

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

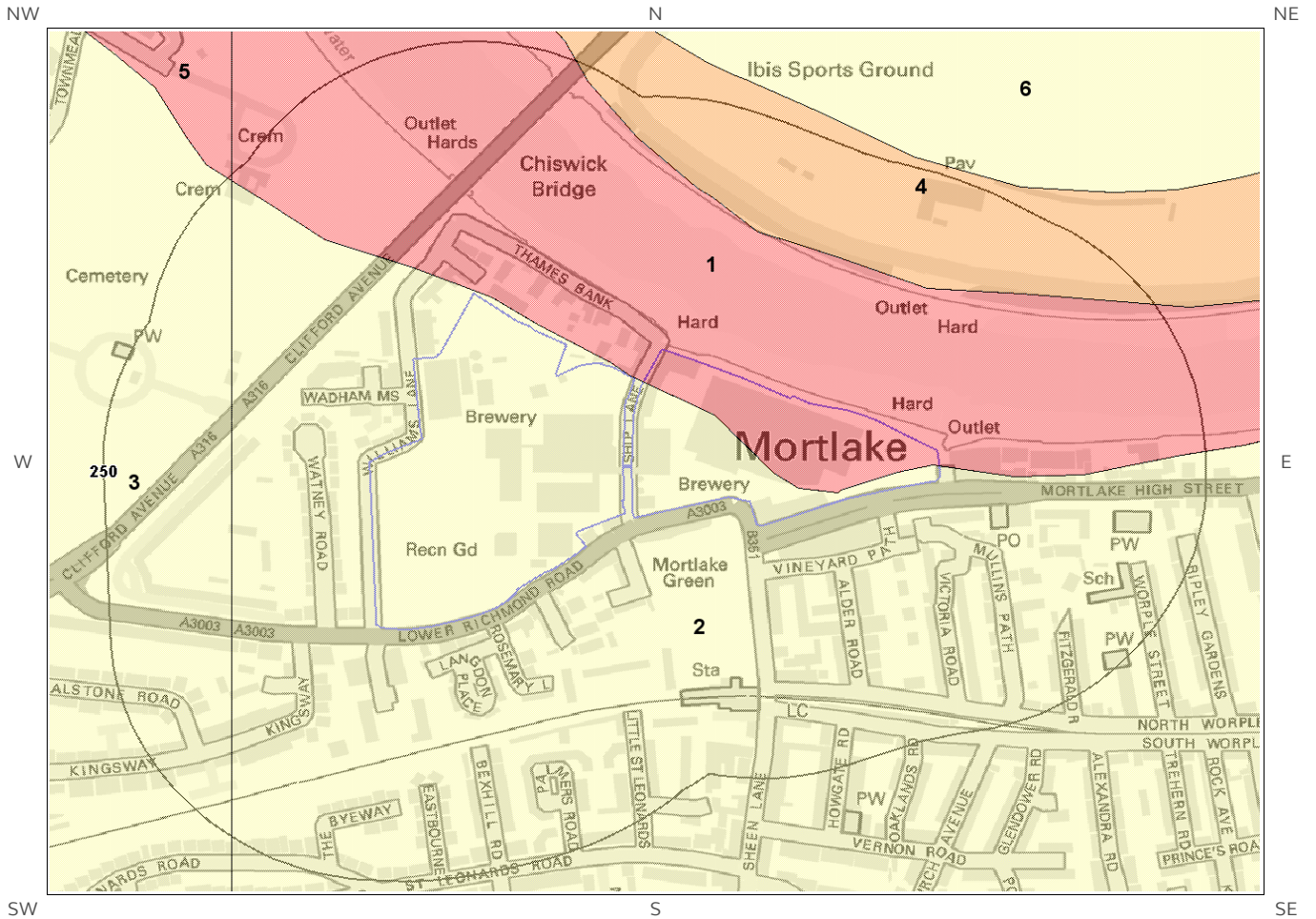
Are there any Clay Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

