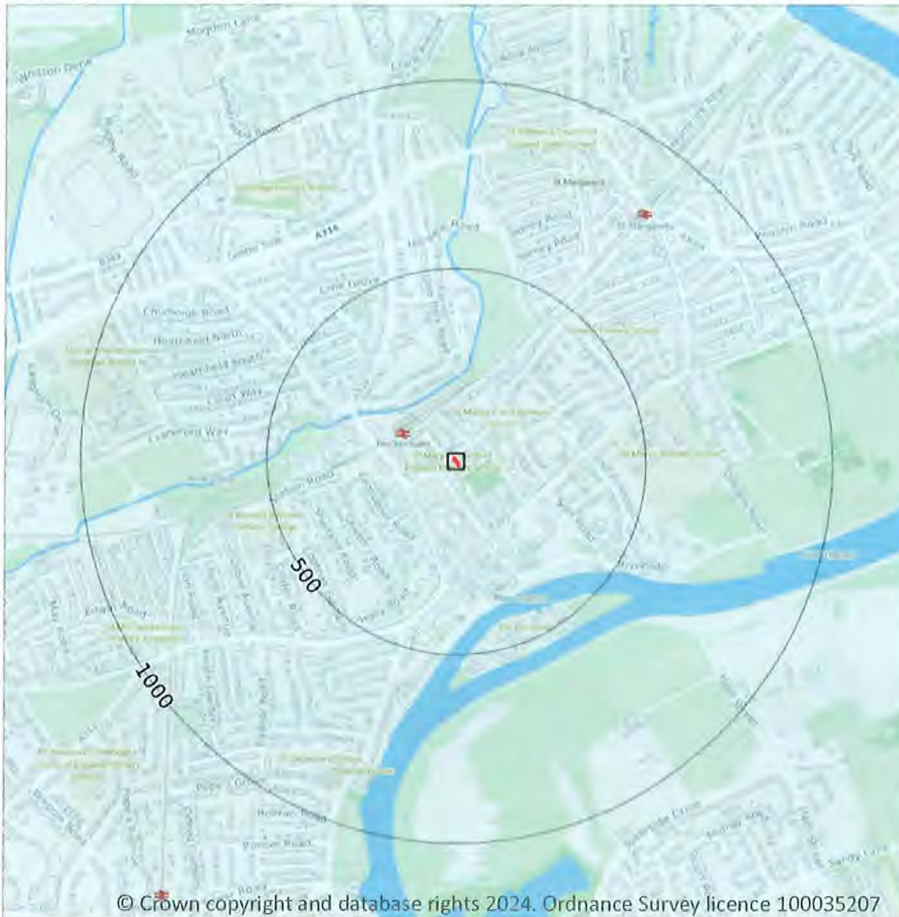
Records within 250m 0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



- Site Outline
- Search buffers in metres (m)
- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

1

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

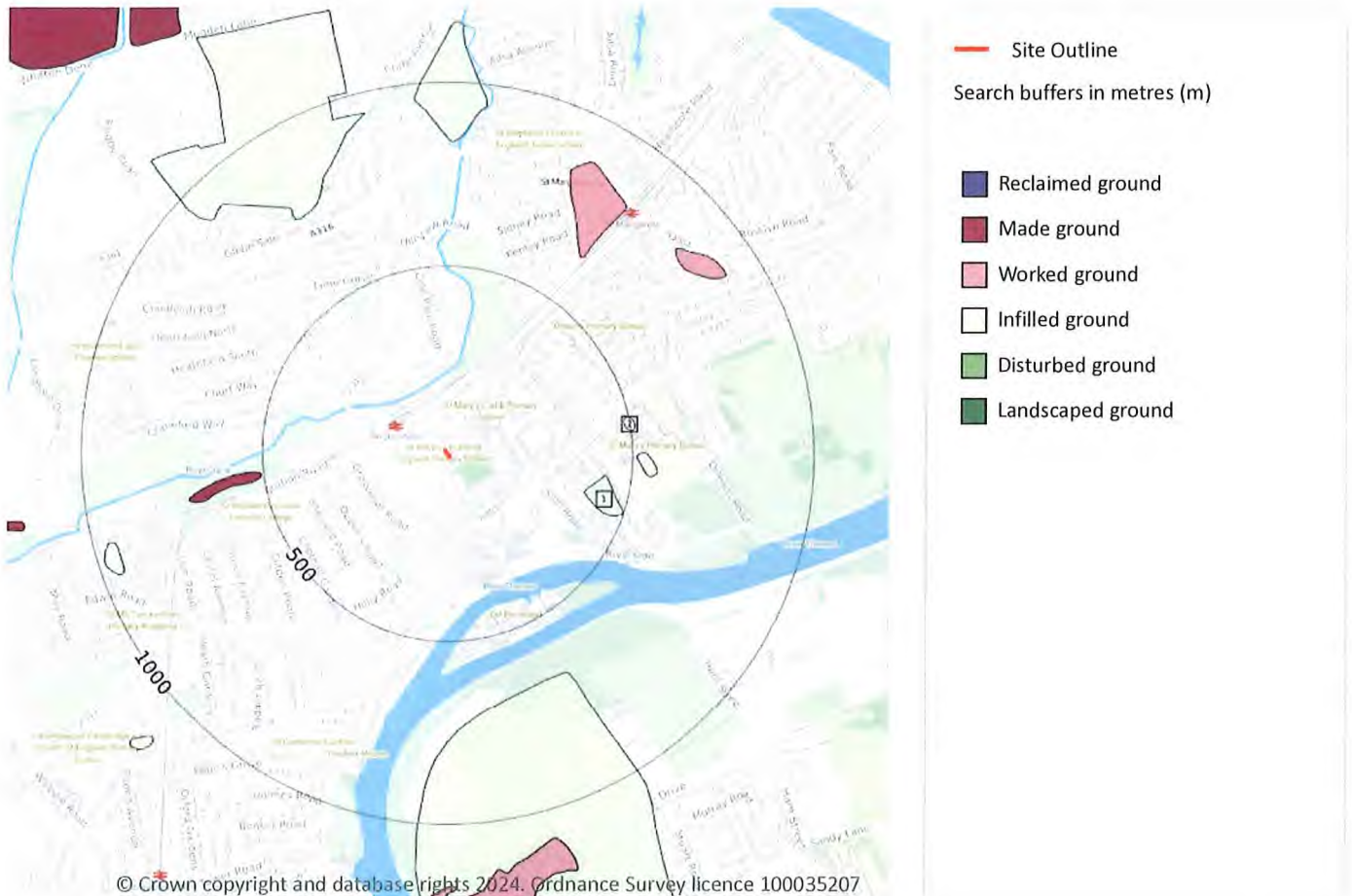
Features are displayed on the Geology 1:10,000 scale - Availability map on [page 87](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	TQ17SE

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Artificial and made ground



14.2 Artificial and made ground (10k)

Records within 500m

2

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on [page 88](#) >

ID	Location	LEX Code	Description	Rock description
1	381m E	WMGR-UKNOWN	Infilled Ground	Unknown/unclassified Entry
2	485m E	WMGR-UKNOWN	Infilled Ground	Unknown/unclassified Entry

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



- Site Outline
- Search buffers in metres (m)
- Landslip (10k)
- Superficial geology (10k)
Please see table for more details.

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14.3 Superficial geology (10k)

Records within 500m

3

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on [page 89](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	LASI-Z	Langley Silt Member - Silt (unlithified Deposits Coding Scheme)	Silt
2	127m NW	KPGR-XSV	Kempton Park Gravel Formation - Sand And Gravel	Sand And Gravel
3	349m SE	ALV-Z	Alluvium - Silt (unlithified Deposits Coding Scheme)	Silt

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

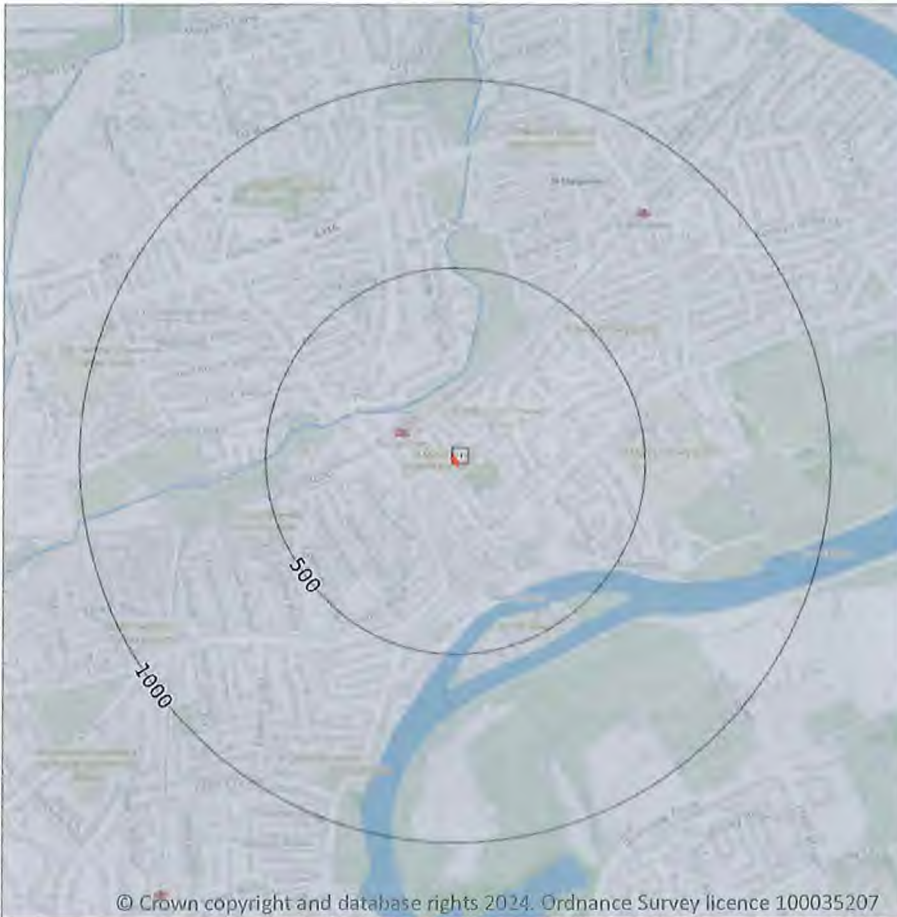
0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



