

Example Report BGS Wallingford

Site Investigation Borehole:

This report contains the geological succession derived from 1:10 000 data (where available) at a specific point. This includes geological map extracts for the surrounding area taken from the digital geological map of Great Britain at 1:10,000 scale (BGS Geology 10k) where available, otherwise at 1:50,000 scale (BGS Geology 50k).

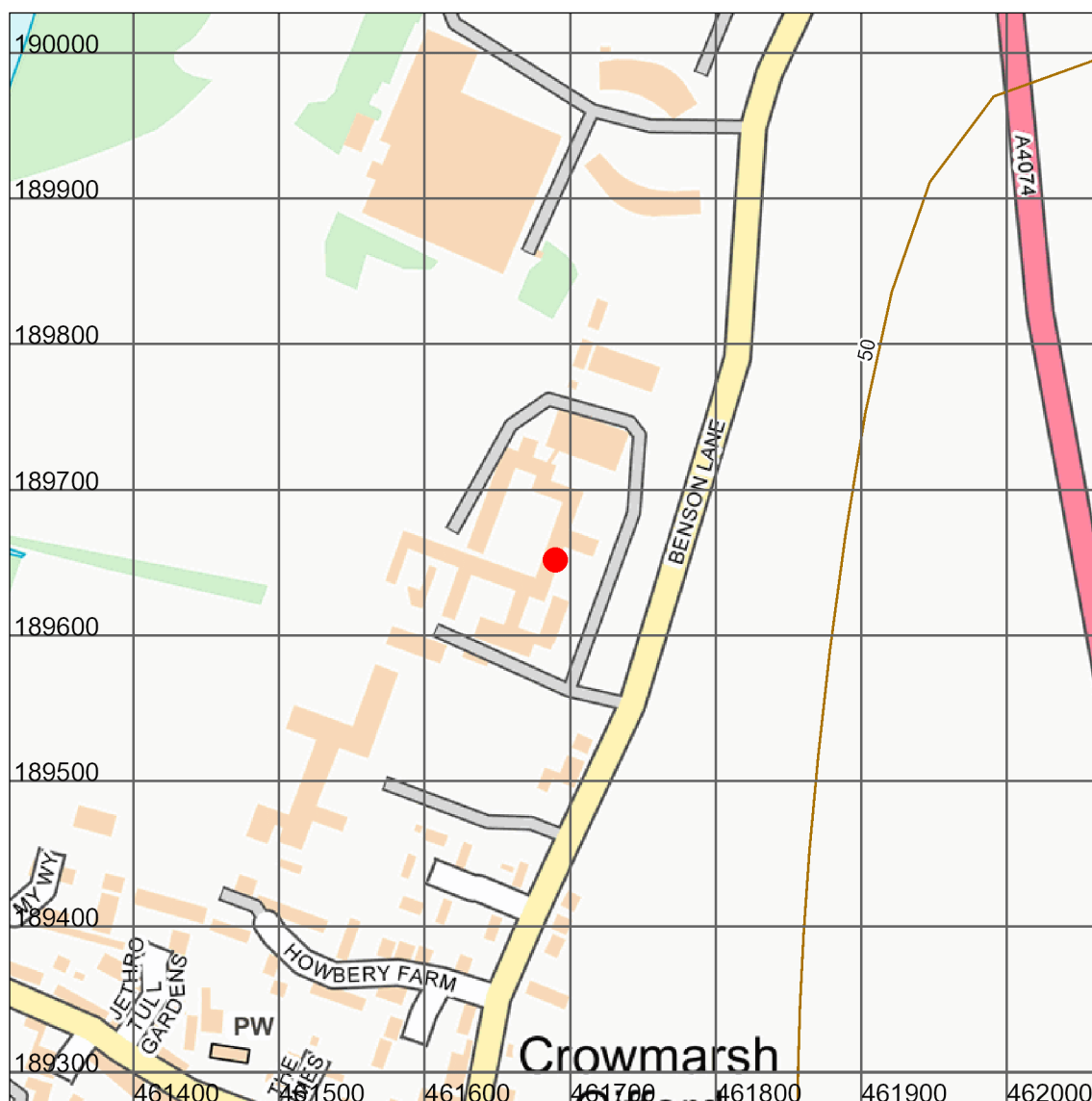
Modules:

Geological Map Extracts
Borehole Prognosis (point)
Geoscience Data List

Report Id: *GR_999999/1*

Client reference:

Search location



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Search location indicated in red

Site Address:

British Geological Survey
Wallingford

Point centred at: 461690,189652

Geological Map Extracts 1:10,000 Scale

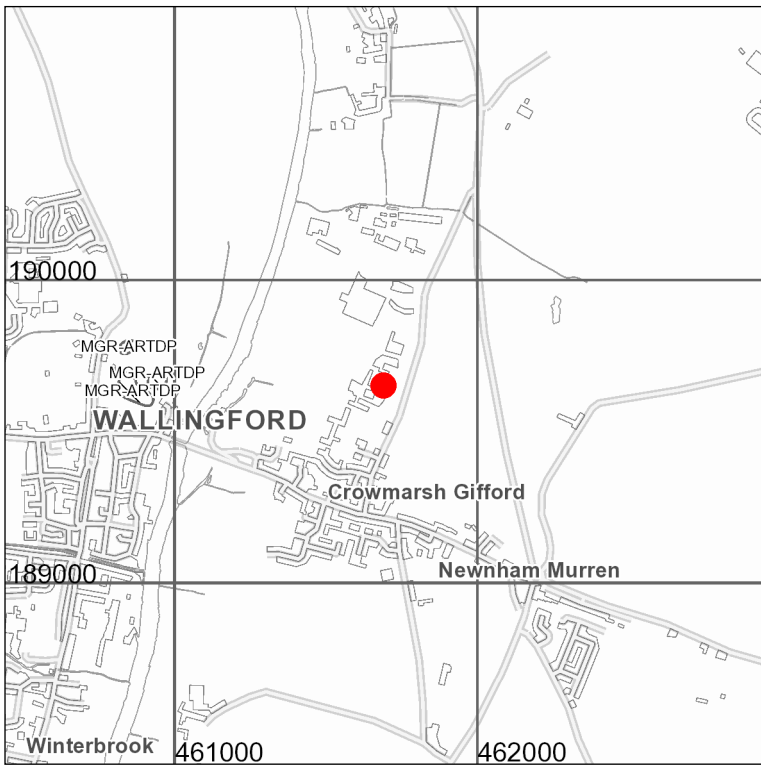
This part of the report contains extracts of geological maps taken from the 1:10 000 scale BGS Digital Geological Map of Great Britain (BGS Geology 10k). The geological information in BGS Geology is divided into four themes: artificial ground, landslide deposits, superficial deposits and bedrock, shown here in separate maps. The fifth 'combined geology' map superimposes all four of these themes, to show the uppermost geological formations.

More information about BGS Geology 10k is available here http://www.bgs.ac.uk/products/digitalmaps/DiGMapGB_10.html and information on the BGS geological classification schemes here <http://www.bgs.ac.uk/bgsrscs/>. The maps are labelled with two-part computer codes that indicate the name of the geological unit and its composition. Descriptions of the units listed in the map keys may be available in the BGS Lexicon of Named Rock Units (<http://www.bgs.ac.uk/lexicon/>). If available, these descriptions can be found by searching against the first part of the computer code used on the maps. Please consult the legend and the codes on the map in areas of complex geology. If in doubt, please contact BGS Enquiries for clarification.

In the map legends the geological units are listed in order of their age, as defined in the BGS Lexicon, with the youngest first. However, where units are of the same defined age they are listed alphabetically and this may differ from the actual geological sequence.

Artificial ground

This is ground at or near the surface that has been modified by man. It includes ground that has been deposited (Made Ground) or excavated (Worked Ground), or some combination of these: Landscaped Ground or Disturbed Ground.




