19 Radon

Site Outline

Search buffers in metres (m)

- Greater than 30%
- Between 10% and 30%
- Between 5% and 10%
- Between 3% and 5%
- Between 1% and 3%
- Less than 1%

19.1 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 125 >**

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.

20 Soil chemistry

20.1 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 km^2. 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 km^2; 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.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m	6

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 km^2).

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**	**340**	**234**	**7.9**	**133**	**171**	**41**	**39**
On site	**18**	**3.2**	**469**	**322**	**11.8**	**157**	**259**	**50**	**61**
22m W	17	3	309	212	5.1	118	145	36	32
23m W	17	3	292	201	4.3	109	129	34	30
24m E	18	3.2	549	377	32.1	222	391	63	76
36m E	17	3	432	297	16.3	169	242	50	52

This data is sourced from the British Geological Survey.

20.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

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 km^2.

This data is sourced from the British Geological Survey.

21 Railway infrastructure and projects

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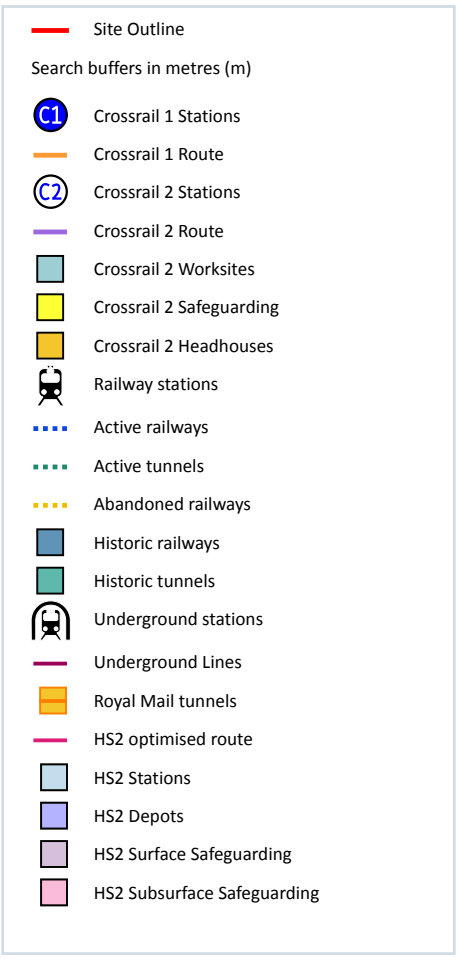

21.1 Underground railways (London)

Records within 250m **5**

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

Features are displayed on the Railway infrastructure and projects map on **page 129 >**

Location	Line Name	Line Section	Track Type	Depth (m bgl)	Operational hours
7m W	Circle Line	Circle Line	Tunnel	8.86	Mon-Sat: Early 0437 Late 0031, Sun: Early 0621 Late 0033
2m SW	Hammersmith and City Line	Hammersmith & City Line	Tunnel	10.5	Mon-Sat: Early 0437 Late 0040, Sun: Early 0556 Late 0033

Location	Line Name	Line Section	Track Type	Depth (m bgl)	Operational hours
3m S	Metropolitan Line	Metropolitan Line	Tunnel	10.5	Mon-Sat: Early 0500 Late 0119, Sun: Early 0636 Late 0016
130m N	Northern Line	Northern Line - Bank branch	Tunnel	29.09	No 24hr service. Mon-Sat: Early 0512 Late 0113, Sun: Early 0651 Late 0022
230m NW	Victoria Line	Victoria Line	Tunnel	17.96	Mon-Thu: Early 0521 Late 0102, Fri: Early 0521, 24hr service until Sun, Sun: Late 0006

This data is sourced from publicly available information by Groundsure.

21.2 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.

21.3 Railway tunnels

Records within 250m	**5**

Railway tunnels taken from contemporary Ordnance Survey mapping.

Features are displayed on the Railway infrastructure and projects map on **page 129 >**

Location	Type
On site	**Railway Tunnel**
112m NW	Railway Tunnel
156m SE	Railway Tunnel
173m NW	Railway Tunnel
177m SE	Railway Tunnel

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m	62

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 129 >**

Location	Land Use	Year of mapping	Mapping scale
On site	**Tunnel**	**1982**	**1250**
On site	**Tunnel**	**1997**	**1250**
On site	**Tunnel**	**1996**	**1250**
On site	**Tunnel**	**1973**	**1250**
On site	**Tunnel**	**1930**	**-**
On site	**Tunnel**	**1896**	**-**
On site	**Tunnel**	**1991**	**1250**
On site	**Tunnel**	**1916**	**-**
On site	**Tunnel**	**1960**	**1250**
On site	**Tunnel**	**1994**	**10000**
On site	**Tunnel**	**1966**	**10560**
On site	**Tunnel**	**1894**	**10560**
On site	**Tunnel**	**1882**	**10560**
On site	**Tunnel**	**1976**	**10000**
On site	**Tunnel**	**1971**	**10000**
On site	**Railway**	**1930**	**-**
On site	**Railway**	**1896**	**-**
On site	**Railway**	**1916**	**-**
On site	**Railways**	**1897**	**-**
On site	**Railways**	**1877**	**-**
On site	**Railways**	**1916**	**-**
On site	**Railways**	**1930**	**-**
1m W	Railway	1916	-

Location	Land Use	Year of mapping	Mapping scale
17m NW	Railway Sidings	1948	10560
17m NW	Railway Sidings	1957	10560
131m SE	Railway	1930	-
131m SE	Railway	1896	-
141m NW	Railway	1916	-
150m SE	Tunnel	1930	-
150m SE	Tunnel	1896	-
151m SE	Tunnel	1930	-
153m SE	Tunnel	1973	1250
153m SE	Tunnel	1930	-
153m SE	Tunnel	1916	-
153m SE	Tunnel	1973	1250
154m SE	Tunnel	1960	1250
154m SE	Tunnel	1997	1250
154m SE	Tunnel	1996	1250
156m SE	Tunnel	1882	10560
158m SE	Railway Tunnels	1897	-
161m SE	Tunnel	1894	10560
162m W	Tunnel	1930	-
162m W	Tunnel	1916	-
164m SE	Tunnel	1930	-
164m SE	Tunnel	1916	-
176m NW	Tunnel	1930	-
188m NW	Tunnel	1916	-
210m NW	Tunnel	1896	-
210m NW	Tunnel	1916	-
213m W	Tunnel	1894	10560
217m W	Tunnel	1896	-

Location	Land Use	Year of mapping	Mapping scale
217m W	Tunnel	1916	-
223m W	Railway	1896	-
224m NW	Tunnel	1896	-
226m NW	Tunnel	1894	10560
234m NW	Tunnel	1882	10560
235m W	Tunnel	1896	-
239m W	Tunnel	1930	-
240m NW	Tunnel	1963	1250
240m NW	Tunnel	1982	1250
240m NW	Tunnel	1988	1250
240m NW	Tunnel	1991	1250

This data is sourced from Ordnance Survey/Groundsure.

