



CONSULTANCY | ENVIRONMENT  
INFRASTRUCTURE | BUILDINGS

## ENVIRONMENT – LAND

Fergus Jack and Bryn Williams Joint LPA  
Receivers of Brightsea UK Ltd  
Network 46, Swinderby

Phase 1 Geo-Environmental Desk Study



## **ENVIRONMENT LAND**

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Camp Road, Lincoln

Phase 1 Geo-Environmental Desk Study

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## Limitations

The assessments and interpretation have been made in line with legislation and guidelines in force at the time of writing, representing best practice at that time.

All of the comments and opinions contained in this report, including any conclusions, are based on the information obtained by BWB during our investigations.

There may be other conditions prevailing on the site which have not been disclosed by this investigation and which have not been taken into account by this report. Responsibility cannot be accepted for conditions not revealed by the investigation.

Any diagram or opinion of the possible configuration of the findings is conjectural and given for guidance only and confirmation of intermediate ground conditions should be considered if deemed necessary.

Except as otherwise requested by the Client, BWB is not obliged and disclaims any obligation to update the report for events taking place after:

- a) The date on which this assessment was undertaken; and
- b) The date on which the final report is delivered.

BWB makes no representation whatsoever concerning the legal significance of its findings or to other legal matters referred to in the following report.

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<b>EXECUTIVE SUMMARY</b>	
Site Address	The site is located at Network 46, Camp Road, Witham Street Hughs, Lincoln, LN6 9TW at national grid reference 488909, 362002.
Site Setting	<p>The Site is irregular in shape and forms part of the former RAF Base, Swinderby. Two former hanger buildings are present in the northern part of the Site, one of which is currently tenanted. The second is disused and in a state of disrepair.</p> <p>An electricity sub-station is located in the central eastern part of the Site. All other buildings have been demolished.</p> <p>A number of stockpiles are present across the Site. Stockpiles in the northern part of the Site comprise demolition rubble with other stockpiles comprising a grass cover.</p>
Site History	<p>The earliest 1886 mapping depicts the land being used from agricultural purposes until 1951 when the Site is utilised as an airbase, RAF Swinderby.</p> <p>Similar land uses have been present in the surrounding land. However, Witham St Hughs, a residential village, has more recently been constructed to the east of the Site.</p>
Regulatory Setting	<p>A List 2 Dangerous Substance Inventory Site relating to VIP Bin Cleaning for pH and a historical NIHHS site is located approximately 330m to the northeast of the site, previously licensed to British Gas for use of light petroleum gas.</p> <p>No other permits, consents or authorisations exists that are anticipated to affect site.</p>
Geological Setting	<p>The Site is underlain by superficial deposits of Balderton Sand and Gravel Member and bedrock deposits of the Scunthorpe Mudstone Formation and Charmouth Mudstone Formation.</p> <p>No Made Ground has been mapped at the Site, however, localised deposits can be expected from previous development.</p>
Geotechnical Setting	Natural deposits encountered may be suitable to support low loading structures. However, more heavily loaded structures may require foundations to be deepened into the competent bedrock beneath the Site which is anticipated to be at a depth of <10.00 m bgl.
Contamination Sources	<p>Contamination sources have been identified at the Site and include: previous agricultural uses and the recent use of the Site as RAF Swinderby.</p> <p>Contamination from potential off-Site sources is possible. Off-Site sources include further agricultural uses and the airfield as well as a rifle range. The risk of significant impact from these sources to the Site is considered to be low.</p>
Pollutant Linkages	Based on the former uses that have occurred at or in close proximity to the Site, the assessment has indicated that the Site poses a <b>LOW TO MEDIUM</b> risk to Human Health and Controlled Waters.
Recommendations	It is recommended that an intrusive ground investigation be undertaken to quantify the identified pollutant linkages and assess the ground conditions for foundation design.

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## **EXECUTIVE SUMMARY**

This summary should be read in conjunction with BWB's full report (ref. NTW2253/01/V2 ) and reflects an assessment of the Site based on information received by BWB at the time of production.

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Figure 2	Site Layout Plan

## APPENDICES

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Appendix I Historical Ordnance Survey Plans  
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## **1 INTRODUCTION**

### **Instruction**

- 1.1 BWB Consulting (BWB) was instructed by Fergus Jack and Bryn Williams Joint LPA Receivers of Brightsea UK Ltd (the Client) to carry out a Geo-Environmental review at the site at Network 46, Swinderby. Details of the project brief are included in BWB proposal reference THJ/MOH/NTW2253/01/V2, dated June 2014.
- 1.2 The proposed development is anticipated to be for commercial/industrial land use. A confirmed masterplan is yet to be completed; however, it is understood that part of the Site is to be developed as a warehouse with associated offices, yards and car parking for Geopost.

### **Objectives**

- 1.3 The report has been completed to present pertinent information into the environmental risks and liabilities associated with the site. It has been completed to fulfil the requirements of a preliminary risk assessment in accordance with BS10175: 2011 Investigation of Potentially Contaminated Sites Code of Practice and CLR11 Model Procedures for the Management of Contaminated Land. The objectives of the report are:
  - To assess historical activities at the site with respect to their potential impact on the site environment;
  - To characterise the environmental setting of the site, identify migration pathways and vulnerable receptors for contamination originating at the site, focusing on potential soil and groundwater liabilities;
  - To assess historical and current surrounding land use in relation to known or potential off-site contamination issues that may impact the subject property;
  - To review existing site investigation and remediation information available for the site;
  - To develop a preliminary conceptual site model (CSM); and
  - To assess potential environmental liabilities associated with the site.

### **Scope of Works**

- 1.4 The scope of work included:
  - Site visit to inspect the current condition at ground surface;
  - Review of the following information:
    - British Geological Survey (BGS) Borehole Records ([www.bgs.co.uk](http://www.bgs.co.uk));
    - British Geological Survey (1973) 1:50 000 Scale, Lincoln No. 114 Solid and Drift
    - Zetica – Regional Unexploded Bomb Risk Maps ([www.zetica.com](http://www.zetica.com))
    - GroundSure® EnviroInsight Report No. HMD-214-1529295 and GroundSure® GeoInsight Report No. HMD-214-1529296
    - Environment Agency ([www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)).
  - Provide a summary of key ground risks that require further ground investigation in order to control the identified risks; and

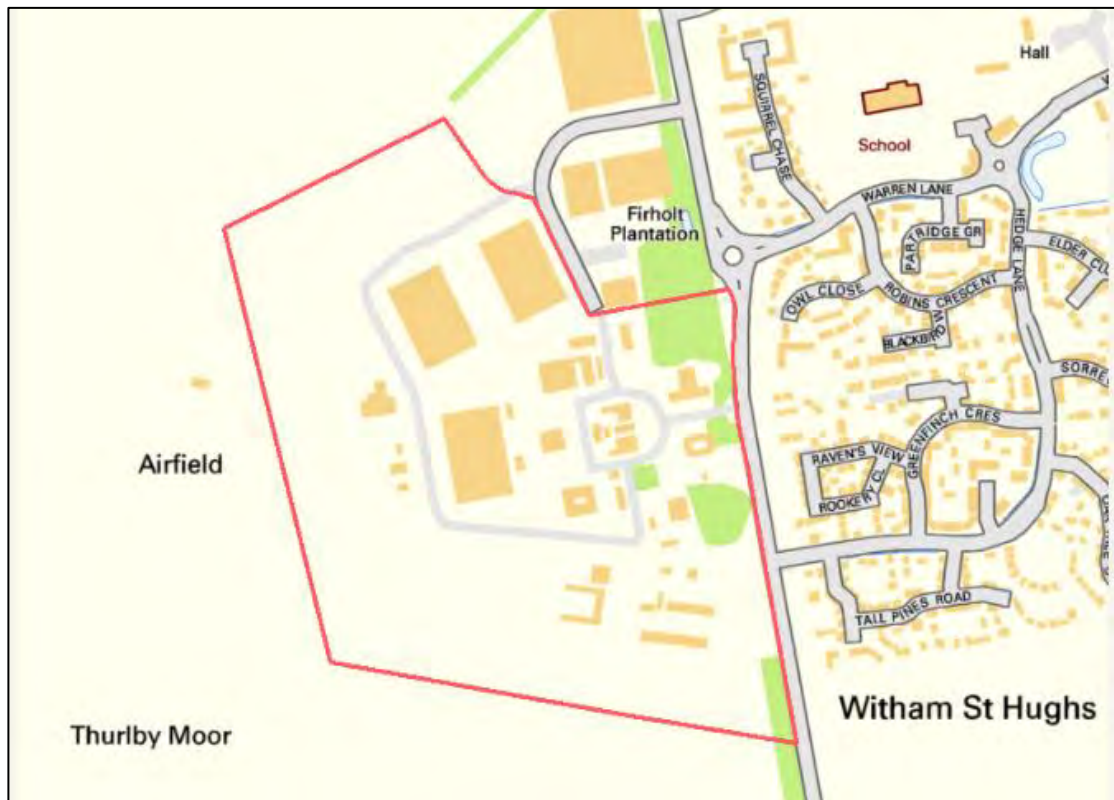
- 
- Produce a geo-environmental desk study (this report) providing qualitative contamination risk assessment and ground-related constraints to the proposed development.

