



1.2 Superficial Deposits and Landslips

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary?	No
Database searched and no data found.	

1.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site boundary?

No

Database searched and no data found.

1.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary?

No

Database searched and no data found.

This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site** boundary?

Nο

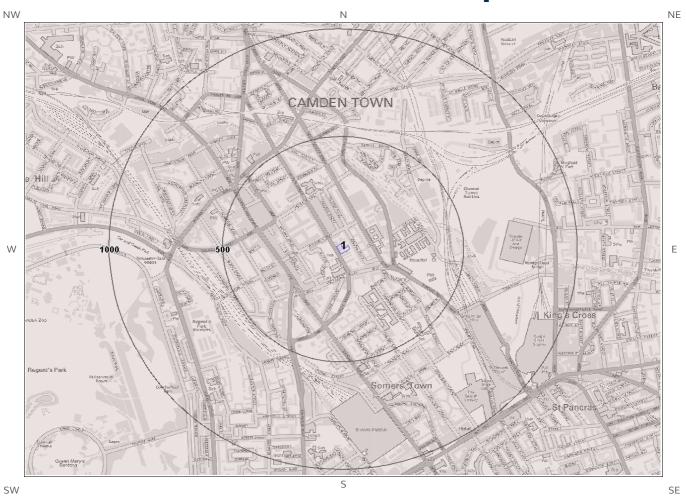
Database searched and no data found.

 $^{^{\}star}$ $\,\,$ This includes an automatically generated 50m buffer zone around the site





1.3 Bedrock and Faults Map



Bedrock and Faults Legend

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1.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:256

1.3.1 Bedrock/ Solid Geology

Records of Bedrock/ Solid Geology within 500m of the study site boundary:

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	LC-CLSISA	London Clay Formation - Clay, Silt And Sand	No Details

1.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site* boundary?

Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	Moderate	Very Low

1.3.3 Faults

Are there any records of Faults within 500m of the study site boundary?

No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as Faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

 $^{^{\}star}$ $\,\,$ This includes an automatically generated 50m buffer zone around the site





1.4 Radon Data

1.4.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level

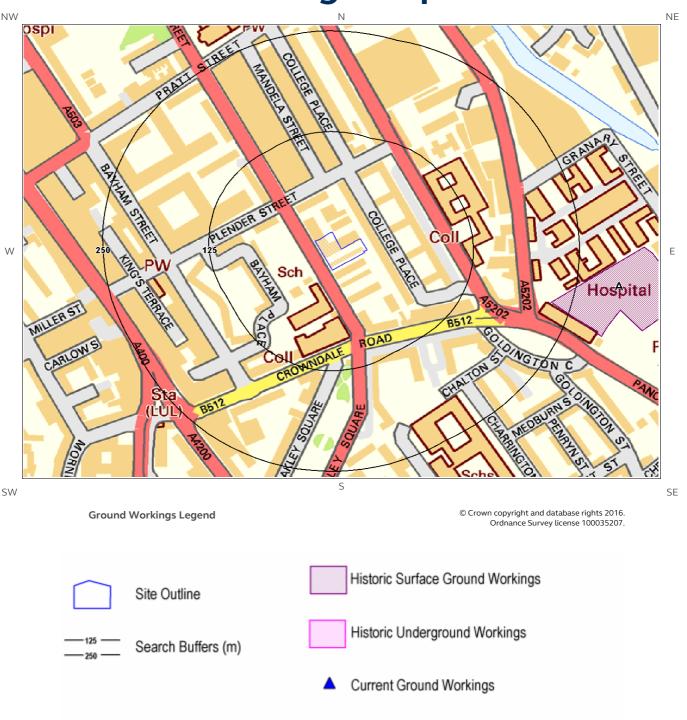
1.4.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary





2 Ground Workings Map







2 Ground Workings

2.1 Historical Surface Ground Working Features derived from Historical Mapping

This dataset is based on Groundsure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping.