- Site Outline
- Search buffers in metres (m)
- Bedrock faults and other linear features (10k)
- Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m

1

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 91](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	LC-CLAY	London Clay Formation - Clay	Eocene Epoch

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

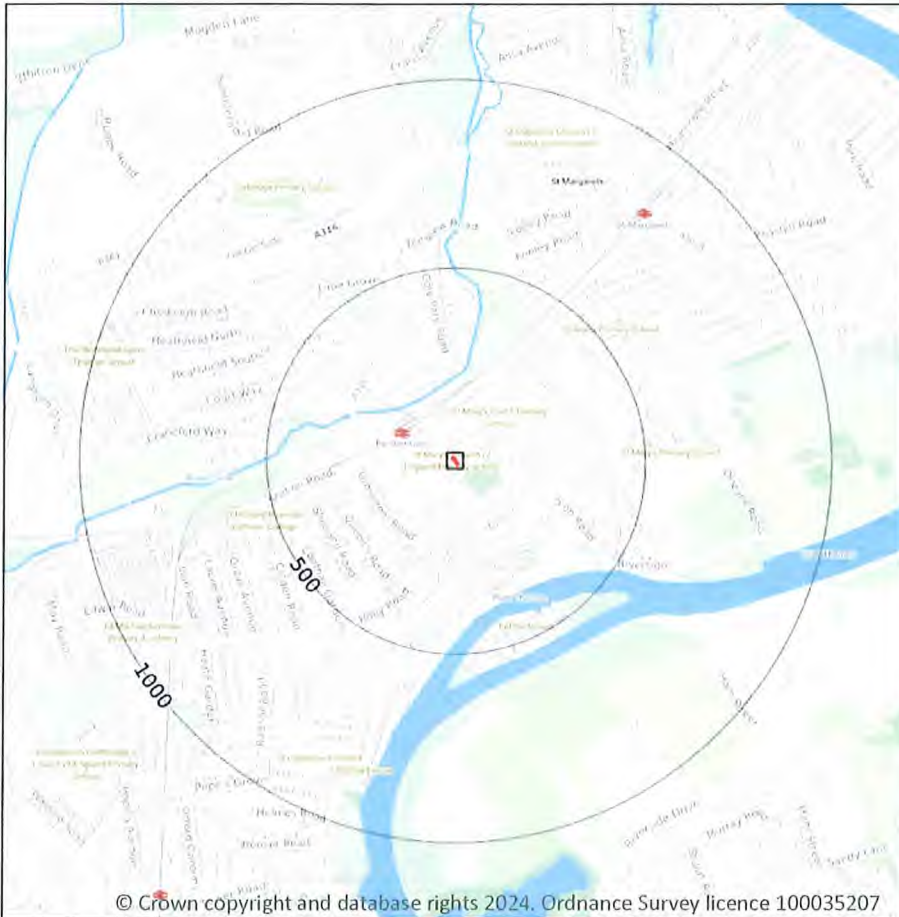
0

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



15.1 50k Availability

Records within 500m

1

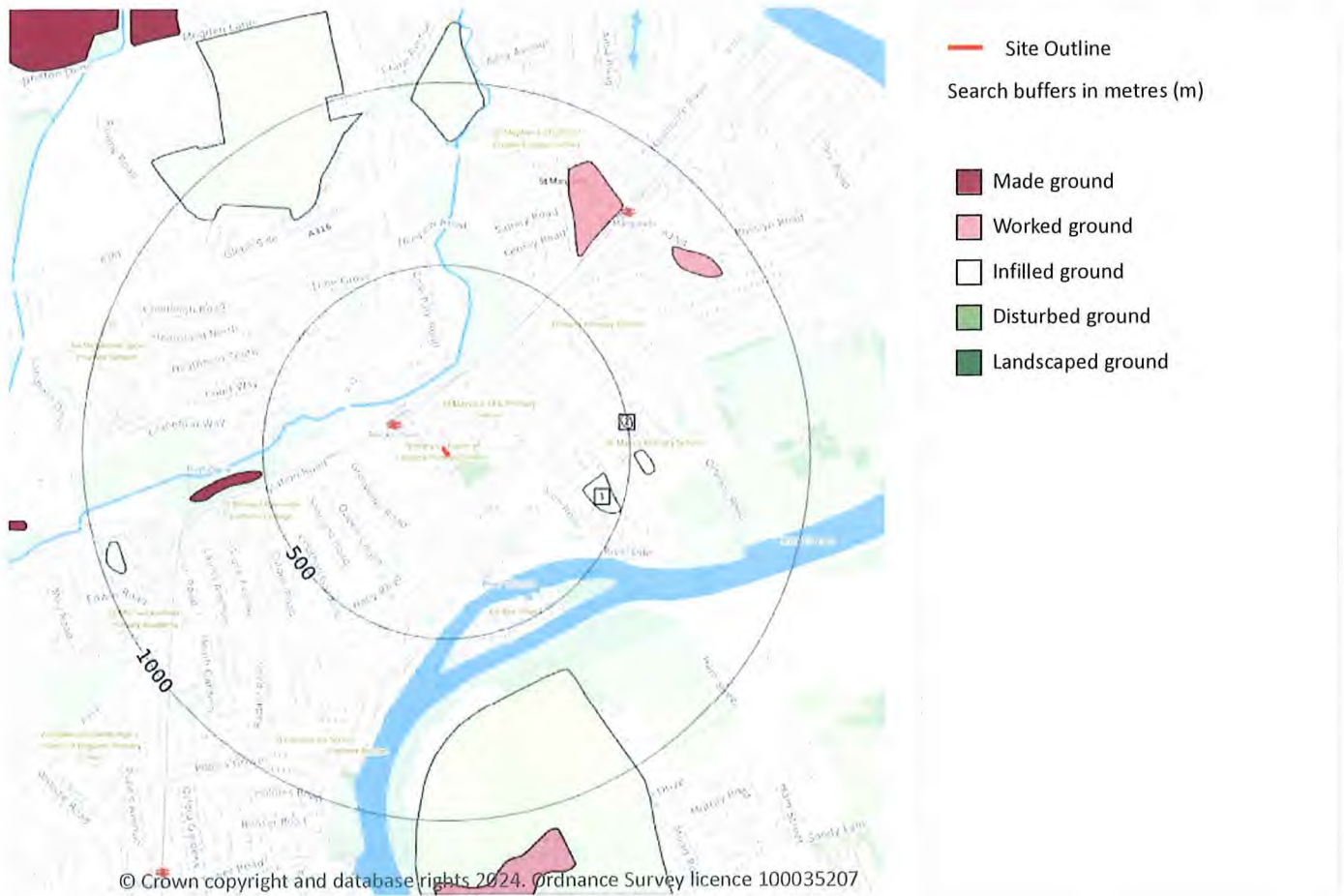
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on [page 93](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW270_south_london_v4

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Artificial and made ground



15.2 Artificial and made ground (50k)

Records within 500m

2

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on [page 94](#) >

ID	Location	LEX Code	Description	Rock description
1	381m E	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
2	484m E	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

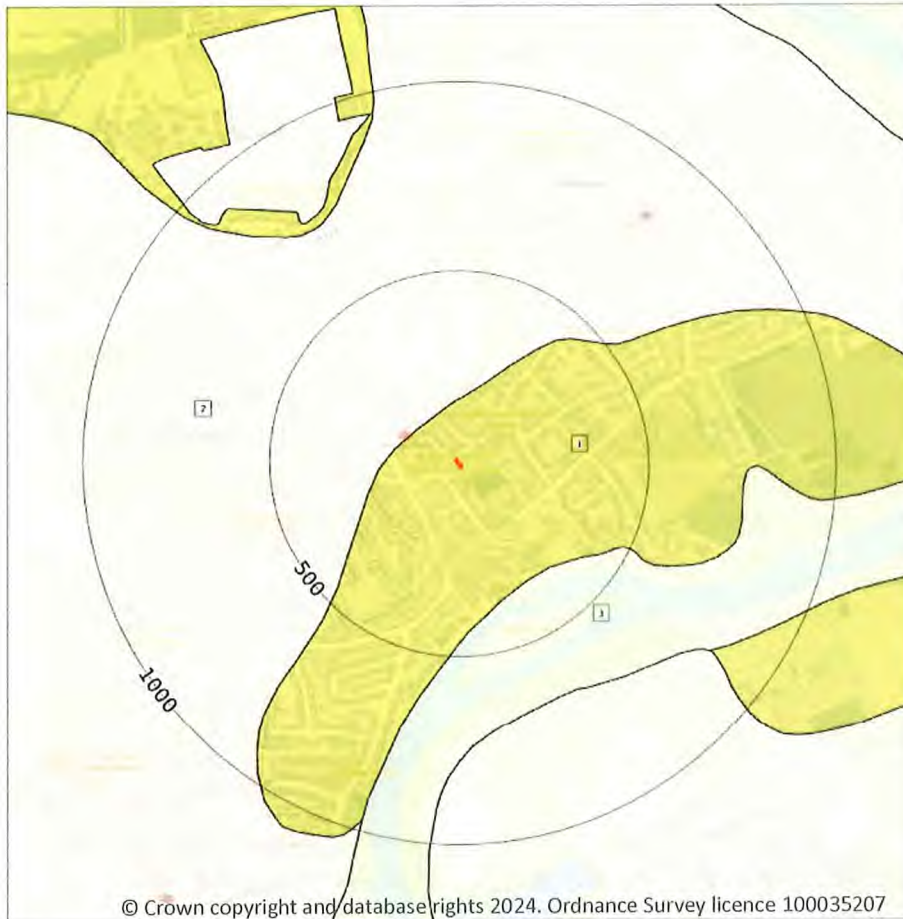
Records within 50m

0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial



- Site Outline
- Search buffers in metres (m)
- Landslip (50k)
- Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m

3

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on [page 96 >](#)

ID	Location	LEX Code	Description	Rock description
1	On site	LASI-XCZ	LANGLEY SILT MEMBER	CLAY AND SILT
2	128m NW	KPGR-XSV	KEMPTON PARK GRAVEL MEMBER	SAND AND GRAVEL
3	349m SE	ALV-XCZSP	ALLUVIUM	CLAY, SILT, SAND AND PEAT

This data is sourced from the British Geological Survey.