6 Natural Ground Subsidence

6.1 Shrink-Swell Clay map

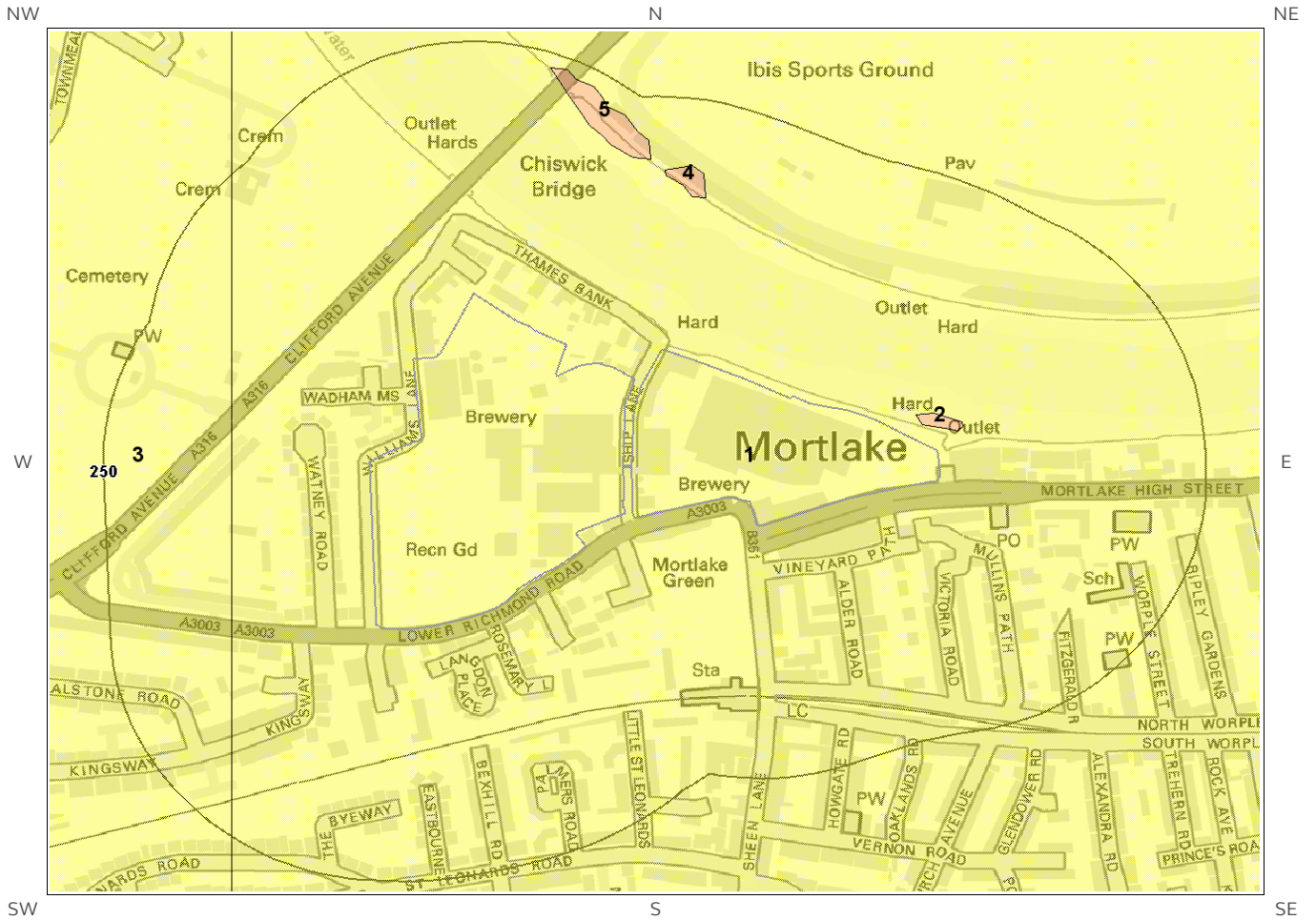


Shrink Swell Clay Legend

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6.2 Landslides map

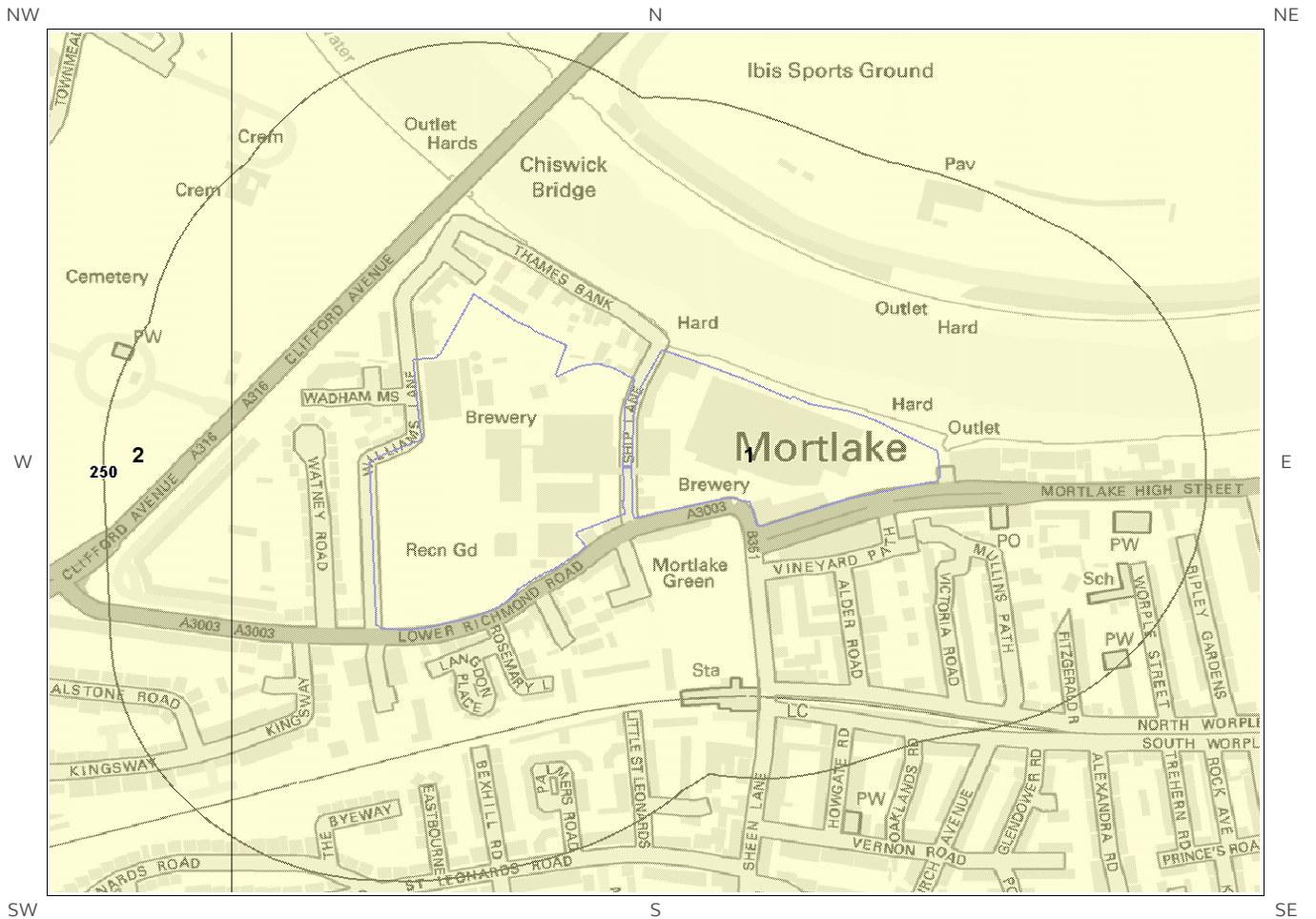


Landslides Legend

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6.3 Ground Dissolution of Soluble Rocks map