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? Yes

The following Historical Surface Ground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
1A	226.0	E	529721 183526	Burial Ground	1873
2A	226.0	E	529721 183526	Burial Ground	1873

2.2 Historical Underground Working Features derived from Historical Mapping

This data is derived from the Groundsure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? Yes

The following Historical Underground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
Not shown	429.0	Е	529866 183609	Tunnel	1973
Not shown	585.0	SE	529982 183101	Tunnel	1894
Not shown	640.0	W	528675 183621	Tunnel	1973
Not shown	640.0	W	528675 183621	Tunnel	1989
Not shown	650.0	W	528658 183631	Tunnel	1914
Not shown	650.0	W	528658 183631	Tunnel	1938
Not shown	668.0	W	528651 183636	Tunnel	1968
Not shown	668.0	W	528651 183636	Tunnel	1940





ID	Distance (m)	Direction	NGR	Use	Date
Not shown	668.0	W	528651 183636	Tunnel	1957
Not shown	685.0	W	528642 183634	Tunnel	1989
Not shown	685.0	W	528642 183634	Tunnel	1973
Not shown	764.0	N	529602 184492	Tunnel	1968
Not shown	764.0	Ν	529602 184492	Tunnel	1989
Not shown	764.0	Ν	529602 184492	Tunnel	1973
Not shown	815.0	E	530261 183691	Tunnel	1914
Not shown	815.0	Е	530261 183691	Tunnel	1938
Not shown	817.0	Е	530264 183690	Railway Tunnel	1994
Not shown	817.0	Е	530264 183690	Railway Tunnel	1966
Not shown	817.0	Е	530264 183690	Railway Tunnel	1957
Not shown	817.0	E	530264 183690	Railway Tunnel	1971
Not shown	817.0	Е	530264 183690	Railway Tunnel	1976
Not shown	817.0	Е	530264 183690	Railway Tunnel	1940
Not shown	834.0	Ν	529574 184527	Tunnel	1873
Not shown	834.0	Ν	529574 184527	Tunnel	1873
Not shown	840.0	Ν	529582 184534	Tunnel	1957
Not shown	840.0	Ν	529582 184534	Tunnel	1940
Not shown	850.0	SE	530177 183066	Tunnel	1873
Not shown	850.0	SE	530177 183066	Tunnel	1873
Not shown	851.0	SE	530174 183067	Tunnel	1894
Not shown	883.0	N	529576 184558	Tunnel	1914
Not shown	883.0	N	529576 184558	Tunnel	1938
Not shown	923.0	E	530325 183147	Tunnel	1894
Not shown	925.0	E	530326 183183	Tunnel	1873
Not shown	925.0	Е	530326 183183	Tunnel	1873





2.3 Current Ground Workings

This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

Are there any BGS Current Ground Workings within 1000m of the study site boundary?

Yes

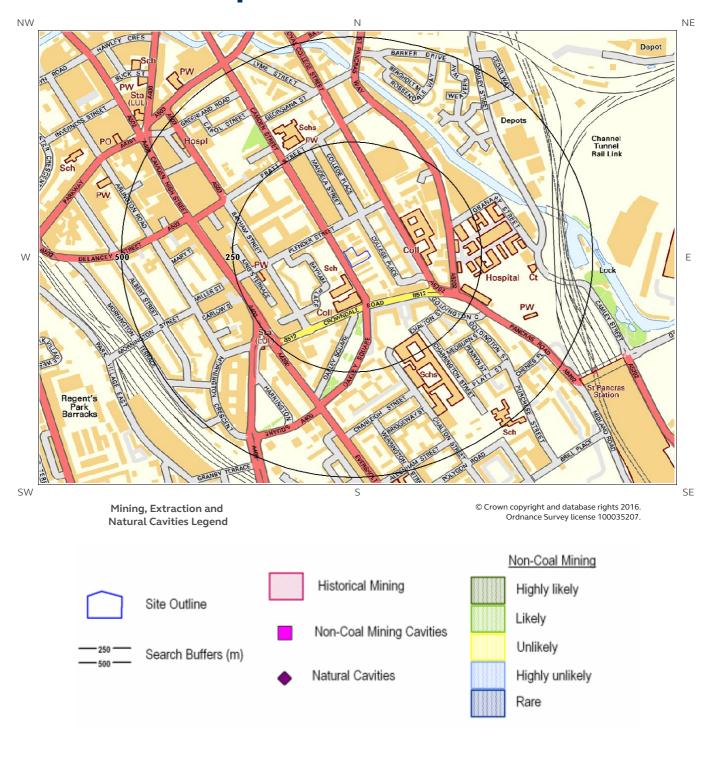
The following Current Ground Workings information is provided by British Geological Survey:

ID	Distanc e (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	699.0	Е	530085 183810	Crushed Rock	Kings Cross Rail Depot	A site where mineral commodities are unloaded from rail trucks and stored	Active
Not shown	700.0	Е	530090 183800	Crushed Rock	Kings Cross Rail Depot	A site where mineral commodities are unloaded from rail trucks and stored	Active
Not shown	700.0	Е	530090 183800	Marine Sand & Gravel	Kings Cross Rail Depot	A site where mineral commodities are unloaded from rail trucks and stored	Active





3 Mining, Extraction & Natural Cavities Map







3 Mining, Extraction & Natural Cavities

3.1 Historical Mining

This dataset is derived from Groundsure unique Historical Land-use Database that are indicative of mining or extraction activities.

Are there any Historical Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

3.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

3.3 Johnson Poole and Bloomer

This dataset provides information as to whether the study site lies within an area where JPB hold information relating to mining.

Are there any JPB Mining areas within 1000m of the study site boundary?

Yes

The following information provided by JPB is not represented on mapping: Whilst outside of an area where The Coal Authority have information on coal mining activities, Johnson Poole & Bloomer (JPB) have information such as mining plans and maps held within their archive of mining activities that have occurred within 1km of this property. Further details and a quote for services can be obtained by emailing this report to enquiries.gs@jpb.co.uk.

3.4 Non-Coal Mining

This dataset provides information as to whether the study site lies within an area which may have been subject to non-coal historic mining.

Are there any Non-Coal Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.





3.5 Non-Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA) mining cavities database (compiled for the national study entitled "Review of mining instability in Great Britain, 1990" PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary?

No

Database searched and no data found.

3.6 Natural Cavities

This dataset provides information based on Peter Brett Associates natural cavities database.

Are there any Natural Cavities within 1000m of the study site boundary?

No

Database searched and no data found.

3.7 Brine Extraction

This data provides information from the Coal Authority issued on behalf of the Cheshire Brine Subsidence Compensation Board.

Are there any Brine Extraction areas within 1000m of the study site boundary?

No

Database searched and no data found.

3.8 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary?

No

Database searched and no data found.

3.9 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records. This search is based upon postcode information to a sector level.

Are there any Tin Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.





3.10 Clay Mining

This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

Are there any Clay Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.