21.5 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.

21.6 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.

21.7 Railways

Records within 250m	26

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 129 >**

Location	Name	Type
On site	**Thameslink**	**rail**
On site	**Thameslink**	**rail**
5m S	Not given	Multi Track
12m NW	Thameslink	rail
12m NW	Thameslink	rail
13m S	Not given	Multi Track
14m NW	Not given	Multi Track
18m NW	Not given	Multi Track
46m NW	Not given	Multi Track
61m NW	Not given	Multi Track
66m SE	Not given	Multi Track
67m NW	Not given	Multi Track
68m NW	Not given	Multi Track
99m NW	Not given	Multi Track
119m NW	Thameslink	rail
121m NW	Thameslink	rail
129m SE	Not given	Multi Track
132m SE	Thameslink	rail
133m SE	Thameslink	rail
143m NW	Not given	Multi Track
153m SE	Thameslink	rail
153m SE	Thameslink	rail
174m NW	Thameslink	rail
175m NW	Thameslink	rail

Location	Name	Type
179m NW	Thameslink	rail
182m NW	Thameslink	rail

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 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.

21.9 Crossrail 2

Records within 500m	**1**

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

Features are displayed on the Railway infrastructure and projects map on **page 129 >**

Location	Route Type	Name	Under consultation
132m N	Tunnelled route	Central Core	No

This data is sourced from publicly available information by Groundsure.

21.10 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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Groundsure's Terms and Conditions can be accessed at this link: https://www.groundsure.com/terms-and-conditions-april-2023/ ↗.

Appendix F

BGS BOREHOLES

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Site	Borehole Number
CTRL GI DATA - Entire NDATA19 data set	SMKX63

Boring Method	Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion		14.26	UR/LCE	Issue 1
	Location	**Dates**	**Engineer**	**Sheet**
	530564 E 182950 N	12/05/1993	RLE	1/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					14.24	0.02	TARMAC		
					14.11	0.15	Granite COBBLES		
					13.94	(0.13)	CONCRETE		
0.40-0.40	C					0.32			
0.40-1.00	B					(0.17)			
0.60-0.60	C				13.66	0.60	Brown slightly fine to coarse sandy CLAY with a little angular fine to coarse brick, concrete and slag gravel. (MADE GROUND)		
1.00-1.00	C					(0.28)			
1.20-2.00	B					(1.40)	Soft brown mottled yellow brown and blue grey very silty CLAY with some medium to coarse sand size fragments of brick, slag, clinker and coal. (MADE GROUND)		
2.05-2.50	U				12.26	2.00	Stiff becoming very stiff brown mottled blue grey extremely fissured CLAY. (LONDON CLAY)		
2.90-3.05	D								
3.05-3.50	D								
						(3.00)			
4.05-4.50	U								
5.05-5.50	D				9.26	5.00	Very stiff dark grey brown extremely closely fissured CLAY, locally with rare shell fragments. (LONDON CLAY)		
5.50-6.00	D								
6.00-6.45	U								
6.45-6.45	D								
7.05-7.50	D					(4.05)			
8.05-8.50	U								
8.50-8.50	D								
9.05-9.50	D				5.21	9.05	As Sheet 1 (LONDON CLAY)		

Remarks
Hand dug inspectionpit to 1.10m then cable tool boring in 150mm diameter to 30.00m. Hole cased to 5.00m. One sinker bar used.

Scale (approx)	Logged By
1:50	

Figure No.

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Site	Borehole Number
CTRL GI DATA - Entire NDATA19 data set	SMKX63

Boring Method	Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion		14.26	UR/LCE	Issue 1
	Location	**Dates**	**Engineer**	**Sheet**
	530564 E 182950 N	12/05/1993	RLE	2/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.05-10.50	U					(1.45)			
10.50-10.50	D				3.76	10.50	Very stiff grey brown extremely closely fissured CLAY. (LONDON CLAY)		
11.05-11.50	D						With much bioturbation		
12.05-12.50	U						Rare shell fragments		
12.50-12.50	D					(3.55)			
13.00-13.45	D								
14.05-14.50	U				0.21	14.05	Very stiff grey brown CLAY with occasional discontinuous partings (<1mm thick) and lenses (<10x2mm) of light grey fine sandy silt. Rare bioturbation. (LONDON CLAY)		
14.50-14.50	D								
15.05-15.50	D								
16.05-16.50	U					(3.85)			
16.50-16.50	D								
17.05-17.50	D								
17.90-18.05	D				-3.64	17.90	As Sheet 2 (WOOLWICH AND READING BEDS)		
18.05-18.35	U								
18.35-18.35	D								
19.05-19.50	D								

Remarks	Scale (approx)	Logged By
	1:50	
	Figure No.	

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Site	Borehole Number
CTRL GI DATA - Entire NDATA19 data set	SMKX63

Boring Method	Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion		14.26	UR/LCE	Issue 1
	Location	**Dates**	**Engineer**	**Sheet**
	530564 E 182950 N	12/05/1993	RLE	3/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
20.05-20.50	U								
20.50-20.50	D								
21.05-21.05	D								
						(8.15)			
22.00-22.30	U								
22.30-22.30	D								
23.05-23.50	D								
24.05-24.50	U								
24.50-24.50	D								
25.05-25.50	D								
26.05-26.35	U				-11.79	26.05	Very stiff grey below 27.05m becoming grey purple grey, yellow and red mottled extremely closely fissured CLAY. (WOOLWICH AND READING BEDS)		
26.35-26.35	D								
27.05-27.50	D								
28.05-28.50	U					(3.95)			
28.50-28.50	D								
29.05-29.50	D								
30.00-30.00	D				-15.74	30.00			

Remarks

Scale (approx)	Logged By
1:50	

Figure No.