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Scale: 1:25 000 (1cm = 250 m)

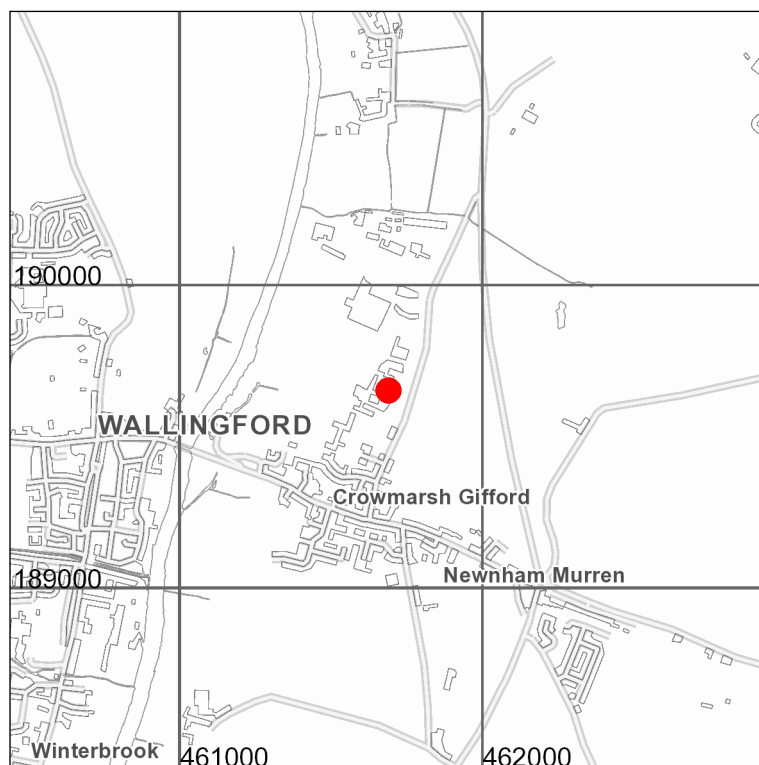
Search area indicated in red

Key to Artificial ground:

Map colour	Computer Code	Name of geological unit	Composition
	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

Landslide deposits

These are deposits formed by localised mass-movement of soils and rocks on slopes under the action of gravity. Landslides may occur within the bedrock, superficial deposits or artificial ground; and the landslide deposits may themselves be artificially modified.



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Scale: 1:25 000 (1cm = 250 m)