## 2 THE SITE

### Site Location

- 2.1 The site is located at N6 Camp Road, Lincoln at National Grid coordinates 488909, 362002. The location of the site is shown in **Figure 1**.

**Figure 1 Site Location Plan**



Reproduced from the Ordnance Survey 1:25,000 scale map with the permission of the controller of Her Majesty's Stationery Office Crown Copyright Reserved. OS Licence number 100013665.

### Site Description

- 2.2 The layout of the Site with the main features is presented as **Figure 2**.
- 2.3 The layout of the Site with the main features is presented as **Figure 2**. Observations made at the time of the Site reconnaissance are summarised below.
- 2.4 Two former aircraft hangers are located in the northern part of the Site. The easternmost hanger was tenanted by Expert Packers, a packaging and logistics company. The westernmost hanger was disused and was noted to have been vandalised.
- 2.5 External areas of the Site comprise either asphalt or concrete hardstanding which was noted to be in reasonable condition throughout. However, some areas were noted to have undergone significant degradation. Where vegetation was present, it was generally overgrown with mature trees and shrubs present across the Site.

- 
- 2.6 It is noted that land in the far south-eastern part of the Site did not include any significantly well-established vegetation as land was largely given over to grass which, in part was notably shorter than the surrounding land.
  - 2.7 An electricity sub-station is present in the central eastern part of the Site and remained a live facility.
  - 2.8 Stockpiles of demolition rubble are present in the north-western area of the Site and are understood to be the result of former demolition works undertaken on Site.
  - 2.9 Additional stockpiles of unknown composition are located in the south of the Site. These stockpiles were noted to be vegetated and appeared to have been present for some time.
  - 2.10 A number of ducts are present across the Site, some of which had been exposed. The ducting contained pipework and may be linked to the former aviation fuel storage area which is understood to have been situated in the south-eastern area.
  - 2.11 No above ground or below ground fuel storage was observed during the walkover.

### 3 DESK STUDY

#### Historical Mapping

3.1 Historical Ordnance Survey (OS) mapping for the Site area has been reviewed. These maps and plans date from the 1886 OS County Series to the current 2012 OS Plans. The historical plans reviewed have been reproduced in **Appendix I**. The key points of the historical development of the Site and surrounding area are summarised below in **Tables 1** and **2**.

**Table 1 Key Points of Site Development History (1886-2012)**

Dates	On Site	Significance
1886	<p><b>SKELMIRE FARM</b> is located in the northwest and <b>FIRHOLT FARM</b> is located in the northeast of the Site. An area of marshland/rough ground is located to the east of <b>SKELMIRE FARM</b>.</p> <p><b>Firholt Plantation</b> is located in the east of the Site.</p> <p>The remainder of the Site comprises open fields, possibly for <b>AGRICULTURAL USES</b>.</p>	<p>The construction of buildings on Site indicates that <b>MADE GROUND</b> is likely to be present.</p> <p>The use of the Site for agricultural purposes gives rise to the possibility for <b>HERBICIDES</b> and <b>PESTICIDES</b> to have been used on-Site.</p>
1951-1955	<p>Both farms are no longer mapped and the area is now referenced as an <b>AIRFIELD (RAF SWINDERBY)</b>, with no detail shown. <b>Firholt Plantation</b> is no longer mapped.</p>	<p><b>MADE GROUND</b> associated with developed areas and infrastructure such as roads.</p>
1965	<p>Notable development has occurred across the Site as part of the <b>AIRFIELD</b>. Buildings are not labelled.</p>	<p><b>MADE GROUND</b> associated with developed areas and infrastructure such as roads and runways.</p> <p><b>RAF SWINDERBY:</b> potential contaminants include: <b>ASBESTOS, FUEL STORAGE, HEAVY METALS, MUNITIONS, ANTI-FREEZE, UNEXPLODED ORDNANCE (UXO's), RADIUM 226, HYDRAULIC OIL, PAINTS</b> and <b>HAZARDOUS GROUND GASES</b> from any <b>LANDFILLING</b> activities.</p>
1979	<p>Two <b>ELECTRICAL SUB STATIONS</b> are located on the eastern Site boundary and in the centre of the Site.</p> <p><b>Firholt Plantation</b> is shown in the east of the Site.</p> <p>Two churches are labelled.</p>	<p><b>POLYCHLORINATED BIPHENYLS (PCBs)</b> are used within electricity sub-stations which have the potential to impact upon the <b>soils and groundwater</b> beneath the Site and ultimately future <b>Site users</b>.</p>
1979-2012	<p>No significant changes.</p>	<p>N/A</p>

**SOURCES IN BOLD AND CAPS      Receptors in bold and italics**

**Table 2      Key Points of Surrounding Area Development History (1886-2012)**

<b>Dates</b>	<b>Off Site</b>	<b>Significance</b>
1886	The Site surrounds are open land, possibly for agricultural use and moorland.	The use of the surrounding site for agricultural purposes gives rise to the possibility for <b>HERBICIDES</b> and <b>PESTICIDES</b> to have been used and could potentially migrate to site through overland flow.
1951-1955	The area surrounding the Site has been cleared for use as <b>RAF SWINDERBY</b> .	<b>MADE GROUND</b> deposits are likely to result from the development.
1965	Runways as part of <b>RAF SWINDERBY</b> are shown to the north, south and west of the Site. <b>BUILDINGS AND INFRASTRUCTURE</b> assumed to be associated with <b>RAF SWINDERBY</b> have been constructed adjacent to the east of the Site.	<b>RAF SWINDERBY:</b> contaminants may include: <b>ASBESTOS, FUEL STORAGE, HEAVY METALS, HYDRAULIC OIL, PAINTS, LANDFILL</b> and <b>HAZARDOUS GROUND GASES</b> from any <b>LANDFILLING</b> activities.
2012	A <b>residential development</b> labelled Witham St. Hughs has been constructed to the east of the Site. <b>RUNWAYS</b> to the north, south and west of the site are no longer shown.	The <b>residential development</b> is considered to be a potential receptor to any on-Site derived contamination which has the potential to migrate off-Site.

**SOURCES IN BOLD AND CAPS      Receptors in bold and italics**

**Aerial Photographs**

3.2 Aerial photography presented in the GroundSure® Report dated 18<sup>th</sup> September 2007 shows the Site in its former layout prior to the large scale demolition of former buildings.

**Operational / Company Records**

3.3 No operational or company records were reviewed as part of this report.

**Previous Investigation Reports**

3.4 A previous investigation report: 'Desk Study for Military Related Contamination at RAF Swinderby, Lincolnshire' by BAE Systems Property & Environmental Services for the BWB Partnership, dated March 2002, reference A186-00-R2-1 has been reviewed as part of this report. The report indicates the following:

3.5 The former airfield (including the subject Site and surrounds) was assessed for potential contamination due to previous use as RAF Swinderby during World War II (WWII), comprising a bomber station and training base. During the bombing of Swinderby in October 1940, a number of high explosive and incendiary bombs landed on the airfield (the subject site and surrounds).