15.5 Superficial permeability (50k)

Records within 50m **1**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	Low	Very Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m **0**

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

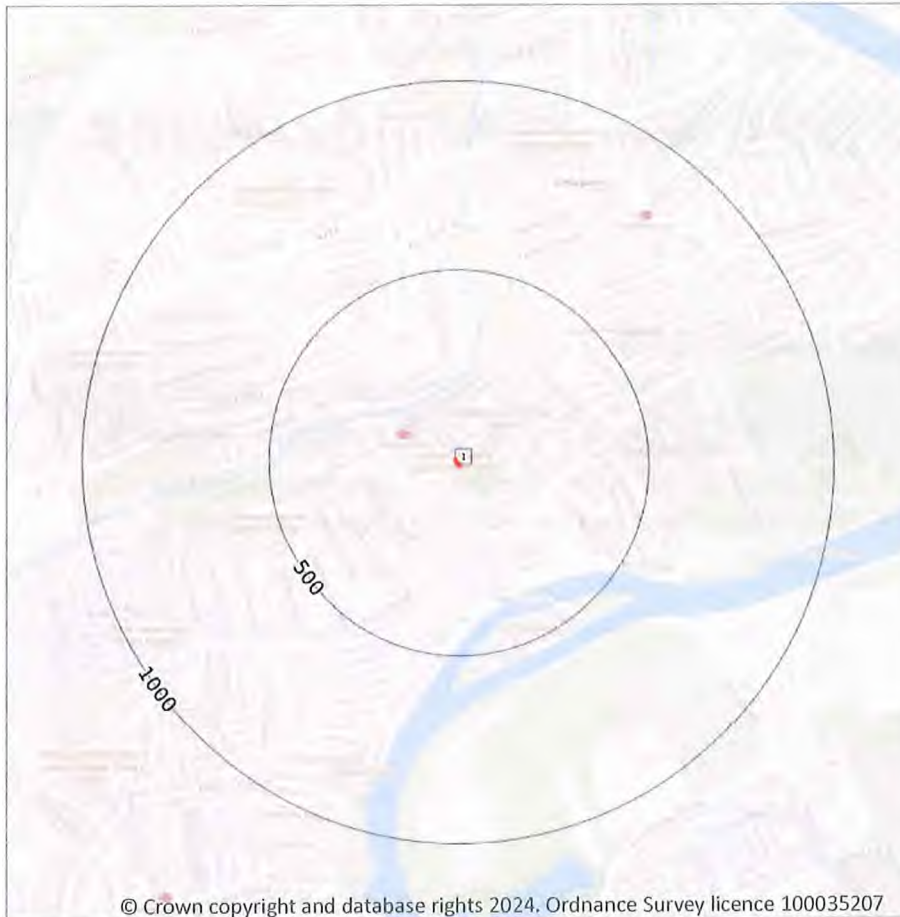
15.7 Landslip permeability (50k)

Records within 50m **0**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



- Site Outline
- Search buffers in metres (m)
- Bedrock faults and other linear features (50k)
- Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m

1

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 98](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	LC-XCZ	LONDON CLAY FORMATION - CLAY AND SILT	YPRESIAN

This data is sourced from the British Geological Survey.



15.9 Bedrock permeability (50k)

Records within 50m

1

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	Low	Very Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

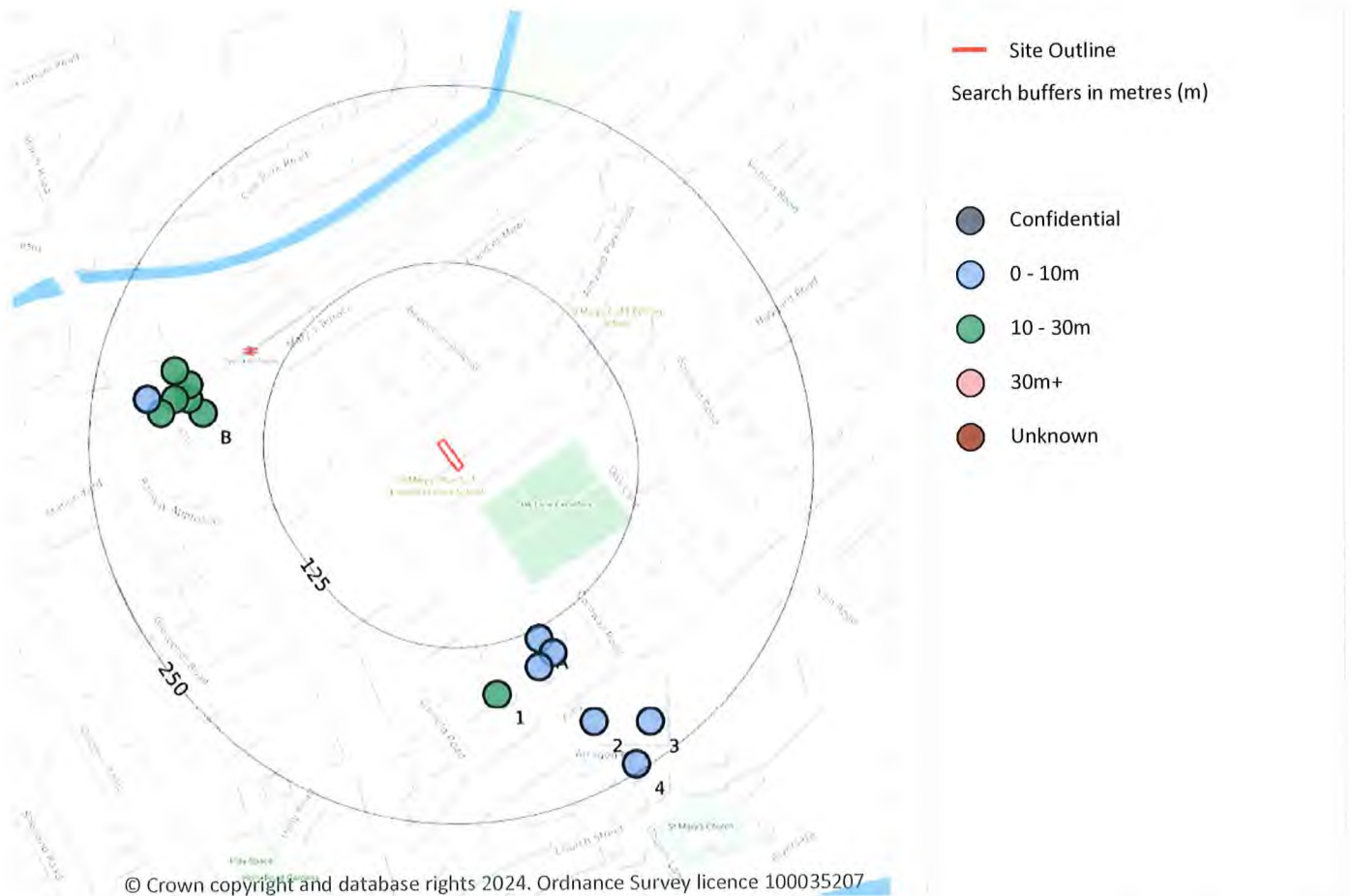
Records within 500m

0

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.

