Silverstone Fields Farm, Towcester

Baseline Desk Study

Carried out for: Linnell Bros Limited

February 2015 Report No. R5004 Issue 1
BASELINE STUDY

Silverstone Fields Farm, Towcester

Carried out for: Linnell Bros Limited

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1. INTRODUCTION

1.1. Engagement of ESG

Environmental Scientifics Group (ESG) was instructed by Linnell Bros Limited (LBL) to conduct a Baseline Desk Study as part of an Application for the Industrial Emissions Directive, for the site known as Silverstone Fields Farm, Towcester. The offer to carry out the work was presented in ESG Proposal reference QLO/R14-E-0361/001/DH, dated 16 December 2014. The Proposal was accepted by LBL by return of the signed ESG Appointment Letter dated 13 January 2015.

The Baseline Desk Study aims to provide a historical review of the site and the immediately surrounding area together with a review of published geology, hydrogeology and hydrology maps and databases held by relevant statutory bodies. An assessment of potential on and off-site sources of contamination and identification of potential target receptors is also included, together with any other information considered pertinent to the site, in order to refine the conceptual site model (CSM) and to ensure that any subsequent Ground Investigation addresses any issues identified.

1.2. Site Description and Current Land Use

The site is located in Silverstone, Towcester at approximate National Grid Reference (NGR) SP 681 456, as shown on the Key Plan, Figure 1.

The site comprises a roughly rectangular shaped area of land which is currently used as a timber treatment plant and associated materials storage yard (Figure 2), within the main footprint of Silverstone Fields Farm site. The site also includes a previously undeveloped area to the east, of approximately 0.11 ha, which is the proposed extension for the present timber treatment area.

The site is bounded to the north, west and south by the wider Silverstone Fields Farm site, presently used as a timber merchants, and to the east by a small unnamed road, which currently provides access to the proposed development area, and agricultural fields used for livestock grazing.

1.3. Proposed Development

It is understood that the site is currently functioning as a timber merchants and that an extension to the current timber treatment area is proposed to the east of the site, as shown in the Groundsure reports. Whilst the Groundsure report only shows the proposed extension, ‘the site’ as referred to in this report is that shown by the Permit Area boundary on Figure 2.
2. HISTORICAL SITE REVIEW

2.1. Ordnance Survey Maps

The historical land use of the site and the pertinent land uses within 300 m of the site have been determined by review of Ordnance Survey map extracts dating from 1883 to 2014, provided by GroundSure Environmental Insight Group. Copies of the map extracts are presented in Appendix B.

<table>
<thead>
<tr>
<th>DATE</th>
<th>ON SITE DEVELOPMENT</th>
<th>NEARBY DEVELOPMENT &amp; FEATURES</th>
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</table>
| 1883 - 1884 (1:10,560) 1884 (1:2, 500) | • Silverstone Fields Farm is present in the current location of the site. | • The site is surrounded by agricultural land.  
• A river is present approximately 150 m to the north west of the site  
• An unnamed road is present 200 m to the south east of the site |
| 1899 - 1900 (1:10,560) 1900 (1:2, 500) 1950 - 1951 (1:10,560) 1957 (1:10,560) | • No change                                                      | • A gravel pit is located approximately 175 m to the south west of the site  
• The river 150 m to the north west has been artificially straightened  
• A spring is noted 250 m to the north of the site  
• The unnamed road present 200 m to the south of the site in now denoted as the A43 |
| 1966 (1:10,560) 1973 – 1976 (1:2,500) 1983 (1:10,000) 1993 (1:10,000) 1994 (1:2,500) | • Additional buildings are now present on the site expanding it's footprint to the south west | • Shacks Barn Farm is now present 300 m to the south east  
• Unnamed ponds are present 175 m to the south west (where the gravel pit was previously located)and 250 m to the north of the site |
| 2002 (1:10,000) 2010 (1:10,000) 2014 (1:10,000) | • Further development has taken place on the site, expanding the footprint further to the south-west | • No change |

2.2 Summary of Site History

Silverstone Fields Farm was present in its current location on the earliest maps from the area, surrounded by agricultural land. Minimal change has taken place in the surrounding area since this time, although the site has expanded noticeably to the south west.

3. GEOLOGY

3.1. Introduction

The British Geological Society (BGS) map sheet for the area, (Solid & Drift Sheet 202, 1969), and information contained in the EnviroInsight Report (Appendix A) have been used to provide a basic description of the geology of the site.
3.2. **Bedrock Geology**

The solid geology present on site is shown on the BGS map to be Rutland Formation - Mudstone and Wellingborough Limestone Member from the Jurassic Period; this is confirmed by the GeoInsight Report. This geology has a high permeability.

3.3. **Superficial Geology**

The BGS map sheet indicates that no superficial geology is present on the site. The closest superficial geology is shown 43 m to the south-east, comprising Glaciofluvial Deposits - Sand and Gravel from the Ionian Age.

3.4. **Geological Structure**

The BGS map indicates that no faults are present within 500 m of the site.

3.5. **Artificial Geology**

The BGS map does not indicate any areas of Made Ground within 500 m of the site. However, it is anticipated that Made Ground is likely to be present associated with the previous development of the wider site.

3.6. **Geological Hazards**

3.6.1. Coal and Mineral Extraction

The GeoInsight Report states that within 1 km of the site boundary there are

- No current or historical coal or non-coal mining areas
- No non-coal mining cavities
- No gypsum, tin, or clay mining
- No brine extraction areas

3.6.2. Stability Hazards

The EnviroInsight Report states that the on-site potentials for stability hazards are as follows:

- collapsible ground – ‘very low’;
- compressible ground – ‘negligible’;
- ground dissolution – ‘negligible to ‘very low’;
3.6.3. Radon

Although the property is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level, no radon protective measures are necessary according to the Groundsure report. The document 'Radon: guidance on protective measures for new dwellings' (BRE, 2007) also indicates that the site lies in an area where no radon protection measures are required.

4. HYDROGEOLOGY

4.1. Introduction

Information contained in the EnvirolInsight Report (Appendix A) has been used to provide a description of the hydrogeology of the site and its surroundings.

4.2. Hydrogeological Characteristics of the Principal Formations

It is reported in the EnvirolInsight Report that the site is located on both secondary (A) and secondary (B) aquifers within the bedrock.

The EA website (accessed 19 January 2015) defines a Secondary (A) aquifer as "Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers" and defines a Secondary (B) aquifer as "Predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers."

Aquifers within the superficial deposits near the site include:

- A secondary (A) aquifer, 43 m to the south-east;
- An unproductive aquifer, 129 m to the south-east of the site.

The EA website defines an unproductive aquifer as "Rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow".

The EnvirolInsight report classifies the leaching potential of the soil at the site to be Minor Aquifer/High Leaching Potential (H3).
4.3. **Groundwater Abstractions**

The EnviroInsight Report lists no current groundwater abstraction licences within 1 km of the site.

4.4. **Source Protection Zones**

The EnviroInsight Report states that the site is not located within 500 m of a Source Protection Zone (SPZ).

4.5. **Nitrate Vulnerable Zone**

The EnviroInsight Report states that the site is located within a Nitrate Vulnerable Zone (NVZ). NVZs are designated areas where the land drains into one or more of the following categories of water: (a) surface freshwaters which contain or could contain, if preventative action is not taken, nitrate concentrations greater than 50 mg/l; (b) groundwaters which contain or could contain, if preventative action is not taken, nitrate concentrations greater than 50 mg/l; (c) natural freshwater lakes, or other freshwater bodies, estuaries, coastal waters and marine waters which are eutrophic or may become so in the near future if protective action is not taken.

5. **HYDROLOGY**

5.1. **Introduction**

The EnviroInsight Report and associated maps (Appendix A and B), information from the Meteorological Office and the Environment Agency (EA) website have been used to provide a description of the hydrology of the site and its surroundings.

5.2. **Surface Water Features**

The EnviroInsight Report and associated maps indicate that the Silverstone Brook is located 185 m to the north-west of the site.

5.3. **Surface Water Permissions**

5.3.1. **Abstraction Licences**

The EnviroInsight Report lists no surface water abstraction licences within 1 km of the site.

5.3.2. **Discharge Consents**

The EnviroInsight Report lists two discharge consents within 500 m of the site. Both entries relate to sewage discharges at Shacks Barn Farm, 259 m south east and 351 m south of the site, the receiving water being an unnamed ditch and a tributary of the Silverstone Brook.
5.4. Floodplain Information

The EnviroInsight Report flood map indicates that a Zone 2 and Zone 3 floodplain is present 164 m to the north west of the site due to the presence of the Silverstone Brook. The Environment Agency allocates Zone 2 flood plains where ‘the annual probability of flooding is between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea' and Zone 3 floodplains where ‘the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year’ is present.

The EnviroInsight Report does not list the site to be within 250 m of an area benefiting from flood defences and there are no flood water storage areas or flood defences within 250 m.

The EnviroInsight Report states that the site is within a zone that is susceptible to ground water flooding below the surface, meaning that given the geological conditions there may be a groundwater flooding hazard to basements and other below surface infrastructure.

6. ECOLOGY AND ARCHAEOLOGY

The EnviroInsight Report does not list any of the following ecological receptors, as recognised by the DETR Circular on Contaminated Land (2006) within 1000 m of the site: Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Local Nature Reserves (LNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar Sites, World Heritage Sites, Environmentally Sensitive Areas, Areas of Outstanding Natural Beauty (AONB), National Parks or Nitrate Sensitive Areas.

There is one area of Ancient and Semi-Natural Woodland listed within 1 km of the site, 824 m to the east of the site.

7. RECORDED POLLUTION INCIDENTS

This section details any known pollution incidents reported either on or within 500 m of the site as documented by the EA. The pollution incidents listed here are identified in the Environmental Permits, Incidents and Registers section of the EnviroInsight Report.

7.1. Substantiated Pollution Incidents

The Groundsure Report does not list any List 1 or 2 national pollution incidents within 500 m of site.

8. LOCAL WASTE MANAGEMENT FACILITIES

8.1. Historical Landfill

The EnviroInsight Report does not list any Registered Landfill Sites, BGS Recorded Landfill Sites, or Local Authority Recorded Landfill Sites within 1 km of the site.
8.2. Other Waste Licences and Permits

The EnviroInsight Report does not list any Registered Waste Transfer Sites, Licensed Waste Management Facility (Landfill Boundaries), Licensed Waste Management Facilities (Locations), Registered Waste Treatment or Disposal Sites, or Integrated Pollution Control Registered Sites within 1 km of the site.

8.3. Enforcement and Prohibition Notices

No Enforcement and Prohibition Notices are listed in the EnviroInsight Report within 1 km of the site.

9. AUXILIARY INFORMATION

9.1. Introduction

This section details any other information reported in the EnviroInsight Report (Appendix A) and elsewhere that may be pertinent in setting a context for the site.

9.2. Current Land Uses

The Groundsure report states that there are no records of potentially contaminative industrial or commercial sites at the site or within 250 m of the site.

9.3. Hazardous Substances

Groundsure lists no records within 500m of the study site relating to:

- Historic IPC Authorisations
- Part A(1) and IPPC Authorised Activities
- Water Industry Referrals (potentially harmful discharges to the public sewer)
- Red List Discharge Consents (potentially harmful discharges to controlled waters)
- List 1 or List 2 Dangerous Substances Inventory Sites
- Part A(2) and Part B Activities and Enforcements
- Category 3 or 4 Radioactive Substances Authorisations:
- Planning Hazardous Substance Consents and Enforcements
- Control of Major Accident Hazards Sites (COMAH) No records of Notifications of No Records of Installations Handling Hazardous Substances sites (NIHHS)
9.4. Fuel Station Entries

There are no underground high pressure oil and gas pipelines or petrol and fuel sites listed in the EnviroInsight Report within 500 m of the site.

10. SITE RECONNAISSANCE

Site reconnaissance was undertaken on 21 January 2015 and the following section provides a description of the site and significant findings from the visit.

The site is a roughly rectangular area of land within the Silverstone Fields Farm site which is an active timber treatment works. The current site contains a building, used for timber treatment, in the south east. In the east of the site is a strip of undeveloped land, of approximately 0.11 ha, which is the proposed area for an extension to the current timber treatment building. The area is elevated by approximately 1.5 m compared to the neighbouring timber treatment building, to the west. During the site visit it was evident that recent activity has taken place on the extension site to remove trees and vegetation in preparation for future works. The remainder of the site is covered by concrete hardstanding and is mainly used for timber storage and associated vehicle movements.

The site is surrounded by agricultural land, used for livestock grazing, to the east and south and the wider Silverstone Fields Farm site to the north and west. A single residential style property is presently neighbouring the wider site boundary to the north east.