3.6 Pertinent former activities and features at RAF Swinderby that may have affected the subject site included:

- The storage and use of ammunition and pyrotechnics;
- The presence of a former gas chamber and possible storage of chemical weapons (e.g. mustard gas and phosgene);
- Two decontamination chambers, a sewage disposal works, a destructor house for decommissioning of munitions;
- Storage and maintenance of aircraft,
- Above and below ground bulk fuel storage areas,
- Fire crew training undertaken by setting kerosene enabled fires;
- Disposal of domestic and site derived wastes (e.g. demolition waste, scrap metal (it should be noted that some materials may have contained radiological materials e.g. illumines paint) and drums of waste chemicals) through dumping and burning; and
- Disposal of munitions through burying, burning and detonation, paint shops, aircraft crash sites, general storage and the installation of anti-aircraft emplacements.

3.7 The report concludes that there is a low to moderate risk of unexploded ordnance (UXO) and military related contamination on the wider site. Future works should cease immediately if any such device is encountered and the appropriate authorities informed.

3.8 The report recommends that it may be prudent to further characterise areas of the wider airfield beyond the Site at moderate risk of UXO via a geophysical survey or watching brief by an explosives engineer and UXO induction prior to any on site works.

3.9 On the basis of the available information, BWB considers that the risks of UXO and military related contamination on-Site to be low.

### ***Other Reports***

3.10 BWB acknowledges that a report was undertaken by WSP for an area of land including and greater than the Network 46 site. The contents of this report have not been made available for review and will not be referenced further within this assessment. However, it is known from the information provided that an area of hydrocarbon contamination within groundwater was previously identified in the south-eastern corner.

### **Permits Consents and Authorisations**

3.11 A full listing of permits, consents and authorisations including discharge consents, pollution incidences and other environmental information included in the GroundSure<sup>®</sup> Report, is presented in **Appendix II**.

3.12 The following pertinent features have been identified, which have the potential to have a detrimental impact on the Site.

3.13 A former 'List 2 Dangerous Substance Inventory Site' is located approximately 275m to the east of the Site and was licensed to VIP Bin Cleaning for pH. No further details were provided.

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- 3.14 A historical NIHHS site is located approximately 330m to the northeast of the Site, previously licensed to British Gas for use of light petroleum gas. No further details were provided.
- 3.15 The following potentially contaminative industrial sites and features have been identified on Site and within 250m of the study Site:

**Table 3 Potentially Contaminative Industrial Sites and Features**

Distance (m)	Direction	Feature
On site	On Site - northeast	Tanks
On site	On Site - centre	Electricity sub station
On site	On Site - northeast	Electricity sub station
On site	On Site - northeast	Electricity sub station
On site	On Site - east	Electricity sub station
67	West	Swinderby Airfield – disused airports and landing strips
91	Northeast	Turbine Efficiency Ltd - electrical production and manipulation equipment

### Landfilling and Waste Management

- 3.16 No EA, BGS and Local Authority recorded landfills or waste treatment, transfer or disposal sites are listed within 1km of the subject Site.

### Geology, Hydrogeology and Hydrology

**Table 4 Published Ground Conditions**

Geology	<p>Made Ground has not been mapped on site however due to the <b>site's</b> history Made Ground of varying thicknesses should be expected.</p> <p>Superficial deposits comprise the Balderton Sand and Gravel Member that can be described as orange-brown sandy gravel dominated by rounded pebbles of quartz/quartzite with flint and rarer Triassic sandstone.</p> <p>A BGS Borehole record (Ref: SK86SE15) located approximately 325 m west of the Site within the former RAF Airfield indicates the depth to bedrock to be approximately 8.80 m bgl.</p> <p>The permeability of the bedrock ranges from high to very high though intergranular flow.</p> <p>Bedrock deposits comprise the Scunthorpe Mudstone Formation and Charmouth Mudstone Formation (Mudstone).</p> <p>No SPZ on site or within 500m of the site.</p>
Hydrogeology	<p>Information published by the Environment Agency (EA) indicates that Balderton Sand and Gravel Member superficial deposits underlying the site are classified as a Secondary A Aquifer. <b>These are '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'.</b></p> <p>The Scunthorpe and Charmouth Mudstone bedrock formations are</p>

	<p>classed as 'unproductive strata' with low permeability that have negligible significance for water supply or river base flow.</p> <p>One current groundwater abstraction license is registered within 1km of the subject site. The abstraction is licensed to Thurlby gravel Pit located approximately 630m to the south for mineral washing with a maximum daily volume of 2,046m<sup>3</sup>.</p>
Surface Waters	<p>Sixteen Detailed River Network entries are present within 500m, comprising culverts, secondary and tertiary rivers. Eleven surface water features are present within 250m, the closest are located approximately 70m to the northeast and 85m to the east. No surface water abstractions are listed within 1km of the Site.</p> <p>According to the EA, the Site is not at risk of flooding from rivers or the sea. A Zone 2 floodplain (between 0.1% and 1% probability of flooding from rivers and between 0.1% and 0.5% from the sea) is located approximately 200m to the south of the Site. No flood defences are located within 500m.</p>
Mining and Mineral Extraction	<p>Information provided within the GroundSure® report indicates that the site is not located within a coal mining referral area or an area at risk of coal mining or brine abstraction.</p>
Ground Stability and Constraints	<p>The following ground related stability and constraints have been identified for the area. These relate to: shrink/swell of clays, landslides, ground dissolutions of soluble rocks, compressible deposits, collapsible deposits and running sands. All have been classed as negligible to very low.</p> <p>The superficial deposits may support traditional shallow strip/pad foundations for low loading buildings, however, foundations may require locally deepening depending on the thicknesses of Made Ground at the Site.</p> <p>For more highly loaded buildings it is likely that foundations will need to be advanced to depth within more competent bedrock geology which is anticipated to present at a depth of &lt;10.00 m bgl.</p>
Ground Gas & Radon	<p>The site is not located within a Radon affected area as less than 1% of houses lie above the action level.</p>

## Ground Related Constraints & Opportunities

**Table 5 Ground Related Constraints & Opportunities**

Potential Constraint	Explanation	Potential Mitigation Options
Made Ground	No Made Ground has been mapped on Site, however given the former development of the Site, varying thicknesses of Made Ground should be expected.	The Made Ground on Site may include a variety of old building materials including asbestos and it may be beneficial to remove material from Site.
Obstructions	Existing foundations may lie beneath the surface.	These will need to be located and possibly excavated and processed prior to redevelopment.

Potential Constraint	Explanation	Potential Mitigation Options
Trees	Mature trees are present on-Site. A masterplan has not been provided to show the end use of the trees, so it is assumed that they will need to be removed.	Prior to redevelopment, all vegetation and its root systems will require removal from Site. As sand and gravel has been mapped on site; compressibility and future ground settlements should not be significant.
Coal Mining	No coal mining has been recorded on site.	N/A
Mineral Extraction	No mineral extraction has been recorded on site.	N/A
Ground Dissolution Hazards	No significant ground dissolution hazards have been identified. Deposits of Made Ground from previous construction (e.g. basements) may cause differential settlement in localised areas.	An intrusive investigation will be required to assess ground conditions.
UXO	A UXO Report has previously been undertaken for the Site and the wider RAF airfield.	<p>The report concludes that there is a low to moderate risk of unexploded ordnance (UXO) and military related contamination on the wider site.</p> <p>The report recommends that it may be prudent to further characterise areas of the wider former RAF facility at moderate risk of UXO via a geophysical survey or watching brief by an explosives engineer and UXO induction prior to any on site works.</p> <p>On the basis of the available information BWB considered the Site un consideration to represent a low risk given the former development at the Site.</p>