4 Natural Ground Subsidence 4.1 Shrink-Swell Clay Map







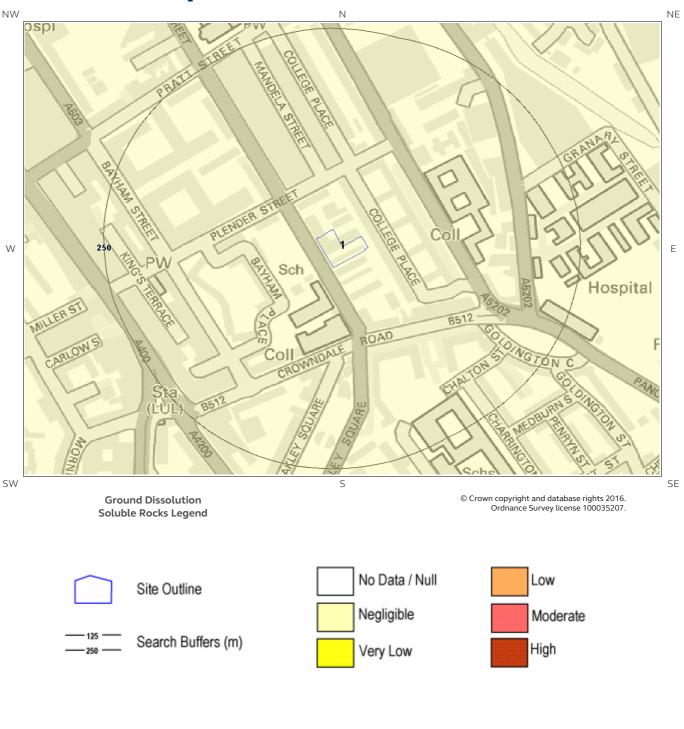
4.2 Landslides Map







4.3 Ground Dissolution Soluble Rocks Map







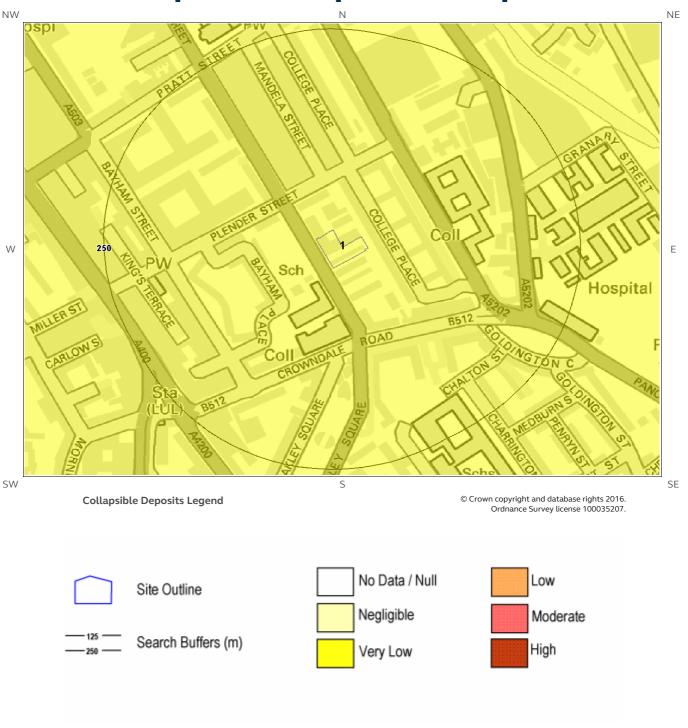
4.4 Compressible Deposits Map







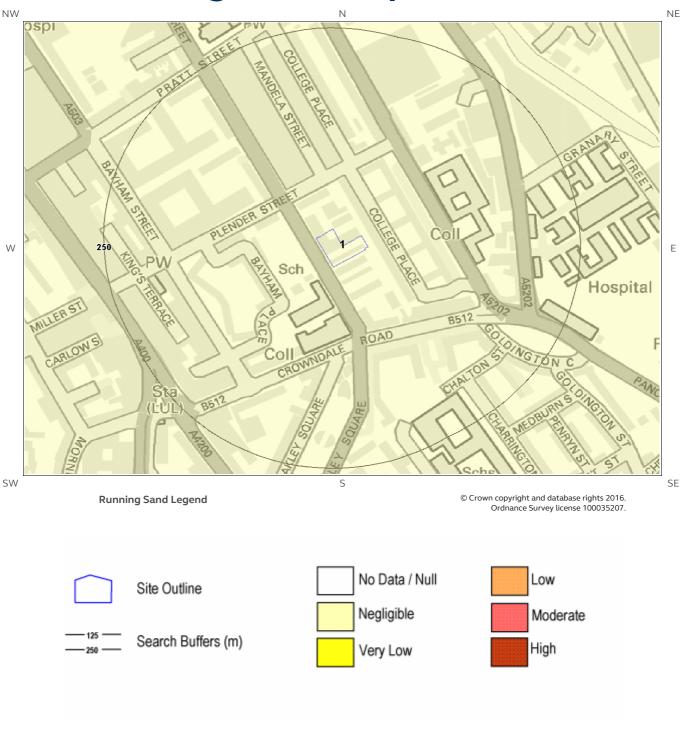
4.5 Collapsible Deposits Map







4.6 Running Sand Map







4 Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site** boundary? Moderate

4.1 Shrink-Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Moderate	Ground conditions predominantly high plasticity. Do not plant or remove trees or shrubs near to buildings without expert advice about their effect and management. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a probable increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a probable increase in insurance risk during droughts or where vegetation with high moisture demands is present.