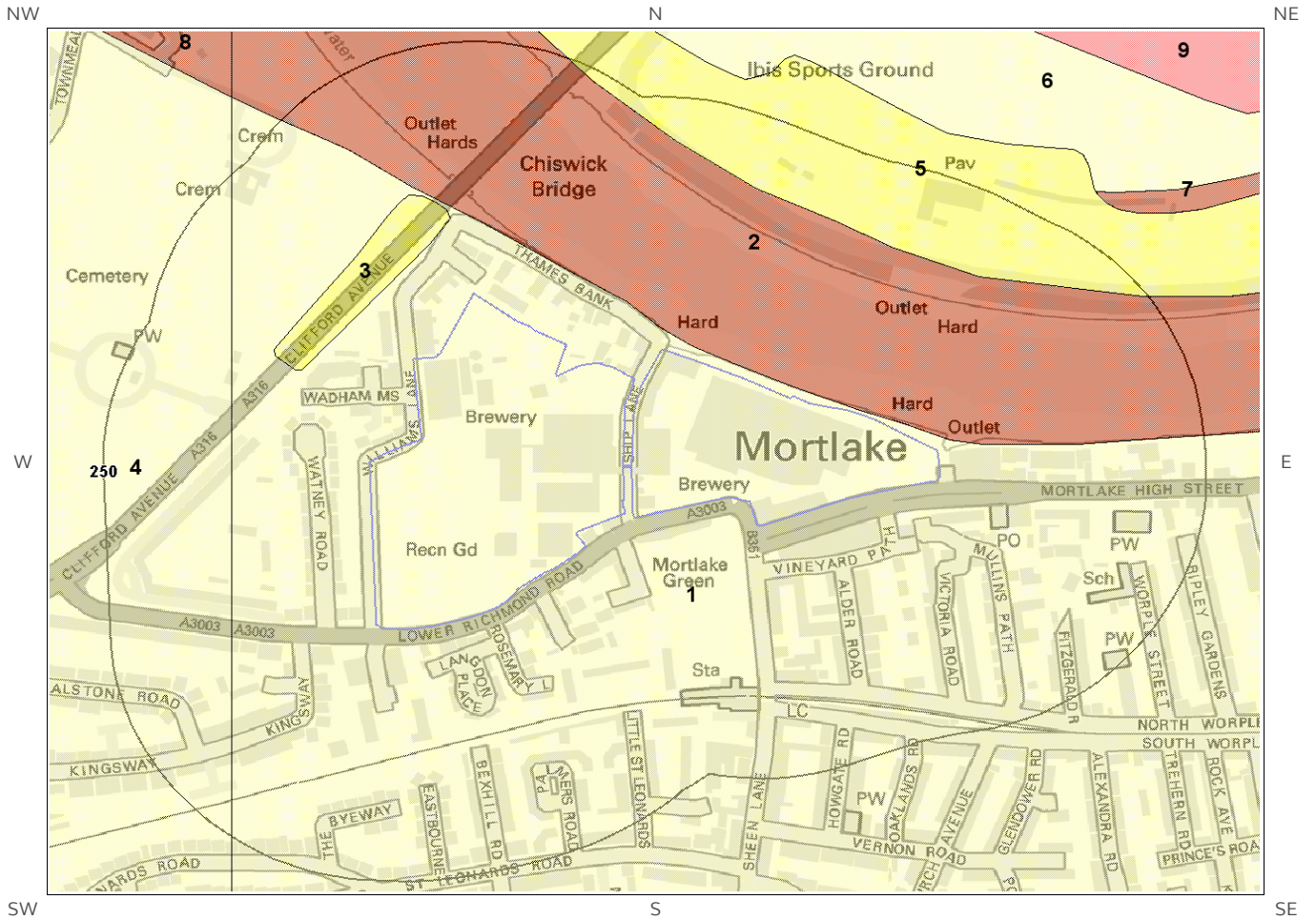


Ground Dissolution Soluble Rocks Legend

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6.4 Compressible Deposits map

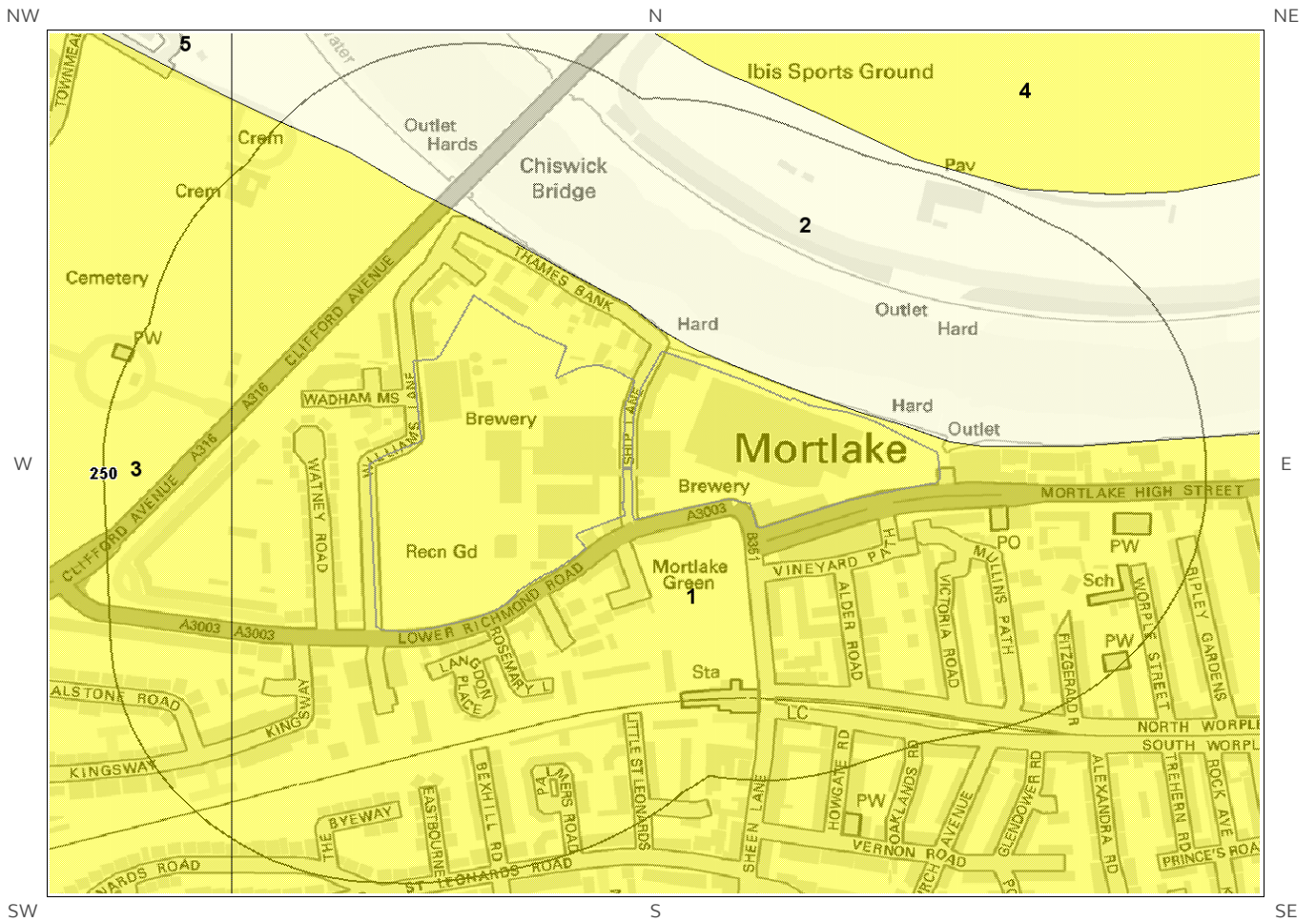


Compressible Deposits Legend

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6.5 Collapsible Deposits map