## 4 PRELIMINARY ENVIRONMENTAL RISK ASSESSMENT

### Introduction

- 4.1 The risk posed by any contaminants in soil or groundwater will depend on the nature of the hazard, the probability of exposure, the pathway by which exposure occurs, and the likely effects on the receptors. A contaminant is defined as a substance that has the potential to cause harm, while a risk is considered to exist if such a substance is present in sufficient concentration to cause harm and a pathway exists for a receptor to be exposed to the substance.
- 4.2 The following sections discuss all the identified potential on and off site sources, pathways and receptors in the context of the proposed development and plausible pollutant linkages which may represent a risk to identified receptors such as human health and/or controlled waters from the data gained from the desk study. At this stage the assessment is qualitative and aimed to determine all pollutant linkages, irrespective of significance or allowing for uncertainty.
- 4.3 Three impact potentials exist for any given site, these are:
- The Site impacting upon itself;
  - The Site impacting on its surroundings; and
  - The Surroundings impacting on the site.
- 4.4 All three impacts need to be considered in a risk assessment.
- 4.5 A Source, Pathway, Receptor analysis has been undertaken for the site based on the information provided in the preceding sections. This is presented as **Table 5**.
- 4.6 **Sources (S);** These are potential or known sources of contamination that may relate to a former land use or present site feature or process (e.g. fuel storage tanks).
- 4.7 **Pathways (P);** A pathway is defined as a mechanism or route by which a contaminant comes into contact with, or otherwise affects a receptor. Pathways by which the identified receptors may be impacted upon in the context of the proposed development.
- 4.8 **Receptors (R);** Receptors are defined as people, living organisms, ecological systems, controlled waters, atmosphere, structures and utilities that could be adversely affected by contaminant(s).

**Table 6 Conceptual Site Model**

Source	Pathway	Receptor	Con	Prob	Risk	Mitigation/Investigation
<p><b>S1:</b> On-site – RAF Swinderby: fuels, hydraulic fluid, munitions, sewage disposal, over ground and underground fuel storage, ash waste from fires, paints, anti-freeze, heavy metals, Radium 226, pesticides and herbicides and hazardous ground gases.</p> <p>(It is also considered likely that hydrocarbon contamination is present in the southeast of the Site as indicated by the figure produced by WSP as part of their ground investigations)</p>	<p><b>P1:</b> Ingestion, skin contact and inhalation</p>	<p><b>R1:</b> Future Site users, construction and maintenance workers</p>	Md	Lw	M/L	<p>A ground investigation should be conducted to characterise potential contaminants within the Site.</p>
	<p><b>P2:</b> Migration into buildings through foundation cracks, service entry points</p>	<p><b>R2:</b> Future Site users, workers.</p>	Sv	Lw	M	<p>This should include suitable chemical analytical testing for the associated contaminants. The ground investigation should also seek to characterise the ground gas regime.</p>
	<p><b>P3:</b> Direct Contact</p>	<p><b>R3:</b> Foundation and utility pipes</p>	Mi	Lw	L	<p>Construction workers should adopt appropriate PPE and hygiene precautions.</p> <p>Should localised or low concentrations of contamination be identified then it is expected that conventional protection measures such as a soil cover system or/or basic gas protection measures would mitigate significant risk.</p>
	<p><b>P4:</b> Leaching and permeation and subsequent groundwater flow</p>	<p><b>R4:</b> Secondary A Aquifer</p>	Md	Li	M	<p>A ground investigation should be conducted to characterise potential contaminants within the soils and groundwater and assess risks to Controlled Waters receptors.</p> <p>It is noted that information contained within third party information pertaining to the Site indicates that groundwater in the southeast of the Site is impacted with hydrocarbons.</p>
	<p><b>P5:</b> Migration of contamination via surface water off-Site</p>	<p><b>R5:</b> Surface Waters</p>	Md	UI	L	<p>Given the distance to the surface water courses and the nature of the surrounding land, it is unlikely that Site derived contaminants will have migrated to potential surface water receptors.</p>
<p><b>S2:</b> Off-site – Electrical Sub-Stations: PCB or oil contamination</p>	<p><b>P1:</b> Ingestion, skin contact and inhalation</p>	<p><b>R1:</b> Construction and Maintenance Workers</p>	Md	Li	M/L	<p>A ground investigation should be conducted to characterise potential contaminants within the</p>

	<b>P4:</b> Leaching and permeation and subsequent groundwater flow	<b>R4:</b> Secondary A Aquifer	Mi	UI	VL	Site. Mitigation measures may involve localised removal of material.
<b>S4:</b> Off-Site – The wider RAF base, Swinderby: fuels, hydraulic fluid, munitions, sewage disposal, over ground and underground fuel storage, ash waste from fires, paints, anti-freeze, heavy metals, Radium 226, pesticides and herbicides and hazardous ground gases.	<b>P6:</b> Migration of contaminated via groundwater on-Site	<b>R2:</b> Future Site users.	Md	Lw	M/L	A ground investigation should be conducted to characterise potential contaminants within the Site.  This should include suitable chemical analytical testing for the associated contaminants. The ground investigation should also seek to characterise the ground gas regime.  Construction workers should adopt appropriate PPE and hygiene precautions.  Should localised or low concentrations of contamination be identified then it is expected that conventional protection measures such as a soil cover system or/or basic gas protection measures would mitigate significant risk.
<p style="text-align: center;"> <span style="background-color: #800000; color: white; padding: 2px;">VH = Very High</span>,                  <span style="background-color: #FF0000; color: white; padding: 2px;">H = High</span>,                  <span style="background-color: #FF8C00; color: white; padding: 2px;">M = Moderate</span>,                  <span style="background-color: #FFD700; color: black; padding: 2px;">M/L = Moderate/Low</span>,                  <span style="background-color: #008000; color: white; padding: 2px;">L = Low</span>,                  <span style="background-color: #90EE90; color: black; padding: 2px;">VL = Very Low</span> </p> <p style="text-align: center;">KEY: Sv = Severe, Md = Medium, Mi = Mild, Mr = Minor Hi = High, Li = Likely, Lw = Low Likelihood, UI = Unlikely</p>						

### Pollutant Linkage Assessment Summary

When the Site is assessed in the context of the ground conditions and historical activities that have occurred on and in close proximity to the Site, the proposed development is considered to pose a **LOW TO MEDIUM** risk to Human Health and Controlled Waters.

---

## 5 CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

#### Environmental

- 5.1 The history of site and surrounding areas shows that significant contaminants may potentially have been generated from commercial and agricultural activities that took place. The most pertinent historical land uses are considered to be the former RAF Swinderby Airfield and Skelmire and Firholt Farm.
- 5.2 Further to the above, information contained within the figure provided from a third party (WSP) ground investigation report indicates that there are areas of hydrocarbon impacted groundwater, principally within the south-eastern area of the Site. There is the potential for any contamination to migrate off-Site to the south and impact upon the wider groundwater environment.
- 5.3 Surrounding land uses are considered to have a moderate to low potential to impact upon the Site with regards to soil and/or groundwater contamination.
- 5.4 When the Site is assessed in the context of these activities, the proposed development is considered to pose a **LOW TO MEDIUM** risk to Human Health and Controlled Waters.

#### Geotechnical

- 5.5 Made Ground has not been mapped on Site however due to the **site's history** Made Ground of varying thicknesses should be expected.
- 5.6 The Site is underlain with superficial deposits of Balderton Sand and Gravel Member and bedrock deposits of the Scunthorpe Mudstone Formation and Charmouth Mudstone Formation.
- 5.7 The natural deposits encountered may be suitable to support low loading structures, however, more highly loaded structures may require foundations to be deepened into the competent bedrock beneath the Site which is anticipated to be present at <10.00 m bgl.

### Recommendations

- 5.8 It is recommended that an intrusive ground investigation be undertaken to assess the identified pollutant linkages and assess the ground conditions for foundation design.

---

## 6 REFERENCES

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- 
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  21. NHBC Guidance for the Safe Development of Housing on Land Affected by Contamination, R&D Publication 66: 2008

## **FIGURES**

**FIGURE 2  
SITE LAYOUT PLAN**



**NOTES**

- 1. DO NOT SCALE THIS DRAWING. ALL DIMENSIONS MUST BE CHECKED/ VERIFIED ON SITE. IF IN DOUBT ASK.
- 2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS.
- 3. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL LEVELS IN METERS UNLESS NOTED OTHERWISE.
- 4. ANY DISCREPANCIES NOTED ON SITE ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY.