No obvious signs of contamination were observed during the site visit. An overground fuel storage tank, possibly used for vehicle refuelling, was present to the north of the timber treatment building. Two overground chemical tanks were also present to the south of the timber treatment building, presumed to be associated with the timber treatment process. All tanks present on site were observed to be in good condition; however, none of the tanks were located within bunded areas.

It is understood that the chemicals currently used on site are Tanatone, Tanagard and Tanalith and Antifoam.

Photographs from the reconnaissance are provided in Appendix C.

11. CONCEPTUAL SITE MODEL

11.1. Introduction

This section draws together the information gathered in the Baseline Desk Study and outlines an initial conceptual model of the site in order to produce a qualitative assessment of potential contamination in terms of a source-pathway-receptor framework.
11.2. Legislation on Contaminated Land

Part IIA of the Environmental Protection Act, 1990, which was enacted by Section 57 of the Environment Act 1995 and the associated Contaminated Land (England) Regulations 2000 (SI 2000/227), was brought into full effect on 1 April 2000. This legislation created a statutory regime for the identification and remediation of potentially contaminated land. The principal feature of this legislation is that the hazards associated with contaminated land should be evaluated in the context of a site-specific risk-based framework.

Part IIA of the EPA 1990 defines contaminated land as:

“any land which appears to the Local Authority in whose area it is situated to be in such a condition by reason of substances in, on or under the land, that significant harm is being caused, or that there is a significant possibility of significant harm being caused, or that pollution of controlled waters is being or is likely to be caused”.

Controlled waters are considered to be all groundwaters, inland surface waters and estuarine and coastal waters.

To determine whether land falls under the Part IIA definition of contaminated land, it is necessary to establish whether a pollutant linkage is present, the degree of harm resulting from the linkage, and the significance of such harm to the receptor. A pollutant linkage comprises:

- Source - a contaminant at a concentration capable of causing adverse health or environmental effects.
- Pathway - there must be an exposure pathway through which the receptor comes into contact with the contamination source.
- Receptor - there must be a human or environmental receptor present, which may be at risk of harm or impact from the source.

The responsible authority then needs to consider whether the identified pollution linkage:

- is resulting in significant harm being caused to the receptor in the pollutant linkage;
- presents a significant possibility of significant harm being caused to that receptor;
- is resulting in the significant pollution of controlled waters, which constitute the receptor; or is likely to result in such pollution.

If a pollutant linkage is demonstrated, then the Part IIA legislation provides powers for remedial action to be enforced by the Local Authority in whose area the contaminated land is situated. Although the site is unlikely to be designated as contaminated under Part IIA, the regime provides a suitable framework for assessing the site.
11.3. Potential Sources of Contamination

Information gathered during this baseline desk study has been used to identify the likely contaminants as well as their sources and spatial distribution. The potential current and historical on-site sources of contamination are as follows:

CURRENT:

- Possible Made Ground

- Daily movement of vehicles around the site, including large commercial lorries and possible refuelling;

- Timber treatment plant daily site activities;

- Chemicals (Tanatone, Tanagard Tanalith and Antifoam) - for specific associated contaminants refer to Table 2) and fuel stored in tanks without any spill containment bunds.

HISTORICAL:

- None

The potential current and historical off-site sources of contamination within 250 m of the site are detailed below.

CURRENT:

- Timber Treatment Works (wider Silverstone Fields Farm site)

- Possible Made Ground (associated with the original construction of buildings on the wider site)

HISTORICAL:

- Amended river channel – possible infill (150 m north west of the site)

The contaminants associated with these uses, as derived using Department of Environment Industry Profiles; R&D Publication 66:2008, Guidance for Safe Development of Housing on Land Affected by Contamination (NHBC, EA and CIEH); and through experience of industrial land use, are detailed in Table 2.
Table 2: Potential Contaminants Associated with On and Off Site Sources

<table>
<thead>
<tr>
<th>Description</th>
<th>Metals, semi-metals, non-metals, inorganic chemicals and others</th>
<th>Organic chemicals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Movement or parking of vehicles, refuelling and storage of fuel on site</td>
<td>As, Cd, Cr, Cu, Pb, Hg, Ni, Zn,</td>
<td>Oil/fuel hydrocarbons, aromatic hydrocarbons, PAHs, chlorinated aliphatic hydrocarbons, organolead compounds</td>
</tr>
<tr>
<td>Timber products manufacturing works</td>
<td>As, Cd, Cr, Cu, Pb, Zn, $\text{SO}_4^{2-}$, $\text{S}_2^-$, B, pH</td>
<td>Phenol, propane, chlorophenols, oil/fuel hydrocarbons, aromatic hydrocarbons, PAHS, chlorinated aliphatic hydrocarbons, hexachlorocyclohexane, organic compounds</td>
</tr>
<tr>
<td>Storage of chemical Tanatone, Tanagard and Tanalith</td>
<td>copper (II) nitrate, copper (II) carbonate, copper (II) hydroxide, trihydrate, hydrochloric acid</td>
<td>5-chloro-2-methyl-isothiazolin-3-one, 2-methyl-2H-isothiazol-3-one,2-octyl-2H-isothiazol-3-one, 2-aminoethanol, tallow alkyl amines, ethoxylated, organic acid, fatty acids (C8-C10), n, n –didecyl-n,n-dimethylammonium carbonate, propiconazole, tebuconazole, didecyldimethylammonium, chloride, azo dyestuff</td>
</tr>
<tr>
<td>Made Ground (potentially present on-site)</td>
<td>Ground gases including methane and carbon dioxide</td>
<td>A range of organic and inorganic contaminants potentially present</td>
</tr>
</tbody>
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Antifoam is also used on site, however, no specific chemical compounds are listed within the Data Safety Sheet provided to ESG. However, the relevant Data Safety Sheet states that it does not contain any dangerous ingredients, as specified in the regulation (EC) No. 1907/2006.

11.4. Potential Pathways

To develop further an understanding of the potential risks posed by the contaminants to human receptors, the pathways through which contaminants may impact sensitive receptors need to be identified. The CLEA model (DEFRA & EA 2002) indicates potential exposure routes for assessing risks to human health as follows:

- Dermal contact;
- Inhalation of particulates;
- Inhalation of soil vapour (indoor and outdoor);
- Inhalation of groundwater vapour (indoor and outdoor);
- Direct ingestion of soil and dust.
It is considered that the potential pathways with respect to controlled waters will include:

- Downward migration through Made Ground and superficial deposits to underlying Secondary A and Secondary B Aquifers;
- Lateral migration through Made Ground towards surface waters;
- Lateral migration through groundwater towards surface waters;
- Lateral migration by means of man-made pathways (i.e. services) to surface waters.

Pathways relating to ground gases include subsurface migration and accumulation in enclosed spaces within buildings. Accumulation can cause asphyxiation in the case of carbon dioxide whilst methane poses a potential explosive risk when present in high enough concentrations.

11.5. Potential Receptors

An end-use of commercial/industrial has been used to develop an understanding of the likely sensitive human receptors. It is envisaged that the potential receptors of contamination (if present on site) are:

- Future site users – critical receptor, female adult;
- Immediately adjacent residents – critical receptor, female child;
- Construction workers – critical receptor, female adult.

Information gathered during the site research has been used to develop an understanding of the likely sensitive controlled waters receptors. The most sensitive controlled water receptor is considered to be the groundwater within the Secondary A and Secondary B Aquifers (bedrock) underlying the site.

The most sensitive surface water receptor is the Silverstone Brook located 150 m to the north. Other relevant surface water receptors are the ponds located to the north and south west of the site; however, these man-made ponds could be lined and therefore not in hydraulic connectivity with the surrounding groundwater.

Receptors associated with ground gases include buildings associated with the development and the people who will occupy them.
11.6. Potential Significant Pollutant Linkages Considered

The potential sources, pathways and receptors, as detailed in Sections 11.3 to 11.5 have been assessed to present below a list of potential significant pollutant linkages to be considered. The significant pollutant linkages listed are those that cannot be discounted at this stage without further information being gathered through an intrusive site investigation.

Table 3: Potential Significant Pollutant Linkages Associated with the Site

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>PATHWAY</th>
<th>ON-SITE RECEPTOR (for industrial/commercial uptake end-use)</th>
<th>OFF-SITE RECEPTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contaminated soils / groundwater</td>
<td>→ Outdoor inhalation</td>
<td>→ Female adult</td>
<td>Female child</td>
</tr>
<tr>
<td>Contaminated soils / groundwater</td>
<td>→ Indoor inhalation</td>
<td>→ Female adult</td>
<td>Female child</td>
</tr>
<tr>
<td>Contaminated soils</td>
<td>→ Dermal exposure</td>
<td>→ Female adult</td>
<td>Female child</td>
</tr>
<tr>
<td>Contaminated soils</td>
<td>→ Ingestion</td>
<td>→ Female adult</td>
<td>Female child</td>
</tr>
<tr>
<td>Contaminated soils</td>
<td>→ Inhalation of particulates</td>
<td>→ Female adult</td>
<td>Female child</td>
</tr>
<tr>
<td>Leachate from Contaminated soils</td>
<td>→ Downward migration through soil superficial deposits and bedrock</td>
<td>→ Bedrock Secondary A and Secondary B Aquifers</td>
<td>Bedrock Secondary A and Secondary B Aquifers</td>
</tr>
<tr>
<td>Leachate from contaminated soils</td>
<td>→ Lateral migration via man-made services</td>
<td>→ n/a</td>
<td>Silverstone Brook and man-made ponds (depending on their construction)</td>
</tr>
<tr>
<td>Leachate from contaminated soils</td>
<td>→ Lateral migration through Made Ground</td>
<td>→ n/a</td>
<td>Silverstone Brook and man-made ponds (depending on their construction)</td>
</tr>
<tr>
<td>Contaminated groundwater</td>
<td>→ Lateral migration in groundwater</td>
<td>→ n/a</td>
<td>Silverstone Brook and man-made ponds (depending on their construction)</td>
</tr>
<tr>
<td>Made Ground</td>
<td>→ Migration of ground gases in the subsurface into enclosed spaces within the proposed site buildings</td>
<td>→ Buildings, Female adult</td>
<td>Buildings, Female child</td>
</tr>
</tbody>
</table>

An intrusive site investigation would be required in order to confirm the contamination status of the site, particularly in the area of the proposed extension where no hardstanding is present, and to determine whether the geology matches the BGS records from the surrounding area.
12. CONCLUSIONS

The main findings of the Baseline Study are as follows:

Location of site, historical land use and basic site description:

- The site is located in Silverstone, Towcester at approximate National Grid Reference (NGR) SP 681 456. The site comprises a roughly rectangular shaped area of land which is presently used as a timber treatment plant and associated materials storage yard. The site also includes a previously undeveloped area to the east, of approximately 0.11 ha, which is the proposed extension for the present timber treatment area.

- The site is bounded to the north, west and south by the wider Silverstone Fields Farm site, currently used as a timber merchants, and to the east by agricultural fields used for livestock grazing.

- Silverstone Fields Farm was present in its current location on the earliest maps from the area (dated 1883), surrounded by agricultural land. Minimal change has taken place in the surrounding area since this time, although the site has expanded noticeably to the south west.

- There are few historical land uses within 250 m of the site that have the potential to cause significant contamination. Those that should be considered as potential contamination sources are the wider Silverstone Fields Farm site, which is currently a timber yard and the river, 150 m to the north west, which has been artificially straightened (possible infill).

- No obvious signs of contamination were observed during the site visit. An overground fuel storage tank, possibly used for vehicle refuelling, was present to the north of the timber treatment building. Two overground chemical tanks were also present to the south of the timber treatment building, presumed to be associated with the timber treatment process. All tanks present on site were observed to be in good condition; however, none of the tanks were located within bunded areas.

Geology, hydrogeology and hydrology:

- The solid geology present on site is shown to be Rutland Formation Mudstone and Wellingborough Limestone Member from the Jurassic Period.

- No superficial deposits are present within the vicinity of the site.
• Although the (BGS) map sheet for the area indicates no Made Ground within the vicinity of the site, it is considered highly likely that Made Ground is present due to the previous development of the wider site.

• The site is not considered to be located within a Brine Compensation Area or an area which may be affected by coal mining. Stability hazards on the site are generally considered to be negligible to low.

• The site is located in a radon affected area; however no radon protection measures are considered necessary.

• The site is located on both Secondary A and Secondary B Bedrock aquifers. The closest aquifer within the superficial deposits lies 43 m to the south east. There is no groundwater Source Protection Zone (SPZ) within 500 m of site. However, the site is located within a Nitrate Vulnerable Zone (NVZ).

• No groundwater abstraction licences are present within 1 km of the site and two discharge consents are present within 500 m of the site, both relating to Shacks Barn Farm, 300 m to the south east, the receiving water being an unnamed ditch and a tributary of the Silverstone Brook.