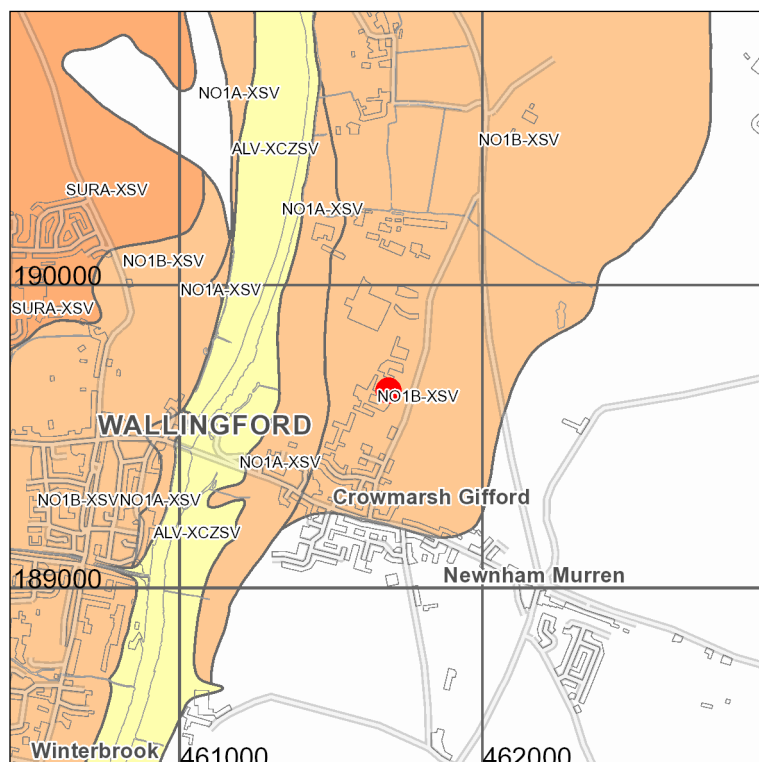
Search area indicated in red

Key to Landslide deposits:

No deposits found in the search area

Superficial deposits

These are relatively young geological deposits, formerly known as 'Drift', which lie on the bedrock in many areas. They include deposits such as unconsolidated sands and gravels formed by rivers, and clayey tills formed by glacial action. They may be overlain by landslide deposits or by artificial deposits, or both.



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Scale: 1:25 000 (1cm = 250 m)

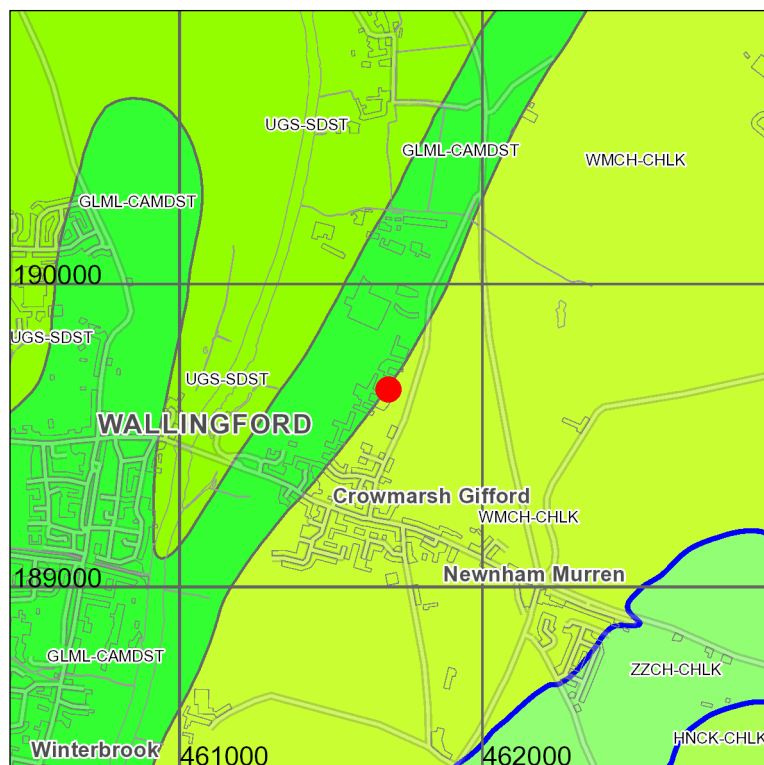
Search area indicated in red

Key to Superficial deposits:



Map colour	Computer Code	Name of geological unit	Composition
	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
	SURA-XSV	SUMMERTOWN-RADLEY SAND AND GRAVEL MEMBER	SAND AND GRAVEL
	NO1A-XSV	NORTHMOOR SAND AND GRAVEL MEMBER, LOWER FACET	SAND AND GRAVEL
	NO1B-XSV	NORTHMOOR SAND AND GRAVEL MEMBER, UPPER FACET	SAND AND GRAVEL

Bedrock

Bedrock forms the ground underlying the whole of an area, commonly overlain by superficial deposits, landslide deposits or artificial deposits, in any combination. The bedrock formations were formerly known as the 'Solid Geology'.