**LEGEND**



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Client:  
**DTZ**

Project Title:  
**Network 46 Swinderby**

Drawing Title:  
**Figure 2 - Site Layout Plan**

Scale:	Date:	Drawn:	Authorised:
Not to Scale	01/08/14	RPD	MOH

Drawing Status:  
**FINAL**

Drawing No:	Revision:
<b>NTW22533/EN/001</b>	<b>R1</b>

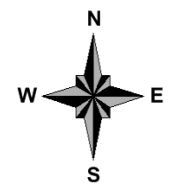
## **APPENDICES**

**APPENDIX I**  
**HISTORICAL ORDNANCE SURVEY MAPS**

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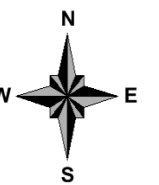
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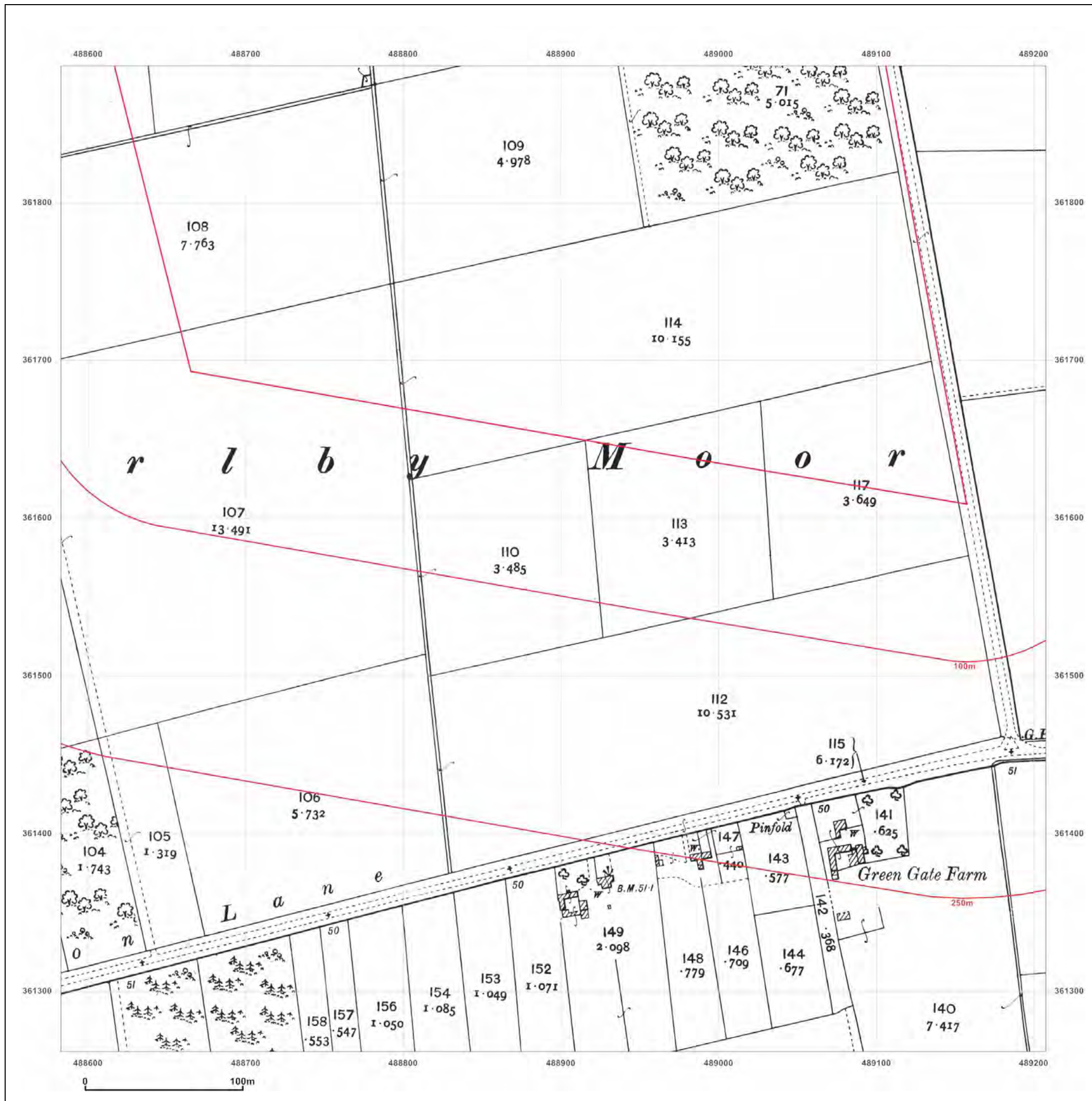


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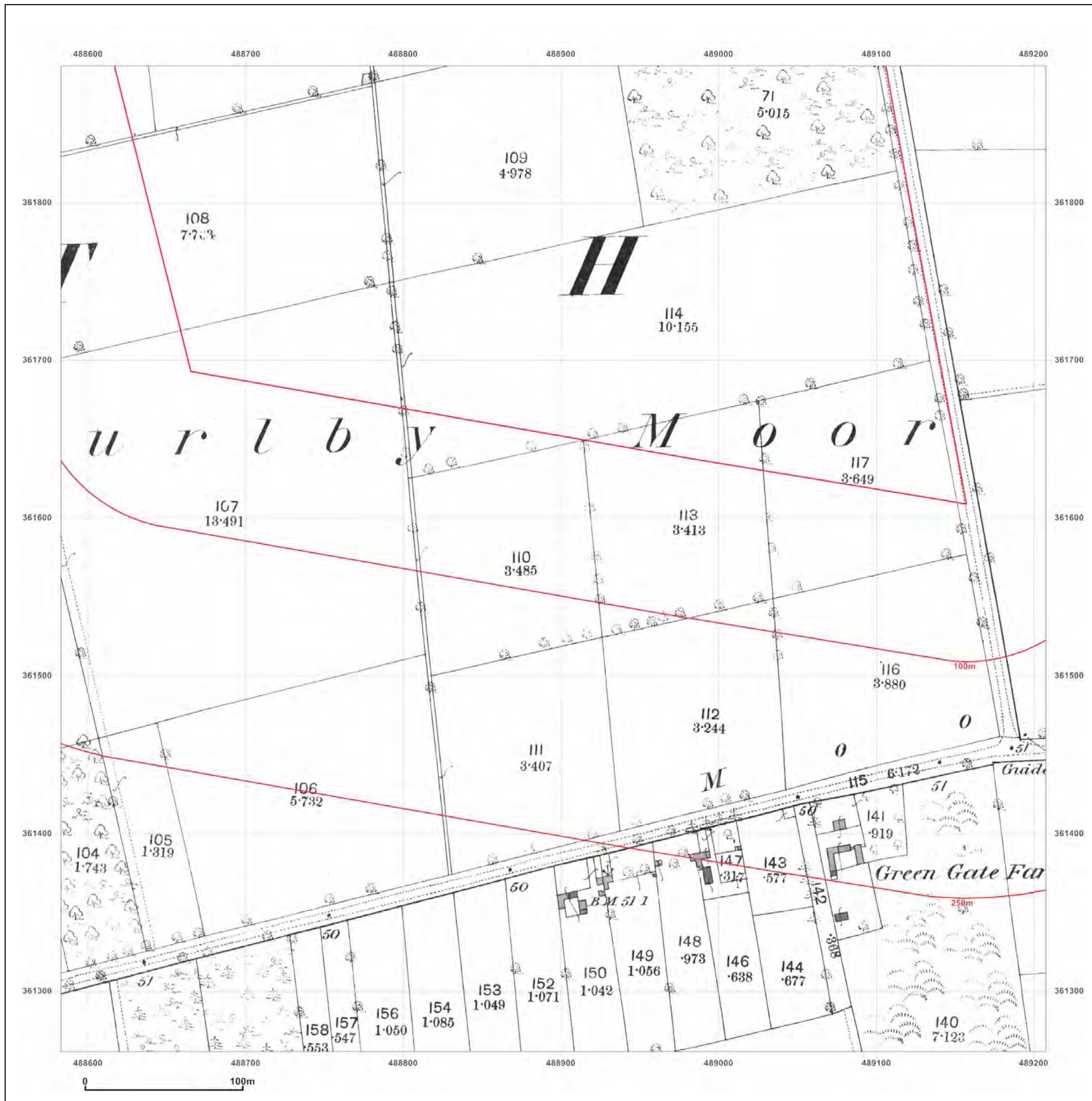