• The Silverstone Brook is located 185 m to the north-west of the site. Zone 2 and Zone 3 floodplains are present 164 m north-west of the site. The site is not within an area benefiting from flood defences and there are no flood water storage areas within 250 m.

• The site is within a zone that is susceptible to ground water flooding below the surface, meaning that given the geological conditions there may be a groundwater flooding hazard to basements and other below surface infrastructure.

Conceptual site model:

- The potential for contamination has been assessed in terms of a source-pathway-receptor framework, and a list of possibly significant pollutant linkages (if contamination is present) has been identified.

- In terms of human health receptors, it should be noted that the proposed end-use of the site is industrial/commercial.

- The primary controlled waters receptors are considered to be the secondary (A) and secondary (B) aquifers in the bedrock geology, Silverstone Brook and the man-made ponds (depending on their construction).
The main potential sources of contamination on-site have been identified as:

- Possible Made Ground
- Daily movement of vehicles around the site, including large commercial lorries and possible refuelling;
- Timber treatment plant daily site activities;
- Chemicals (Tanatone, Tanagard Tanalith and Antifoam) - for specific associated contaminants refer to Table 2) and fuel stored in tanks without any spill containment bunds.

The main potential sources of contamination off-site have been identified as:

- Amended river channel – possible infill
- Timber Works, on the wider Silverstone Fields Farm site
- Possible Made Ground

An intrusive ground investigation would be required in order to confirm the current contamination status of the site.

For ESG

Joanne Grantham
Assistant Scientist

Charlotte Reeve
Operations Manager, Contaminated Land
References


MAGIC (Multi Agency Geographic Information for the Countryside) : www.magic.gov.uk.

Meteorological Office website : www.metoffice.gov.uk

FIGURES
Figure 1
Silverstone Fields Farm
Towcester
R5004
Not To Scale

Title
Permit Area

Project
Silverstone Fields Farm, Towcester

Project No
R5004

Figure No
Figure 2
APPENDIX A
GROUNDSURE REPORTS
Environmental Scientifics Group ESG
UNIT 5 E S G C L VOELCKER, LEAMINGTON ROAD,
SOUTHAM, CV47 1RB

GroundSure Reference: GS-1845510
Your Reference: R5004 Silverstone Fields Farm
Report Date 14 Jan 2015
Report Delivery Method: Email - pdf

GroundSure EnviroInsight
Address: SILVERSTONE FIELDS FARM, SILVERSTONE, TOWCESTER, NN12 8TB

Dear Sir/ Madam,

Thank you for placing your order with GroundSure. Please find enclosed the GroundSure EnviroInsight as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above GroundSure reference number.

Yours faithfully,

[Signature]

Managing Director
Groundsure Limited

Enc.
GroundSure EnviroInsight
Address: SILVERSTONE FIELDS FARM, SILVERSTONE, TOWCESTER, NN12 8TB
Date: 14 Jan 2015
Reference: GS-1845510
Client: Environmental Scientifics Group ESG

Aerial Photograph Capture date: 04-Nov-2006
Grid Reference: 467920, 245877
Site Size: 0.11ha
Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

<table>
<thead>
<tr>
<th>Section 1: Environmental Permits, Incidents and Registers</th>
<th>On-site</th>
<th>0-50m</th>
<th>51-250</th>
<th>251-500</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Industrial Sites Holding Environmental Permits and/or Authorisations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1.1 Records of historic IPC Authorisations</td>
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<td>0</td>
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<tr>
<td>1.1.2 Records of Part A(1) and IPPC Authorised Activities</td>
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<table>
<thead>
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<th>Section 2: Landfill and Other Waste Sites</th>
<th>On-site</th>
<th>0-50m</th>
<th>51-250</th>
<th>251-500</th>
<th>501-1000</th>
<th>1000-5000</th>
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<td>2.1.3 BGS/DoE Landfill Site Survey</td>
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<td>2.2 Landfill and Other Waste Sites Findings</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites</td>
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<td>2.2.2 Environment Agency Licensed Waste Sites</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
## Section 3: Current Land Use

| 3.1 Current Industrial Sites Data | On-site | 0-50m | 51-250 | 251-500 | Not searched |
| 3.2 Records of Petrol and Fuel Sites | 0 | 0 | 0 | 0 | |
| 3.3 Underground High Pressure Oil and Gas Pipelines | 0 | 0 | 0 | 0 | |

## Section 4: Geology

4.1 Are there any records of Artificial Ground and Made Ground present beneath the study site? No

4.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site? Yes

4.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.

## Section 5: Hydrogeology and Hydrology

### 5.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site? Yes

### 5.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site? Yes

| 5.3 Groundwater Abstraction Licences (within 2000m of the study site) | On-site | 0-50m | 51-250 | 251-500 | 501-1000 | 1000-2000 |
| 5.4 Surface Water Abstraction Licences (within 2000m of the study site) | 0 | 0 | 0 | 0 | 3 |
| 5.5 Potable Water Abstraction Licences (within 2000m of the study site) | 0 | 0 | 0 | 0 | 3 |
| 5.6 Source Protection Zones (within 500m of the study site) | 0 | 0 | 0 | 0 | Not searched | Not searched |
| 5.7 Source Protection Zones within Confined Aquifer | 0 | 0 | 0 | 0 | Not searched | Not searched |
| 5.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site) | 1 | 0 | 3 | 0 | Not searched | Not searched |

| 5.9 Is there any Environment Agency information on river quality within 1500m of the study site? No | No | No | No | No | No |
| 5.10 Detailed River Network entries within 500m of the site | 0 | 0 | 2 | 8 | Not searched | Not searched |
| 5.11 Surface water features within 250m of the study site | No | No | Yes | Not searched | Not searched | Not searched |
### Section 6: Flooding

6.1 Are there any Environment Agency Zone 2 floodplains within 250m of the study site?  
- **Yes**

6.2 Are there any Environment Agency Zone 3 floodplains within 250m of the study site?  
- **Yes**

6.3 Are there any Flood Defences within 250m of the study site?  
- **No**

6.4 Are there any areas benefiting from Flood Defences within 250m of the study site?  
- **No**

6.5 Are there any areas used for Flood Storage within 250m of the study site?  
- **No**

6.6 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?  
- Potential below Surface

6.7 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?  
- High

### Section 7: Designated Environmentally Sensitive Sites

<table>
<thead>
<tr>
<th>7.1 Records of Sites of Special Scientific Interest (SSSI)</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
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</thead>
<tbody>
<tr>
<td>7.2 Records of National Nature Reserves (NNR)</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>7.3 Records of Special Areas of Conservation (SAC)</td>
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<td>7.4 Records of Special Protection Areas (SPA)</td>
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<tr>
<td>7.5 Records of Ramsar sites</td>
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<td>0</td>
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<td>7.6 Records of Ancient Woodlands</td>
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<td>1</td>
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<td>7.7 Records of Local Nature Reserves (LNR)</td>
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<td>7.8 Records of World Heritage Sites</td>
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<td>7.10 Records of Areas of Outstanding Natural Beauty (AONB)</td>
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<td>7.11 Records of National Parks</td>
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<td>7.13 Records of Nitrate Vulnerable Zones</td>
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<td>7.14 Records of Green Belt Data</td>
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</table>
Section 8: Natural Hazards

<table>
<thead>
<tr>
<th>Question</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1 What is the maximum risk of natural ground subsidence?</td>
<td>Low</td>
</tr>
<tr>
<td>8.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?</td>
<td>Low</td>
</tr>
<tr>
<td>8.1.2 What is the maximum Landslides hazard rating identified on the study site?</td>
<td>Very Low</td>
</tr>
<tr>
<td>8.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?</td>
<td>Very Low</td>
</tr>
<tr>
<td>8.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?</td>
<td>Negligible</td>
</tr>
<tr>
<td>8.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?</td>
<td>Very Low</td>
</tr>
<tr>
<td>8.1.6 What is the maximum Running Sand hazard rating identified on the study site?</td>
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</tr>
</tbody>
</table>

Section 9: Mining

<table>
<thead>
<tr>
<th>Question</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.1 Are there any coal mining areas within 75m of the study site?</td>
<td>No</td>
</tr>
<tr>
<td>9.2 What is the risk of subsidence relating to shallow mining within 150m of the study site?</td>
<td>Negligible</td>
</tr>
<tr>
<td>9.3 Are there any brine affected areas within 75m of the study site?</td>
<td>No</td>
</tr>
</tbody>
</table>
Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between GroundSure and the Client. The document contains the following sections:

1. **Environmental Permits, Incidents and Registers**
   Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

2. **Landfills and Other Waste Sites**
   Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

3. **Current Land Uses**
   Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure underground oil and gas pipelines.

4. **Geology**
   Provides information on artificial and superficial deposits and bedrock beneath the study site.

5. **Hydrogeology and Hydrology**
   Provides information on productive strata within the bedrock and superficial geological layers, abstraction licenses, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

6. **Flooding**
   Provides information on surface water flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

7. **Designated Environmentally Sensitive Sites**
   Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

8. **Natural Hazards**
   Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence.

9. **Mining**
   Provides information on areas of coal and shallow mining.

10. **Contacts**
    This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, GroundSure provide a free Technical Helpline (08444 159000) for further information and guidance.

**Note: Maps**

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier “A” on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as “Not Shown”.

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.
1. Environmental Permits, Incidents and Registers Map
1. Environmental Permits, Incidents and Registers

1.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency and Local Authorities reveal the following information:

1.1.1 Records of historic IPC Authorisations within 500m of the study site:

Database searched and no data found.

1.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

Database searched and no data found.

1.1.3 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

Database searched and no data found.

1.1.4 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

Database searched and no data found.

1.1.5 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

Database searched and no data found.
1.1.6 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

Database searched and no data found.

1.1.7 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

Database searched and no data found.

1.1.8 Records of Category 3 or 4 Radioactive Substances Authorisations:

Database searched and no data found.

1.1.9 Records of Licensed Discharge Consents within 500m of the study site:

The following Licensed Discharge Consents records are represented as points on the Environmental Permits, Incidents and Registers Map:

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance</th>
<th>Direction</th>
<th>NGR</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>259.0</td>
<td>SE</td>
<td>468184 245799</td>
<td>Address: Shacks Barn Farm, Silverstone, Towcester, Northants, NN12 8TB Effluent Type: Sewage Discharges - Final/treated Effluent - Not Water Company Permit Number: PRCNF17600 Permit Version: 1 Receiving Water: Unnamed Ditch Status: New Consent (wra 91, S88 &amp; Sched 10 As Amended By Env Act 1995) Issue date: 26/9/2005 Effective Date: 19/8/2005 Revocation Date: -</td>
</tr>
<tr>
<td>2</td>
<td>351.0</td>
<td>S</td>
<td>467880 245490</td>
<td>Address: Shacks Barn Farm, Silverstone, Towcester, Northants, NN12 8TB Effluent Type: Sewage Discharges - Final/treated Effluent - Not Water Company Permit Number: PRCNF17276 Permit Version: 1 Receiving Water: Trib Of Silverstone Brook Status: New Consent (wra 91, S88 &amp; Sched 10 As Amended By Env Act 1995) Issue date: 6/10/2004 Effective Date: 6/10/2004 Revocation Date: -</td>
</tr>
</tbody>
</table>

1.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

Database searched and no data found.
1.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site:

0

Database searched and no data found.

1.3 Environment Agency Recorded Pollution Incidents

1.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

0

Database searched and no data found.

1.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

0

Database searched and no data found.

1.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site?

0

Database searched and no data found.
2. Landfill and Other Waste Sites Map

Landfill and Other Waste Sites Legend

- Site Outline
- E.A. Active Landfill
- Historic and Planned Waste Sites
- E.A. Historic Landfill
- E.A. Licensed Waste Site
- Search Buffers (m)
- Local Authority Landfill
- BGS / DoE Survey Landfill

2. Landfill and Other Waste Sites

2.1 Landfill Sites

2.1.1 Records from Environment Agency landfill data within 1000m of the study site:

Database searched and no data found.

2.1.2 Records of Environment Agency historic landfill sites within 1500m of the study site:

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)</th>
<th>Direction</th>
<th>NGR</th>
<th>Details</th>
</tr>
</thead>
</table>

2.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

The following landfill records are represented as points on the Landfill and Other Waste Sites map:

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)</th>
<th>Direction</th>
<th>NGR</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not shown</td>
<td>1206.0</td>
<td>NE</td>
<td>46900 0.0 24650 0.0</td>
<td>Address: Wood Burcote, Towcester, Northants BGS Number: 1127.0 Risk: Risk to minor aquifer Waste Type: N/A</td>
</tr>
</tbody>
</table>
2.1.4 Records of Local Authority landfill sites within 1500m of the study site:

Database searched and no data found.