16 Boreholes



16.1 BGS Boreholes

Records within 250m

14

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on [page 100](#) >

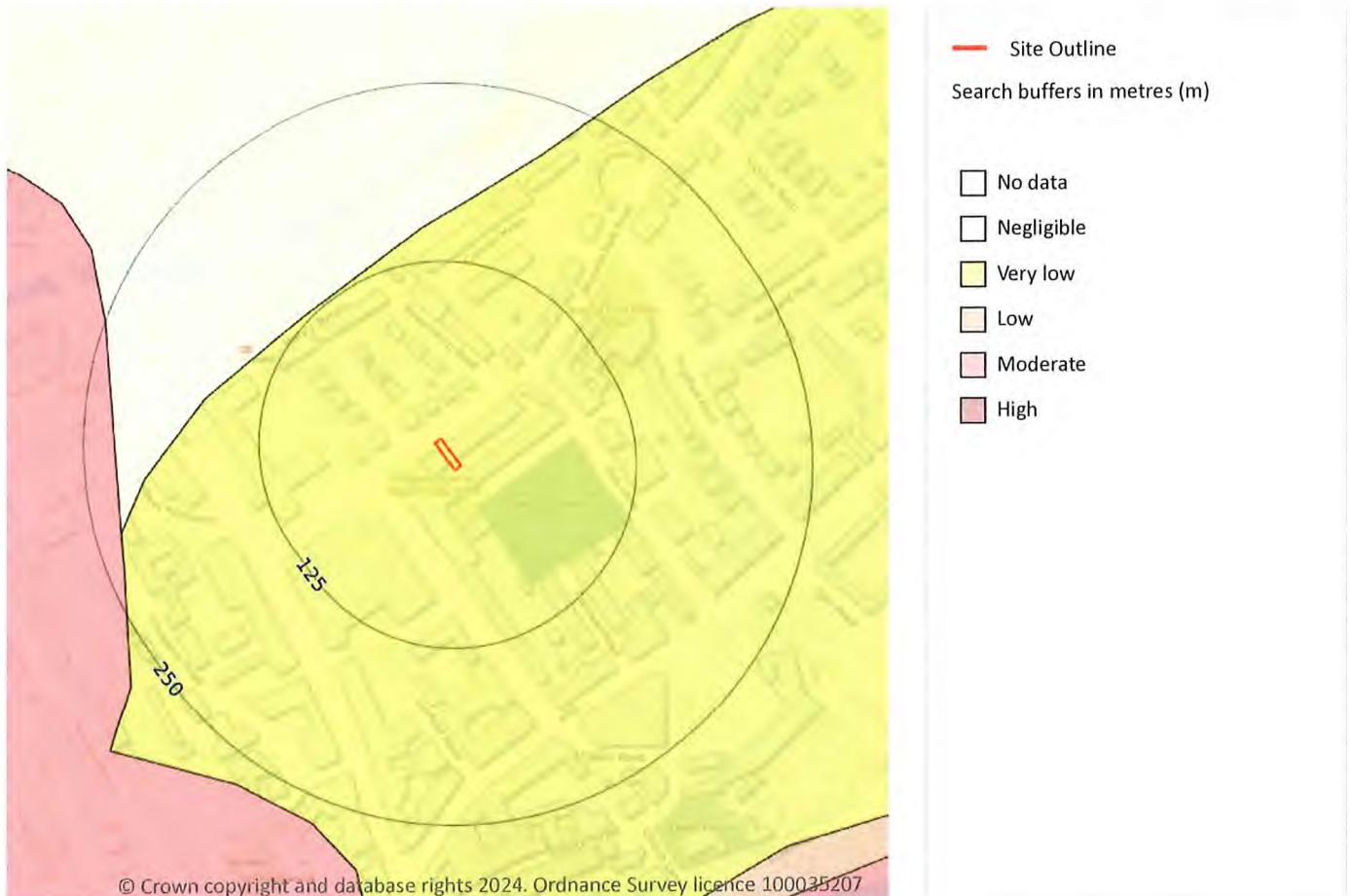
ID	Location	Grid reference	Name	Length	Confidential	Web link
A	132m SE	516370 173470	YORK STREET TWICKENHAM 1	7.0	N	15947100 ↗
A	145m SE	516380 173460	YORK STREET TWICKENHAM TP 1	2.0	N	15947101 ↗

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	150m SE	516370 173450	YORK STREET TWICKENHAM TP 2	1.0	N	15947102 ↗
1	161m S	516340 173430	T EXCH TWICKENHAM 1	25.0	N	581475 ↗
B	170m W	516130 173630	LONDON ROAD BRIDGE TWICKENHAM 7	18.29	N	581611 ↗
B	182m W	516120 173640	LONDON ROAD BRIDGE TWICKENHAM 4	12.19	N	581608 ↗
B	184m W	516120 173650	LONDON ROAD BRIDGE TWICKENHAM 2	18.29	N	581606 ↗
B	191m W	516110 173640	LONDON ROAD BRIDGE TWICKENHAM 5	18.29	N	581609 ↗
B	196m W	516110 173660	LONDON ROAD BRIDGE TWICKENHAM 1	18.29	N	581605 ↗
B	200m W	516100 173630	LONDON ROAD BRIDGE TWICKENHAM 6	12.19	N	581610 ↗
2	203m SE	516410 173410	TWICKENHAM NWH F5616 A	10.0	N	581579 ↗
B	211m W	516090 173640	LONDON ROAD BRIDGE TWICKENHAM 3	9.14	N	581607 ↗
3	225m SE	516450 173410	TWICKENHAM NWH F5616 B	10.0	N	581580 ↗
4	244m SE	516440 173380	TWICKENHAM NWH F5616 C	10.0	N	581581 ↗

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



17.1 Shrink swell clays

Records within 50m

1

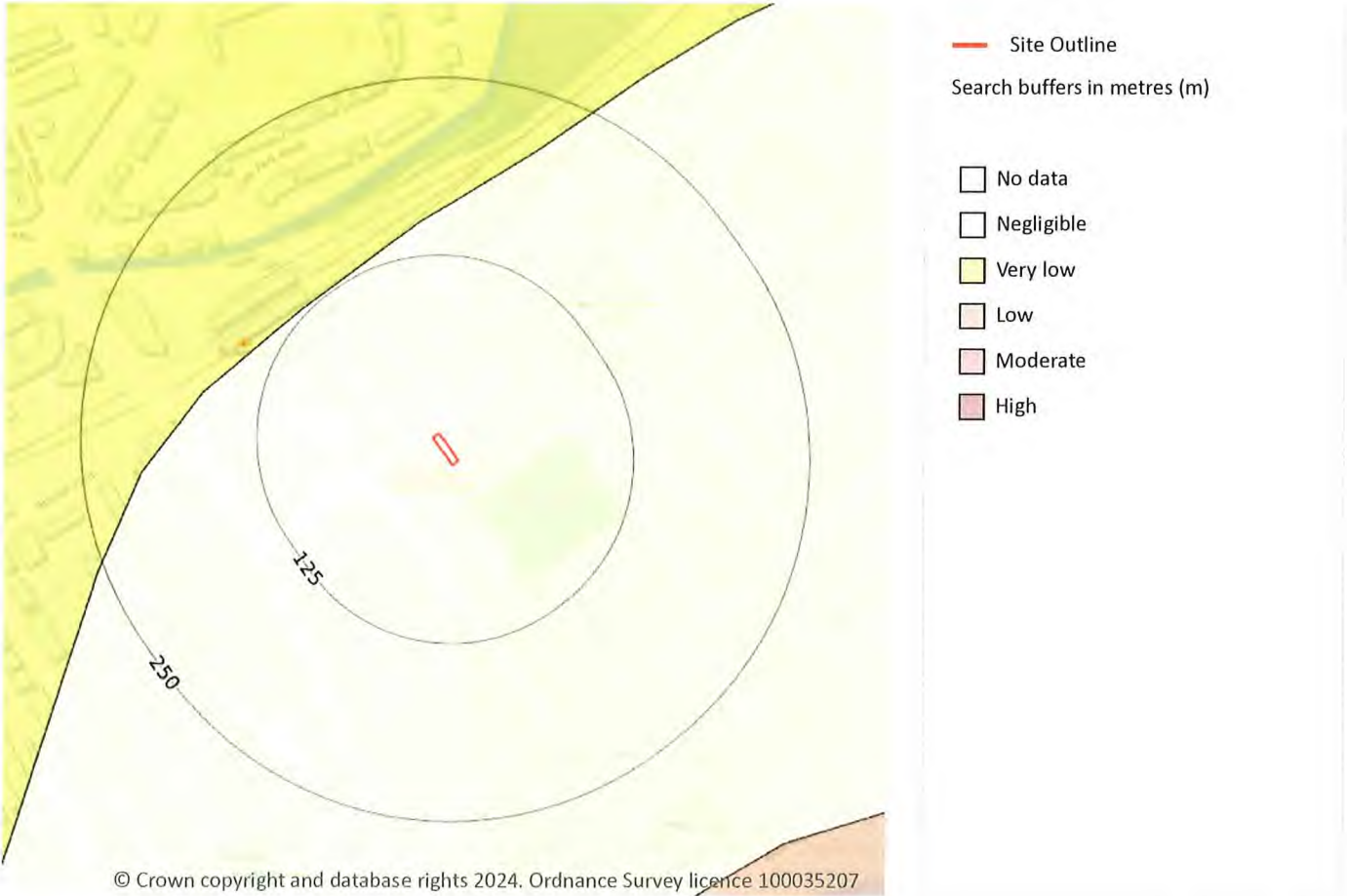
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 102](#) >

Location	Hazard rating	Details
On site	Very low	Ground conditions predominantly low plasticity.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



17.2 Running sands

Records within 50m

1

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on [page 103](#) >

Location	Hazard rating	Details
On site	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



17.3 Compressible deposits

Records within 50m

1

The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 104](#) >

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



- Site Outline
- Search buffers in metres (m)
- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.4 Collapsible deposits

Records within 50m

1

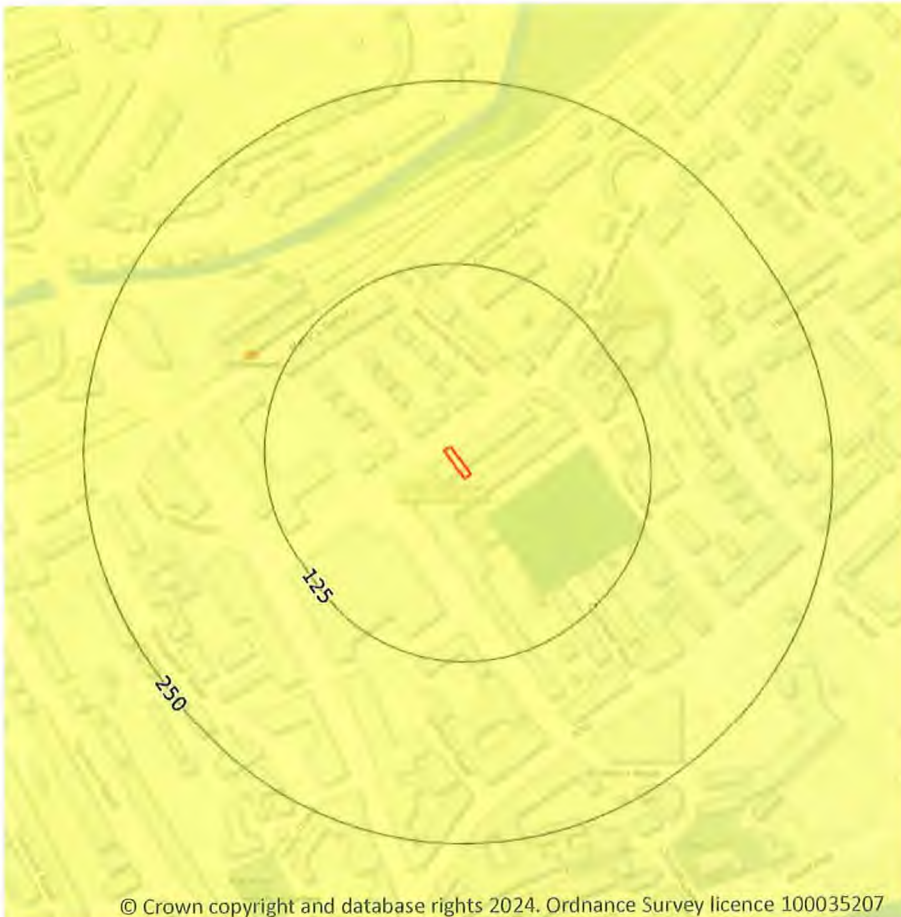
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 105 >](#)