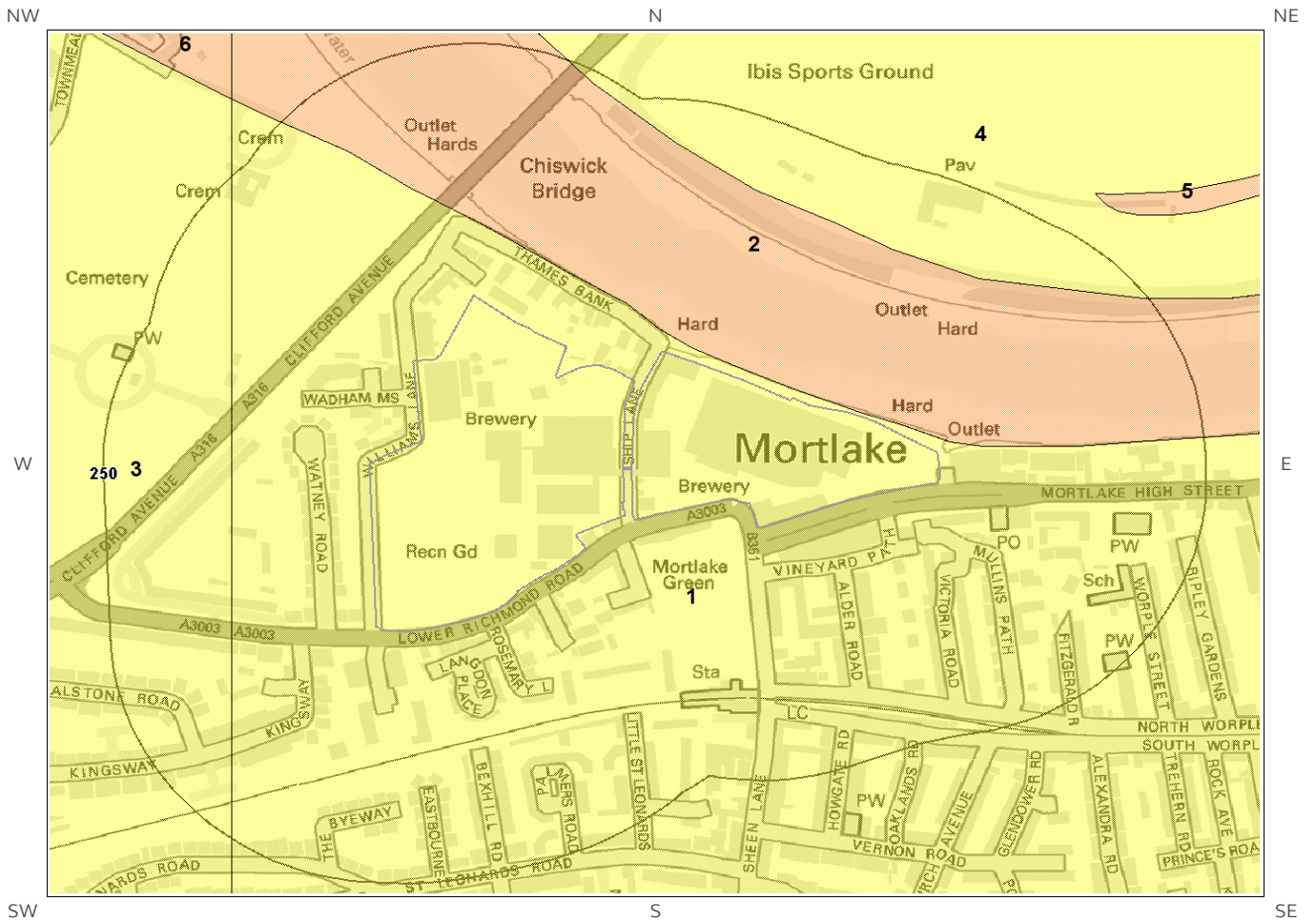


Collapsible Deposits Legend

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6.6 Running Sand map



Running Sand Legend

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6 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? High

6.1 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.
2	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.

6.2 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.

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

ID	Distance (m)	Direction	Hazard Rating	Details
2	16.0	NE	Low	Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property - no significant increase in insurance risk due to natural slope instability problems.

6.3 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.

6.4 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 deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.
2	4.0	N	High	Very significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build - consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Construction may not be possible at economic cost. For existing property - probable increase in insurance risk from compressibility especially if water conditions or loading of the ground change significantly.

6.5 Collapsible Deposits

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

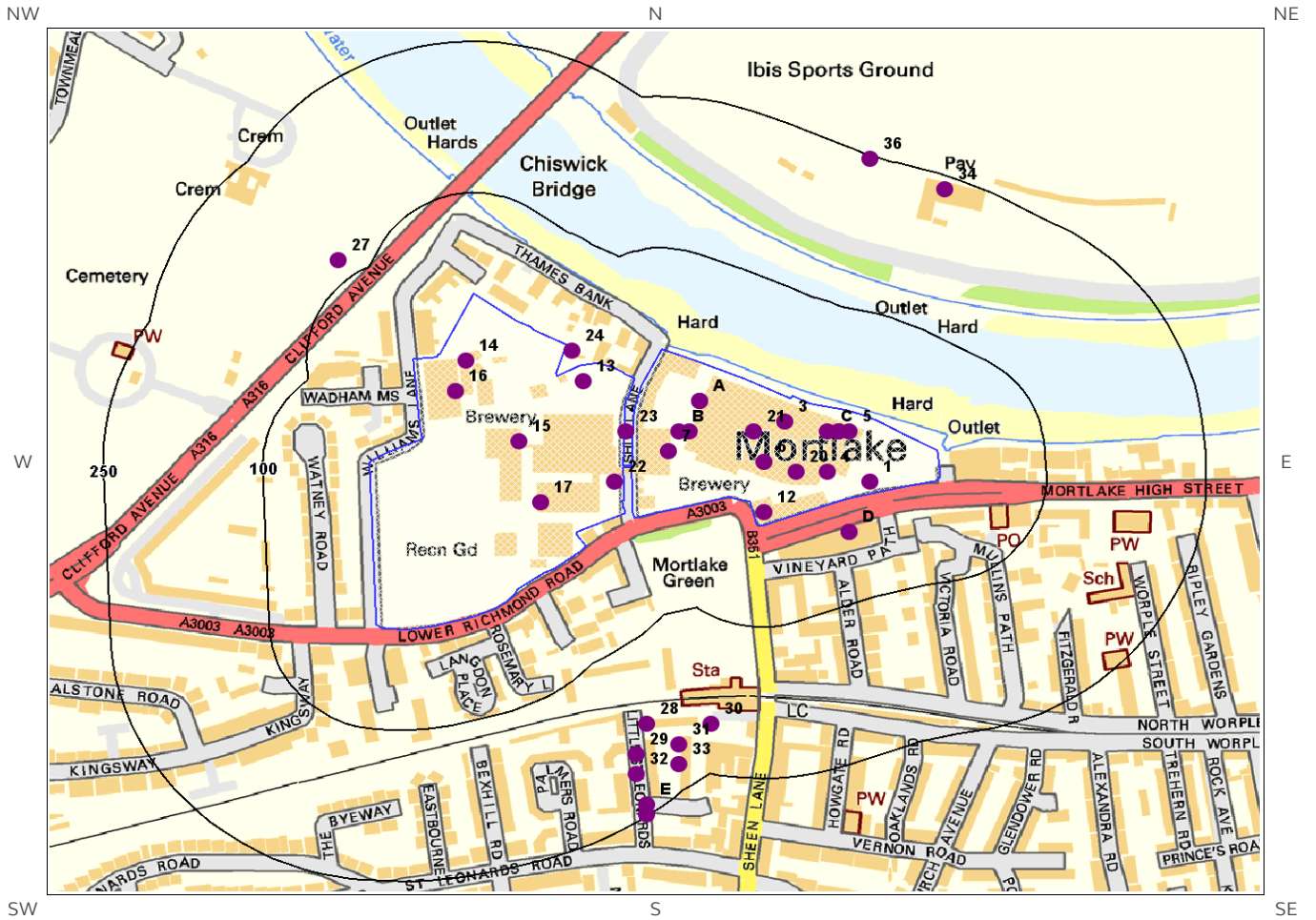
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
2	4.0	N	Negligible	No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

6.6 Running Sands

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

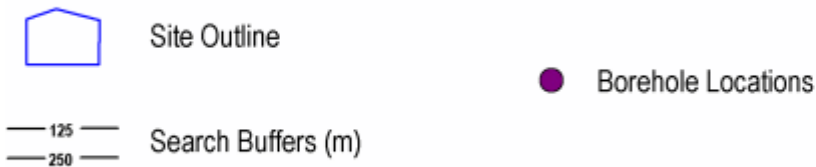
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
2	4.0	N	Low	Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build - consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property - no significant increase in insurance risk due to running sand problems is likely.