2.2 Other Waste Sites

2.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:

Database searched and no data found.

2.2.2 Records of Environment Agency licensed waste sites within 1500m of the study site:

Database searched and no data found.
3. Current Land Use Map

Current Land Use Legend

- Site Outline
- Search Buffers (m)
- Current Industrial Sites
- Petrol & Fuel Sites
- Underground High Pressure Oil & Fuel Pipelines


Report Reference: GS-1845510
Client Reference: R5004 Silverstone Fields Farm
3. Current Land Uses

3.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site: 0

Database searched and no data found.

3.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site: 0

Database searched and no data found.

3.3 Underground High Pressure Oil and Gas Pipelines

Records of high pressure underground pipelines within 500m of the study site: 0

Database searched and no data found.
4. Geology

4.1 Artificial Ground and Made Ground

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

4.2 Superficial Ground and Drift Geology

The database has been searched on site, including a 50m buffer.

<table>
<thead>
<tr>
<th>Lex Code</th>
<th>Description</th>
<th>Rock Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>GFDMP-SAGR</td>
<td>GLACIOFLUVIAL DEPOSITS, MID PLEISTOCENE</td>
<td>SAND AND GRAVEL</td>
</tr>
</tbody>
</table>

4.3 Bedrock and Solid Geology

The database has been searched on site, including a 50m buffer.

<table>
<thead>
<tr>
<th>Lex Code</th>
<th>Description</th>
<th>Rock Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>RLD-MDST</td>
<td>RUTLAND FORMATION</td>
<td>MUDSTONE</td>
</tr>
<tr>
<td>WBRO-LMST</td>
<td>WELLINGBOROUGH LIMESTONE MEMBER</td>
<td>LIMESTONE</td>
</tr>
<tr>
<td>RLD-MDST</td>
<td>RUTLAND FORMATION</td>
<td>MUDSTONE</td>
</tr>
</tbody>
</table>

(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)
5. Hydrogeology and Hydrology

5a. Aquifer Within Superficial Geology

Report Reference: GS-1845510
Client Reference: R5004 Silverstone Fields Farm
5b. Aquifer Within Bedrock
Geology and Abstraction Licenses

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Ordnance Survey license 100035207.

Report Reference: GS-1845510
Client Reference: R5004 Silverstone Fields Farm
5c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses
5d. Hydrology Source Protection Zones within confined aquifer
5 e. Hydrology – Detailed River Network and River Quality

Map 1

Report Reference: GS-1845510
Client Reference: R5004 Silverstone Fields Farm
5. Hydrogeology and Hydrology

5.1 Aquifer within Superficial Deposits

Are there records of strata classification within the superficial geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency’s Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the GroundSure EnviroInsight User Guide.

The following aquifer records are shown on the Aquifer within Superficial Geology Map (5a):

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)</th>
<th>Direction</th>
<th>Designation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>43.0</td>
<td>SE</td>
<td>Secondary A</td>
<td>Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.</td>
</tr>
<tr>
<td>8</td>
<td>129.0</td>
<td>SE</td>
<td>Unproductive</td>
<td>These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.</td>
</tr>
<tr>
<td>2</td>
<td>165.0</td>
<td>E</td>
<td>Secondary A</td>
<td>Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.</td>
</tr>
<tr>
<td>3</td>
<td>186.0</td>
<td>NW</td>
<td>Secondary A</td>
<td>Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.</td>
</tr>
<tr>
<td>9</td>
<td>456.0</td>
<td>S</td>
<td>Unproductive</td>
<td>These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.</td>
</tr>
</tbody>
</table>

5.2 Aquifer within Bedrock Deposits

Are there records of strata classification within the bedrock geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency’s Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the GroundSure EnviroInsight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (5b):

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)</th>
<th>Direction</th>
<th>Designation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>0.0</td>
<td>On Site</td>
<td>Secondary A</td>
<td>Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.</td>
</tr>
<tr>
<td>ID</td>
<td>Distance (m)</td>
<td>Direction</td>
<td>Designation</td>
<td>Description</td>
</tr>
<tr>
<td>----</td>
<td>--------------</td>
<td>-----------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>12</td>
<td>0.0</td>
<td>On Site</td>
<td>Secondary B</td>
<td>Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers.</td>
</tr>
<tr>
<td>13</td>
<td>12.0</td>
<td>N</td>
<td>Secondary B</td>
<td>Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers.</td>
</tr>
<tr>
<td>1</td>
<td>71.0</td>
<td>SE</td>
<td>Principal</td>
<td>Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers.</td>
</tr>
<tr>
<td>22</td>
<td>96.0</td>
<td>NW</td>
<td>Unproductive</td>
<td>These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.</td>
</tr>
<tr>
<td>7</td>
<td>355.0</td>
<td>SW</td>
<td>Secondary A</td>
<td>Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.</td>
</tr>
<tr>
<td>14</td>
<td>379.0</td>
<td>SW</td>
<td>Secondary B</td>
<td>Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers.</td>
</tr>
<tr>
<td>23</td>
<td>405.0</td>
<td>E</td>
<td>Unproductive</td>
<td>These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.</td>
</tr>
<tr>
<td>8</td>
<td>419.0</td>
<td>SW</td>
<td>Secondary A</td>
<td>Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.</td>
</tr>
<tr>
<td>2</td>
<td>447.0</td>
<td>SW</td>
<td>Principal</td>
<td>Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers.</td>
</tr>
</tbody>
</table>

### 5.3 Groundwater Abstraction Licences

**Are there any Groundwater Abstraction Licences within 2000m of the study site?**  Yes

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (5b):

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)</th>
<th>Direction</th>
<th>NGR</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>468500</td>
<td>Licence No: 6/33/04/*G/0084 Details: General Farming &amp; Domestic</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>246900</td>
<td>Direct Source: Ground Water Source Of Supply</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Point: Well Near Towcester Data Type: Point</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>466800</td>
<td>Licence No: 6/33/04/*G/0036 Details: General Farming &amp; Domestic</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>247500</td>
<td>Direct Source: Ground Water Source Of Supply</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Point: Well At Handley Park Data Type: Point</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>466100</td>
<td>Licence No: 6/33/04/*G/0031 Details: General Farming &amp; Domestic</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>245000</td>
<td>Direct Source: Ground Water Source Of Supply</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Point: Catchpit At Challock Farm Data Type: Point</td>
</tr>
</tbody>
</table>
5.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 2000m of the study site? Yes

The following Surface Water Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (5b):

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)</th>
<th>Direction</th>
<th>NGR</th>
<th>Details</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not shown 1972.0 N 468450 247900</td>
<td>Licence No: 6/33/04/&quot;S/0095 Details: Spray Irrigation - Direct Direct Source: Surface Water Source Of Supply Point: Silverstone Brook At Towcester Data Type: Line</td>
<td>Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 20/2/2002 Expiry Date: 31/3/2016 Issue No: 1 Version Start Date: 20/2/2002 Version End Date:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site? No

Database searched and no data found.

5.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site? No

Database searched and no data found.
5.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site?

No

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

5.8 Groundwater Vulnerability and Soil Leaching Potential

Is there any Environment Agency information on groundwater vulnerability and soil leaching potential within 500m of the study site? Yes

<table>
<thead>
<tr>
<th>Distance (m)</th>
<th>Direction</th>
<th>Classification</th>
<th>Soil Vulnerability Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>On Site</td>
<td>Minor Aquifer/High Leaching Potential</td>
<td>H3</td>
<td>Coarse textured or moderately shallow soils which readily transmit non-adsorbed pollutants and liquid discharges but have some ability to attenuate adsorbed pollutants because of their clay or organic matter content.</td>
</tr>
<tr>
<td>75</td>
<td>SE</td>
<td>Major Aquifer/Low Leaching Potential</td>
<td>L</td>
<td>Soils in which pollutants are unlikely to penetrate the soil layer because either water movement is largely horizontal, or they have the ability to attenuate diffuse pollutants.</td>
</tr>
<tr>
<td>114</td>
<td>E</td>
<td>Major Aquifer/High Leaching Potential</td>
<td>H3</td>
<td>Coarse textured or moderately shallow soils which readily transmit non-adsorbed pollutants and liquid discharges but have some ability to attenuate adsorbed pollutants because of their clay or organic matter content.</td>
</tr>
<tr>
<td>149</td>
<td>NW</td>
<td>Minor Aquifer/Low Leaching Potential</td>
<td>L</td>
<td>Soils in which pollutants are unlikely to penetrate the soil layer because either water movement is largely horizontal, or they have the ability to attenuate diffuse pollutants.</td>
</tr>
</tbody>
</table>

5.9 River Quality

Is there any Environment Agency information on river quality within 1500m of the study site? No
5.9.1 Biological Quality:

Database searched and no data found.

5.9.2 Chemical Quality:

Database searched and no data found.

5.10 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site? Yes

The following Detailed River Network records are represented on the Hydrology Map (5e):

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)</th>
<th>Direction</th>
<th>River Name: Silverstone Brook</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>186.0</td>
<td>NW</td>
<td>Welsh River Name: -</td>
<td>River Type: Primary River</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Alternative Name: -</td>
<td>Main River Status: Currently Undefined</td>
</tr>
<tr>
<td>2</td>
<td>245.0</td>
<td>SW</td>
<td>Welsh River Name: -</td>
<td>River Type: Secondary River</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Alternative Name: -</td>
<td>Main River Status: Currently Undefined</td>
</tr>
<tr>
<td>3</td>
<td>282.0</td>
<td>NW</td>
<td>Welsh River Name: -</td>
<td>River Type: Primary River</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Alternative Name: -</td>
<td>Main River Status: Currently Undefined</td>
</tr>
<tr>
<td>4</td>
<td>330.0</td>
<td>N</td>
<td>Welsh River Name: -</td>
<td>River Type: Culvert</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Alternative Name: -</td>
<td>Main River Status: Currently Undefined</td>
</tr>
<tr>
<td>5</td>
<td>331.0</td>
<td>N</td>
<td>Welsh River Name: -</td>
<td>River Type: Tertiary River</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Alternative Name: -</td>
<td>Main River Status: Currently Undefined</td>
</tr>
<tr>
<td>6</td>
<td>343.0</td>
<td>W</td>
<td>Welsh River Name: -</td>
<td>River Type: Primary River</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Alternative Name: -</td>
<td>Main River Status: Currently Undefined</td>
</tr>
<tr>
<td>7</td>
<td>343.0</td>
<td>W</td>
<td>Welsh River Name: -</td>
<td>River Type: Tertiary River</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Alternative Name: -</td>
<td>Main River Status: Currently Undefined</td>
</tr>
<tr>
<td>8</td>
<td>375.0</td>
<td>N</td>
<td>Welsh River Name: -</td>
<td>River Type: Primary River</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Alternative Name: -</td>
<td>Main River Status: Currently Undefined</td>
</tr>
<tr>
<td>9</td>
<td>443.0</td>
<td>W</td>
<td>Welsh River Name: -</td>
<td>River Type: Tertiary River</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Alternative Name: -</td>
<td>Main River Status: Currently Undefined</td>
</tr>
<tr>
<td>10</td>
<td>443.0</td>
<td>W</td>
<td>Welsh River Name: -</td>
<td>River Type: Tertiary River</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Alternative Name: -</td>
<td>Main River Status: Currently Undefined</td>
</tr>
</tbody>
</table>
5.11 Surface Water Features

Are there any surface water features within 250m of the study site?  Yes

The following surface water records are not represented on mapping:

<table>
<thead>
<tr>
<th>Distance (m)</th>
<th>Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>185.0</td>
<td>NW</td>
</tr>
<tr>
<td>231.0</td>
<td>N</td>
</tr>
<tr>
<td>243.0</td>
<td>SW</td>
</tr>
<tr>
<td>247.0</td>
<td>W</td>
</tr>
</tbody>
</table>
6. Environment Agency Flood Map for planning (from rivers and the sea)
6. Flooding

6.1 Zone 2 Flooding

Environment Agency Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 1 – Environment Agency Flood Map for Planning:

Is the site within 250m of an Environment Agency Zone 2 floodplain? Yes

The following floodplain records are represented as green shading on the Flood Map:

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)</th>
<th>Direction</th>
<th>Update</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>164.0</td>
<td>NW</td>
<td>03-Nov-2014</td>
<td>Zone 2 - (Fluvial Models )</td>
</tr>
</tbody>
</table>

6.2 Zone 3 Flooding

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 1 – Environment Agency Flood Map for Planning.

Is the site within 250m of an Environment Agency Zone 3 floodplain? Yes

The following floodplain records are represented as blue shading on the Flood Map:

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)</th>
<th>Direction</th>
<th>Update</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>164.0</td>
<td>NW</td>
<td>03-Nov-2014</td>
<td>Zone 3 - (Fluvial Models )</td>
</tr>
</tbody>
</table>

6.3 Flood Defences

Are there any Flood Defences within 250m of the study site? No

Database searched and no data found.