Location	Hazard rating	Details
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



— Site Outline
Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.5 Landslides

Records within 50m

1

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

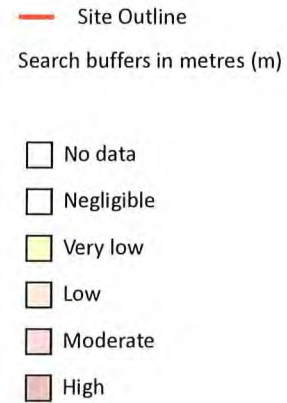
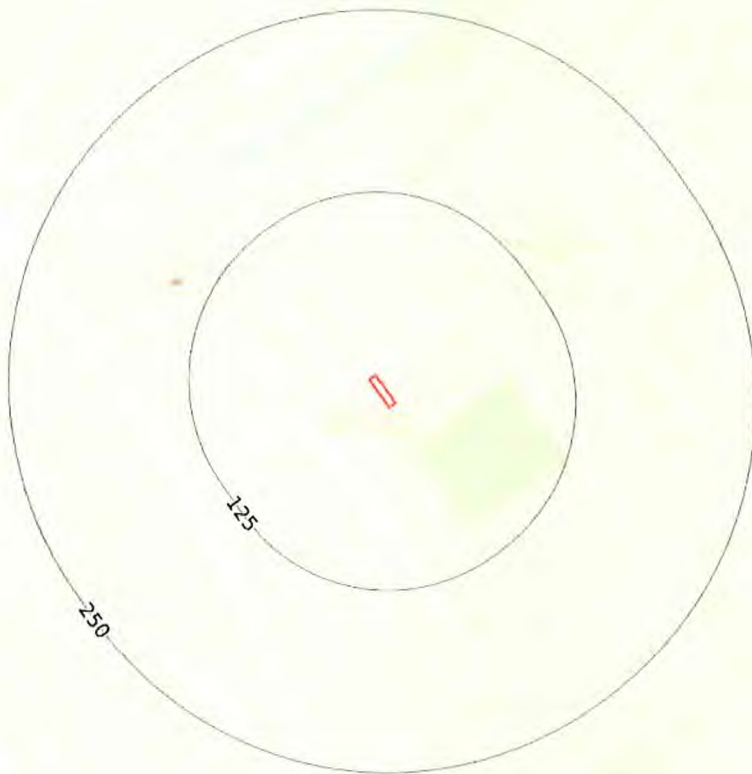
Features are displayed on the Natural ground subsidence - Landslides map on [page 106](#) >

Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



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17.6 Ground dissolution of soluble rocks

Records within 50m

1

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

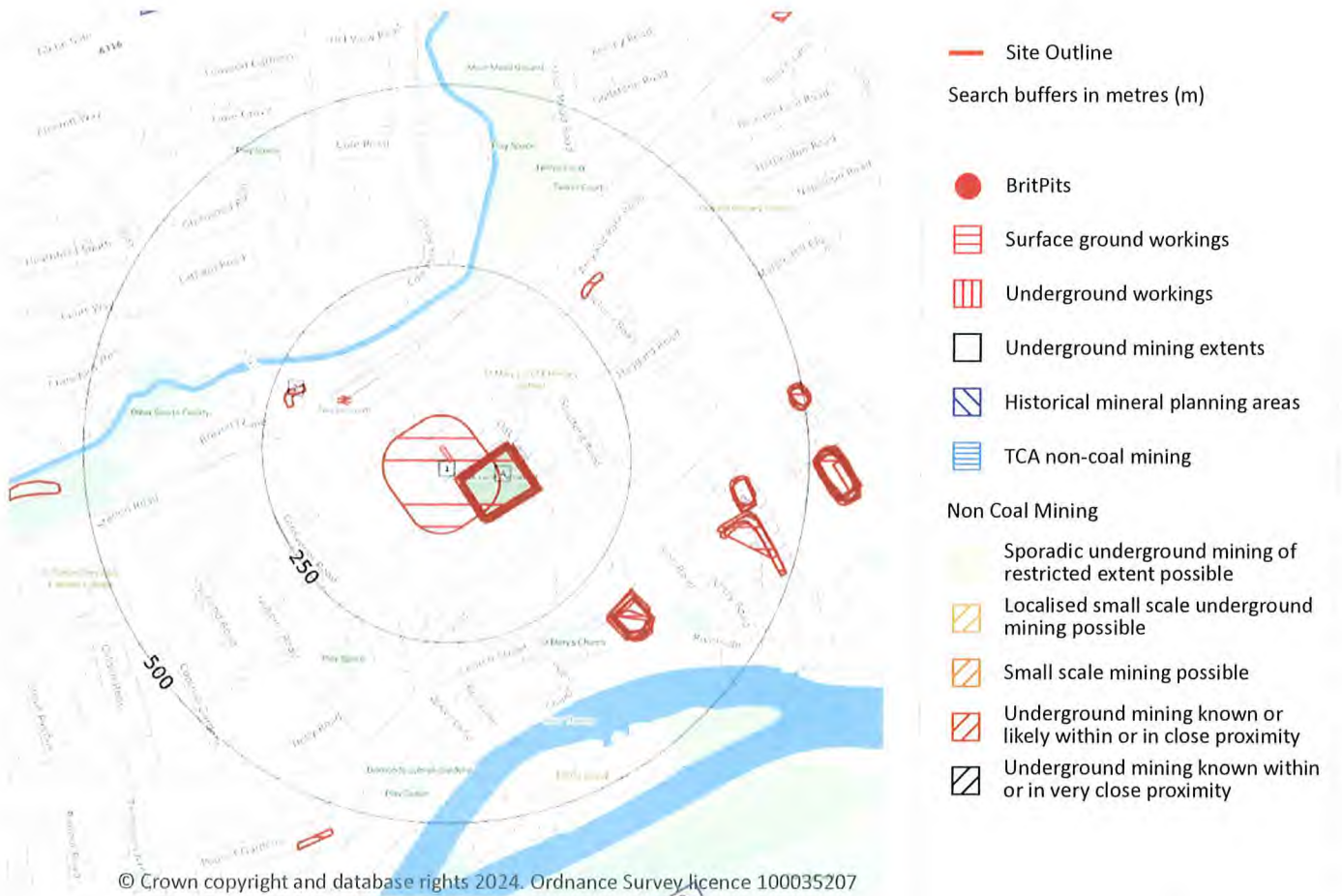
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 107 >](#)

Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

This data is sourced from the British Geological Survey.



18 Mining and ground workings



18.1 BritPits

Records within 500m

0

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m

13

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining and ground workings map on [page 109](#) >

ID	Location	Land Use	Year of mapping	Mapping scale
1	On site	Grave Yard	1865	1:10560
A	22m SE	Disused Cemetery	1933	1:10560
A	23m SE	Disused Cemetery	1938	1:10560
A	23m SE	Disused Cemetery	1912	1:10560
A	24m SE	Disused Cemetery	1938	1:10560
A	24m SE	Disused Cemetery	1912	1:10560
A	26m SE	Cemetery	1991	1:10000
A	26m SE	Cemetery	1973	1:10000
A	29m SE	Cemetery	1935	1:10560
A	31m SE	Cemetery	1966	1:10560
A	31m SE	Disused Cemetery	1948	1:10560
A	34m SE	Disused Cemetery	1912	1:10560
2	205m NW	Unspecified Ground Workings	1896	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m

0

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

This is data is sourced from Ordnance Survey/Groundsure.



18.4 Underground mining extents

Records within 500m

0

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

0

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

0

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site

0

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m

0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the



Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m

0

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m

0

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m

0

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.12 Coal mining

Records on site

0

Areas which could be affected by past, current or future coal mining.

This data is sourced from the Coal Authority.



18.13 Brine areas

Records on site 0

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.

18.14 Gypsum areas

Records on site 0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site 0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site 0

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m

0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m

0

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m

0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m

0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.



This data is sourced from Groundsure.

