3. Mining, Extraction & Natural Cavities Map

Mining, Extraction & Natural Cavities Legend

- Site Outline
- Historical Mining
- Non-Coal Mining Cavities
- Natural Cavities

Non-Coal Mining
- Highly likely
- Likely
- Unlikely
- Highly unlikely
- Rare

Report Reference: EMS-197486_288126
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?**  
No  
The following information provided by JPB is not represented on Mapping:

Database searched. No results found.

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  

Report Reference: EMS-197486_288126
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 dataset provides information from the Brine Compensation Board which has been discontinued and is now covered by the Coal Authority.

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. More detailed information on potential Tin Mining may be found in Section 3.4 – Non-Coal Mining Hazards.

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

Shrink-Swell Clay Legend

Site Outline

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>□</td>
<td>No Data / Null</td>
</tr>
<tr>
<td>□</td>
<td>Low</td>
</tr>
<tr>
<td>□</td>
<td>Moderate</td>
</tr>
<tr>
<td>□</td>
<td>High</td>
</tr>
</tbody>
</table>

Search Buffers (m)

Report Reference: EMS-197486_288126
4.2 Landslides Map

Landslides Legend

- Site Outline
- Search Buffers (m)
- No Data / Null
- Negligible
- Very Low
- Low
- Moderate
- High

Report Reference: EMS-197486_288126
4.3 Ground Dissolution Soluble Rocks Map

Ground Dissolution Soluble Rocks Legend

- Site Outline
- Search Buffers (m)

- No Data / Null
- Low
- Negligible
- Moderate
- Very Low
- High

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Report Reference: EMS-197486_288126
4.4 Compressible Deposits Map

Compressible Deposits Legend

- Site Outline
- Search Buffers (m)
- No Data / Null
- Low
- Negligible
- Moderate
- Very Low
- High

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Licence Number: 100035207

Report Reference: EMS-197486_288126
4.5 Collapsible Deposits Map

Collapsible Deposits Legend

- Site Outline
- Search Buffers (m)
- No Data / Null
- Negligible
- Low
- Moderate
- Very Low
- High

Report Reference: EMS-197486_288126
4.6 Running Sand Map

Running Sand Legend

- Site Outline
- Search Buffers (m)
- No Data / Null
- Negligible
- Very Low
- Low
- Moderate
- High

Report Reference: EMS-197486_288126
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:

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)*</th>
<th>Direction</th>
<th>Hazard Rating</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.0</td>
<td>On Site</td>
<td>Negligible</td>
<td>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 due to potential problems with shrink-swell clays.</td>
</tr>
<tr>
<td>2</td>
<td>15.0</td>
<td>NW</td>
<td>Moderate</td>
<td>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.</td>
</tr>
</tbody>
</table>

4.2 Landslides

The following Landslides information provided by the British Geological Survey:

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)*</th>
<th>Direction</th>
<th>Hazard Rating</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.0</td>
<td>On Site</td>
<td>Very Low</td>
<td>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.</td>
</tr>
</tbody>
</table>

4.3 Ground Dissolution of Soluble Rocks

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

<table>
<thead>
<tr>
<th>Distance (m)*</th>
<th>Direction</th>
<th>Hazard Rating</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>On site</td>
<td>Null-Negligible</td>
<td>Soluble rocks are not present in the search area. 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.</td>
</tr>
</tbody>
</table>

This includes an automatically generated 50m buffer zone around the study site boundary.

Report Reference: EMS-197486_288126
4.4 Compressible Deposits

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

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)*</th>
<th>Direction</th>
<th>Hazard Rating</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.0</td>
<td>On Site</td>
<td>Negligible</td>
<td>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.</td>
</tr>
</tbody>
</table>

4.5 Collapsible Deposits

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

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)*</th>
<th>Direction</th>
<th>Hazard Rating</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.0</td>
<td>On Site</td>
<td>Very Low</td>
<td>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.</td>
</tr>
</tbody>
</table>

4.6 Running Sands

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

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)*</th>
<th>Direction</th>
<th>Hazard Rating</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.0</td>
<td>On Site</td>
<td>Very Low</td>
<td>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.</td>
</tr>
</tbody>
</table>
5. Borehole Records Map

Borehole Records Legend

Site Outline

Borehole Locations

Search Buffers (m)

Report Reference: EMS-197486_288126
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:

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)</th>
<th>Direction</th>
<th>NGR</th>
<th>BGS Reference</th>
<th>Drilled Length (m)</th>
<th>Borehole Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>29.0</td>
<td>W</td>
<td>525730,17,9570</td>
<td>TQ27NE507</td>
<td>152.4</td>
<td>JOHN BARKER &amp; CO BOILER HOUSE</td>
</tr>
<tr>
<td>2</td>
<td>42.0</td>
<td>W</td>
<td>525710,17,9620</td>
<td>TQ27NE1376</td>
<td>16.0</td>
<td>KENSINGTON-POST OFFICE</td>
</tr>
<tr>
<td>3</td>
<td>50.0</td>
<td>W</td>
<td>525700,17,9600</td>
<td>TQ27NE305</td>
<td>7.16</td>
<td>KING STREET &amp; BULL STREET KENSINGTON</td>
</tr>
<tr>
<td>4A</td>
<td>66.0</td>
<td>NW</td>
<td>525720,17,9670</td>
<td>TQ27NE504/A</td>
<td>135.25</td>
<td>JOHN BARKER &amp; CO 1</td>
</tr>
<tr>
<td>5A</td>
<td>66.0</td>
<td>NW</td>
<td>525720,17,9670</td>
<td>TQ27NE504/B</td>
<td>130.45</td>
<td>JOHN BARKER &amp; CO 2</td>
</tr>
<tr>
<td>6</td>
<td>70.0</td>
<td>W</td>
<td>525690,17,9560</td>
<td>TQ27NE506</td>
<td>153.62</td>
<td>JOHN BARKER &amp; CO BOILER HOUSE</td>
</tr>
<tr>
<td>7</td>
<td>74.0</td>
<td>NW</td>
<td>525700,17,9660</td>
<td>TQ27NE1696</td>
<td>135.2</td>
<td>NUMBER NOT USED</td>
</tr>
<tr>
<td>8</td>
<td>74.0</td>
<td>W</td>
<td>525680,17,9580</td>
<td>TQ27NE505</td>
<td>153.0</td>
<td>JOHN BARKER &amp; CO BOILER HOUSE</td>
</tr>
<tr>
<td>9</td>
<td>136.0</td>
<td>NE</td>
<td>525850,17,9750</td>
<td>TQ27NE1404</td>
<td>18.28</td>
<td>KENSINGTON HOTEL</td>
</tr>
<tr>
<td>10</td>
<td>151.0</td>
<td>N</td>
<td>525730,17,9770</td>
<td>TQ27NE311</td>
<td>2.44</td>
<td>FIRE BRIGADE STATION KENSINGTON</td>
</tr>
<tr>
<td>11</td>
<td>179.0</td>
<td>SW</td>
<td>525624,17,9454</td>
<td>TQ27NE1030</td>
<td>24.38</td>
<td>121-127 KENSINGTON HIGH STREET 4</td>
</tr>
<tr>
<td>12</td>
<td>186.0</td>
<td>W</td>
<td>525580,17,9522</td>
<td>TQ27NE1028</td>
<td>10.82</td>
<td>121-127 KENSINGTON HIGH STREET 2</td>
</tr>
<tr>
<td>13</td>
<td>199.0</td>
<td>S</td>
<td>525820,17,9380</td>
<td>TQ27NE7</td>
<td>10.77</td>
<td>CORNER OF 5TH END ROW OF ST ALBANS H67</td>
</tr>
<tr>
<td>14</td>
<td>219.0</td>
<td>SW</td>
<td>525576,17,9451</td>
<td>TQ27NE1031</td>
<td>17.53</td>
<td>121-127 KENSINGTON HIGH STREET 5</td>
</tr>
<tr>
<td>15</td>
<td>222.0</td>
<td>W</td>
<td>525553,17,9490</td>
<td>TQ27NE1029</td>
<td>30.48</td>
<td>121-127 KENSINGTON HIGH STREET 3</td>
</tr>
<tr>
<td>16</td>
<td>226.0</td>
<td>SW</td>
<td>525632,17,9384</td>
<td>TQ27NE1034</td>
<td>21.34</td>
<td>121-127 KENSINGTON HIGH STREET 8</td>
</tr>
<tr>
<td>17</td>
<td>226.0</td>
<td>SW</td>
<td>525600,17,9410</td>
<td>TQ27NE1033</td>
<td>30.48</td>
<td>121-127 KENSINGTON HIGH STREET 7</td>
</tr>
</tbody>
</table>