6.4 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site? No
6.5 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site?  No

6.6 Groundwater Flooding Susceptibility Areas

6.6.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site?  Yes

Does this relate to Clearwater Flooding or Superficial Deposits Flooding?  Clearwater Flooding

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

6.6.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?  Potential below Surface

Where potential for groundwater flooding of property situated below ground level is indicated, this means that given the geological conditions there may be a groundwater flooding hazard to basements and other below surface infrastructure. Unless other relevant information, e.g. records of previous flooding, suggests groundwater flooding has occurred before in this area you need take no further action in relation to groundwater flooding hazard. If there are records of previous incidences of groundwater flooding, then it is recommended that other information e.g. rainfall history, property type, and land drainage information in addition to previous records of flooding be investigated in order to establish relative, but not absolute, risk of groundwater flooding.

6.7 Groundwater Flooding Confidence Areas

What is the British Geological Survey confidence rating in this result?  High

Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.
7. Designated Environmentally Sensitive Sites Map

© Crown copyright and database rights 2015.
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7. Designated Environmentally Sensitive Sites

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site? Yes

<table>
<thead>
<tr>
<th>Section</th>
<th>Count</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:</td>
<td>0</td>
<td>Database searched and no data found.</td>
</tr>
<tr>
<td>7.2 Records of National Nature Reserves (NNR) within 2000m of the study site:</td>
<td>0</td>
<td>Database searched and no data found.</td>
</tr>
<tr>
<td>7.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:</td>
<td>0</td>
<td>Database searched and no data found.</td>
</tr>
<tr>
<td>7.4 Records of Special Protection Areas (SPA) within 2000m of the study site:</td>
<td>0</td>
<td>Database searched and no data found.</td>
</tr>
<tr>
<td>7.5 Records of Ramsar sites within 2000m of the study site:</td>
<td>0</td>
<td>Database searched and no data found.</td>
</tr>
</tbody>
</table>
7.6 Records of Ancient Woodland within 2000m of the study site:

The following records of Designated Ancient Woodland provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)</th>
<th>Direction</th>
<th>Ancient Woodland Name</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>824.0</td>
<td>E</td>
<td>UNKNOWN</td>
<td>Ancient and Semi-Natural Woodland</td>
</tr>
<tr>
<td>4</td>
<td>1395.0</td>
<td>E</td>
<td>UNKNOWN</td>
<td>Ancient and Semi-Natural Woodland</td>
</tr>
<tr>
<td>Not shown</td>
<td>1922.0</td>
<td>W</td>
<td>UNKNOWN</td>
<td>Ancient and Semi-Natural Woodland</td>
</tr>
</tbody>
</table>

7.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:

Database searched and no data found.

7.8 Records of World Heritage Sites within 2000m of the study site:

Database searched and no data found.

7.9 Records of Environmentally Sensitive Areas within 2000m of the study site:

Database searched and no data found.

7.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:

Database searched and no data found.

7.11 Records of National Parks (NP) within 2000m of the study site:

Database searched and no data found.
7.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

Database searched and no data found.

7.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:

The following Nitrate Vulnerable Zone records produced by DEFRA are represented as polygons on the Designated Environmentally Sensitive Sites Map:

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)</th>
<th>Direction</th>
<th>NVZ Name</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.0</td>
<td>On Site</td>
<td>Existing</td>
<td>DEFRA</td>
</tr>
<tr>
<td>2</td>
<td>0.0</td>
<td>On Site</td>
<td>Existing</td>
<td>DEFRA</td>
</tr>
</tbody>
</table>

7.14 Records of Green Belt land within 2000m of the study site:

Database searched and no data found.
8. Natural Hazards

Findings

8.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a GroundSure GeoInsight, available from our website. The following information has been found:

8.1.1 Shrink Swell

What is the maximum Shrink-Swell\* hazard rating identified on the study site? Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

<table>
<thead>
<tr>
<th>Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground conditions predominantly medium plasticity. Do not plant trees with high soil moisture demands near to buildings. 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 possible increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a possible increase in insurance risk, especially during droughts or where vegetation with high moisture demands is present.</td>
</tr>
</tbody>
</table>

8.1.2 Landslides

What is the maximum Landslide* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

<table>
<thead>
<tr>
<th>Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<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>

\* This indicates an automatically generated 50m buffer and site.
8.1.3 Soluble Rocks

What is the maximum Soluble Rocks* hazard rating identified on the study site? **Very Low**

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

<table>
<thead>
<tr>
<th>Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Significant soluble rocks are present. Problems unlikely except with considerable surface or subsurface water flow. No special actions required to avoid problems due to soluble rocks. No special ground investigation required or increased construction costs are likely. An increase in financial risk due to potential problems with soluble rocks is unlikely.</td>
</tr>
</tbody>
</table>

8.1.4 Compressible Ground

What is the maximum Compressible Ground* hazard rating identified on the study site? **Negligible**

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

<table>
<thead>
<tr>
<th>Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<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>

8.1.5 Collapsible Rocks

What is the maximum Collapsible Rocks* hazard rating identified on the study site? **Very Low**

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

<table>
<thead>
<tr>
<th>Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<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>
8.1.6 Running Sand

What is the maximum Running Sand\* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

<table>
<thead>
<tr>
<th>Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<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>

\* This indicates an automatically generated 50m buffer and site.
9. Mining

9.1 Coal Mining

Are there any coal mining areas within 75m of the study site? No

Database searched and no data found.

9.2 Shallow Mining

What is the subsidence hazard relating to shallow mining on-site*? Negligible

*Please note this data is searched with a 150m buffer.

9.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site? No

Guidance: No Guidance Required.
Contact Details
GroundSure Helpline
Telephone: 08444 159 000
info@groundsure.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

Environment Agency
National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 08708 506 506
Web: www.environment-agency.gov.uk
Email: enquiries@environment-agency.gov.uk

Public Health England
Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
https://www.gov.uk/government/organisations/public-health-england
Email: enquiries@phe.gov.uk
Main switchboard: 020 7654 8000

The Coal Authority
200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk

Ordnance Survey
Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505

Local Authority
Authority: South Northamptonshire Council
Phone: 0845 2300226
Web: www.southnorthants.gov.uk
Address: Springfields, Towcester, Northants, NN12 6AE

Gemapping PLC
Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444

Acknowledgements: Site of Special Scientific Interest, National Nature Reserve, Ramsar Site, Special Protection Area, Special Area of Conservation data is provided by, and used with the permission of, Natural England who retain the Copyright and Intellectual Property Rights for the data.

PointX © Database Right/Copyright, Thomson Directories Limited © Copyright Link Interchange Network Limited © Database Right/Copyright and Ordnance Survey © Crown Copyright and/or Database Right. All Rights Reserved. Licence Number [03421028].

This report has been prepared in accordance with the GroundSure Ltd standard Terms and Conditions of business for work of this nature.

Report Reference: GS-1845510
Client Reference: R5004 Silverstone Fields Farm
Standard Terms and Conditions

1 Definitions

In these terms and conditions unless the context otherwise requires:

"Beneficiary" means the person or entity for whose benefit the Client has obtained the Services.

"Client" means the party or parties entering into a Contract with GroundSure.

"Commercial" means any building or property which is not Residential.

"Confidential Information" means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than

(i) information which the Client can prove was rightfully in its possession prior to disclosure by GroundSure and

(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).

"Support Services" means Support Services provided by GroundSure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

"Contract" means the contract between GroundSure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.

"Third Party Data Provider" means any third party providing Third Party Content to GroundSure.

"Data Reports" means reports comprising factual data with no accompanying interpretation.

"Fees" has the meaning set out in clause 5.1.

"GroundSure" means GroundSure Limited, a company registered in England and Wales under number 03421028.

"GroundSure Materials" means all materials prepared by GroundSure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.

"Intellectual Property" means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.

"Mapping" means a map, map data or a combination of historical maps of various ages, time periods and scales.

"Order" means an electronic, written or other order form submitted by the Client requesting Services from GroundSure in respect of a specified Site.

"Ordnance Survey" means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adnac Drive, Southampton, SO16 OAS, UK.

"Order Website" means the online platform through which Orders may be placed by the Client and accepted by GroundSure.

"Report" means a Risk Screening Report or Data Report for Commercial or Residential property.

"Residential" means any building or property used as or intended to be used as a single dwelling.

"Risk Screening Report" means a risk screening report comprising factual data with an accompanying interpretation by GroundSure.

"Services" means any Report, Mapping and/or Support Services which GroundSure has agreed to provide by accepting an Order pursuant to clause 2.6.

"Site" means the area of land in respect of which the Client has requested GroundSure to provide the Services.

"Third Party Content" means data, database information or other information which is provided to GroundSure by a Third Party Data Provider.

"User Guide" means the user guide, as amended from time to time, available upon request from GroundSure and on the website (www.GroundSure.com) and forming part of this Contract.

2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 GroundSure agrees to provide the Services in accordance with the Contract.

2.2 GroundSure shall exercise reasonable skill and care in the provision of the Services.

2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of GroundSure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.

2.4 The Client acknowledges that terms and conditions appearing on a Client’s order form, printed stationery or other communication, or any terms or conditions implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.

2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, GroundSure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and GroundSure will have no liability therefor. In addition you acknowledge and agree that GroundSure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.

2.6 GroundSure’s quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by GroundSure. GroundSure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by GroundSure. GroundSure’s acceptance of an Order shall be binding only when made in writing and signed by GroundSure’s authorised representative or when accepted through the Order Website.

3 The Client’s obligations

3.1 The Client shall comply with the terms of this Contract and

(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and

(ii) be liable to GroundSure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.

3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary’s needs.

3.3 The Client shall supply to GroundSure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as GroundSure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.

3.4 Where the Client’s approval or decision is required to enable GroundSure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.

3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the GroundSure Materials, or use the GroundSure Materials in a manner for which they were not intended. The Client may make the GroundSure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that GroundSure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

4 Reliance

4.1 The Client acknowledges that the Services provided by GroundSure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by GroundSure to be accurate or complete or fit for any purpose.

4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person or no other are entitled to rely on their contents;

(i) the Beneficiary,

(ii) the Beneficiary’s professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate).

(iv) the first purchaser or first tenant of the Site, and

(v) the professional advisers and lenders of the first purchaser or tenant of the Site.

4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by GroundSure. Any party considering such Reports and Services does so at their own risk.

5 Fees and Disbursements

5.1 GroundSure shall charge and the Client shall pay fees at the rate and frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by GroundSure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together “Fees”).
5.2 The Client shall pay all outstanding Fees to GroundSure in full without deduction, counterclaim or set off within 30 days of the date of GroundSure’s invoice or such other period as may be agreed in writing between GroundSure and the Client (“Payment Date”). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.

5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2, a member of GroundSure’s management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

6. Intellectual Property and Confidentiality

6.1 Subject to
   (i) full payment of all relevant Fees and
   (ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the GroundSure Materials.

6.2 All Intellectual Property in the GroundSure Materials are and shall remain owned by GroundSure or GroundSure’s licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.

6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client shall, and shall procure that any recipients of the GroundSure Materials shall:
   (i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to GroundSure or any third party from the Services;
   (ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;
   (iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);
   (iv) not combine the Services with or incorporate such Services into any other information data or service;
   (v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);
   (vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and
   (vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that contained within Ordnance Survey’s OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey.

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the GroundSure Materials in order to advise the Beneficiary in a professional capacity. However, GroundSure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.

6.6 The Client shall procure that any person to whom the Services are made available shall notify GroundSure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7. Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of GroundSure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:
   (i) any breach of contract, including any deliberate breach of the Contract by GroundSure or its employees, agents or subcontractors;
   (ii) any use made of the Reports, Services, Materials or any part of them; and
   (iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.

7.4 GroundSure shall not be liable for
   (i) loss of profits;
   (ii) loss of business;
   (iii) depletion of goodwill and/or similar losses;
   (iv) loss of anticipated savings;
   (v) loss of goods;
   (vi) loss of contract;
   (vii) loss of use;
   (viii) loss or corruption of data or information;
   (ix) business interruption;
   (x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;
   (xi) loss or damage that arise as a result of the use of all or part of the GroundSure Materials in breach of the Contract;
   (xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the GroundSure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;
   (xiii) loss or damage to a computer, software, modem, telephone or other property; and
   (xiv) loss or damage caused by a delay or loss of use of GroundSure’s internet ordering service.

7.5 GroundSure’s total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.

7.6 GroundSure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of GroundSure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against GroundSure in relation to the Services or other matters arising pursuant to the Contract.

8. GroundSure’s right to suspend or terminate

8.1 If GroundSure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, GroundSure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.