19.5 National karst database

Records within 500m

0

This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

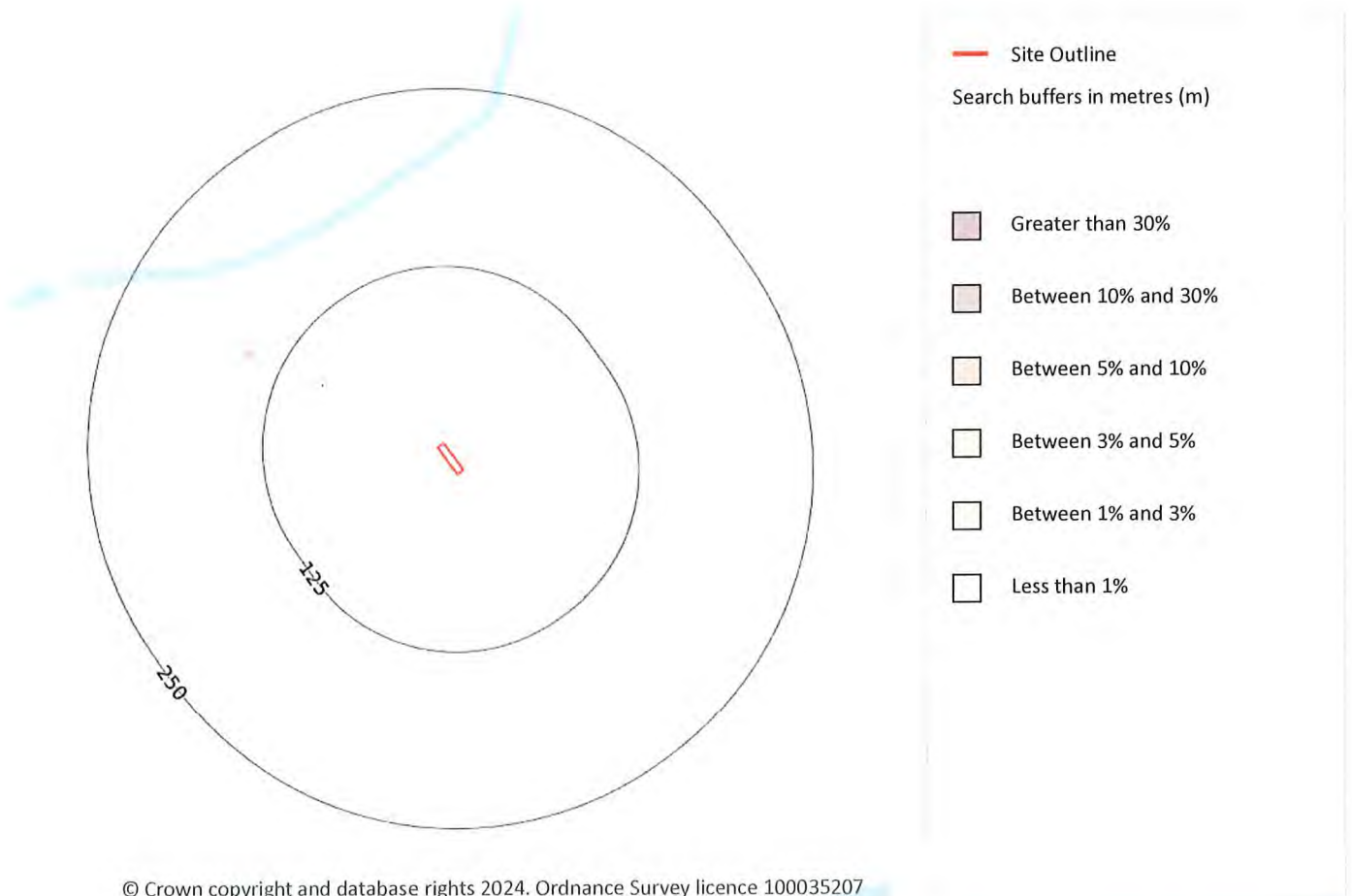
Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over 800 caves, 1300 stream sinks, 5600 springs, 10,000 sinkholes.

The database is not yet complete, and not all records have been verified. The absence of data does not mean that karst features are not present at a site. A reliability rating is included with each record.

This data is sourced from the British Geological Survey.



20 Radon



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20.1 Radon

Records on site

1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on [page 116 >](#)

Location	Estimated properties affected	Radon Protection Measures required
On site	Less than 1%	None

This data is sourced from the British Geological Survey and UK Health Security Agency.



21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m

1

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	No data	No data	No data	No data	No data	No data	No data

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

4

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km²).

Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
On site	17	3	457	314	0.8	72	47	23	22
On site	17	3	504	346	0.9	71	49	24	19
On site	18	3.2	488	335	0.8	67	50	25	27
3m W	18	3.2	461	317	0.8	66	48	24	30

This data is sourced from the British Geological Survey.



21.3 BGS Measured Urban Soil Chemistry

Records within 50m

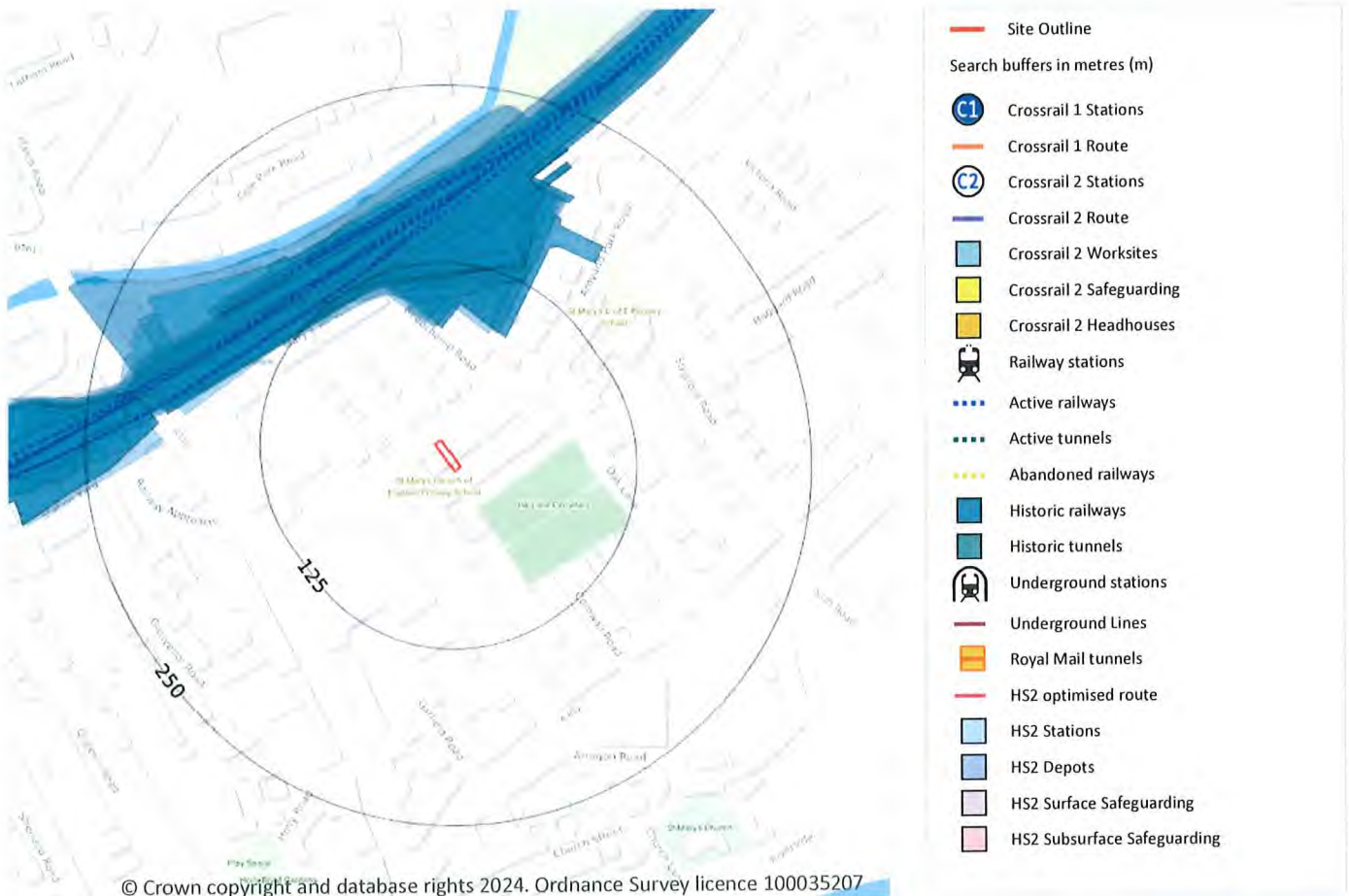
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The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

This data is sourced from the British Geological Survey.



22 Railway infrastructure and projects



22.1 Underground railways (London)

Records within 250m

0

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m

0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.



This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m

54

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

Features are displayed on the Railway infrastructure and projects map on [page 120](#) >

Location	Land Use	Year of mapping	Mapping scale
79m N	Railway Sidings	1973	10000
79m N	Railway Sidings	1966	10560
79m N	Railway Sidings	1948	10560
80m N	Railway	1893	-
80m N	Railway Sidings	1894	10560
82m N	Railway Sidings	1912	10560
99m N	Railway Sidings	1912	10560
108m N	Railway Sidings	1894	10560
110m N	Railway	1913	-
111m N	Railway	1932	-
111m NW	Railway Sidings	1938	10560
113m N	Railway Sidings	1898	10560
113m N	Railway Sidings	1933	10560
114m N	Railway Sidings	1898	2500
115m N	Railway Sidings	1938	10560
115m N	Railway Sidings	1912	10560
117m N	Railway Sidings	1935	10560



Location	Land Use	Year of mapping	Mapping scale
117m N	Railway Sidings	1915	2500
117m N	Railway Sidings	1935	2500
119m N	Railway Sidings	1896	2500
119m NW	Railway Sidings	1959	2500
119m N	Railway Sidings	1896	10560
120m N	Railway Sidings	1967	1250
120m N	Railway Sidings	1959	1250
120m N	Railway Sidings	1973	-
121m NW	Railway Sidings	1991	10000
123m N	Railway	1897	-
125m NW	Railway Sidings	1865	2500
129m NW	Railway Sidings	1898	10560
130m NW	Railway Sidings	1996	1250
134m NW	Railway Sidings	1896	10560
151m NW	Railway Sidings	1980	1250
151m NW	Railway Sidings	1988	1250
152m NW	Railway Sidings	1996	1250
152m NW	Railway Sidings	1991	1250
152m NW	Railway Sidings	1973	-
152m NW	Railway Sidings	1959	2500
152m NW	Railway Sidings	1959	2500
169m W	Railway	1932	-
173m W	Railway	1913	-
173m W	Railway	1868	-
198m W	Railway Sidings	1991	10000
198m W	Railway Sidings	1973	10000
198m W	Railway Sidings	1966	10560
198m W	Railway Sidings	1948	10560



Location	Land Use	Year of mapping	Mapping scale
202m W	Railway Sidings	1865	10560
217m W	Railway Sidings	1865	2500
217m W	Railway Sidings	1896	2500
219m W	Railway Sidings	1938	10560
219m W	Railway Sidings	1912	10560
221m W	Railway Sidings	1896	10560
223m W	Railway Sidings	1934	2500
244m N	Railway Sidings	1973	-
246m W	Railway Sidings	1912	10560

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m

0

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.