7 Borehole Records map



Borehole Records Legend

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7 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:

37

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	0.0	On Site	520600 175980	TQ27NW927	2	MORTLAKE TP1
2C	0.0	On Site	520560 176030	TQ27NW406	122	MORTLAKE BREWERY
3	0.0	On Site	520520 176040	TQ27NW930	1	MORTLAKE TP4
4	0.0	On Site	520560 175990	TQ27NW928	2	MORTLAKE TP2
5	0.0	On Site	520580 176030	TQ27NW926	8	MORTLAKE 5
6	0.0	On Site	520500 176000	TQ27NW929	2	MORTLAKE TP3
7	0.0	On Site	520410 176010	TQ27NW922	8	MORTLAKE 1
8B	0.0	On Site	520420 176030	TQ27NW931	1	MORTLAKE TP5
9A	0.0	On Site	520440 176060	TQ27NW925	8	MORTLAKE 4
10A	0.0	On Site	520440 176060	TQ27NW405	111	MORTLAKE BREWERY
11B	0.0	On Site	520430 176030	TQ27NW397	10	MORTLAKE DEVELOPMENT BH5
12	0.0	On Site	520500 175950	TQ27NW574	9	WATNEY'S BREWERY, MORTLAKE
13	0.0	On Site	520330 176080	TQ27NW396	10	MORTLAKE DEVELOPMENT BH4
14	0.0	On Site	520220 176100	TQ27NW672	Not available	MORTLAKE BREWERY 1
15	0.0	On Site	520270 176020	TQ27NW394	20	MORTLAKE DEVELOPMENT BH2
16	0.0	On Site	520210 176070	TQ27NW673	Not available	MORTLAKE BREWERY 2
17	0.0	On Site	520290 175960	TQ27NW393	10	MORTLAKE DEVELOPMENT BH1
18C	0.0	On Site	520570 176030	TQ27NW597	122	WATNEY'S BREWERY, MORTLAKE
19C	0.0	On Site	520570 176030	TQ27NW596	101	WATNEY'S BREWERY, MORTLAKE
20	0.0	On Site	520530 175990	TQ27NW923	8	MORTLAKE 2
21	0.0	On Site	520490 176030	TQ27NW924	15	MORTLAKE 3
22	0.0	On Site	520360 175980	TQ27NW398	15	MORTLAKE DEVELOPMENT BH6

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
23	1.0	E	520370 176030	TQ27NW399	10	MORTLAKE DEVELOPMENT BH7
24	7.0	E	520320 176110	TQ27NW395	10	MORTLAKE DEVELOPMENT BH3
25D	33.0	S	520580 175930	TQ27NW79/A	20	AMORTLAKE HIGH ST MORTLAKE
26D	33.0	S	520580 175930	TQ27NW79/A-C	20	MORTLAKE HIGH ST MORTLAKE
27	120.0	NW	520100 176200	TQ27NW23	5	RICHMOND MAIN DRAINAGE HOLES MORTLAKE
28	177.0	SE	520390 175740	TQ27NW521	6	LITTLE ST LEONARDE BH2
29	195.0	SE	520380 175710	TQ27NW801	9	LITTLE ST LEONARDS ROAD MORTLAKE 1
30	202.0	S	520450 175740	TQ27NW522	6	LITTLE ST LEONARDE BH3
31	210.0	SE	520420 175720	TQ27NW803	7	LITTLE ST LEONARDS ROAD MORTLAKE 2
32	211.0	SE	520380 175690	TQ27NW816	9	LITTLE ST LEONARDS ROAD MORTLAKE 3
33	227.0	SE	520420 175700	TQ27NW819	7	LITTLE ST LEONARDS ROAD MORTLAKE 4
34	236.0	N	520670 176270	TQ27NW425	168	DUKES MEADOWS CHISWICK
35E	241.0	SE	520390 175660	TQ27NW822	6	LITTLE ST LEONARDS ROAD MORTLAKE 5
36	246.0	N	520600 176300	TQ27NW476	12	DUKES MEADOW GOLF CLUB
37E	249.0	SE	520390 175650	TQ27NW520/N	6	LITTLE ST LEONARDE 1

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/18464321
#2C: scans.bgs.ac.uk/sobi_scans/boreholes/587001
#3: scans.bgs.ac.uk/sobi_scans/boreholes/18464324
#4: scans.bgs.ac.uk/sobi_scans/boreholes/18464322
#5: scans.bgs.ac.uk/sobi_scans/boreholes/18464320
#6: scans.bgs.ac.uk/sobi_scans/boreholes/18464323
#7: scans.bgs.ac.uk/sobi_scans/boreholes/18464316
#8B: scans.bgs.ac.uk/sobi_scans/boreholes/18464325
#9A: scans.bgs.ac.uk/sobi_scans/boreholes/18464319
#10A: scans.bgs.ac.uk/sobi_scans/boreholes/587000
#11B: scans.bgs.ac.uk/sobi_scans/boreholes/586990
#12: scans.bgs.ac.uk/sobi_scans/boreholes/587169
#13: scans.bgs.ac.uk/sobi_scans/boreholes/586989
#15: scans.bgs.ac.uk/sobi_scans/boreholes/586987
#17: scans.bgs.ac.uk/sobi_scans/boreholes/586986
#18C: scans.bgs.ac.uk/sobi_scans/boreholes/587192
#19C: scans.bgs.ac.uk/sobi_scans/boreholes/587191
#20: scans.bgs.ac.uk/sobi_scans/boreholes/18464317
#21: scans.bgs.ac.uk/sobi_scans/boreholes/18464318
#22: scans.bgs.ac.uk/sobi_scans/boreholes/586991
#23: scans.bgs.ac.uk/sobi_scans/boreholes/586994
#24: scans.bgs.ac.uk/sobi_scans/boreholes/586988
#25D: scans.bgs.ac.uk/sobi_scans/boreholes/586658
#26D: scans.bgs.ac.uk/sobi_scans/boreholes/586659
#27: scans.bgs.ac.uk/sobi_scans/boreholes/586602
#28: scans.bgs.ac.uk/sobi_scans/boreholes/587116
#29: scans.bgs.ac.uk/sobi_scans/boreholes/18208130
#30: scans.bgs.ac.uk/sobi_scans/boreholes/587117
#31: scans.bgs.ac.uk/sobi_scans/boreholes/18208132
#32: scans.bgs.ac.uk/sobi_scans/boreholes/18208145
#33: scans.bgs.ac.uk/sobi_scans/boreholes/18208148
#34: scans.bgs.ac.uk/sobi_scans/boreholes/587020
#35E: scans.bgs.ac.uk/sobi_scans/boreholes/18208152
#36: scans.bgs.ac.uk/sobi_scans/boreholes/587071
#37E: scans.bgs.ac.uk/sobi_scans/boreholes/587115