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Site	Borehole Number
CTRL GI DATA - Entire NDATA19 data set	SMKX64

Boring Method	Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion		13.87	UR/LCE	Issue 1
	Location	**Dates**	**Engineer**	**Sheet**
	530614 E 182943 N	25/05/1993	RLE	1/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							COBBLES		
					13.72	0.15 (0.35)	CONCRETE		
0.50-0.50	B				13.37	0.50	Firm brown clayey slightly fine to coarse sandy subangular fine to coarse flint GRAVEL. (BRICKEARTH?)		
0.60-0.60	C								
0.80-0.80	B								
1.00-1.00	C								
1.20-1.20	B								
1.50-1.95	B					(1.80)			
					11.57	2.30	Firm brown mottled light grey extremely closely fissured CLAY. (LONDON CLAY)		
2.50-2.95	U								
3.00-3.00	D					(1.10)			
					10.47	3.40	Stiff grey brown extremely closely fissured CLAY.		
3.50-3.95	D						Coarse gravel sized fragments of grey calacreous SILTSTONE moderately strong. (LONDON CLAY)		
4.50-5.00	B					(2.30)			
5.50-5.95	D								
					8.17	5.70	As Sheet 1 (LONDON CLAY)		
6.50-6.95	U								
7.00-7.00	D								
7.50-7.95	D								
8.50-8.50	U								
9.00-9.00	D								
9.50-9.95	D						Slightly fine sandy, thin lamina (6mm) of silty fine sand.		

Remarks
Hand dug inspection pit to 1.20m then cable tool boring in 150mm diameter to 30.00m. Hole cased to 2.50m.Two sinker bars used.

Scale (approx)	Logged By
1:50	

Figure No.

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Site	Borehole Number
CTRL GI DATA - Entire NDATA19 data set	SMKX64

Boring Method	Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion		13.87	UR/LCE	Issue 1
	Location	**Dates**	**Engineer**	**Sheet**
	530614 E 182943 N	25/05/1993	RLE	2/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.50-10.95	U								
11.00-11.00	D								
11.50-11.95	D					(11.90)	Thin lamina (4mm) of light grey silty fine sand.		
12.50-12.50	U								
13.00-13.00	D								
13.50-13.95	D						Extremely closely fissured, partings and lenses absent		
14.50-14.95	U								
15.00-15.00	D								
15.50-15.95	D						Lignite fragment (20x8mm) and thin lamina (4mm) of brown fine sand		
16.50-16.50	U								
17.00-17.00	D						Pyrite nodule (15mm)		
17.50-17.95	D				-3.73	17.60	As Sheet 2 (WOOLWICH AND READING BEDS) Brown mottled light grey		
18.50-18.95	U								
19.00-19.00	D								
19.50-19.95	D								

Remarks

Scale (approx)	Logged By
1:50	

Figure No.

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Site	Borehole Number
CTRL GI DATA - Entire NDATA19 data set	SMKX64

Boring Method	Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion		13.87	UR/LCE	Issue 1
	Location	**Dates**	**Engineer**	**Sheet**
	530614 E 182943 N	25/05/1993	RLE	3/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
20.50-20.50	U						Red brown mottled light grey and red		
21.00-21.00	D								
21.50-21.95	D								
						(9.10)			
22.50-22.95	U						Light grey mottled brown		
23.00-23.00	D								
23.50-23.95	D						Red brown mottled light grey		
24.50-24.50	U								
25.00-25.00	D						Light grey and yellow brown very silty clay		
25.50-25.95	D						Brown mottled light grey		
26.50-26.95	U						Dark grey		
					-12.83	26.70	Very stiff light grey and grey thickly laminated very silty CLAY, very clayey SILT and SILT. Some shell fragments below 27.50m. (WOOLWICH AND READING BEDS)		
27.00-27.00	D								
						(1.10)			
27.50-27.95	D								
					-13.93	27.80	Very stiff grey, dark yellow, red brown and purple mottled extremely closely fissured CLAY. (WOOLWICH AND REDAING BEDS)		
28.50-28.95	U								
						(2.20)			
29.00-29.00	D						Light grey red brown purple and yellow mottled		
29.55-30.00	D								
					-16.13	30.00			

Remarks

Scale (approx)	Logged By
1:50	

Figure No.

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Site	Borehole Number
CTRL GI DATA - Entire NDATA19 data set	SMKX65

Boring Method	Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion		14.97	UR/LCE	Issue 1
	Location	**Dates**	**Engineer**	**Sheet**
	530641 E 182896 N	11/05/1993	RLE	1/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					14.92	0.05	TARMAC		
						(0.30)	CONCRETE		
0.40-0.40	C				14.62	0.35	Soft to firm brown slightly fine sandy CLAY locally with a little angular to subangular fine to coarse gravel of brick, concrete and flint. (MADE GROUND)		
0.50-0.50	B								
0.80-0.80	C					(0.85)			
1.00-1.00	B								
1.20					13.77	1.20	Black and red brown fine to coarse sandy CLAY with a little angular to rounded fine to medium gravel of slag, brick, flint and clinker. Occasional pockets of soft grey very silty clay. (MADE GROUND)		
1.20-1.20	C								
1.20-2.50	B								
1.25-1.70	D								
2.05-2.50	D					(1.30)			
2.50					12.47	2.50	Dense brown clayey very fine to coarse sandy angular to rounded fine to coarse flint GRAVEL. (BRICKEARTH ?)		
2.50-3.50	B								
						(1.00)			
3.55-4.00	U				11.47	3.50	Stiff brown and grey, becoming grey brown below 3.70m, extremely closely fissured CLAY. Above 6.00m occasional selenite crystals (<4mm) (LONDON CLAY)		
4.00-4.00	D								
4.55-5.00	D								
5.55-6.00	U								
6.00-6.00	D					(5.05)			
6.55-7.00	D								
7.55-8.00	U								
8.55-9.00	D				6.42	8.55	Very stiff grey extremely closely fissured very silty CLAY with occasional partings (<1mm) of dark grey silt to 13.55m then light grey silt to 20.00m. Occasional partings (<1mm) lenses (<6mm) of light grey fine sand below 16.00m. (LONDON CLAY)		
9.55-10.00	U								

Remarks
Hand dug inspection pit to 1.20m then cable tool boring in 150mm diameter to 30.00m. Hole cased to 4.70m.One sinker bar used.