Search area indicated in red

-  Fault
-  Coal, ironstone or mineral vein

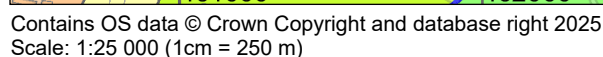
Note: Faults are shown for illustration and to aid interpretation of the map. Because these maps are generalised from more detailed versions not all such features are shown and their absence on the map face does not necessarily mean that none are present. Coals, ironstone beds and mineral veins occur only in certain rock types and regions of the UK; if present here, they will be described under 'bedrock' below.

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Scale: 1:25 000 (1cm = 250 m)

Key to Bedrock geology:

Map colour	Computer Code	Name of geological unit	Rock type
	GLML-CAMDST	GLAUCONITIC MARL MEMBER	CALCAREOUS MUDSTONE
	HNCK-CHLK	HOLYWELL NODULAR CHALK FORMATION AND NEW PIT CHALK FORMATION (UNDIFFERENTIATED)	CHALK
	WMCH-CHLK	WEST MELBURY MARLY CHALK FORMATION	CHALK
	ZZCH-CHLK	ZIG ZAG CHALK FORMATION	CHALK
	UGS-SDST	UPPER GREENSAND FORMATION	SANDSTONE

This map shows all the geological themes from the previous four maps overlaid in order of age.



Please see the Keys to the Artificial, Landslide, Superficial and Bedrock geology maps.



Borehole Prognosis

This module provides an evaluation of the expected geological sequence beneath a site to a depth appropriate for the specified use. This interpretation is based on the information available in the surrounding area. Due to natural geological variation the conditions encountered on drilling may differ. This module does not cover the possibility of artesian conditions or gas being encountered. (Information on artesian conditions is included in the 'Groundwater abstraction' and 'Hydrogeology – non abstraction' modules).

Setting:

The site lies at an elevation of about 48 m above Ordnance Datum (OD) on the edge of the village of Crowmarsh Gifford. The proposed borehole site lies about 450 m east of the River Thames that flows approximately north to south at an elevation of about 44 m above OD. The site is about 300 m east of the Thames flood plain. There are open drains in places on the nearby flood plain, and also a longer open drain flowing from east to west, about 500 m north of the site.



Geology

It is anticipated that the following succession of strata will be encountered in a deep borehole below the site:

Unit	Typical composition	Potential for difficult ground i.e possible running sands possible undermining or possible dissolution	Thickness in metres	Depth in metres to the base of the unit
Artificial ground				
Made Ground	Unknown		Up to 1 m	Less than 1 m
Superficial deposits				
Northmoor Sand and Gravel Member (upper facet)	Sand and gravel	Possible running sands	Up to 5 m	Less than 6 m
Bedrock (below rockhead)				
West Melbury Marly Chalk Formation	Grey marly (clay-rich) chalk with thin limestone beds		Up to 2 m	Less than 8 m
Glaucinitic Marl Member	Pale brownish-grey clay-rich chalk marl with grains of glauconite; commonly contains phosphatic pebbles		Up to 2 m	Less than 10 m
Upper Greensand Formation	Dark green glauconitic sand and sandstone with a clay matrix underlain by whitish, micaceous, calcareous siltstone and fine-grained sandstone with some chert and siliceous sandstone ('malmstone')		About 15 m	Less than 25 m



Gault Formation	Grey, silty mudstone; silty towards top, gravelly at base		About 60 m	Less than 85 m
Lower Greensand Group	Coarse-grained, ferruginous, quartzose sand with small quartzite pebbles; locally passes into sandy clay	Possible running sands	Less than 8 m	Less than 93 m
Portland Formation	Sand and limestone	Possible running sands	Probably absent	
Kimmeridge Clay Formation	Silty mudstones, some sandy		About 35 m	Less than 128 m

The blue line in this table indicates 'rockhead', which is the base of superficial deposits. This is the 'geological rockhead', as distinct from the 'engineering rockhead', which is the base of 'engineering soil' (in the sense of BS5930:1999).

For further definitions of stratigraphic terms that appear in the table above, on our maps and in our publications please see 'The BGS Lexicon' www.bgs.ac.uk/lexicon

Information on the distribution of contaminated ground is not held by BGS but by the relevant Local Authority.