8.2 GroundSure shall be entitled to terminate the Contract immediately on written notice in the event that:
   (i) the Client fails to pay any sum due to GroundSure within 30 days of the Payment Date; or
   (ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or
   (iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client’s creditors or shall suffer distress or execution to be levied on his goods; or
   (iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

9. Client’s Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.

9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:
   (i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon GroundSure’s acceptance of the Order; and
   (ii) the Reports and/or Mapping provided under this Contract are (a) supplied to the Client’s specification(s) and in any event (b) by their nature cannot be returned.

10. Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:
   (i) GroundSure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in
GroundSure’s possession or control; and

(ii) the Client shall pay to GroundSure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay GroundSure any additional costs incurred in relation to the termination or suspension of the Contract.

11 Anti-Bribery

11.1 The Client warrants that it shall:

(i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;

(ii) comply with such of GroundSure’s anti-bribery and anti-corruption policies as are notified to the Client from time to time; and

(iii) promptly report to GroundSure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law.

11.3 Any breach of this Clause 11 shall be deemed a material breach of this Contract.

12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.

12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through GroundSure.

12.3 GroundSure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of GroundSure.

12.4 No failure on the part of GroundSure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.

12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.

12.6 The Secretary of State for Business, Innovation and Skills (“BIS”) or BIS’ successor body, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.

12.7 GroundSure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

(i) the Client or Beneficiary’s failure to provide facilities, access or information;

(ii) fire, storm, flood, tempest or epidemic;

(iii) Acts of God or the public enemy;

(iv) riot, civil commotion or war;

(v) strikes, labour disputes or industrial action;

(vi) acts or regulations of any governmental or other agency;

(vii) suspension or delay of services at public registries by Third Party Data Providers;

(viii) changes in law; or

(ix) any other reason beyond GroundSure’s reasonable control.

In the event that GroundSure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then GroundSure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day when it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 GroundSure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at GroundSure who will respond in a timely manner.

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law.
Dear Sir/Madam,

Thank you for placing your order with GroundSure. Please find enclosed the GroundSure GeoInsight as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above GroundSure reference number.

Yours faithfully,

Managing Director
Groundsure Limited

Enc.
GroundSure GeoInsight
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Report Reference: GS-1845511
Client Reference: RS004 Silverstone Fields Farm
Overview of Findings

The GroundSure GeoInsight provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Shallow Mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and GroundSure’s unique database including historical surface ground and underground workings.

For further details on each dataset, please refer to each individual section in the report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched ‘-’ will be recorded.

Section 1: Geology

1.1 Artificial Ground
1.1.1 Is there any Artificial Ground/Made Ground present beneath the study site? No
1.1.2 Are there any records relating to permeability of artificial ground within the study site’s boundary? No

1.2 Superficial Geology and Landslips
1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site? Yes
1.2.2 Are there any records relating to permeability of superficial geology within the study site boundary? Yes
1.2.3 Are there any records of landslip within 500m of the study site boundary? No
1.2.4 Are there any records relating to permeability of landslips within the study site boundary? No

1.3 Bedrock, Solid Geology & Faults
1.3.1 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section. Yes
1.3.2 Are there any records relating to permeability of bedrock within the study site boundary? No
1.3.3 Are there any records of faults within 500m of the study site boundary? No

1.4 Radon data
1.4.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level
1.4.2 Is the property in an area where Radon Protection Measures are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary

Section 2: Ground Workings

<table>
<thead>
<tr>
<th>On-site</th>
<th>0-50m</th>
<th>51-250</th>
<th>251-500</th>
<th>501-1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Historical Surface Ground Working Features from Small Scale Mapping</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>Not Searched Not Searched</td>
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<tr>
<td>2.2 Historical Underground Workings from Small Scale Mapping</td>
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</tr>
<tr>
<td>2.3 Current Ground Workings</td>
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</table>

Section 3: Mining, Extraction & Natural Cavities

<table>
<thead>
<tr>
<th>On-site</th>
<th>0-50m</th>
<th>51-250</th>
<th>251-500</th>
<th>501-1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Historical Mining</td>
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<td>0</td>
<td>0</td>
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</tr>
</tbody>
</table>

Report Reference: GS-1845511
R5004 Silverstone Fields Farm
## Section 3: Mining, Extraction & Natural Cavities

<table>
<thead>
<tr>
<th>Subsection</th>
<th>On-site</th>
<th>0-50m</th>
<th>51-250</th>
<th>251-500</th>
<th>501-1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2 Coal Mining</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3 Johnson Poole and Bloomer Mining Area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.4 Non-Coal Mining</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.5 Non-Coal Mining Cavities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.6 Natural Cavities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.7 Brine Extraction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.8 Gypsum Extraction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.9 Tin Mining</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.10 Clay Mining</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Section 4: Natural Ground Subsidence

<table>
<thead>
<tr>
<th>Subsection</th>
<th>On-site</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Shrink Swell Clay</td>
<td>Low</td>
</tr>
<tr>
<td>4.2 Landslides</td>
<td>Very Low</td>
</tr>
<tr>
<td>4.3 Ground Dissolution of Soluble Rocks</td>
<td>Very Low</td>
</tr>
<tr>
<td>4.4 Compressible Deposits</td>
<td>Negligible</td>
</tr>
<tr>
<td>4.5 Collapsible Deposits</td>
<td>Very Low</td>
</tr>
<tr>
<td>4.6 Running Sand</td>
<td>Very Low</td>
</tr>
</tbody>
</table>

## Section 5: Borehole Records

<table>
<thead>
<tr>
<th>Subsection</th>
<th>On-site</th>
<th>0-50m</th>
<th>51-250</th>
</tr>
</thead>
<tbody>
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<tr>
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<td>8</td>
</tr>
</tbody>
</table>

## Section 6: Estimated Background Soil Chemistry

<table>
<thead>
<tr>
<th>Subsection</th>
<th>On-site</th>
<th>0-50m</th>
<th>51-250</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 Records of Background Soil Chemistry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
<td>35</td>
</tr>
</tbody>
</table>

## Section 7: Railways and Tunnels

<table>
<thead>
<tr>
<th>Subsection</th>
<th>On-site</th>
<th>0-50m</th>
<th>51-250</th>
<th>251-500</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1 Tunnels</td>
<td></td>
<td></td>
<td></td>
<td>Not Searched</td>
</tr>
<tr>
<td>7.2 Historical Railway and Tunnel Features</td>
<td></td>
<td></td>
<td></td>
<td>Not Searched</td>
</tr>
<tr>
<td>7.3 Historical Railways</td>
<td></td>
<td></td>
<td></td>
<td>Not Searched</td>
</tr>
<tr>
<td>7.4 Active Railways</td>
<td></td>
<td></td>
<td></td>
<td>Not Searched</td>
</tr>
</tbody>
</table>

Report Reference: GS-1845511
Client Reference: R5004 Silverstone Fields Farm
### Section 7: Railways and Tunnels

<table>
<thead>
<tr>
<th></th>
<th>On-site</th>
<th>0-50m</th>
<th>51-250</th>
<th>251-500</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.5 Railway Projects</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
1 Geology
1.1 Artificial Ground Map

Artificial Ground Legend:
- Site Outline
- Made Ground (undivided)
- Disturbed Ground (undivided)
- Worked Ground (undivided)
- Landscaped Ground (undivided)
- Infilled Ground
- Reclaimed Ground

1 Geology

1.1 Artificial Ground

1.1.1 Artificial/Made Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:202

Are there any records of Artificial/Made Ground within 500m of the study site boundary? No

Database searched and no data found.

1.1.2 Permeability of Artificial Ground

Are there any records relating to permeability of artificial ground within the study site boundary? No

Database searched and no data found.
1.2 Superficial Deposits and Landslips Map

Report Reference: GS-1845511
Client Reference: R5004 Silverstone Fields Farm
1.2 Superficial Deposits and Landslips

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary? Yes

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)</th>
<th>Direction</th>
<th>LEX Code</th>
<th>Description</th>
<th>Rock Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>43.0</td>
<td>SE</td>
<td>GFDMP-SAGR</td>
<td>GLACIOFLUVIAL DEPOSITS, MID PLEISTOCENE</td>
<td>SAND AND GRAVEL</td>
</tr>
<tr>
<td>2</td>
<td>129.0</td>
<td>SE</td>
<td>TILMP-DMTN</td>
<td>TILL, MID PLEISTOCENE</td>
<td>DIAMICTON</td>
</tr>
<tr>
<td>3</td>
<td>165.0</td>
<td>E</td>
<td>GFDMP-SAGR</td>
<td>GLACIOFLUVIAL DEPOSITS, MID PLEISTOCENE</td>
<td>SAND AND GRAVEL</td>
</tr>
<tr>
<td>4</td>
<td>186.0</td>
<td>NW</td>
<td>ALV-CSSG</td>
<td>ALLUVIUM</td>
<td>CLAY, SILT, SAND AND GRAVEL</td>
</tr>
<tr>
<td>5</td>
<td>236.0</td>
<td>SE</td>
<td>GFDMP-SAGR</td>
<td>GLACIOFLUVIAL DEPOSITS, MID PLEISTOCENE</td>
<td>SAND AND GRAVEL</td>
</tr>
<tr>
<td>6</td>
<td>286.0</td>
<td>SW</td>
<td>RTD1-SAGR</td>
<td>RIVER TERRACE DEPOSITS, 1</td>
<td>SAND AND GRAVEL</td>
</tr>
<tr>
<td>7</td>
<td>336.0</td>
<td>NW</td>
<td>TUFA-CATU</td>
<td>TUFA</td>
<td>CALCAREOUS TUFA</td>
</tr>
<tr>
<td>8</td>
<td>456.0</td>
<td>S</td>
<td>GFDMP-SAGR</td>
<td>GLACIOFLUVIAL DEPOSITS, MID PLEISTOCENE</td>
<td>SAND AND GRAVEL</td>
</tr>
</tbody>
</table>

1.2.2 Permeability of Superficial Ground

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

<table>
<thead>
<tr>
<th>Distance (m)</th>
<th>Direction</th>
<th>Flow Type</th>
<th>Maximum Permeability</th>
<th>Minimum Permeability</th>
</tr>
</thead>
<tbody>
<tr>
<td>43.0</td>
<td>SE</td>
<td>Intergranular</td>
<td>Very High</td>
<td>High</td>
</tr>
</tbody>
</table>

1.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary? No

Database searched and no data found.

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

1.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site** boundary? No

Database searched and no data found.

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

Report Reference: GS-1845511
Client Reference: R5004 Silverstone Fields Farm
1.3 Bedrock and Faults Map

Bedrock and Faults Legend


Site Outline

Search Buffers (m)
1.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:202

1.3.1 Bedrock/ Solid Geology

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

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)</th>
<th>Direction</th>
<th>LEX Code</th>
<th>Description</th>
<th>Rock Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.0</td>
<td>On Site</td>
<td>RLD-MDST</td>
<td>Rutland Formation - Mudstone</td>
<td>Bathonian / Bajocian</td>
</tr>
<tr>
<td>2</td>
<td>0.0</td>
<td>On Site</td>
<td>WBRO-LMST</td>
<td>Wellingborough Limestone Member - Limestone</td>
<td>Bathonian</td>
</tr>
<tr>
<td>3</td>
<td>12.0</td>
<td>N</td>
<td>RLD-MDST</td>
<td>Rutland Formation - Mudstone</td>
<td>Bathonian / Bajocian</td>
</tr>
<tr>
<td>4</td>
<td>67.0</td>
<td>NW</td>
<td>STAM-SDSL</td>
<td>Stamford Member - Sandstone And Siltstone, Interbedded</td>
<td>Bathonian / Bajocian</td>
</tr>
<tr>
<td>5</td>
<td>71.0</td>
<td>SE</td>
<td>BWL-LMST</td>
<td>Blisworth Limestone Formation - Limestone</td>
<td>Bathonian</td>
</tr>
<tr>
<td>6</td>
<td>96.0</td>
<td>NW</td>
<td>WHM-MDST</td>
<td>Whitby Mudstone Formation - Mudstone</td>
<td>Toarcian</td>
</tr>
<tr>
<td>7A</td>
<td>355.0</td>
<td>SW</td>
<td>STAM-SDSL</td>
<td>Stamford Member - Sandstone And Siltstone, Interbedded</td>
<td>Bathonian / Bajocian</td>
</tr>
<tr>
<td>8</td>
<td>405.0</td>
<td>E</td>
<td>BWC-MDST</td>
<td>Blisworth Clay Formation - Mudstone</td>
<td>Bathonian</td>
</tr>
<tr>
<td>9A</td>
<td>447.0</td>
<td>SW</td>
<td>BWL-LMST</td>
<td>Blisworth Limestone Formation - Limestone</td>
<td>Bathonian</td>
</tr>
</tbody>
</table>

1.3.2 Permeability of Bedrock Ground

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

<table>
<thead>
<tr>
<th>Distance (m)</th>
<th>Direction</th>
<th>Flow Type</th>
<th>Maximum Permeability</th>
<th>Minimum Permeability</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>On Site</td>
<td>Fracture</td>
<td>Low</td>
<td>Very Low</td>
</tr>
<tr>
<td>0.0</td>
<td>On Site</td>
<td>Fracture</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>12.0</td>
<td>N</td>
<td>Fracture</td>
<td>Low</td>
<td>Very Low</td>
</tr>
</tbody>
</table>

1.3.3 Faults

Are there any records of Faults within 500m of the study site boundary? No

Database searched and no data found.