Scale (approx)	Logged By
1:50	

Figure No.

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Site	Borehole Number
CTRL GI DATA - Entire NDATA19 data set	SMKX65

Boring Method	Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion		14.97	UR/LCE	Issue 1
	Location	**Dates**	**Engineer**	**Sheet**
	530641 E 182896 N	11/05/1993	RLE	2/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.00-10.00	D								
10.55-11.00	D								
11.55-12.00	U						Very closely fissured		
12.55-13.00	D								
13.55-14.00	U								
14.00-14.00	D								
						(11.45)			
14.55-15.00	D						Rare fine gravel of lignite		
15.55-16.00	U						Very sandy		
16.00-16.00	D								
16.55-17.00	D								
17.55-17.55	U								
18.00-18.00	D						Slightly fine sandy		
18.55-19.00	D								
19.55-20.00	U								
					-5.03	20.00	As Sheet 2		

Remarks	Scale (approx)	Logged By
	1:50	
	Figure No.	

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Site	Borehole Number
CTRL GI DATA - Entire NDATA19 data set	SMKX65

Boring Method	Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion		14.97	UR/LCE	Issue 1
	Location	**Dates**	**Engineer**	**Sheet**
	530641 E 182896 N	11/05/1993	RLE	3/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
20.00-20.00	D						Very stiff grey and brown becoming brown mottled blue grey extremely closely fissured CLAY. (WOOLWICH AND READING BEDS)		
20.05-20.35	U								
20.50-20.50	D								
21.05-21.35	D						Red brown and blue grey		
						(2.50)			
22.00-22.30	U								
22.50-22.50	D				-7.53	22.50	Very stiff blue grey and brown extremely to very closely fissured CLAY. Fissures locally slickensided and polished. (WOOLWICH AND READING BEDS)		
23.00							Very sandy very silty CLAY and fine SAND.		
23.00-23.30	D								
24.00-24.30	U								
25.00-25.30	D								
26.05-26.35	U								
						(7.50)			
26.70-26.70	D								
27.00							slightly fine sandy very silty CLAY		
27.00-27.30	D								
27.70-27.70	D								
28.00-28.30	U								
28.80-28.80	D								
29.00-29.30	D								
29.50-29.50	D								
30.00-30.00	D				-15.03	30.00			

Remarks	Scale (approx)	Logged By
	1:50	
	Figure No.	

Appendix G

EA FLOOD MAP

Flood map for planning

Your reference	Location (easting/northing)	Created
<Unspecified>	**530649/182880**	**16 May 2023 18:03**

Your selected location is in flood zone 1, an area with a low probability of flooding.

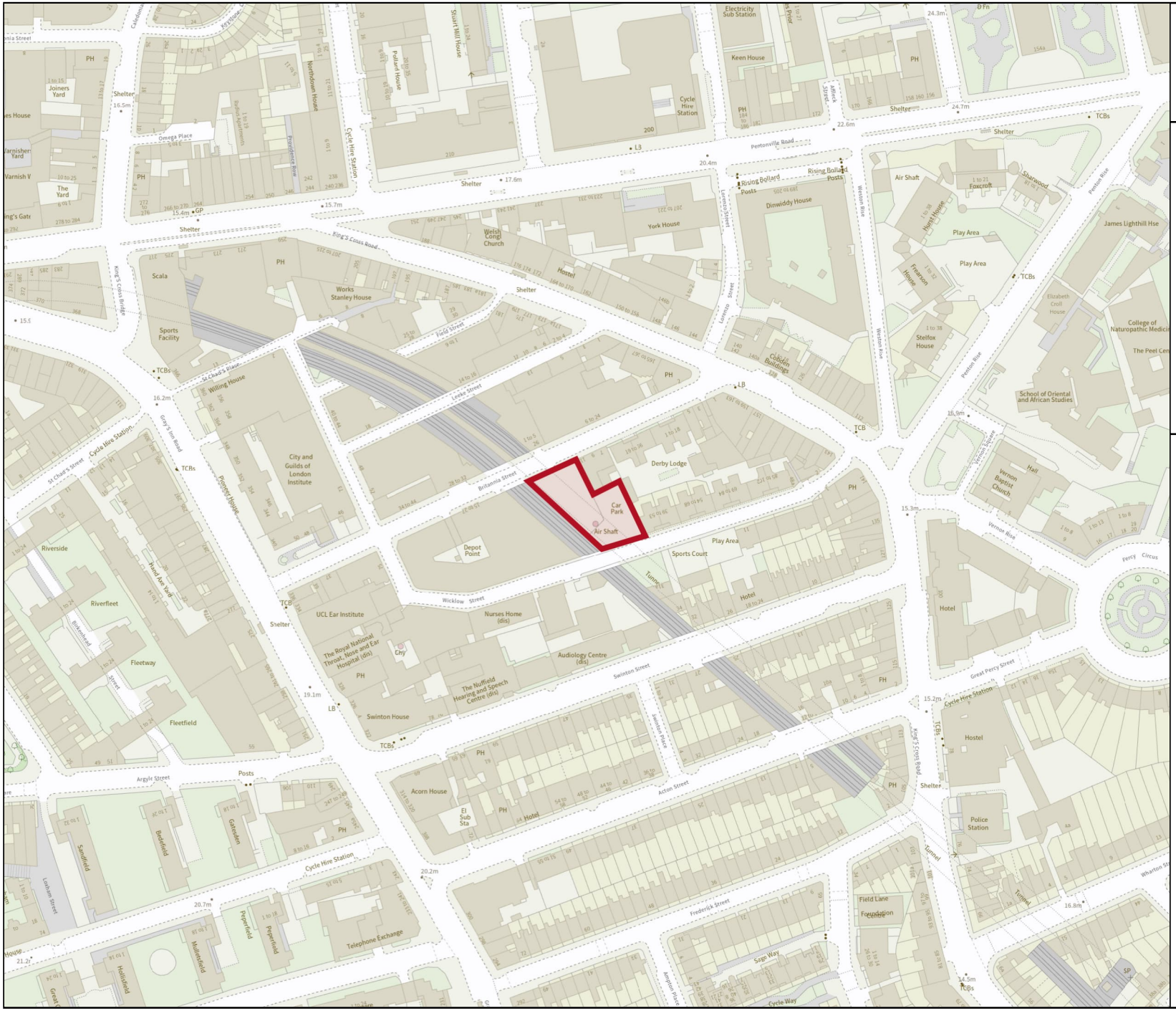
You will need to do a flood risk assessment if your site is **any of the following:**

- bigger that 1 hectare (ha)
- In an area with critical drainage problems as notified by the Environment Agency
- identified as being at increased flood risk in future by the local authority's strategic flood risk assessment
- at risk from other sources of flooding (such as surface water or reservoirs) and its development would increase the vulnerability of its use (such as constructing an office on an undeveloped site or converting a shop to a dwelling)

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.