Potential drilling hazards considered at your site

This section of the report only describes geological hazards that might be directly encountered by drilling at this site.

Running sand conditions hazard

Running sand conditions occur when loosely-packed sand moves as a result of water flowing through the spaces between the sand grains. The pressure of the flowing water reduces the contact between the grains and they are carried along by the flow. Excavations or boreholes in water-saturated sand are likely to encounter running conditions: the sand will tend to flow into the void. This can lead to subsidence of the surrounding ground.



Geoscience Data List

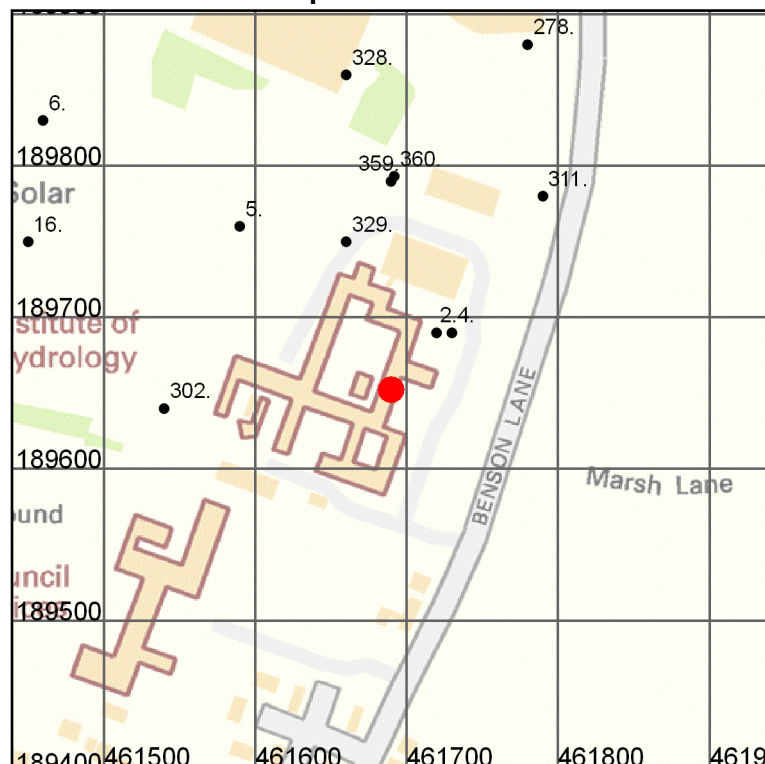
List of available geological data

This part of the report lists the principal data sets held in the National Geoscience Records Centre that are relevant to your enquiry and explains how to obtain copies of the records. Users can make their own index searches using the BGS web page (go to 'Online shops' at www.bgs.ac.uk). This will give access to the BGS Bookshop, Publications catalogue, GeoRecords (borehole browser) and GeoReports.

For current pricing see these internet pages or contact us using the list found at the back of this report.

Note that this report contains selective datasets and is not a definitive listing of all data held in BGS.

Borehole location map



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Scale: 1:5 000 (1cm = 50 m)