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

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

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

Report Reference: GS-1845511
Client Reference: R5004 Silverstone Fields Farm
1.4 Radon Data

1.4.1 Radon Affected Areas
Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.

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

Report Reference: GS-1845511
Client Reference: R5004 Silverstone Fields Farm
2 Ground Workings

2.1 Historical Surface Ground Working Features derived from Historical Mapping

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

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

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

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)</th>
<th>Direction</th>
<th>NGR</th>
<th>Use</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1B</td>
<td>136.0</td>
<td>SW</td>
<td>467795 245728</td>
<td>Pond</td>
<td>1983</td>
</tr>
<tr>
<td>2A</td>
<td>166.0</td>
<td>SW</td>
<td>467780 245712</td>
<td>Gravel Pit</td>
<td>1950</td>
</tr>
<tr>
<td>3A</td>
<td>169.0</td>
<td>SW</td>
<td>467777 245712</td>
<td>Gravel Pit</td>
<td>1950</td>
</tr>
</tbody>
</table>

2.2 Historical Underground Working Features derived from Historical Mapping

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

Are there any Historical Underground Working Features within 1000m of the study site boundary? No

Database searched and no data found.

2.3 Current Ground Workings

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

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

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

<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)</th>
<th>Direction</th>
<th>NGR</th>
<th>Commodity Produced</th>
<th>Pit Name</th>
<th>Type of working</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>4B</td>
<td>171.0</td>
<td>SW</td>
<td>467783 245713</td>
<td>Sand &amp; Gravel</td>
<td>Silverstone Fields Farm Gravel Pit</td>
<td>A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site</td>
<td>Ceased</td>
</tr>
</tbody>
</table>

Not shown 680.0 SW 467505 245285 Sand & Gravel Pits Farm Gravel Pit A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Ceased

---

Report Reference: GS-1845511
Client Reference: R5004 Silverstone Fields Farm
<table>
<thead>
<tr>
<th>ID</th>
<th>Distance (m)</th>
<th>Direction</th>
<th>NGR</th>
<th>Commodity Produced</th>
<th>Pit Name</th>
<th>Type of working</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not shown</td>
<td>913.0</td>
<td>NE</td>
<td>468695</td>
<td>Limestone</td>
<td>Burcotewood Farm</td>
<td>A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site</td>
<td>Ceased</td>
</tr>
</tbody>
</table>
3 Mining, Extraction & Natural Cavities Map

Report Reference: GS-1845511
Client Reference: R5004 Silverstone Fields Farm
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 and no data 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

Database searched and no data found.

3.6 Natural Cavities

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

Are there any Natural Cavities within 1000m of the study site boundary? No

Database searched and no data found.

3.7 Brine Extraction

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

Are there any Brine Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

3.8 Gypsum Extraction

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

Are there any Gypsum Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

3.9 Tin Mining

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

Are there any Tin Mining areas within 1000m of the study site boundary? No

Database searched and no data found.
3.10 Clay Mining

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

Are there any Clay Mining areas within 1000m of the study site boundary? No

Database searched and no data found.
4 Natural Ground Subsidence

4.1 Shrink-Swell Clay Map
4.2 Landslides Map

Landslides Legend

- Site Outline
- Search Buffers (m)

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

Report Reference: GS-1845511
Client Reference: R5004 Silverstone Fields Farm
4.3 Ground Dissolution Soluble Rocks Map

Ground Dissolution Soluble Rocks Legend

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

4.4 Compressible Deposits Map

Silverstone Fields Farm

Compressible Deposits Legend

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

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4.5 Collapsible Deposits Map

Collapsible Deposits Legend

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

Report Reference: GS-1845511
Client Reference: R5004 Silverstone Fields Farm
4.6 Running Sand Map

Running Sand Legend

- Site Outline
- 125m
- 250m
- Search Buffers (m)

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

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? Low

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 likely due to potential problems with shrink-swell clays.</td>
</tr>
<tr>
<td>2</td>
<td>0.0</td>
<td>On Site</td>
<td>Low</td>
<td>Ground conditions predominantly medium plasticity. Do not plant trees with high soil moisture demands near to buildings. 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 possible increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a possible increase in insurance risk, especially during droughts or where vegetation with high moisture demands is present.</td>
</tr>
<tr>
<td>3</td>
<td>12.0</td>
<td>N</td>
<td>Low</td>
<td>Ground conditions predominantly medium plasticity. Do not plant trees with high soil moisture demands near to buildings. 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 possible increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a possible increase in insurance risk, especially 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>

* This includes an automatically generated 50m buffer zone around the site
4.3 Ground Dissolution of Soluble Rocks

The following Ground Dissolution 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>Significant soluble rocks are present. Problems unlikely except with considerable surface or subsurface water flow. No special actions required to avoid problems due to soluble rocks. No special ground investigation required or increased construction costs are likely. An increase in financial risk due to potential problems with soluble rocks is unlikely.</td>
</tr>
<tr>
<td>2</td>
<td>0.0</td>
<td>On Site</td>
<td>Negligible</td>
<td>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.</td>
</tr>
</tbody>
</table>

4.4 Compressible Deposits

The following Compressible Deposits 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 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 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 running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.</td>
</tr>
<tr>
<td>2</td>
<td>43.0</td>
<td>SE</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

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</th>
<th>Borehole Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>188.0</td>
<td>SE</td>
<td>468057 245734</td>
<td>SP64NE110</td>
<td>4.0</td>
<td>SILVERSTONE BYPASS A43 TP 68</td>
</tr>
<tr>
<td>2</td>
<td>210.0</td>
<td>SE</td>
<td>468091 245744</td>
<td>SP64NE82</td>
<td>12.0</td>
<td>SILVERSTONE BYPASS 214</td>
</tr>
<tr>
<td>3</td>
<td>211.0</td>
<td>S</td>
<td>467973 245642</td>
<td>SP64NE108</td>
<td>4.0</td>
<td>SILVERSTONE BYPASS A43 TP 66</td>
</tr>
<tr>
<td>4</td>
<td>211.0</td>
<td>SE</td>
<td>468064 245704</td>
<td>SP64NE109</td>
<td>4.0</td>
<td>SILVERSTONE BYPASS A43 TP 67</td>
</tr>
<tr>
<td>5</td>
<td>218.0</td>
<td>SE</td>
<td>468020 245657</td>
<td>SP64NE81</td>
<td>12.0</td>
<td>SILVERSTONE BYPASS 213</td>
</tr>
<tr>
<td>6</td>
<td>222.0</td>
<td>E</td>
<td>468170 245927</td>
<td>SP64NE114</td>
<td>3.0</td>
<td>SILVERSTONE BYPASS A43 TP 72</td>
</tr>
<tr>
<td>7</td>
<td>230.0</td>
<td>E</td>
<td>468172 245854</td>
<td>SP64NE112</td>
<td>3.0</td>
<td>SILVERSTONE BYPASS A43 TP 70</td>
</tr>
<tr>
<td>8</td>
<td>237.0</td>
<td>SE</td>
<td>468159 245800</td>
<td>SP64NE111</td>
<td>3.0</td>
<td>SILVERSTONE BYPASS A43 TP 69</td>
</tr>
</tbody>
</table>

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

#1: scans.bgs.ac.uk/sobi_scans/boreholes/341089
#2: scans.bgs.ac.uk/sobi_scans/boreholes/341061
#3: scans.bgs.ac.uk/sobi_scans/boreholes/341087
#4: scans.bgs.ac.uk/sobi_scans/boreholes/341088
#5: scans.bgs.ac.uk/sobi_scans/boreholes/341060
#6: scans.bgs.ac.uk/sobi_scans/boreholes/341093
#7: scans.bgs.ac.uk/sobi_scans/boreholes/341091
#8: scans.bgs.ac.uk/sobi_scans/boreholes/341090
## 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>RuralSoil</td>
<td>&lt;15 mg/kg</td>
<td>&lt;1.8 mg/kg</td>
<td>60 - 90 mg/kg</td>
<td>15 - 30 mg/kg</td>
<td>&lt;100 mg/kg</td>
</tr>
<tr>
<td>0.0</td>
<td>On Site</td>
<td>RuralSoil</td>
<td>15 - 25 mg/kg</td>
<td>&lt;1.8 mg/kg</td>
<td>60 - 90 mg/kg</td>
<td>15 - 30 mg/kg</td>
<td>&lt;100 mg/kg</td>
</tr>
<tr>
<td>12.0</td>
<td>N</td>
<td>RuralSoil</td>
<td>&lt;15 mg/kg</td>
<td>&lt;1.8 mg/kg</td>
<td>60 - 90 mg/kg</td>
<td>15 - 30 mg/kg</td>
<td>&lt;100 mg/kg</td>
</tr>
<tr>
<td>43.0</td>
<td>SE</td>
<td>RuralSoil</td>
<td>15 - 25 mg/kg</td>
<td>&lt;1.8 mg/kg</td>
<td>60 - 90 mg/kg</td>
<td>30 - 45 mg/kg</td>
<td>&lt;100 mg/kg</td>
</tr>
<tr>
<td>51.0</td>
<td>E</td>
<td>RuralSoil</td>
<td>&lt;15 mg/kg</td>
<td>&lt;1.8 mg/kg</td>
<td>60 - 90 mg/kg</td>
<td>15 - 30 mg/kg</td>
<td>&lt;100 mg/kg</td>
</tr>
<tr>
<td>51.0</td>
<td>E</td>
<td>RuralSoil</td>
<td>15 - 25 mg/kg</td>
<td>&lt;1.8 mg/kg</td>
<td>60 - 90 mg/kg</td>
<td>15 - 30 mg/kg</td>
<td>&lt;100 mg/kg</td>
</tr>
<tr>
<td>51.0</td>
<td>E</td>
<td>RuralSoil</td>
<td>15 - 25 mg/kg</td>
<td>&lt;1.8 mg/kg</td>
<td>60 - 90 mg/kg</td>
<td>15 - 30 mg/kg</td>
<td>&lt;100 mg/kg</td>
</tr>
<tr>
<td>64.0</td>
<td>SE</td>
<td>RuralSoil</td>
<td>&lt;15 mg/kg</td>
<td>&lt;1.8 mg/kg</td>
<td>60 - 90 mg/kg</td>
<td>15 - 30 mg/kg</td>
<td>&lt;100 mg/kg</td>
</tr>
<tr>
<td>64.0</td>
<td>SE</td>
<td>RuralSoil</td>
<td>&lt;15 mg/kg</td>
<td>&lt;1.8 mg/kg</td>
<td>60 - 90 mg/kg</td>
<td>15 - 30 mg/kg</td>
<td>&lt;100 mg/kg</td>
</tr>
<tr>
<td>67.0</td>
<td>NW</td>
<td>RuralSoil</td>
<td>&lt;15 mg/kg</td>
<td>&lt;1.8 mg/kg</td>
<td>60 - 90 mg/kg</td>
<td>15 - 30 mg/kg</td>
<td>&lt;100 mg/kg</td>
</tr>
<tr>
<td>71.0</td>
<td>SE</td>
<td>RuralSoil</td>
<td>25 - 35 mg/kg</td>
<td>&lt;1.8 mg/kg</td>
<td>60 - 90 mg/kg</td>
<td>30 - 45 mg/kg</td>
<td>&lt;100 mg/kg</td>
</tr>
<tr>
<td>83.0</td>
<td>SE</td>
<td>RuralSoil</td>
<td>15 - 25 mg/kg</td>
<td>&lt;1.8 mg/kg</td>
<td>60 - 90 mg/kg</td>
<td>30 - 45 mg/kg</td>
<td>&lt;100 mg/kg</td>
</tr>
<tr>
<td>88.0</td>
<td>N</td>
<td>RuralSoil</td>
<td>&lt;15 mg/kg</td>
<td>&lt;1.8 mg/kg</td>
<td>60 - 90 mg/kg</td>
<td>15 - 30 mg/kg</td>
<td>&lt;100 mg/kg</td>
</tr>
<tr>
<td>88.0</td>
<td>N</td>
<td>RuralSoil</td>
<td>&lt;15 mg/kg</td>
<td>&lt;1.8 mg/kg</td>
<td>60 - 90 mg/kg</td>
<td>15 - 30 mg/kg</td>
<td>&lt;100 mg/kg</td>
</tr>
<tr>
<td>92.0</td>
<td>SE</td>
<td>RuralSoil</td>
<td>25 - 35 mg/kg</td>
<td>&lt;1.8 mg/kg</td>
<td>60 - 90 mg/kg</td>
<td>30 - 45 mg/kg</td>
<td>&lt;100 mg/kg</td>
</tr>
<tr>
<td>92.0</td>
<td>SE</td>
<td>RuralSoil</td>
<td>25 - 35 mg/kg</td>
<td>&lt;1.8 mg/kg</td>
<td>60 - 90 mg/kg</td>
<td>30 - 45 mg/kg</td>
<td>&lt;100 mg/kg</td>
</tr>
<tr>
<td>96.0</td>
<td>NW</td>
<td>RuralSoil</td>
<td>15 - 25 mg/kg</td>
<td>&lt;1.8 mg/kg</td>
<td>90 - 120 mg/kg</td>
<td>30 - 45 mg/kg</td>
<td>&lt;100 mg/kg</td>
</tr>
<tr>
<td>100.0</td>
<td>NW</td>
<td>RuralSoil</td>
<td>15 - 25 mg/kg</td>
<td>&lt;1.8 mg/kg</td>
<td>90 - 120 mg/kg</td>
<td>30 - 45 mg/kg</td>
<td>&lt;100 mg/kg</td>
</tr>
<tr>
<td>104.0</td>
<td>NE</td>
<td>RuralSoil</td>
<td>&lt;15 mg/kg</td>
<td>&lt;1.8 mg/kg</td>
<td>60 - 90 mg/kg</td>
<td>15 - 30 mg/kg</td>
<td>&lt;100 mg/kg</td>
</tr>
<tr>
<td>104.0</td>
<td>NE</td>
<td>RuralSoil</td>
<td>&lt;15 mg/kg</td>
<td>&lt;1.8 mg/kg</td>
<td>60 - 90 mg/kg</td>
<td>15 - 30 mg/kg</td>
<td>&lt;100 mg/kg</td>
</tr>
<tr>
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</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.