Environment Agency

Flood map for planning

Your reference
<Unspecified>

Location (easting/northing)
530649/182880

Scale
1:2500

Created
16 May 2023 18:03

- Selected area
- Flood zone 3
- Flood zone 2
- Flood zone 1
- Flood defence
- Main river
- Water storage area

0 20 40 60m

Appendix H

REGULATOR RESPONSES

London Borough of Camden
Information and Records Management
Judd Street
London.
WC1H 9JE
e-mail:
foi@camden.gov.uk

Date: 11/05/2023
Case reference: CAM5211

Dear Requester

The response to your request is attached

Yours sincerely,

Philip Lewis
Information Rights Officer

London Borough of Camden
Information and Records Management
Judd Street
London.
WC1H 9JE
e-mail: foi@camden.gov.uk

Date: 11/05/2023
Ref: CAM5211

Dear Requester

Thank you for your request for information dated 04/05/2023 about Environment issues regarding a site located at Britannia Street. We have dealt with this under the Environmental Information Regulations 2004.

Response

The council holds the information requested.

We have been commissioned to work on a site located as follows: Britannia St, London WC1X 9BP (NGR:530651, 182879)
We are interested in any environmentally pertinent information about the site including: ·

Are there any environmental issues associated with the above named site? We are specifically interested in anything that could have led to contamination of soil or groundwater either beneath the site or within a 500m radius? ·
Do you hold any records of water quality within 1km of the site? ·
Are you aware of the presence of above ground storage tanks/gas meters on adjacent sites and are you aware of any spills or leaks associated with these? ·
Any knowledge of former uses of the site? ·
Whether the site has been or is likely to be designated as Contaminated Land under Part IIA of the Environmental Protection Act 1990? ·
Are there any records of landfill or waste transfer activities within 500m of the site? ·
Have there been any soil or groundwater remedial works carried out at the site or within 500m of the site?

We are providing you with a full detailed response the same format as our land searches reports to the 500m radius as requested. Please see attached document.

Further Information:

We do not give our consent for any names and contact details provided in this response to be sent marketing material. Any such use will be reported to the ICO as a breach of General Data Protection Regulations and the Privacy and Electronic Communication Regulations.

Why not check our Portal Open Data Camden before making a new request as your question may already be answered by a previous FOI response or in one of our many useful and interesting datasets.

Your Rights

If you are not happy with how your response was handled you can request an Internal Review within 2 months of this letter by email to foireviews@camden.gov.uk or post: Information and Records Management Team, London Borough of Camden, Town Hall, Judd Street, London WC1H 9JE. Please quote your case reference number. If you are not satisfied with the Internal Review outcome you can complain to the Information Commissioner's Office at casework@ico.org.uk telephone 0303 123 1113, or post to Information Commissioner's Office, Wycliffe House, Water Lane, Wilmslow, Cheshire, SK9 5AF. The ICO website www.ico.org.uk may be useful.