8 Estimated Background Soil Chemistry

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

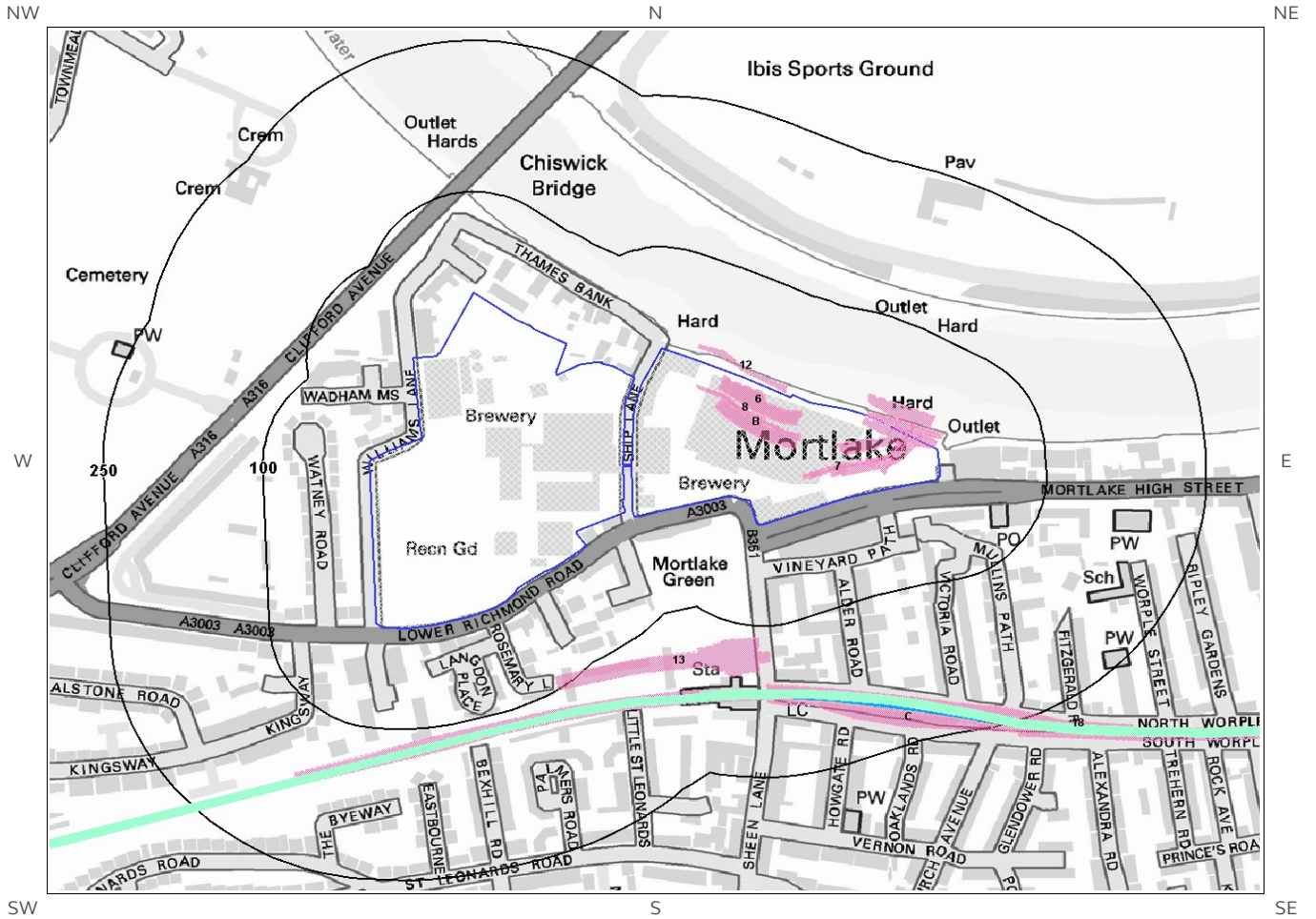
8

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
0.0	On Site	London	No data	No data	No data	No data	No data
0.0	On Site	London	No data	No data	No data	No data	No data
0.0	On Site	London	No data	No data	No data	No data	No data
0.0	On Site	London	No data	No data	No data	No data	No data
0.0	On Site	London	No data	No data	No data	No data	No data
4.0	N	London	No data	No data	No data	No data	No data
11.0	N	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.

9 Railways and Tunnels map



Railways and Tunnels Legend

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-  Underground or Partially Underground Railway / Subway System
-  Railway Track (OpenStreetMap)
-  Railway Tunnel (OS Mapping)
-  High Speed 2
-  Abandoned or Dismantled Railway (OpenStreetMap)
-  High Speed 2 Revised Proposed Route
-  Railway Track (OS Mapping)
-  Railway and/or Tunnel Feature from Historical Mapping
-  Site Outline
-  Search Buffers (m)
-  Crossrail 1

9 Railways and Tunnels

9.1 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? No

Database searched and no data found.

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.

9.2 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? Yes

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

ID	Distance (m)	Direction	NGR	Details	Date
1A	0	On Site	520632 176014	Railway Sidings	1920
2A	0	On Site	520632 176014	Railway Sidings	1938
3	0	On Site	520633 176036	Railway Sidings	1910
4B	0	On Site	520494 176037	Railway Sidings	1920
5B	0	On Site	520494 176037	Railway Sidings	1938
6	0	On Site	520497 176061	Railway Sidings	1910

ID	Distance (m)	Direction	NGR	Details	Date
7	0	On Site	520561 175991	Railway Sidings	1896
8	0	On Site	520479 176050	Railway Sidings	1913
9A	0	On Site	520628 176016	Railway Sidings	1913
10A	0	On Site	520631 176017	Railway Sidings	1896
11	0	On Site	520638 176021	Railway Sidings	1919
12	2	NE	520480 176092	Railway Sidings	1933
13	88	SE	520405 175799	Railway Sidings	1933
14C	108	S	n/a	Railways	1898
15C	108	S	n/a	Railways	1866
16C	108	S	n/a	Railways	1913
17C	108	S	n/a	Railways	1935
18	196	S	n/a	Railways	1919

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

9.3 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.

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.

9.4 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? No

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

Distance (m)	Direction	Name	Type
115	S	Waterloo to Reading Line	rail
115	S	Waterloo to Reading Line	rail
116	S	Not given	Multi Track
116	S	Not given	Multi Track
117	S	Waterloo to Reading Line	rail
117	S	Waterloo to Reading Line	rail
166	S	Waterloo to Reading Line	rail

Distance (m)	Direction	Name	Type
166	S	Waterloo to Reading Line	rail
186	S	Waterloo to Reading Line	rail
186	S	Waterloo to Reading Line	rail

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.