Report Reference: GS-1845511
Client Reference: R5004 Silverstone Fields Farm
7 Railways and Tunnels Map
7 Railways and Tunnels

7.1 Tunnels

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

Have any underground railway lines been identified within the study site boundary? No
Have any underground railway lines been identified within 250m of the study site boundary? 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.

7.2 Historical Railway and Tunnel Features

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

Have any historical railway or tunnel features been identified within the study site boundary? No
Have any historical railway or tunnel features been identified within 250m of the study site boundary? No

Database searched and no data found.

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

7.3 Historical Railways

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

Have any historical railway lines been identified within the study site boundary? No
Have any historical railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

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

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

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

Have any active railway lines been identified within the study site boundary? No
Have any active railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

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

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

7.5 Railway Projects

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

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 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 Report.
Contact Details

GroundSure Helpline
Telephone: 08444 159 000
info@groundsure.com

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Kingsey Dunham Centre
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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

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British Gypsum Ltd
East Leake
Loughborough
Leicestershire
LE12 6HX

The Coal Authority
200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0115 762 6848
DX 716176 Mansfield 5
www.coal.gov.uk

Public Health England
Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
https://www.gov.uk/government/organisations/public-health-england
Email: enquiries@phe.gov.uk
Main switchboard: 020 7654 8000

Johnson Poole & Bloomer Limited
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Brierley Hill, West Midlands
DY5 3LH
Tel: +44 (0)1384 262 000
Email: enquiries.gs@jpb.co.uk
Website: www.jpb.co.uk

Ordnance Survey
Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505
Website: http://www.ordnancesurvey.co.uk/

Getmapping PLC
Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444
Website: http://www1.getmapping.com/

Peter Brett Associates
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Waterman Place
Reading
Berkshire RG1 8DN
Tel: +44 (0)118 950 0761 E-mail: reading@pba.co.uk
Website: http://www.peterbrett.com/home

Acknowledgements: Ordnance Survey © Crown Copyright and/or Database Right. All Rights Reserved. Licence Number [03421028].
This report has been prepared in accordance with the GroundSure Ltd standard Terms and Conditions of business for work of this nature.
Report Reference: GS-1845511
Client Reference: R5004 Silverstone Fields Farm
GroundSure reserves the right to withdraw any quotation or proposal at any time.

"Beneficiary" means the person or entity for whose benefit the Client has obtained the Services. "Client" means the party or parties entering into a Contract with GroundSure. "Commercial" means any building or property which is not Residential. "Contract" means the contract between GroundSure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide. "Data Reports" means reports comprising factual data with no accompanying interpretation. "Defects" means any error, omissions or inaccuracies that exist in the Services or any part of the Services. "Insurance" means any insurance, but makes no warranty that such insurance shall be available from any insurer or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject to the terms and conditions of the policy issued by the insurer and GroundSure will have no liability therefor. In addition, you acknowledge and agree that GroundSure does not act as an agent or broker for any insurers and GroundSure will have no liability therefor. In connection with, this Contract other than (i) information which the Client can prove was rightfully in its possession prior to disclosure by GroundSure and (ii) any information which is in the public domain (other than by virtue of a breach of this Contract). "Support Services" means Support Services provided by GroundSure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items. "Skills" means a Risk Screening Report or Data Report for Commercial or Residential property. "Site" means the area of land in respect of which the Client has requested GroundSure to provide the Services. "Third Party Data Provider" means any report or data which GroundSure obtains from a Third Party Data Provider. "User Guide" means the user guide, as amended from time to time, available upon request from the Client as a result of, or in connection with, this Contract other than (i) information which the Client can prove was rightfully in its possession prior to disclosure by GroundSure and (ii) any information which is in the public domain (other than by virtue of a breach of this Contract). "GroundSure Materials" means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world. "Mapping" means a map, map data or a combination of historical maps of various ages, aerial photos and scales. "Order" means an electronic, written or other order form submitted by the Client requesting Services from GroundSure in respect of a specified Site. "Ordnance Survey" means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK. "Order Website" means the online platform through which Orders may be placed by the Client and accepted by GroundSure. "Report" means a Risk Screening Report or Data Report for Commercial or Residential property. "Residential" means any building or property used as or intended to be used as a single dwelling. "Risk Screening Report" means a risk screening report comprising factual data with an accompanying interpretation by GroundSure. "Skilled Person" means a skilled person carrying out work in order to provide the Services, such as a first purchaser or first tenant of the Site, and the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the GroundSure Materials. All Intellectual Property in the GroundSure Materials are and shall remain the property of the Client and GroundSure. 2.2 GroundSure shall be binding only when made in writing and signed by GroundSure’s authorised representative or when accepted through the Order Website.

3 The Client’s obligations

3.1 The Client shall comply with the terms of this Contract and its Order and shall (i) procure that the Beneficiary or any third party relying on the Services complies with such requirements as if it is bound by the Contract and (ii) be liable to GroundSure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.

3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary’s needs.

3.3 The Client shall supply to GroundSure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site, and shall give such assistance as GroundSure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.

3.4 Where the Client’s approval or decision is required to enable GroundSure to carry out work in order to provide the Services, such approval or decision shall be given or deferred in reasonable time and so as not to delay or disrupt the performance of the Services.

3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, sell, alter, add to, or amend the GroundSure Materials, or use the GroundSure Materials in a manner for which they were not intended. The Client may make the GroundSure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.6 The Client is responsible for the confidentiality of its user name and password and the confidentiality of the Order Website and the Client acknowledges that GroundSure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

4 Reliance

4.1 The Client acknowledges that the Services provided by GroundSure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by GroundSure. 4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents;

(i) the Beneficiary,
(ii) the Beneficiary’s professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),
(iv) the first purchaser or first tenant of the Site, and
(v) the professional advisers and lenders of the first purchaser or tenant of the Site.

4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by GroundSure. Any party considering such Reports and Services does so at their own risk.

5 Fees and Disbursements

5.1 GroundSure shall charge and the Client shall pay fees at the rate and frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by GroundSure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together “Fees”).

5.2 The Client shall pay all outstanding Fees to GroundSure in full without deduction, counterclaim or set off within 30 days of the date of GroundSure’s invoice or such other period as may be agreed in writing between GroundSure and the Client (“Payment Date”). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.

5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable, any objection raised by the Client shall be resolved by agreement. Save to the extent set out in this Contract, the Client acknowledges, and shall procure by the Beneficiary in favour of the Client that the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

6 Intellectual Property and Confidentiality

6.1 Subject to (i) full payment of all relevant Fees and compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the GroundSure Materials.

6.2 All Intellectual Property in the GroundSure Materials are and shall remain owned by GroundSure or GroundSure’s licensors (including without limitation the Third Party Data Providers). The Client acknowledges, and shall procure by acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.

6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.
6.4 The Client shall, and shall procure that any recipients of the GroundSure Materials shall: (i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to GroundSure or any third party from the Services; (ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites; (iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services); (iv) not combine the Services with or incorporate such Services into any other information or data or service; (v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services); (vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and (vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that contained within Ordnance Survey’s OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey.

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the GroundSure Materials in order to advise the Beneficiary in a professional capacity. However, GroundSure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.

6.6 The Client shall procure that any person to whom the Services are made available shall notify GroundSure of any request or requirement to disclose, publish or dissemiante any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7. Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of GroundSure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of: (i) any breach of contract, including any deliberate breach of the Contract by GroundSure or its employees, agents or subcontractors; (ii) any use made of the Reports, Services, Materials or any part of them; and (iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.

7.4 GroundSure shall not be liable for: (i) loss of profits; (ii) loss of business; (iii) depletion of goodwill and/or similar losses; (iv) loss of anticipated savings; (v) loss of goods; (vi) loss of contract; (vii) loss of use; (viii) loss or corruption of data or information; (ix) business interruption; (x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses; (xi) any damage that arise as a result of the use of all or part of the GroundSure Materials in breach of the Contract; (xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the GroundSure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content; (xiii) loss or damage to a computer, software, modem, telephone or other property; and (xiv) loss or damage caused by a delay or loss of use of GroundSure’s internet service.

7.5 GroundSure’s total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.

7.6 GroundSure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of GroundSure which accord with those detailed in clauses 7.3 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against GroundSure in relation to the Services or other matters arising pursuant to the Contract.

8 GroundSure’s right to suspend or terminate

8.1 If GroundSure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, GroundSure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.

8.2 GroundSure shall be entitled to terminate the Contract immediately on written notice in the event that: (i) the Client fails to pay any sum due to GroundSure within 30 days of the Payment Date; or (ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or (iii) the Client being a company is unable to pay its debts within the meaning of Section 273 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client’s creditors or shall suffer distress or execution to be levied on his goods; or (iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

9. Client’s Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.

9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that: (i) the Services under this Contract (and therefore the performance of this Contract) commences immediately upon GroundSure’s acceptance of the Order; and (ii) the Reports and/or Mapping provided under this Contract are (a) supplied to the Client’s specification(s) and in any event (b) by their nature cannot be returned.

10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract: (i) GroundSure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in GroundSure’s possession or control; and (ii) the Client shall pay to GroundSure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay GroundSure any additional costs incurred in relation to the termination or suspension of the Contract.

11 Anti-Bribery

11.1 The Client warrants that it shall: (i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010; (ii) comply with such of GroundSure’s anti-bribery and anti-corruption policies as are notified to the Client from time to time; and (iii) promptly report to GroundSure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.

12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through GroundSure.

12.3 GroundSure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of GroundSure.

12.4 No failure on the part of GroundSure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof. A prompt or default payment in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.

12.6 The Secretary of State for Business, Innovation and Skills (‘BIS’) or BIS’ successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.

12.7 GroundSure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances: (i) the Client or Beneficiary’s failure to provide facilities, access or information; (ii) fire, storm, flood, tempest or epidemic; (iii) Acts of God or the public enemy; (iv) riot, civil commotion or war; (v) strikes, labour disputes or industrial action; (vi) acts or regulations of any governmental or other agency; (vii) suspension or delay of services at public registries by Third Party Data Providers; (viii) changes in law; or (ix) any other reason beyond GroundSure’s reasonable control.

In the event that GroundSure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then GroundSure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly
given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 GroundSure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at GroundSure who will respond in a timely manner.

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law.

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APPENDIX C
PHOTOGRAPHS
Plate 1
Proposed extension area to the east of the current treatment building (North facing)

Plate 2
Proposed extension area to the east of the current treatment building (South facing)
Plate 3
Current access to the proposed extension development site

Plate 4
Storage yard associated with the current treatment building
Plate 5
Chemical tanks used for the current treatment building

Plate 6
Vehicle refuelling area