Additional online information is available for the following boreholes listed above:

#1: [http://scans.bgs.ac.uk/sobi_scans/boreholes/587876](http://scans.bgs.ac.uk/sobi_scans/boreholes/587876)
#2: [http://scans.bgs.ac.uk/sobi_scans/boreholes/588794](http://scans.bgs.ac.uk/sobi_scans/boreholes/588794)
#3: [http://scans.bgs.ac.uk/sobi_scans/boreholes/587614](http://scans.bgs.ac.uk/sobi_scans/boreholes/587614)
#4A: [http://scans.bgs.ac.uk/sobi_scans/boreholes/587871](http://scans.bgs.ac.uk/sobi_scans/boreholes/587871)
#5A: [http://scans.bgs.ac.uk/sobi_scans/boreholes/587872](http://scans.bgs.ac.uk/sobi_scans/boreholes/587872)
#6: [http://scans.bgs.ac.uk/sobi_scans/boreholes/587875](http://scans.bgs.ac.uk/sobi_scans/boreholes/587875)
#7: [http://scans.bgs.ac.uk/sobi_scans/boreholes/589118](http://scans.bgs.ac.uk/sobi_scans/boreholes/589118)
#8: [http://scans.bgs.ac.uk/sobi_scans/boreholes/587874](http://scans.bgs.ac.uk/sobi_scans/boreholes/587874)
#9: [http://scans.bgs.ac.uk/sobi_scans/boreholes/588822](http://scans.bgs.ac.uk/sobi_scans/boreholes/588822)
#10: [http://scans.bgs.ac.uk/sobi_scans/boreholes/587621](http://scans.bgs.ac.uk/sobi_scans/boreholes/587621)
#11: [http://scans.bgs.ac.uk/sobi_scans/boreholes/588437](http://scans.bgs.ac.uk/sobi_scans/boreholes/588437)
#12: [http://scans.bgs.ac.uk/sobi_scans/boreholes/588435](http://scans.bgs.ac.uk/sobi_scans/boreholes/588435)
#13: [http://scans.bgs.ac.uk/sobi_scans/boreholes/587258](http://scans.bgs.ac.uk/sobi_scans/boreholes/587258)
#14: [http://scans.bgs.ac.uk/sobi_scans/boreholes/588438](http://scans.bgs.ac.uk/sobi_scans/boreholes/588438)
#15: [http://scans.bgs.ac.uk/sobi_scans/boreholes/588436](http://scans.bgs.ac.uk/sobi_scans/boreholes/588436)
#16: [http://scans.bgs.ac.uk/sobi_scans/boreholes/588441](http://scans.bgs.ac.uk/sobi_scans/boreholes/588441)
#17: [http://scans.bgs.ac.uk/sobi_scans/boreholes/588440](http://scans.bgs.ac.uk/sobi_scans/boreholes/588440)
6. Estimated Background Soil Chemistry

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

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

<table>
<thead>
<tr>
<th>Distance (m)*</th>
<th>Direction</th>
<th>Sample Type</th>
<th>Arsenic (As)</th>
<th>Cadmium (Cd)</th>
<th>Chromium (Cr)</th>
<th>Nickel (Ni)</th>
<th>Lead (Pb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>On Site</td>
<td>London</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
</tr>
</tbody>
</table>

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

EmapSite
Telephone: 0118 9736883
sales@emapsite.com

British Geological Survey Enquiries
Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143. Fax: 0115 936 3276.
Email: enquiries@bgs.ac.uk
Web: www.bgs.ac.uk
BGS Geological Hazards Reports and general geological enquiries

British Gypsum
British Gypsum Ltd, East Leake, Loughborough, Leicestershire, LE12 6HX
Tel: www.british-gypsum.com

The Coal Authority
200 Lichfield Lane, Mansfield, Notts NG18 4RG
Tel: 0845 762 6848
DX 716176 Mansfield 5  www.coal.gov.uk

Johnson Poole & Bloomer Limited
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Tel: +44 (0) 1384 262 000
Email: enquiries.gs@jpb.co.uk
Website: www.jpb.co.uk

Ordnance Survey
Romsey Road, Southampton SO16 4GU
Tel: 08456 050505

Getmapping PLC
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Tel: 01252 845444

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Acknowledgements
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