Yours sincerely

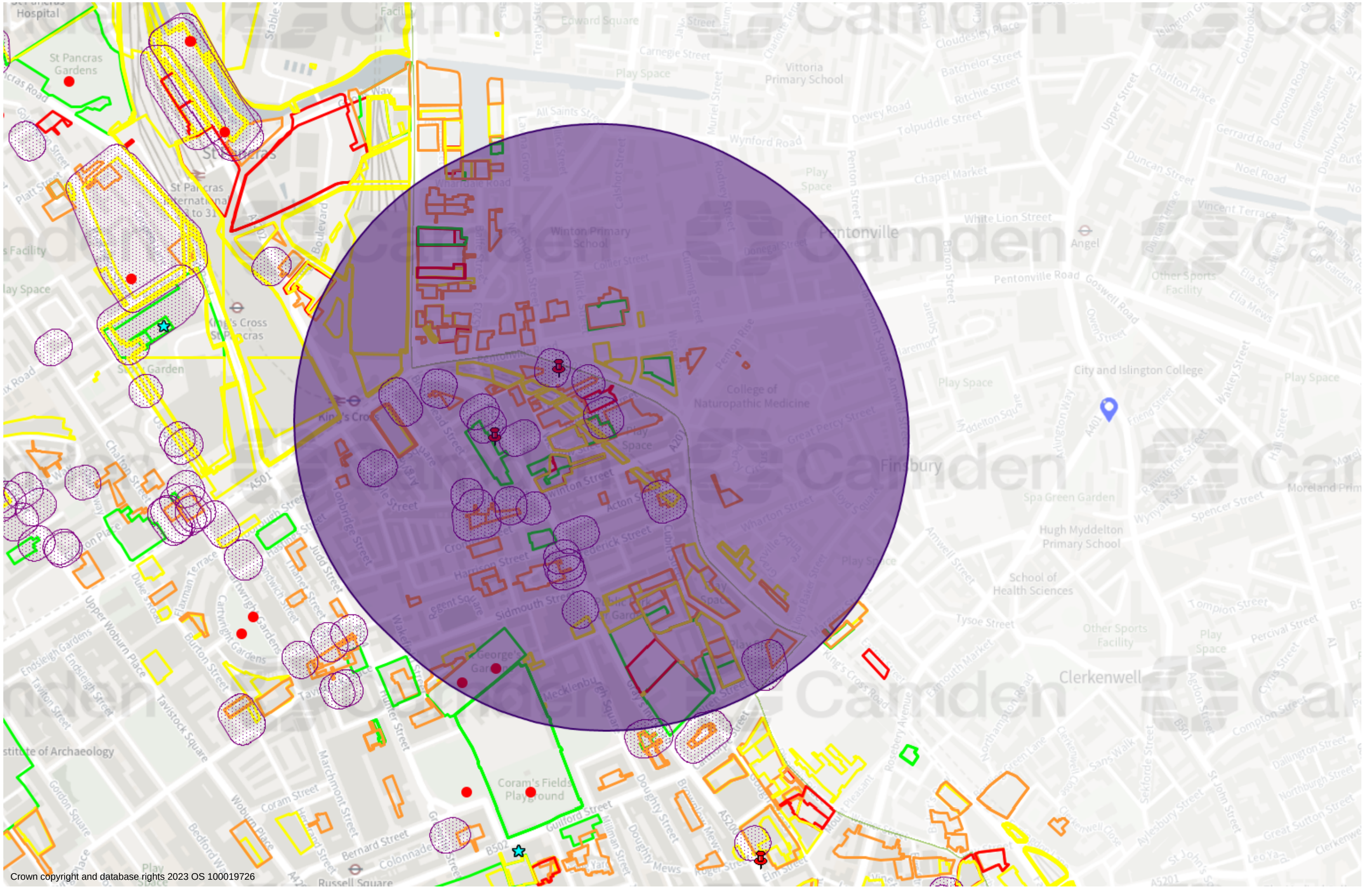
Philip Lewis
Information Rights Officer

Camden

Britannia Street

Scale = 1:5787.180

1-May-2023



BoroughMask (1)

Desc: London Borough Mask

AreaDescription: London Borough

AdminUnitID: 0

CensusCode:

AreaInHectares: 0

Linkage: http://www.camden.gov.uk/ccm/portal/

Contaminated Land Enquiry
Britannia St, London WC1X 9BP

Your query has been answered in red text below:

1. Please could you confirm whether the property is registered as contaminated land or if it is listed as a priority for review.

1A. The subject site has not been determined as contaminated land under Part 2A of EPA 1990.

2. Do you have any concerns regarding pollution (former pollution incidents etc) relating to the property?

2A As part of your enquiry the following searches were undertaken using the Councils GIS software (GISMO) to identify the potential for land contamination due to past and present land use activities within 500m.

- Part A2/B Industrial Process – **Dry cleaners circa 100m north and 130m west**
- Authorised landfill sites – **none**
- Within 500m radius of former landfill site(s) within LBC- **none**.
- Private waters supplies within 1km - **none**
- Pollution Incidents - **none**
- Trade Directory review
- Land use activities identified from O/S maps
- Businesses registered with Kelly's Trade Directory operating within and intersecting a 500m radius of the site.

Description	Site Type	Date	Old Road Name	Old Road Number
1989: Sunglasses and Optical Frame Manufacture	Sunglasses and Optical Frame Manufacture	1989	Calthorpe Street	51, Unit B
1864: Gas & Water Engineers	Gas & Water Engineers	1864	Gray's Inn Road	159
1864: Cabinet Makers	Cabinet Makers	1864	Gough Street North (became 49 Gough St 1	1
1864: Cabinet Makers	Cabinet Makers	1864	Gray's Inn Road	231
1864: Oil & Colour Storage	Oil & Colour Storage	1864	Gray's Inn Road	302
1864: Oil & Colour Storage	Oil & Colour Storage	1864	Gray's Inn Road	225
1989: Printers	Printers	1989	Acton Street	5
1864: Printers	Printers	1864	Manchester Street	6
1864 to 1885: Saddle & Harness Makers	Saddle & Harness Makers	1864 to 1885	Gray's Inn Road	245
1864: Coal & Coke Merchants	Coal & Coke Merchants	1864	Gray's Inn Road	221
1864: Pianoforte Makers	Pianoforte Makers	1864	Gray's Inn Road	211

1864: Gas & Water Engineers	Gas & Water Engineers	1864	Manchester Street	38
1864: Timber Merchants	Timber Merchants	1864	Manchester Street	17
1864: Printers	Printers	1864	Gray's Inn Road	299
1864: Oil & Colour Storage	Oil & Colour Storage	1864	Gray's Inn Road	309
1864: Oil & Colour Storage	Oil & Colour Storage	1864	Gray's Inn Road	340
Unknown Year prior to 1990: Cardboard Box Manufacturer	Cardboard Box Manufacturer	Unknown Year prior to 1990	Britannia Street	07-Nov
1964 to 1965: Printers	Printers	1964 to 1965	King's Cross Road	193 - 195
1964 to 1965: Printers	Printers	1964 to 1965	Leeke Street	6
1864: Coal & Coke Merchants	Coal & Coke Merchants	1864	Argyle Street	31
1873 to 1915: Coal & Coke Merchants	Coal & Coke Merchants	1873 to 1915	Gray's Inn Road	335 to 337
1864: Pianoforte Makers	Pianoforte Makers	1864	Euston Road	11

FINDINGS

The site is located on/in close proximity to former industrial land including an engineering works, lead works, rubber warehouse, railway lands and unknown industrial.

The results identified the following past industrial land use activities of plausible concern within 500m:

Epoch	Land Use
1965-1971	Boot Factory
1934-1939	Garage
1934-1939	Garage
1934-1939	Warehouse
1952-1955	Warehouse
1971-1988	Hospital
1965-1971	Electrical Sub Station
1952-1954	Electrical sub station
1971-1988	Electricity Sub Station
1965-1971	Engineering Works
1871-1877	Disused Burial Ground
1952-1955	Printing Works
1871-1877	Cartridge Works
1934-1939	Refrigerator Manufactory
1965-1971	Engineering Works
1952-1955	Electrical Sub Station
1934-1939	Unknown Industrial
1952-1955	Telephone Exchange
1965-1971	Garage