4.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

4.3 Ground Dissolution of Soluble Rocks

The following Ground Dissolution information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

^{*} This includes an automatically generated 50m buffer zone around the site





4.4 Compressible Deposits

The following Compressible Deposits information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible ground identified. No special actions required to avoid problems due to compressible ground. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible ground.

4.5 Collapsible Deposits

The following Collapsible Rocks information provided by the British Geological Survey:

ID	Distance (m)	^e Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

4.6 Running Sands

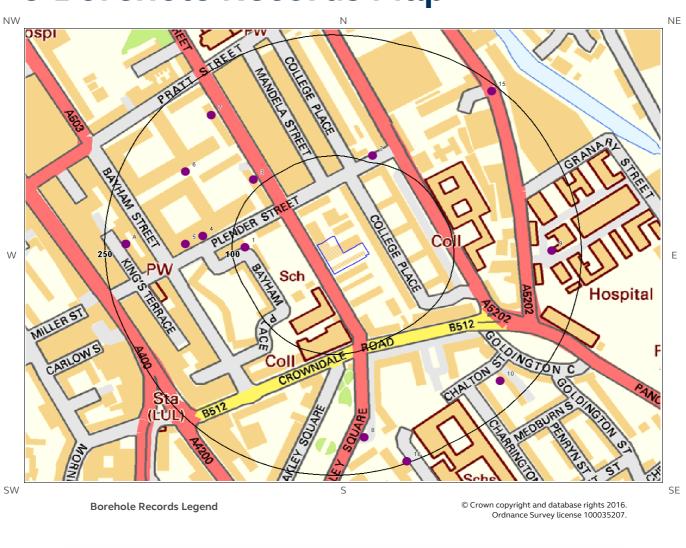
The following Running Sands information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.





5 Borehole Records Map









5 Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary:

16

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	85.0	W	529280 183586	TQ28SE10	121.92	BOROUGH BATHS ST PANCRAS
2	109.0	N	529430 183700	TQ28SE313	7.16	KING ST NOW PLENDER ST ST PANCRAS C36
3	110.0	NW	529290 183670	TQ28SE1334	10.06	CURNOCK STREET ST PANCRAS BH5
4	135.0	W	529230 183600	TQ28SE312	8.46	KING ST & QUEEN ST ST PANCRAS C35
5	155.0	W	529210 183590	TQ28SE1333	9.14	CURNOCK STREET ST PANCRAS BH4
6	180.0	NW	529210 183680	TQ28SE1332	14.02	CURNOCK STREET ST PANCRAS BH3
7	204.0	NW	529240 183750	TQ28SE1331	9.14	CURNOCK STREET ST PANCRAS BH2
8	206.0	S	529420 183350	TQ28SE1019	15.24	OAKLEM SQUARE CAMDEN 1
9	215.0	E	529641 183582	TQ28SE11	67.36	WORK HOUSE (HOSPITAL) ST PANCRAS
10	221.0	SE	529580 183420	TQ28SE2017	25.0	NUMBER NOT USED
114	225.0	W	529140 183590	TQ28SE1172	20.0	KINGS TERR CAMDEN 2
12A	225.0	W	529140 183590	TQ28SE1174	1.0	KINGS TERR CAMDEN TP 2
13A	225.0	W	529140 183590	TQ28SE1173	1.0	KINGS TERR CAMDEN TP 1
144	225.0	W	529140 183590	TQ28SE1171	20.0	KINGS TERR CAMDEN 1
15	242.0	NE	529570 183780	TQ28SE314	7.09	ST PANCRAS WAY C37 ST PANCRAS
16	248.0	S	529470 183320	TQ28SE1020	24.38	OAKLEM SQUARE CAMDEN 2

The borehole records are available using the hyperlinks below: Please note that if the donor of the borehole record has requested the information be held as commercial-in-confidence, the additional data will be held separately by the BGS and a formal request must be made for its release.