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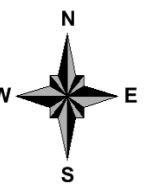
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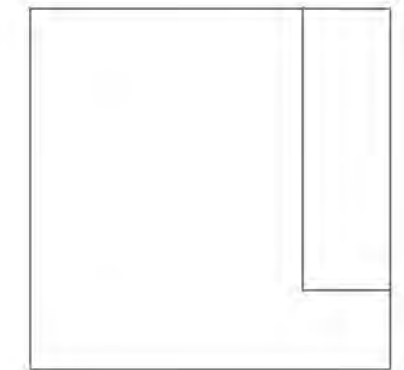
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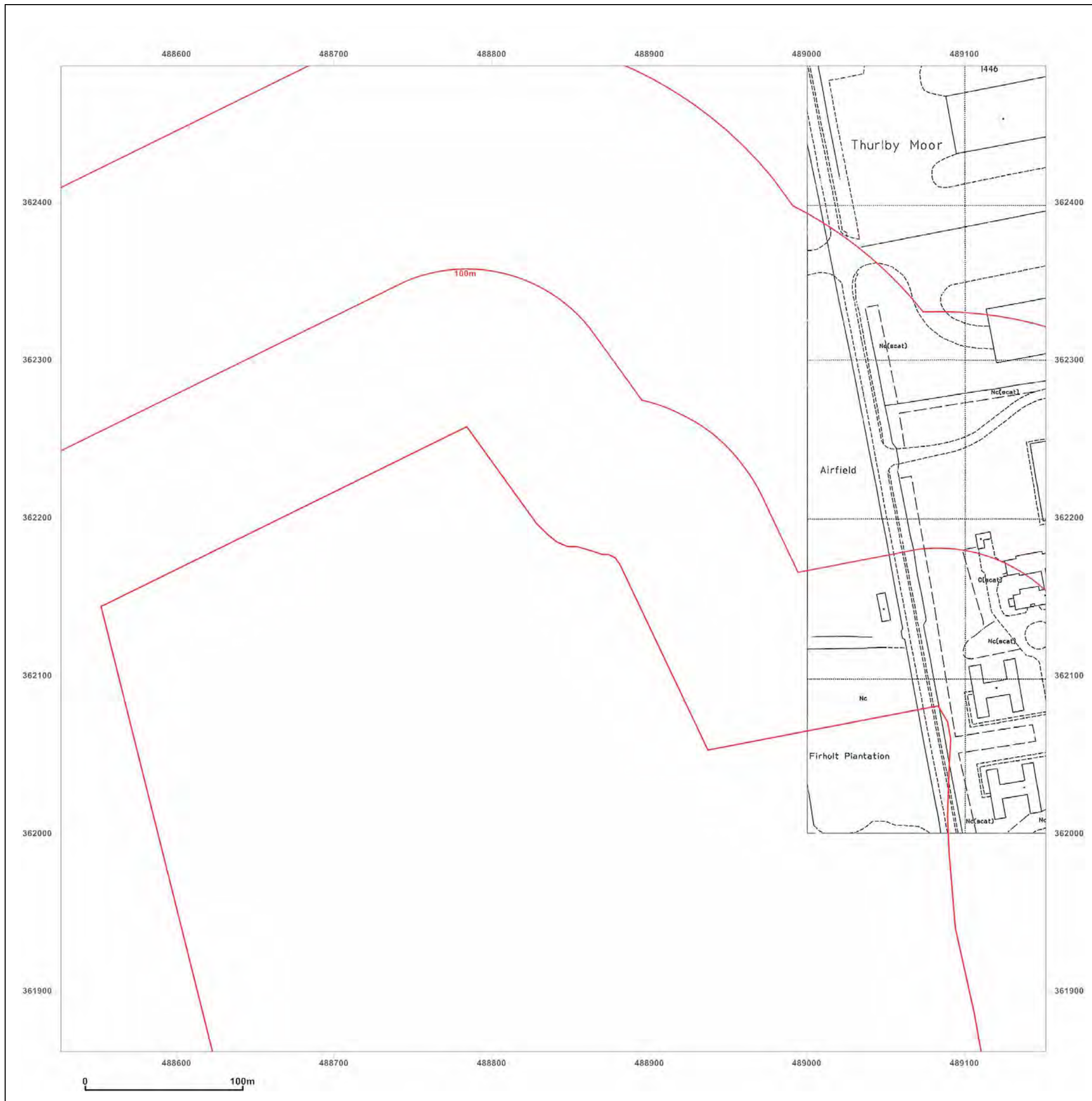