1952-1955	Garage
1971-1988	Electricity Sub Station
1871-1877	Hospital - Foundling
1894-1896	Hospital - Foundling
1934-1939	Hospital - Foundling
1952-1955	Works
1971-1988	Garage
1952-1954	Garage
1952-1954	Works
1965-1971	Garage
1894-1896	Unknown Industrial
1934-1939	Garage
1952-1954	Engineering Works
1952-1954	Disused Burial Ground
1952-1954	Milk Depot
1934-1939	Unknown Industrial
1934-1939	Unknown Industrial
1952-1954	Garage
1952-1954	Unknown Industrial
1952-1954	Garage
1952-1954	Clothing Factory
1965-1971	Garage
1934-1939	Unknown Industrial
1952-1954	Unknown Industrial
1971-1988	Works
1965-1971	Garage
1952-1954	Unknown Industrial
1952-1954	Unknown Industrial
1894-1896	Drill Hall
1952-1954	Unknown Industrial
1934-1939	Unknown Industrial
1952-1954	Unknown Industrial
1934-1939	Unknown Industrial
1952-1955	Unknown Industrial
1965-1971	Depot
1971-1988	Garage
1971-1988	Garage
1934-1939	Boot and Shoe Warehouse
1894-1896	Tramway Depot
1934-1939	Brewery
1952-1955	Unknown Industrial
1934-1939	Unknown Industrial
1952-1954	Unknown Industrial
1965-1971	Iron Works
1965-1971	Engineering Works
1894-1896	Unknown Industrial

1952-1955	Unknown Industrial
1894-1896	Lead Works
1934-1939	Rubber Warehouse
1909-1922	Industrial Unknown
1952-1954	Unknown Industrial
1894-1896	Unknown Industrial
1952-1954	Unknown Industrial
1971-1988	Factory
1934-1939	Unknown Industrial
1934-1939	Unknown Industrial
1934-1939	Unknown Industrial
1934-1939	Unknown Industrial
1965-1971	Unknown Industrial
1965-1971	Hospital
1952-1954	Unknown Industrial
1965-1971	Bottled Beer Store
1934-1939	Unknown Industrial
1934-1939	Unknown Industrial
1934-1939	Unknown Industrial
1894-1896	Chemical Works
1894-1896	Unknown Industrial
1934-1939	Printing Works
1934-1939	Brewery
1952-1954	Unknown Industrial
1952-1954	Unknown Industrial
1952-1954	Unknown Industrial
1965-1971	Unknown Industrial
1965-1971	Railway Land
1894-1896	Unknown Industrial
1894-1896	Timber Yard
1909-1922	Hospital - Foundling
1909-1922	Timber Yard
1934-1939	Unknown Industrial
1934-1939	Printing Machinery Factory
1909-1922	Unknown Industrial
1934-1939	Garage
1909-1922	Unknown Industrial
1871-1877	Ice House
1894-1896	Smithy
1894-1896	Unknown Industrial
1934-1939	Unknown Industrial
1871-1877	Foundry - Copper & Brass
1934-1939	Unknown Industrial
1952-1954	Unknown Industrial
1934-1939	Unknown Industrial
1934-1939	Unknown Industrial

1871-1877	Foundry - Iron
1894-1896	Blacking & Blue Works
1934-1939	Unknown Industrial
1894-1896	Foundry - Iron
1934-1939	Garage
1909-1922	Emery and Black Lead Works
1952-1955	Stationery Factory
1934-1939	Unknown Industrial
1934-1939	Unknown Industrial
1894-1896	Unknown Industrial
1952-1954	Beer bottling factory
1871-1877	Flour Mill
1934-1939	Unknown Industrial
1909-1922	Motor Works
1952-1954	Unknown Industrial
1952-1954	Laundry
1952-1954	Unknown Industrial
1934-1939	Unknown Industrial
1934-1939	Unknown Industrial
1871-1877	Varnish Works
1909-1922	Industrial Unknown
1934-1939	Unknown Industrial
1952-1955	Unknown Industrial
1934-1939	Unknown Industrial
1909-1922	Unknown Industrial
1952-1955	Unknown Industrial
1934-1939	Unknown Industrial
1894-1896	Foundry - Tin
1894-1896	Emery & Lead Works
1952-1955	Warehouse
1934-1939	Unknown Industrial
1934-1939	Railway Lands
1934-1939	Unknown Industrial
1952-1955	Garage
1934-1939	Unknown Industrial
1909-1922	Unknown Industrial
1952-1955	Unknown Industrial
1934-1939	Cartridge Works
1871-1877	Railway Lands
1952-1955	Garage
1894-1896	Railway Lands
1952-1954	Tank
1909-1922	Railway Lands
1965-1971	Tank
1971-1988	Tank
1952-1955	Tank

1934-1939	Railway Lands

According to our contaminated land risk characterisation, land on which the above processes/activities were carried out is considered to represent a **Low** (**risk score 4** e.g. warehouse) to **High** risk (**risk score 16** e.g. Chemical Works and Iron Works) of contamination. It is considered likely that such land could exhibit significantly elevated contaminate levels with the potential to cause harm, although the Council has no present evidence that confirms that there are contamination issues affecting the site other than potentially contaminative land-use activities in proximity. Therefore, the subject site is not currently being investigated under the Part IIA of the Contaminated Land Regime as it is considered (based on the information available) suitable for its current use.

If the site was to be redeveloped in the future, involving ground disturbance, excavation works or soft landscaping (certain soils in Camden contain elevated heavy metals) then a planning condition would be recommended for a detailed site investigation (desk top study, walkover survey and intrusive investigation) and if necessary remediation works. The investigation process follows a risk-based approach under Part 2A of EPA 1990, objectively to ensure that potentially contaminated land is suitable for its proposed use. Consequently, the planning process is the main way in which contaminated land and potentially contaminated land is investigated and remediated in Camden.

3. Do you hold any site inspection, investigation, remediation/validation reports for the site (and is it possible to obtain copies?)

3A From review of available records, we are not aware of any site investigation or remedial works that may have taken place on the subject site.

5. Information relating to known landfills or infilled ground within the vicinity of the site.

5A As illustrated by 2A above, none identified in the vicinity of the site.

6. Private water supply records.

6A There are no private water supplies within the London Borough of Camden.

7. Groundwater abstraction and discharges to ground via soakaway.

7A The Council does not hold records of groundwater abstractions or soakaways. For further information contact the Environment Agency.

8. Any records on the historical development of the site including archaeological issues (e.g. roundhouse);

8A. We do not hold records of archaeological issues.

9. Any available details pertaining to the ponds/reservoirs/other surface water bodies proximate to the site.

9A. Regrettably LBC do not hold records of such controlled waters. This information could be obtained from a site visit and or desktop study.

10. Do you consider the site suitable from an environmental health perspective for continued use in its current configuration?

10A See response to 2A above. Former industrial use has been identified on site, however we currently hold no information confirming whether or not contamination is an issue.