Borehole records

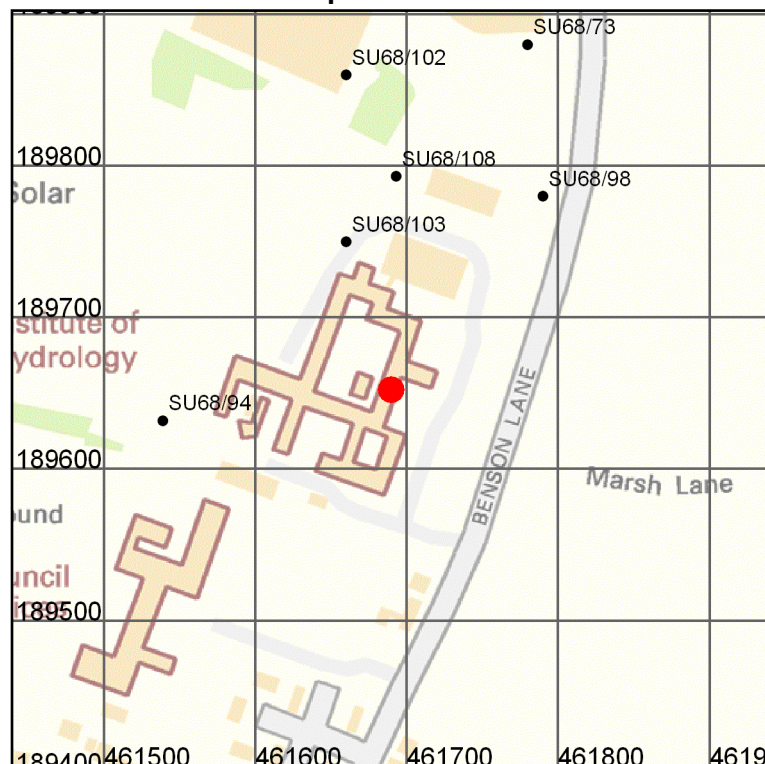
Number of records in map area: 12

In the following table a blank Length field indicates that the borehole is confidential or that no depth has been recorded digitally.

Enquiry staff may be able to provide you with contact details for the originator if you wish to seek release of confidential information.

Borehole registered no	Grid reference	Borehole name	Length (m)
SU68NW16	SU 61450 89750	HOWBERRY PARK CROWMARSH	4
SU68NW2	SU 61720 89690	HOWBERRY PARK BH6 BENSON OXON	8.83
SU68NW278	SU 61780 89880	HYDRAULICS RESEARCH STATION	2.59
SU68NW302	SU 61540 89640	WALLINGFORD TEST BORE, MACLEAN BUILDING	53
SU68NW311	SU 61790 89780	HR WALLINGFORD, HOWBERRY PARK OBH	30
SU68NW328	SU 61660 89860	H R WALLINGFORD, HOWBERRY PARK	25
SU68NW329	SU 61660 89750	MACLEAN BUILDING, CROWMARSH GIFFORD	6
SU68NW359	SU 61690 89790	CEH WALLINGFORD WAL84	5
SU68NW360	SU 61692 89793	CEH WALLINGFORD WAL85	4.8
SU68NW4	SU 61730 89690	HOWBERRY PARK TH4 BENSON OXON	3.04
SU68NW5	SU 61590 89760	HOWBERRY PARK TH5 BENSON OXON	2.43
SU68NW6	SU 61460 89830	HOWBERRY PARK TH6 BENSON OXON	4.26

Water well location map



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Scale: 1:5 000 (1cm = 50 m)

Water Well records

Number of records in map area: 6

All of these records are registered in the main Borehole Records collections (see Borehole Records Table and map above), but please note that some may be duplicate or part duplicate copies. This map shows records of water wells and boreholes in the National Well Record Archive held at Wallingford (WL) or Murchison House (MH). Each record has a Well Registration number which should be quoted when applying for copies.

Additional index information may be held for the Water Well Records as shown below, indicating the information that can be found on the well record itself. If fields are blank, then the well record has not been examined and its contents are unknown. A 'Yes' or a 'No' indicates that the well record has been examined and the information indicated is, or is not, present. This information should help you when requesting copies of records.