#1: scans.bgs.ac.uk/sobi_scans/boreholes/591494

#2: scans.bgs.ac.uk/sobi_scans/boreholes/591832

#3: scans.bgs.ac.uk/sobi_scans/boreholes/592915

#4: scans.bgs.ac.uk/sobi_scans/boreholes/591831

#5: scans.bgs.ac.uk/sobi_scans/boreholes/592914

#6: scans.bgs.ac.uk/sobi_scans/boreholes/592913





#7: scans.bgs.ac.uk/sobi_scans/boreholes/592912
#8: scans.bgs.ac.uk/sobi_scans/boreholes/592600
#9: scans.bgs.ac.uk/sobi_scans/boreholes/591495
#10: scans.bgs.ac.uk/sobi_scans/boreholes/15619845
#11A: scans.bgs.ac.uk/sobi_scans/boreholes/592753
#12A: scans.bgs.ac.uk/sobi_scans/boreholes/592755
#13A: scans.bgs.ac.uk/sobi_scans/boreholes/592754
#14A: scans.bgs.ac.uk/sobi_scans/boreholes/592752
#15: scans.bgs.ac.uk/sobi_scans/boreholes/591833
#16: scans.bgs.ac.uk/sobi_scans/boreholes/592601





6 Estimated Background Soil Chemistry

Records of background estimated soil chemistry within 250m of the study site boundary:

4

For further information on how this data is calculated and limitations upon its use, please see the Groundsure Geo Insight User Guide, available on request.

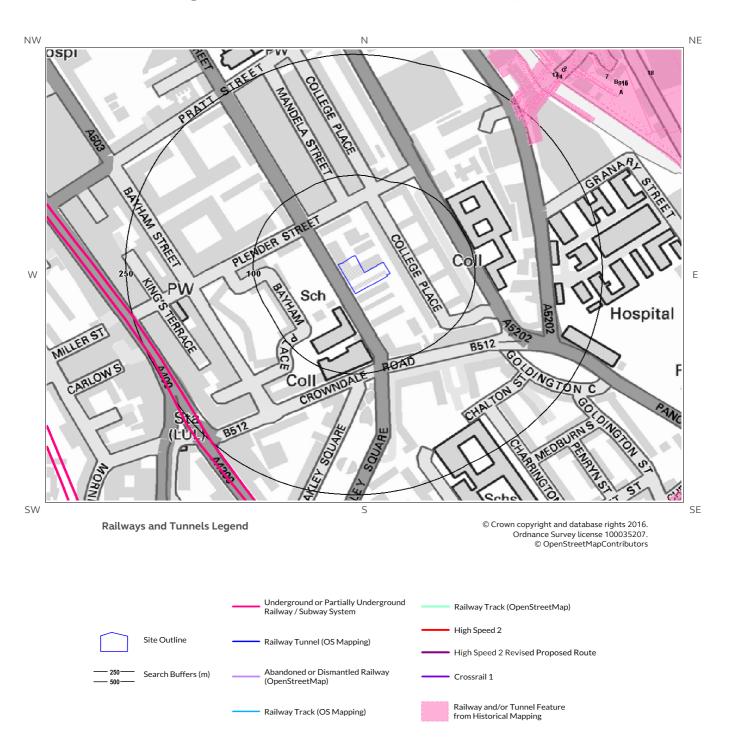
Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	London	No data	No data	No data	No data	No data
53.0	S	London	No data	No data	No data	No data	No data
74.0	Е	London	No data	No data	No data	No data	No data
107.0	SE	London	No data	No data	No data	No data	No data

^{*}As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.





7 Railways and Tunnels Map







7 Railways and Tunnels

7.1 Tunnels

This data is derived from OpenStreetMap and provides information on the possible locations of underground railway systems in the UK - the London Underground, the Tyne & Wear Metro and the Glasgow Subway.

Have any underground railway lines been identified within the study site boundary?

No

Have any underground railway lines been identified within 250m of the study site boundary?