9.5 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? No

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.

The 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.

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Email: enquiries@bgs.ac.uk
Web: www.bgs.ac.uk

BGS Geological Hazards Reports and general geological enquiries



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<https://www.gov.uk/government/organisations/public-health-england>
Email: enquiries@phe.gov.uk
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Standard Terms and Conditions

Groundsure's Terms and Conditions can be viewed online at this link:
<https://www.groundsure.com/terms-and-conditions-feb11-2019>

E. Risk Rating Matrix

Table E.1: Risk rating for contaminated land qualitative risk assessment

Level of Severity	Likelihood		
	Most Likely	Reasonably Foreseeable	Unlikely
Acute harm or severe chronic harm. Direct pollution of sensitive water receptors or serious pollution of other water bodies.	High	High	Low
Harm from long-term exposure. Slight pollution of sensitive receptors or pollution of other water bodies.	Medium	Medium	Low
No significant harm in either short or long term. No pollution of water that is likely to affect sensitive receptors. No more than slight pollution of other water bodies.	Low	Low	Low

F. Environmental Receptors

The Contaminated Land Statutory Guidance has a four category system that considers harm to human health, controlled waters, flora and fauna, property, livestock and crops. The Categories are broadly defined as follows:

1 Contaminated Land – similar to land where it is known that significant harm has been caused or significant harm is being caused

2 Contaminated Land – no significant harm being caused but there is a significant possibility for significant harm to be caused in the future

3 Not Contaminated Land – there may be harm being caused but no significant possibility for significant harm to be caused in the future

4 Not Contaminated Land – no pollutant linkage, normal levels of contaminants and no significant harm being caused and no significant possibility for significant harm to be caused in the future.

Table F.1: Significant pollution to controlled waters

Pollution of controlled waters

Under Section 78A(9) of Part 2A the term “pollution of controlled waters means the entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter. The term “controlled waters” in relation to England has the same meaning as in Part 3 of the Water Resources Act 1991, except that “ground waters” does not include water contained in underground strata but above the saturation zones. (Paragraph 4.36)

Given that the Part 2A regime seeks to identify and deal with significant pollution (rather than lesser levels of pollution), the local authority should seek to focus on pollution which: (i) may be harmful to human health or the quality of aquatic ecosystems or terrestrial ecosystems directly depending on aquatic ecosystems; (ii) which may result in damage to material property; or (iii) which may impair or interfere with amenities and other legitimate uses of the environment. (Paragraph 4.37)

Significant pollution of controlled waters

Paragraph 4.38 states that “The following types of pollution should be considered to constitute significant pollution of controlled waters:

(a) Pollution equivalent to “environmental damage” to surface water or groundwater as defined by The Environmental Damage (Prevention and Remediation) Regulations 2009, but which cannot be dealt with under those Regulations.

(b) Inputs resulting in deterioration of the quality of water abstracted, or intended to be used in the future, for human consumption such that additional treatment would be required to enable that use.

(c) A breach of a statutory surface water Environment Quality Standard, either directly or via a groundwater pathway.

(d) Input of a substance into groundwater resulting in a significant and sustained upward trend in concentration of contaminants (as defined in Article 2(3) of the Groundwater Daughter Directive (2006/118/EC)5”.

Paragraph 4.39 states that “In some circumstances, the local authority may consider that the

Appendices

following types of pollution may constitute significant pollution: (a) significant concentrations⁶ of hazardous substances or non-hazardous pollutants in groundwater; or (b) significant concentrations of priority hazardous substances, priority substances or other specific polluting substances in surface water; at an appropriate, risk based compliance point. The local authority should only conclude that pollution is significant if it considers that treating the land as contaminated land would be in accordance with the broad objectives of the regime as described in Section 1 (of the Contaminated Land Statutory Guidance). This would normally mean that the authority should conclude that less serious forms of pollution are not significant. In such cases the authority should consult the Environment Agency”.

The following types of circumstance should not be considered to be contaminated land on water pollution grounds:

- (a) The fact that substances are merely entering water and none of the conditions for considering that significant pollution is being caused set out in paragraphs 4.38 and 4.39 above are being met.
- (b) The fact that land is causing a discharge that is not discernible at a location immediately downstream or down-gradient of the land (when compared to upstream or up-gradient concentrations).
- (c) Substances entering water in compliance with a discharge authorised under the Environmental Permitting Regulations.

Significant pollution of controlled waters is being caused

In deciding whether significant pollution of controlled waters is being caused, the local authority should consider that this test is only met where it is satisfied that the substances in question are continuing to enter controlled waters; or that they have already entered the waters and are likely to do so again in such a manner that past and likely future entry in effect constitutes ongoing pollution. For these purposes, the local authority should:

- (a) Regard substances as having entered controlled waters where they are dissolved or suspended in those waters, or (if they are immiscible with water) they have direct contact with those waters on or beneath the surface of the water.
- (b) Take the term “continuing to enter” to mean any measurable entry of the substance(s) into controlled waters additional to any which has already occurred.
- (c) Take the term “likely to do so again” to mean more likely than not to occur again.

Land should not be determined as contaminated land on grounds that significant pollution of controlled waters is being caused where: (a) the relevant substance(s) are already present in controlled waters; (b) entry into controlled waters of the substance(s) from land has ceased; and (c) it is not likely that further entry will take place.

Significant Possibility of Significant Pollution of Controlled Waters

In deciding whether or not a significant possibility of significant pollution of controlled waters exists, the local authority should first understand the possibility of significant pollution of controlled waters posed by the land, and the levels of certainty/uncertainty attached to that understanding, before it goes on to decide whether or not that possibility is significant. The term “possibility of significant pollution of controlled waters” means the estimated likelihood that significant pollution of controlled waters might occur. In assessing the possibility of significant pollution of controlled waters from land, the local authority should act in accordance with the

advice on risk assessment in Section 3 and the guidance in this sub-section.

In deciding whether the possibility of significant pollution of controlled waters is significant the local authority should bear in mind that Part 2A makes the decision a positive legal test. In other words, for particular land to meet the test the authority needs reasonably to believe that there is a significant possibility of such pollution, rather than to demonstrate that there is not.

Before making its decision on whether a given possibility of significant pollution of controlled waters is significant, the local authority should consider:

- (a) The estimated likelihood that the potential significant pollution of controlled waters would become manifest; the strength of evidence underlying the estimate; and the level of uncertainty underlying the estimate.
- (b) The estimated impact of the potential significant pollution if it did occur. This should include consideration of whether the pollution would be likely to cause a breach of European water legislation, or make a major contribution to such a breach.
- (c) The estimated timescale over which the significant pollution might become manifest.
- (d) The authority's initial estimate of whether remediation is feasible, and if so what it would involve and the extent to which it might provide a solution to the problem; how long it would take; what benefit it would be likely to bring; and whether the benefits would outweigh the costs and any impacts on local society or the environment from taking action.