Water Well records

Well Reg No.	BH Reg No.	Name	Easting	Northing	Depth (m)	Date	Aquifer	G	C	W	Ch
SU68/73	SU68NW278/BJ	HYDRAULICS RESEARCH STATION	461780	189880	2.6		UPPER GREENSAND FORMATION	No	Yes	Yes	No
SU68/94	SU68NW302/BJ	INSTITUTE OF HYDROLOGY, CROWMARSH GIFFORD	461539	189632	0	1979	UPPER GREENSAND FORMATION	Yes	Yes	Yes	No
SU68/98	SU68NW311/BJ	H R WALLINGFORD, HOWBERY PARK OBH	461790	189780	0	2004	NOT ENTERED				
SU68/102	SU68NW328/BJ	HOWBERRY PARK, WALLINGFORD	461660	189860	0	2008	NOT ENTERED				
SU68/103	SU68NW329/BJ	MACLEAN BUILDING, CROWMARSH GIFFORD	461660	189750	0		NOT ENTERED				
SU68/108	SU68NW360/BJ	CEH WALLINGFORD WAL85	461693	189793	0	2011	NOT ENTERED				

KEY:

Aquifer = The principal aquifer recorded in the borehole

G = Geological Information present on the log

C = Borehole construction information present on the log

W = Water level or yield information present on the log

Ch = Water chemistry information present on the log



Boreholes with water level readings

Number of records in map area: 1

Reference	Easting	Northing	Location	Start_date	End_date	Readings
SU68/73	461780	189880	HYDRAULICS RESEARCH STATION	1960	1971	15

Locations with aquifer properties

Number of records in map area: 0

BGS holds no locations with aquifer properties for the selected area

Site investigation reports

Number of records in search area: 4

Additional laboratory and test data may be available in these reports, subject to any copyright and confidentiality conditions. The grid references used are based on an un-refined rectangle and therefore may not be applicable to a specific site. Borehole records in these reports will be individually referenced within the borehole records collection, described above.

Number	Site investigation title
13340	WHITE CROSS FARM, WALLINGFORD
36074	PRIORY MEADOWS CROWMARSH
39056	HOWBERRY FARM CROWMARSH
54083	STATION ROAD INDUSTRIAL ESTATE WALLINGFORD

National Grid geological maps (1:10 000 and 1:10 560 scale)

Number of records in search area: 1

Map	Type	Survey
SU68NW	C	1974

County Series geological maps (1:10 560 scale)

Number of records in search area: 2

Map	Type	Published
Berkshire16SE		1910
Oxfordshire49SE	C	0

New Series medium scale geological maps (1:50 000 and 1:63 360 scale)

Number of records in search area: 2

Sheet number	Sheet name	Type	Published
254	Henley-on-Thames	C	1980
254	Henley-on-Thames	C	1905

Old Series one inch geological maps (1:63 360 scale)

Number of records in search area: 1

Sheet number	Sheet name	Type	Published
13	Bampton	S	1859

Hydrogeological maps (various scales)

Number of records in search area: 1

Map	Scale
South West Chilterns	1:100,000



Geological Memoirs

Number of records in search area: 1

Geological memoir	Date
Henley on Thames & Wallingford	1908

Technical reports

Technical reports may be available for this area. Please email sales@bgs.ac.uk for further information.

Mining plans

Number of records in search area: 1

This listing includes plans of various types, principally relating to mining activity including abandonment plans. The coverage is not comprehensive; however that for Scotland is most complete.

Record Type	Plan No.	Title
KP	18191	WESTPHALIAN A & B OF THE COALFIELDS OF ENGLAND & WALES (INCLUDING CANONBIE)

Contact Details

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- Geological observations and interpretations are made according to the prevailing understanding of the subject at the time. The quality of such observations and interpretations may be affected by the availability of new data, by subsequent advances in knowledge, improved methods of interpretation, and better access to sampling locations.
- Raw data may have been transcribed from analogue to digital format, or may have been acquired by means of automated measuring techniques. Although such processes are subjected to quality control to ensure reliability where possible, some raw data may have been processed without human intervention and may in consequence contain undetected errors.
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- The topography shown on any map extracts is based on the latest OS mapping and is not necessarily the same as that used in the original compilation of the BGS geological map, and to which the geological linework available at that time was fitted.
- Note that for some sites, the latest available records may be historical in nature, and while every effort is made to place the analysis in a modern geological context, it is possible in some cases that the detailed geology at a site may differ from that described.

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