Yes

Distance (m)	Direction	Line
238	SW	London Underground - Northern Line

The approximate depth value for the nearest London Underground line given in this dataset has been extrapolated from published depths of tube lines at station platforms, and assume a constant gradient between stations. Using this method, topographical variation has resulted in some parts of the line having associated depth values either shallower or deeper than the real-world situation. Depth values are for indication only and should not be relied upon for any calculation or technical purpose and are in no way a substitute for a professional survey.

Line
London Underground Line: Northern Line
Depth: 18mbgl
Track Type: Tunnel

Any records that have been identified are represented on the Railways and Tunnels Map.

This data is derived from Ordnance Survey mapping and provides information on the possible locations of railway tunnels forming part of the UK overground railway network.

Have any other railway tunnels been identified within the site boundary?

No

Have any other railway tunnels been identified within 250m of the site boundary?

No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.





7.2 Historical Railway and Tunnel Features

This data is derived from Groundsure's unique Historical Land-use Database and contains features relating to tunnels, railway tracks or associated works that have been identified from historical Ordnance Survey mapping.

Have any historical railway or tunnel features been identified within the study site boundary?

No

Have any historical railway or tunnel features been identified within 250m of the study site boundary? Yes

ID	Distance (m)	rection	NGR	Details	Date
1B	225	NE	529862 183469	Railway Sidings	1973
2	237	NE	530161 183789	Railway Sidings	1894
9	237	NE	n/a	Railway	1930
10C	238	NE	529635 183882	Railway Sidings	1968
11D	238	NE	529609 183882	Railway Sidings	1952
3	239	NE	530006 183967	Railway Sidings	1911
12C	239	NE	529635 183881	Railway Sidings	1968
13D	239	NE	529635 183881	Railway Sidings	1951
14	239	NE	529470 183994	Railway Sidings	1896
4A	240	NE	530148 183631	Railway Sidings	1920
5A	240	NE	530148 183631	Railway Sidings	1938
15	241	NE	n/a	Railway	1874
16	241	NE	n/a	Railway	1935
17	241	NE	529726 184042	Railway Sidings	1916
18	243	NE	529732 183994	Railway Sidings	1875
6B	246	NE	529858 183542	Railway Sidings	1968
7	246	NE	529861 183587	Railway Sidings	1957
8B	246	NE	529858 183542	Railway Sidings	1948

Any records that have been identified are represented on the Railways and Tunnels Map.





7.3 Historical Railways

This data is derived from OpenStreetMap and provides information on the possible alignments of abandoned or dismantled railway lines in proximity to the study site.

Have any historical railway lines been identified within the study site boundary?

No

Have any historical railway lines been identified within 250m of the study site boundary?

No

Database searched and no data found.

Note: multiple sections of the same track may be listed in the detail above

Any records that have been identified are represented on the Railways and Tunnels Map.

7.4 Active Railways

These datasets are derived from Ordnance Survey mapping and OpenStreetMap and provide information on the possible locations of active railway lines in proximity to the study site.

Have any active railway lines been identified within the study site boundary?

Nο

Have any active railway lines been identified within 250m of the study site boundary?

No

Database searched and no data found.

Note: multiple sections of the same track may be listed in the detail above Any records that have been identified are represented on the Railways and Tunnels Map.

7.5 Railway Projects

These datasets provide information on the location of large scale railway projects High Speed 2 and Crossrail 1.

Is the study site within 5km of the route of the High Speed 2 rail project?

Yes

Is the study site within 500m of the route of the Crossrail 1 rail project?

No

Further information on proximity to these routes, the project construction status and associated works can be obtained through the purchase of a **Groundsure HS2** and **Crossrail 1 Report**.

Crossrail route data has been digitised from publicly available maps by Groundsure. The route as provided relates to the Crossrail 1 project only, and does not include any details of the Crossrail 2 project, as final details of the route for Crossrail 2 are still under consultation.

Please note that this assessment takes account of both the original Phase 2b proposed route and the amended route proposed in 2016. As the Phase 2b route is still under consultation, Groundsure are providing information on both options until the final route is formally confirmed. Practitioners should take account of this uncertainty when advising clients.

Contact Details



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BGS Geological Hazards Reports and general geological enquiries



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$\label{lem:https://www.gov.uk/government/organisations/public-health-england$

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