Reproduced from DEFRA (2012) Contaminated Land Statutory Guidance pursuant to section 78YA of the Environmental Protection Act 1990 as amended by Section 57 of the Environment Act 1995.

Table F.2: Significant harm to human health, ecological systems and property

Relevant types of receptor	Significant harm	Significant possibility of significant harm
Human beings	<p>The following health effects should always be considered to constitute significant harm to human health: death; life threatening diseases (eg cancers); other diseases likely to have serious impacts on health; serious injury; birth defects; and impairment of reproductive functions.</p> <p>Other health effects may be considered by the local authority to constitute significant harm. For example, a wide range of conditions may or may not constitute significant harm (alone or in combination) including: physical injury; gastrointestinal disturbances; respiratory tract effects; cardio-vascular effects; central nervous system effects; skin ailments; effects on organs such as the liver or kidneys; or a wide range of other health impacts. In deciding whether or not a particular form of harm is significant harm, the local authority</p>	<p>The risk posed by one or more relevant contaminant linkage(s) relating to the land comprises:</p> <p>(a) The estimated likelihood that significant harm might occur to an identified receptor, taking account of the current use of the land in question.</p> <p>(b) The estimated impact if the significant harm did occur – i.e. the nature of the harm, the seriousness of the harm to any person who might suffer it, and (where relevant) the extent of the harm in terms of how many people might suffer it.</p> <p>In estimating the likelihood that a specific form of significant harm might occur the local authority should, among other things, consider:</p> <p>(a) The estimated probability that the significant harm might</p>

Relevant types of receptor	Significant harm	Significant possibility of significant harm
	<p>should consider the seriousness of the harm in question: including the impact on the health, and quality of life, of any person suffering the harm; and the scale of the harm. The authority should only conclude that harm is significant if it considers that treating the land as contaminated land would be in accordance with the broad objectives of the regime as described in Section 1 of the Contaminated Land Statutory Guidance.</p>	<p>occur: (i) if the land continues to be used as it is currently being used; and (ii) where relevant, if the land were to be used in a different way (or ways) in the future having regard to the guidance on “current use” in Section 3 of the Contaminated Land Statutory Guidance.</p> <p>(b) The strength of evidence underlying the risk estimate. It should also consider the key assumptions on which the estimate of likelihood is based, and the level of uncertainty underlying the estimate.</p>
<p>Any ecological system, or living organism forming part of such a system, within a location which is:</p> <ul style="list-style-type: none"> • a site of special scientific interest (under section 28 of the Wildlife and Countryside Act (WCA) 1981 (as amended) and Part 4 of the Natural Environment and Rural Communities Act 2006 (as amended)); • a national nature reserve (under Section 35 of the WCA 1981 (as amended)); • a marine nature reserve (under Section 36 of the WCA 1981 (as amended)); • an area of special protection for birds (under Section 3 of the WCA 1981 (as amended)); • a “European site” within the meaning of regulation 8 of the Conservation of Habitats and Species Regulations 2010 (as amended); • any habitat or site afforded policy protection under Section 15 of The National Planning Policy Framework (NPPF) on conserving and enhancing the natural environment (i.e. possible Special Areas of Conservation, potential Special Protection Areas and 	<p>The following types of harm should be considered to be significant harm:</p> <ul style="list-style-type: none"> • harm which results in an irreversible adverse change, or in some other substantial adverse change, in the functioning of the ecological system within any substantial part of that location; or • harm which significantly affects any species of special interest within that location and which endangers the long-term maintenance of the population of that species at that location. <p>In the case of European sites, harm should also be considered to be significant harm if it endangers the favourable conservation status of natural habitats at such locations or species typically found there. In deciding what constitutes such harm, the local authority should have regard to the advice of Natural England and to the requirements of the Conservation of Habitats and Species Regulations 2010 (as amended).</p>	<p>Conditions would exist for considering that a significant possibility of significant harm exists to a relevant ecological receptor where the local authority considers that:</p> <ul style="list-style-type: none"> • significant harm of that description is more likely than not to result from the contaminant linkage in question; or • there is a reasonable possibility of significant harm of that description being caused, and if that harm were to occur, it would result in such a degree of damage to features of special interest at the location in question that they would be beyond any practicable possibility of restoration. <p>Any assessment made for these purposes should take into account relevant information for that type of contaminant linkage, particularly in relation to the ecotoxicological effects of the contaminant.</p>

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Relevant types of receptor	Significant harm	Significant possibility of significant harm
<p>listed or proposed Ramsar sites); or</p> <ul style="list-style-type: none"> any nature reserve established under Section 21 of the National Parks and Access to the Countryside Act 1949. 		
<p>Property in the form of:</p> <ul style="list-style-type: none"> crops, including timber produce grown domestically, or on allotments, for consumption livestock other owned or domesticated animals; wild animals which are the subject of shooting or fishing rights. 	<p>For crops, a substantial diminution in yield or other substantial loss in their value resulting from death, disease or other physical damage. For domestic pets, death, serious disease or serious physical damage. For other property in this category, a substantial loss in its value resulting from death, disease or other serious physical damage.</p> <p>The local authority should regard a substantial loss in value as occurring only when a substantial proportion of the animals or crops are dead or otherwise no longer fit for their intended purpose. Food should be regarded as being no longer fit for purpose when it fails to comply with the provisions of the Food Safety Act 1990. Where a diminution in yield or loss in value is caused by a pollutant linkage, a 20% diminution or loss should be regarded as a benchmark for what constitutes a substantial diminution or loss. In the Guidance states that this description of significant harm is referred to as an “animal or crop effect”.</p>	<p>Conditions would exist for considering that a significant possibility of significant harm exists to the relevant types of receptor where the local authority considers that significant harm is more likely than not to result from the contaminant linkage in question, taking into account relevant information for that type of contaminant linkage, particularly in relation to the ecotoxicological effects of the contaminant.</p>
<p>Property in the form of buildings. For this purpose 'building' means any structure or erection and any part of a building, including any part below ground level, but does not include plant or machinery comprised in a building, or buried services such as sewers, water pipes or electricity cables.</p>	<p>Structural failure, substantial damage or substantial interference with any right of occupation. The local authority should regard substantial damage or substantial interference as occurring when any part of the building ceases to be capable of being used for the purpose for which it is or was intended.</p> <p>In the case of a scheduled Ancient Monument, substantial damage should be regarded as occurring when the damage significantly impairs the historic, architectural, traditional, artistic or archaeological</p>	<p>Conditions would exist for considering that a significant possibility of significant harm exists to the relevant types of receptor where the local authority considers that significant harm is more likely than not to result from the contaminant linkage in question during the expected economic life of the building (or in the case of a scheduled Ancient Monument the foreseeable future), taking into account relevant information for that type of contaminant linkage.</p>

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Relevant types of receptor	Significant harm	Significant possibility of significant harm
	<p>interest by reason of which the monument was scheduled.</p> <p>The Guidance states that this description of significant harm is referred to as a 'building effect'.</p>	

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UK and Ireland Office Locations