11. Have elevated indoor radon gas concentrations been identified within buildings on or within 100m of the site? Have radon protection measures been required in buildings on site or within 100m? If so, please provide details.

11.A The Council does not hold radon gas concentration data. However, information is available at UKradon - UK maps of radon

Disclaimer:

The above response is provided from such information that is readily available to the Council and in its possession. It is believed to be correct, but the Council expressly gives no warranty in this respect nor will the Council accept any liability whatsoever for any error, omission or loss occasioned thereby to any person (whether or not the person requested the information) and in particular the Council gives no warranty that it has researched all its relevant archives in order to respond to the request for information.

Map legends:

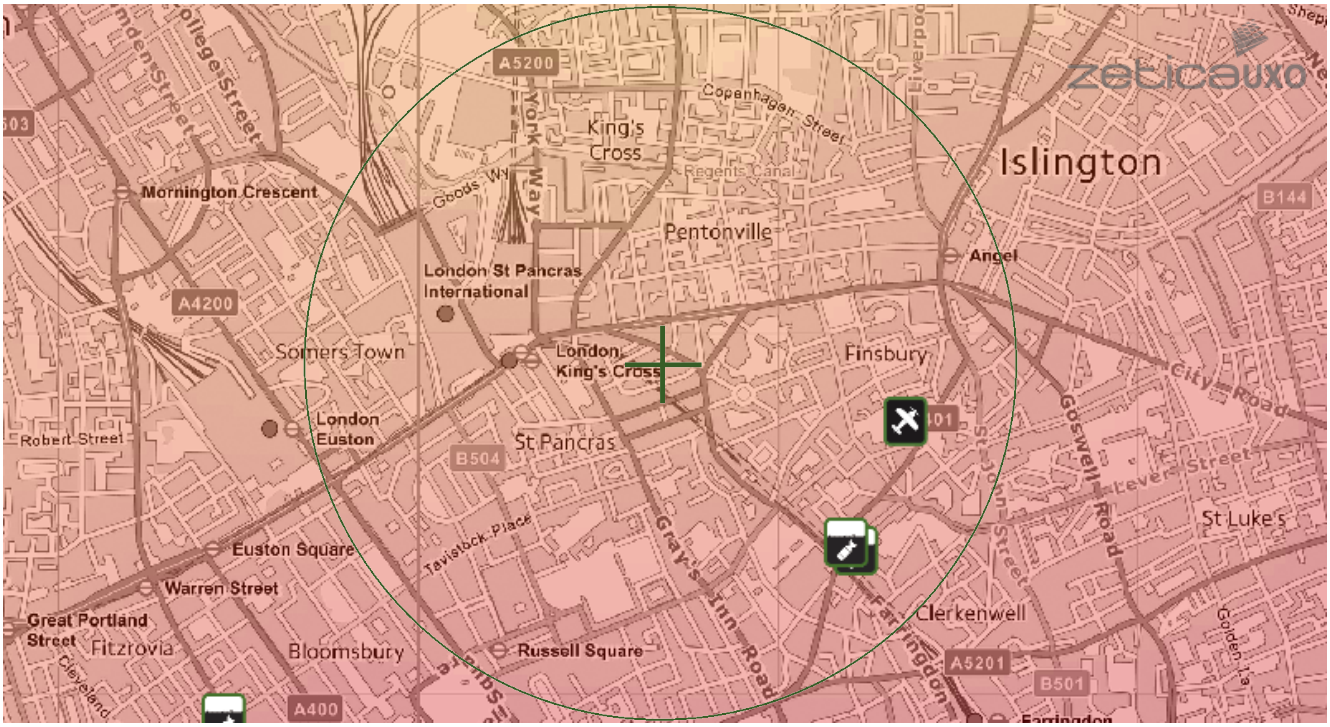
Appendix I

UXO RISK MAPS

UNEXPLODED BOMB RISK MAP

SITE LOCATION

Location: WC1X 9BP,
Map Centre: 530686,182918



LEGEND

London Bomb Risk

miltary	industry	UXO find	Other
transport	dock	Luftwaffe targets	
utilities	abandoned bombs	Bombing decoy	

How to use your Unexploded Bomb (UXB) risk map?

The map indicates the potential for Unexploded Bombs (UXB) to be present as a result of World War Two (WWII) bombing.

You can incorporate the map into your preliminary risk assessment* for potential Unexploded Ordnance (UXO) for a site. Using this map, you can make an informed decision as to whether more in-depth detailed risk assessment* is necessary.

Relative UXB risk across London

The relative risk for the London area is established by plotting the recorded bombing densities.

These are represented as counts of high explosive bombs in km2 area. The areas coloured green represent a record of less than 10 bombs per km2.

Compared to other areas of the UK, this still represents a significant density. However, this is much lower than parts of Central London, where the red colouration indicates in excess of 150 bombs falling per km2, representing a very significant bombing density.

What do I do if my site is in a moderate or high density area?

Generally, we recommend that a detailed UXO desk study and risk assessment is undertaken for sites with a moderate or high bombing density.

Similarly, if your site is near to a designated Luftwaffe target or bombing decoy then additional detailed research is recommended.

More often than not, this further detailed research will conclude that the potential for a significant UXO hazard to be present on your site is actually low.

Never plan site work or undertake a risk assessment using these maps alone. More detail is required, particularly where there may be a source of UXO from other military operations which are not reflected on these maps.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirms that there is a low potential for UXO to be present on your site then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

A low risk really means that there is no greater probability of encountering UXO than anywhere else in the UK.

If you are unsure whether other sources of UXO may be present, you can ask for one of our **pre-desk study assessments (PDSA)**

If I have any questions, who do I contact?

tel: **+44 (0) 1993 886682**
email: **uxo@zetica.com**
web: **www.zeticauxo.com**

The information in this UXB risk map is derived from a number of sources and should be used in conjunction with the accompanying notes on our website: **(https://zeticauxo.com/downloads-and-resources/risk-maps/)**

It is important to note that this map is not a UXO risk assessment and should not be reported as such when reproduced.

*Preliminary and detailed UXO risk assessments are advocated as good practice by industry guidance such as CIRIA C681 'Unexploded Ordnance (UXO), a guide for the construction industry'.

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London
WC2A 1AF

wsp.com