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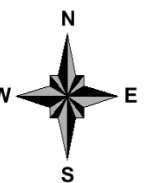
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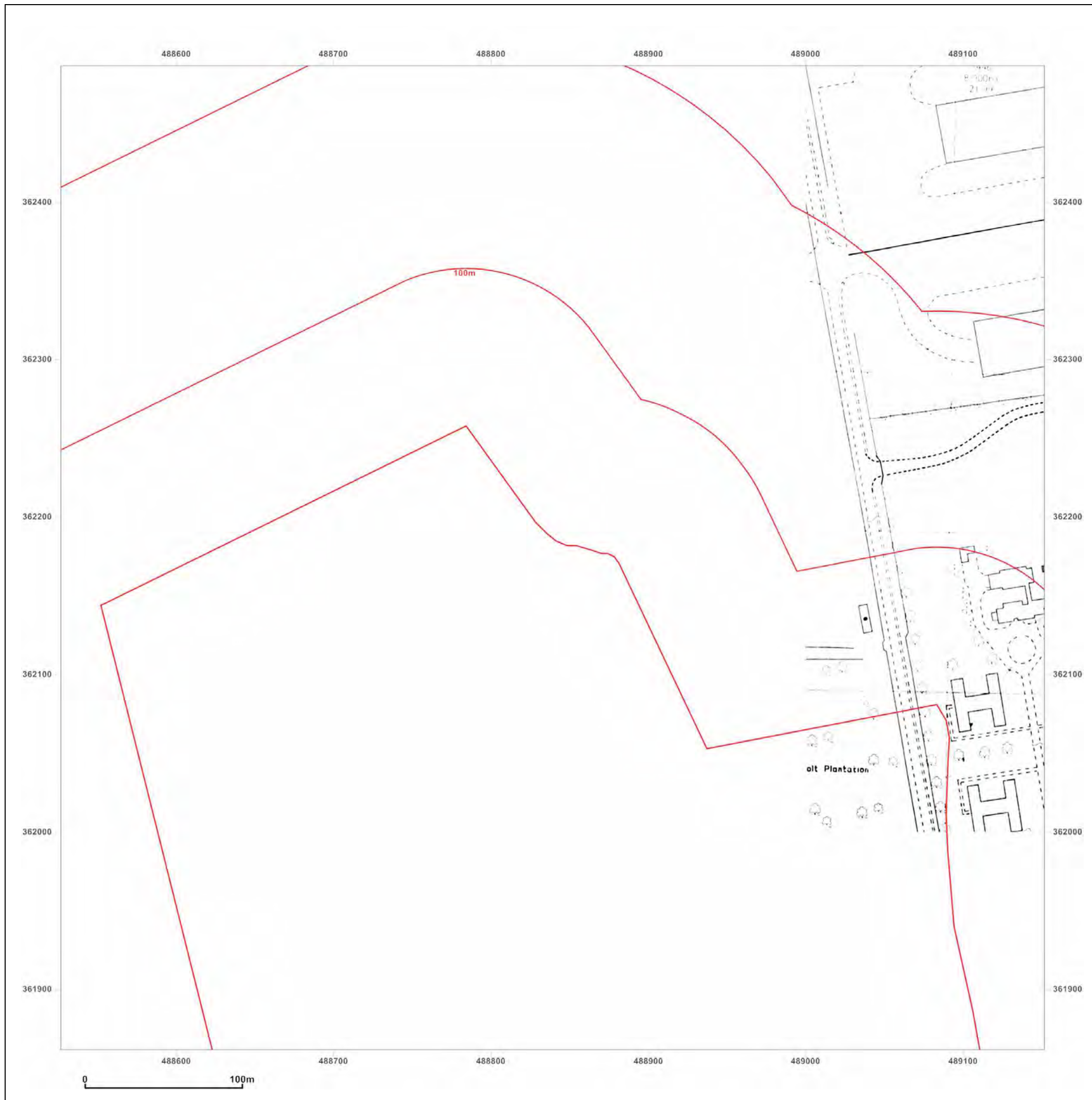
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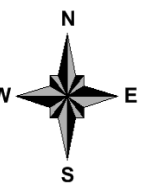
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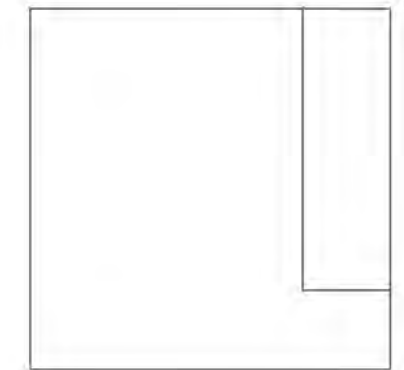
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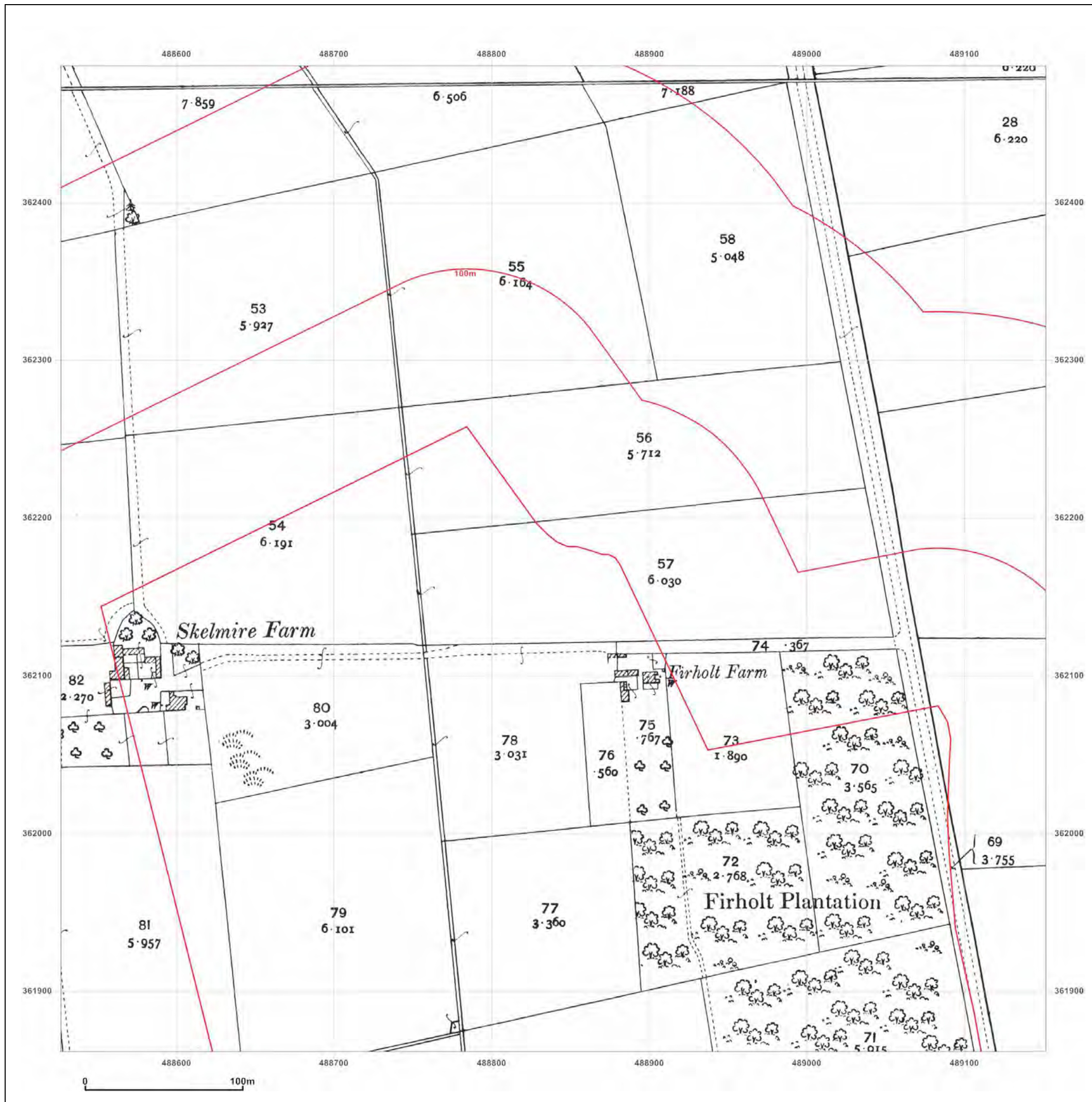