This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m

0

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m

31

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways. Features are displayed on the Railway infrastructure and projects map on [page 120 >](#)



Location	Name	Type
128m NW	Waterloo to Reading Line	rail
129m NW	Not given	Single Track
131m NW	Not given	Single Track
133m N	Not given	Single Track
138m N	Not given	Single Track
140m NW	Waterloo to Reading Line	rail
142m NW	Not given	Multi Track
143m NW	Not given	Multi Track
143m NW		rail
143m NW	Not given	Multi Track
147m NW	Not given	Multi Track
153m NW	Not given	Single Track
156m NW		rail
156m NW	Not given	Single Track
157m NW	Not given	Single Track
159m NW		rail
159m NW	Not given	Single Track
165m NW	Not given	Multi Track
167m N	Not given	Single Track
170m N	Not given	Single Track
174m W	Not given	Single Track
188m N	Not given	Multi Track
192m N	Not given	Single Track
195m N	Not given	Single Track
205m W		rail
205m W	Kingston Loop Line	rail
207m N	Not given	Multi Track
208m W	Not given	Single Track



Location	Name	Type
218m W	Not given	Multi Track
219m N	Not given	Multi Track
245m N		rail

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 1

Records within 500m **0**

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

22.9 Crossrail 2

Records within 500m **0**

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

22.10 HS2

Records within 500m **0**

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 Ltd.



Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see <https://www.groundsure.com/sources-reference> ↗.

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APPENDIX 3 – OS HISTORICAL MAPS

Site Details:

26, AMYAND PARK ROAD,
TWICKENHAM, RICHMOND
UPON THAMES, TW1 3HE

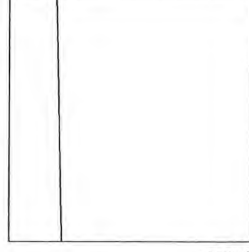
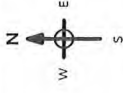
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Grid Ref: 516307, 173599

Map Name: County Series

Map date: 1840

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1840
Revised 1840
Edition N/A
Copyright N/A
Levelled N/A

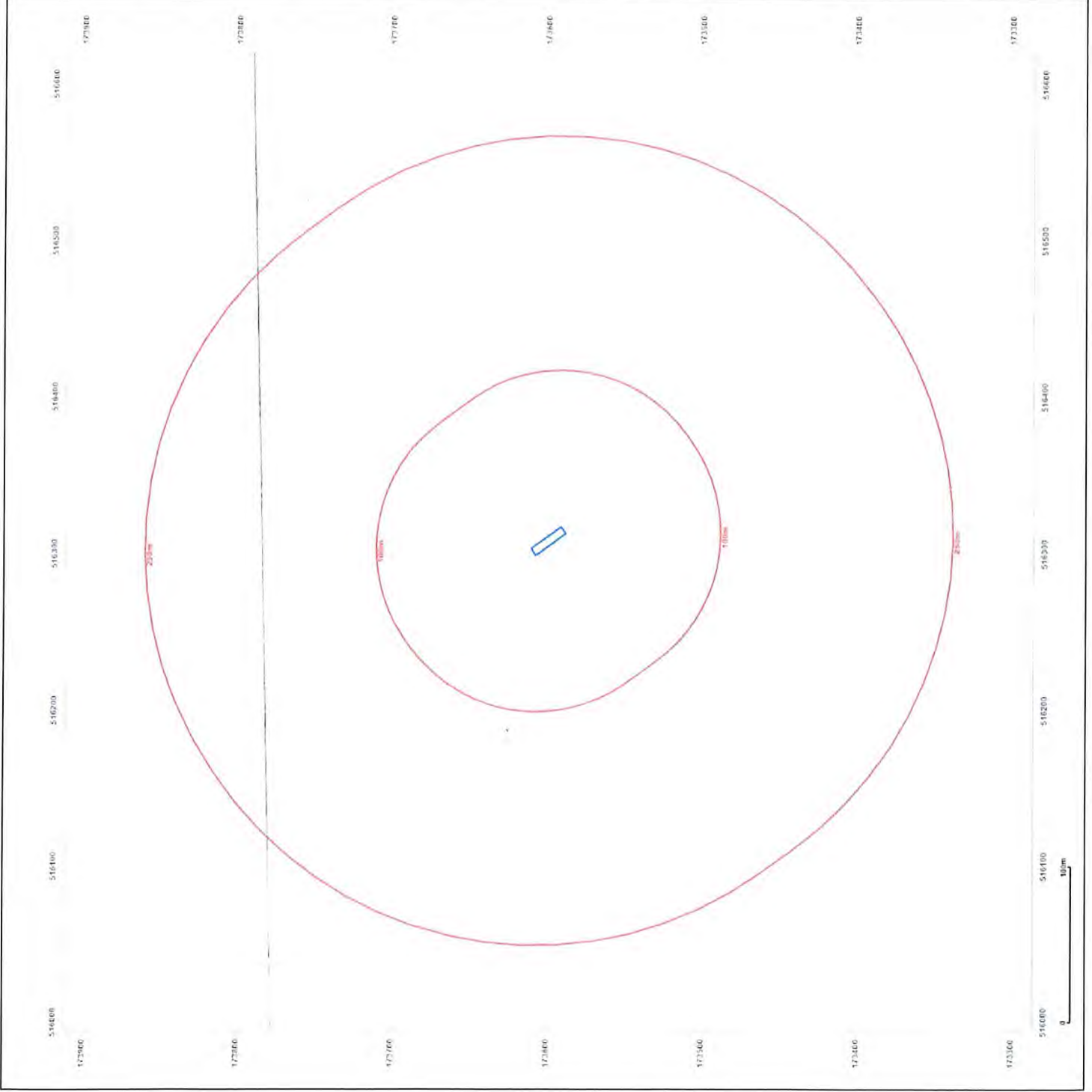


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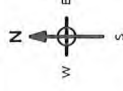
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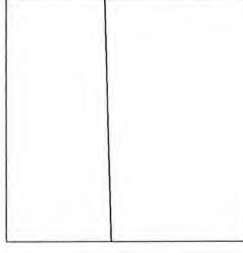
Map date: 1865

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1865
Revised 1865
Edition N/A
Copyright N/A
Levelled N/A

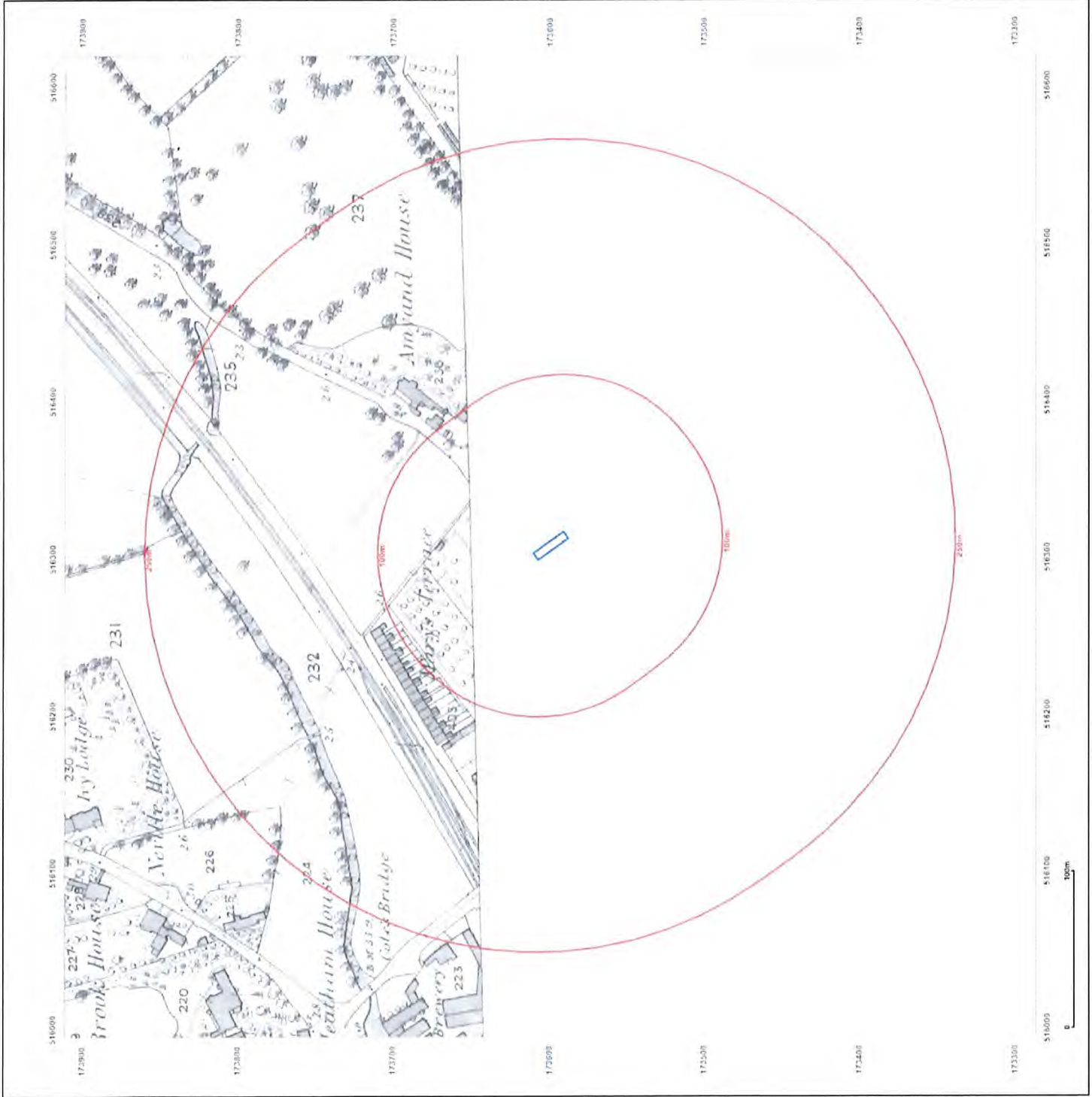


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Map Name: County Series

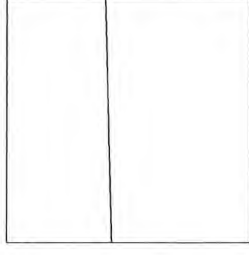
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Printed at: 1:2,500



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Revised 1865
Edition N/A
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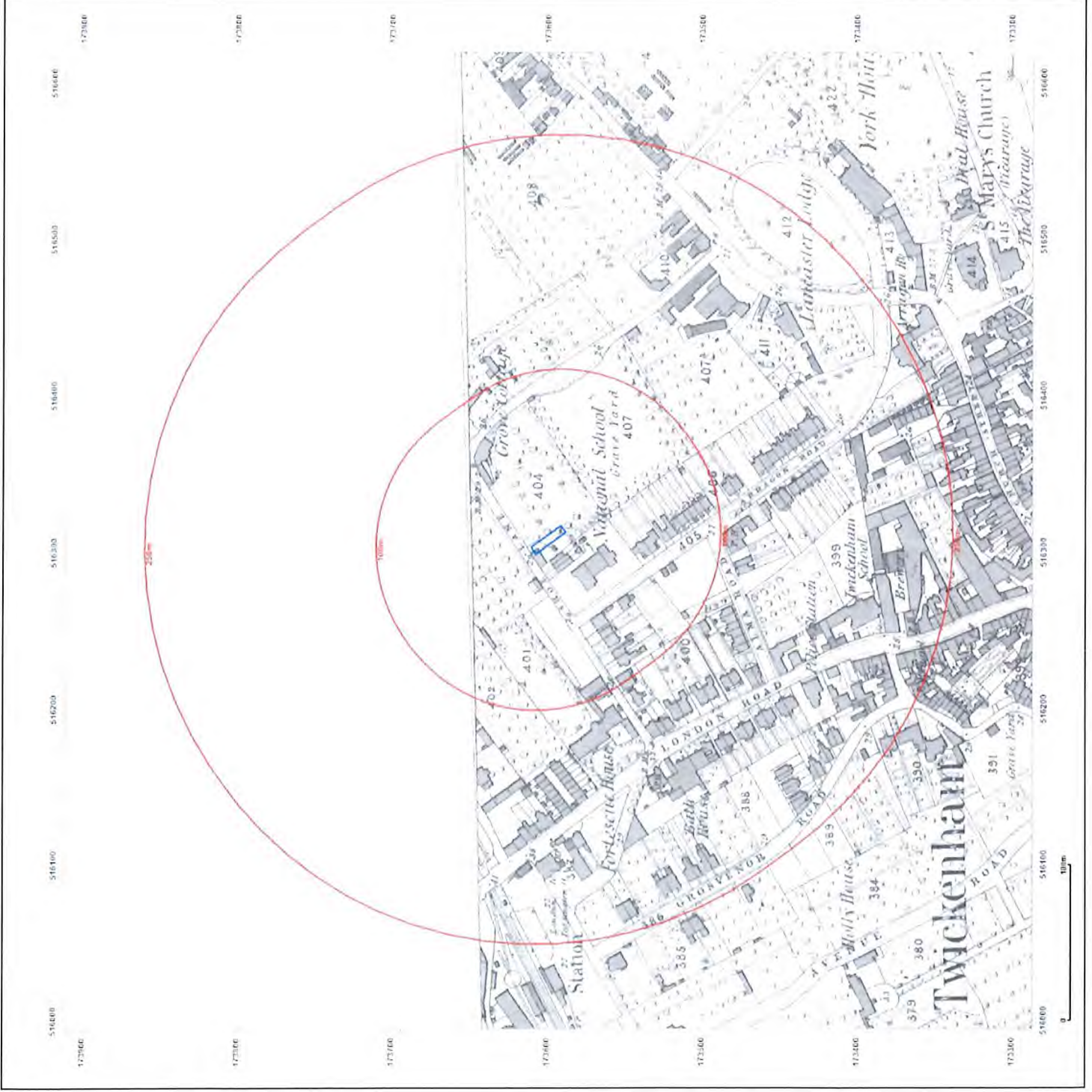


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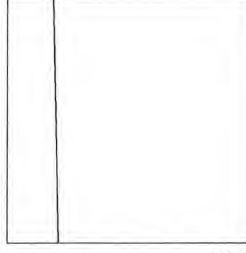
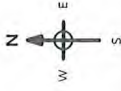
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Grid Ref: 516307, 173599

Map Name: County Series

Map date: 1868

Scale: 1:2,500

Printed at: 1:2,500



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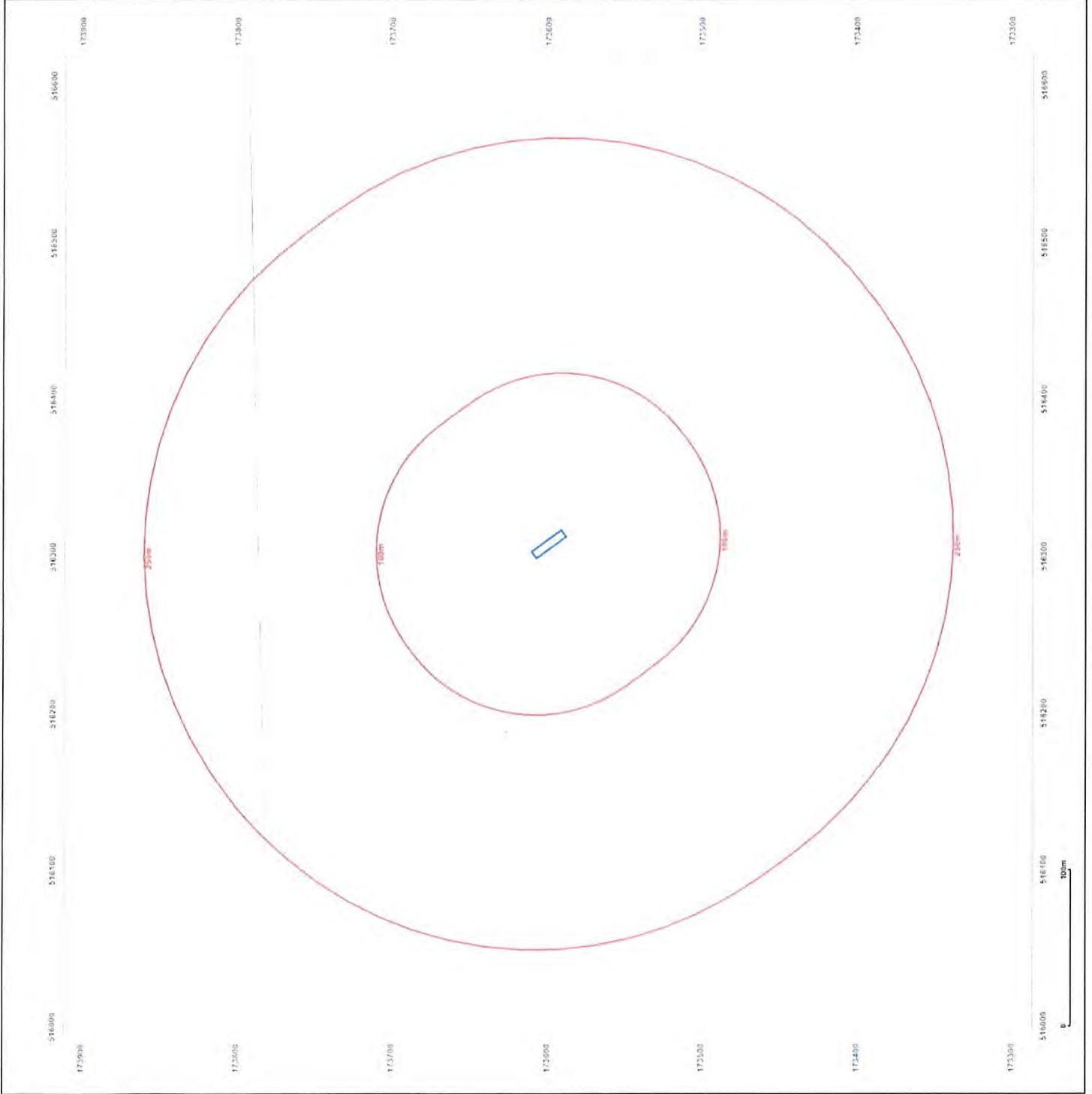


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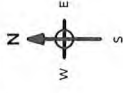
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Map Name: 1056 Scale Town Plan

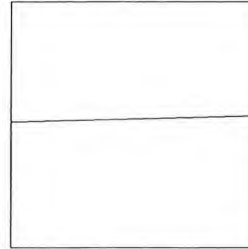
Map date: 1896

Scale: 1:1,056

Printed at: 1:1,056



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Report Ref: GS-J8Q-TRJ-Y52-DNR
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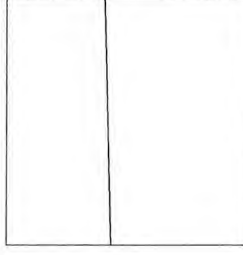
Map date: 1896

Scale: 1:2,500

Printed at: 1:2,500



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