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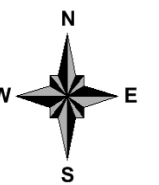
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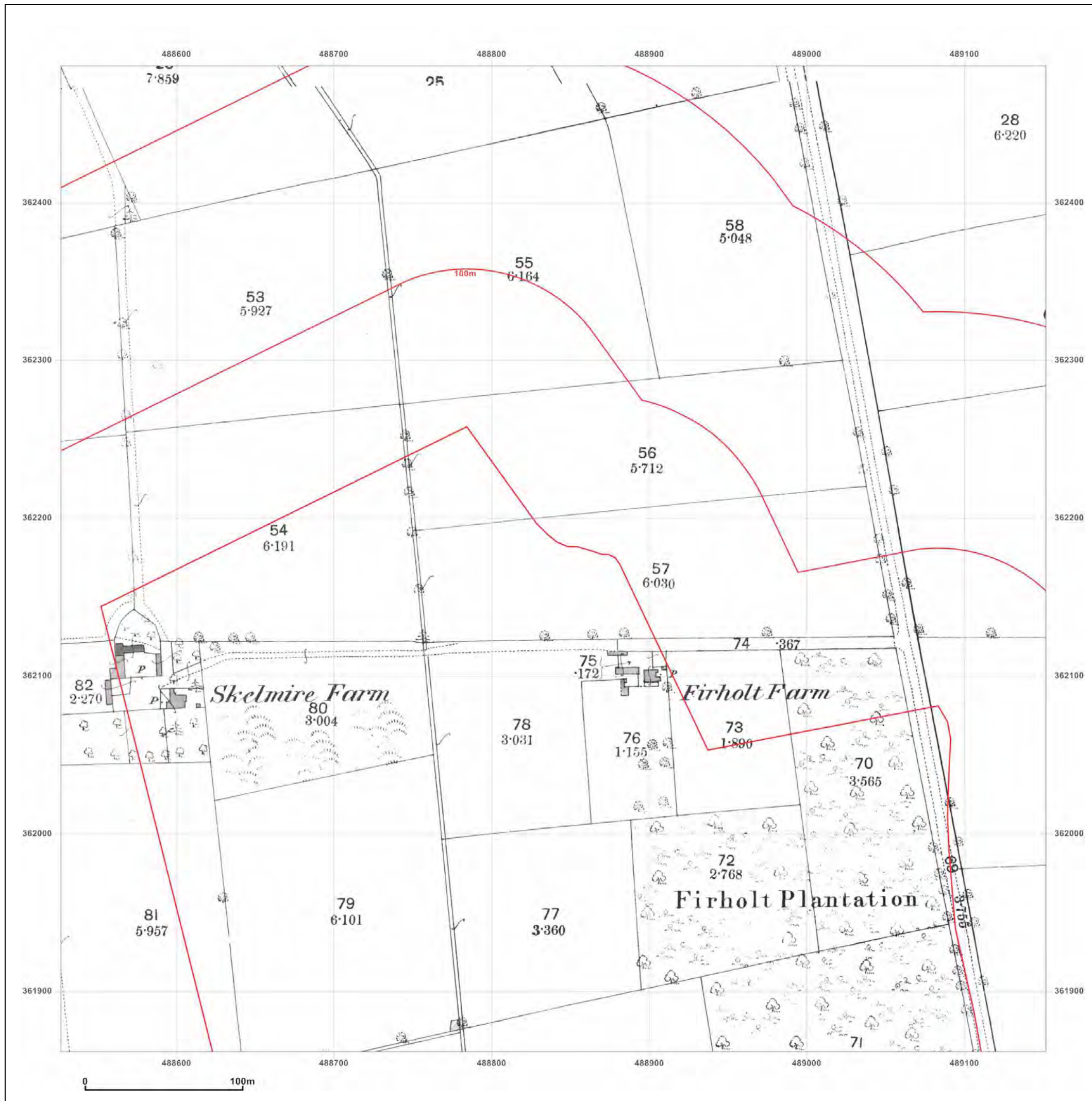
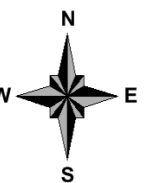
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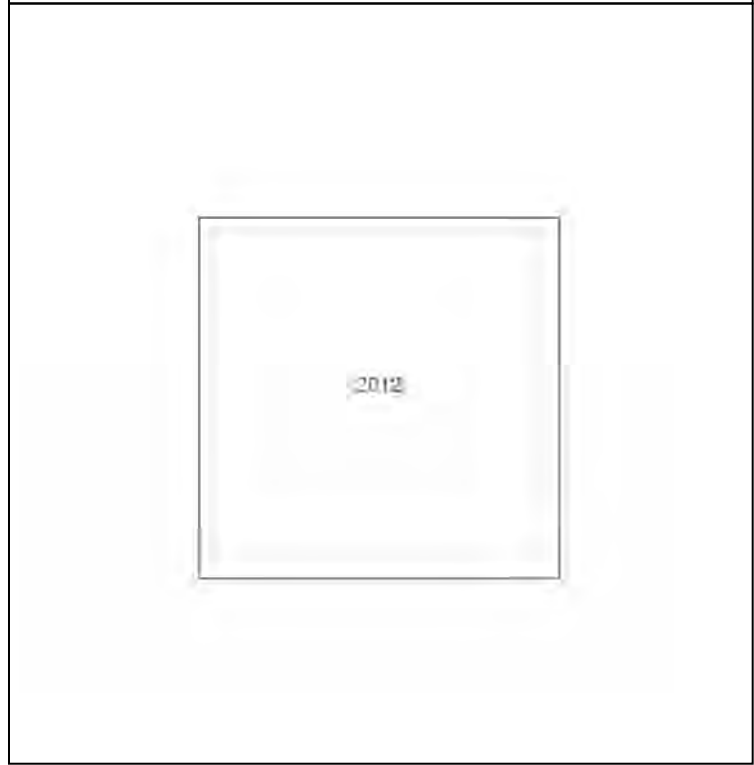
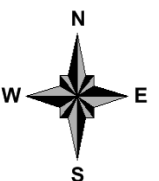
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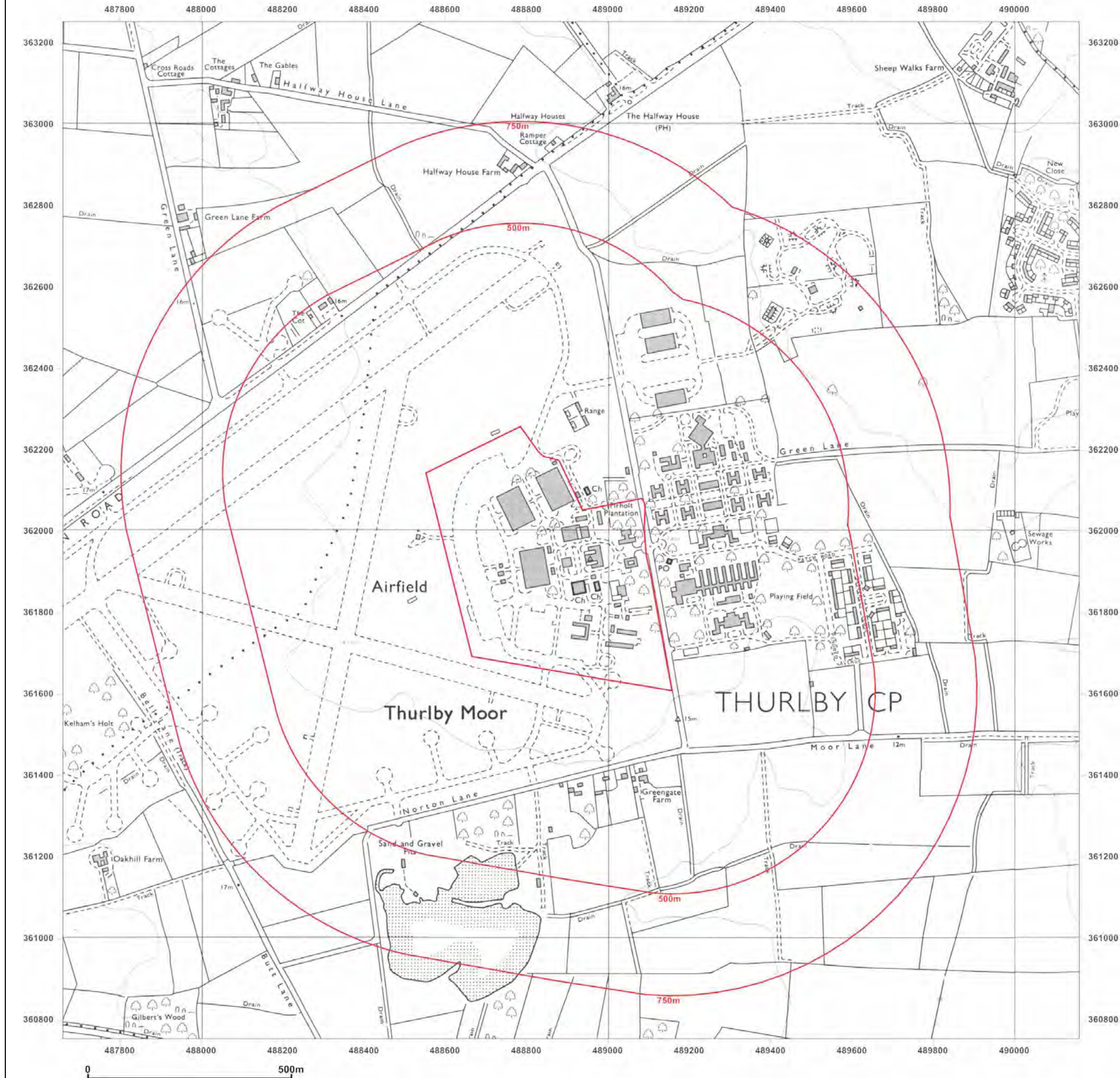
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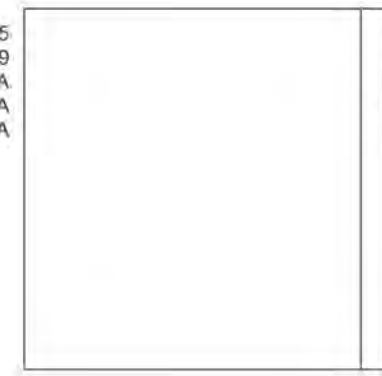
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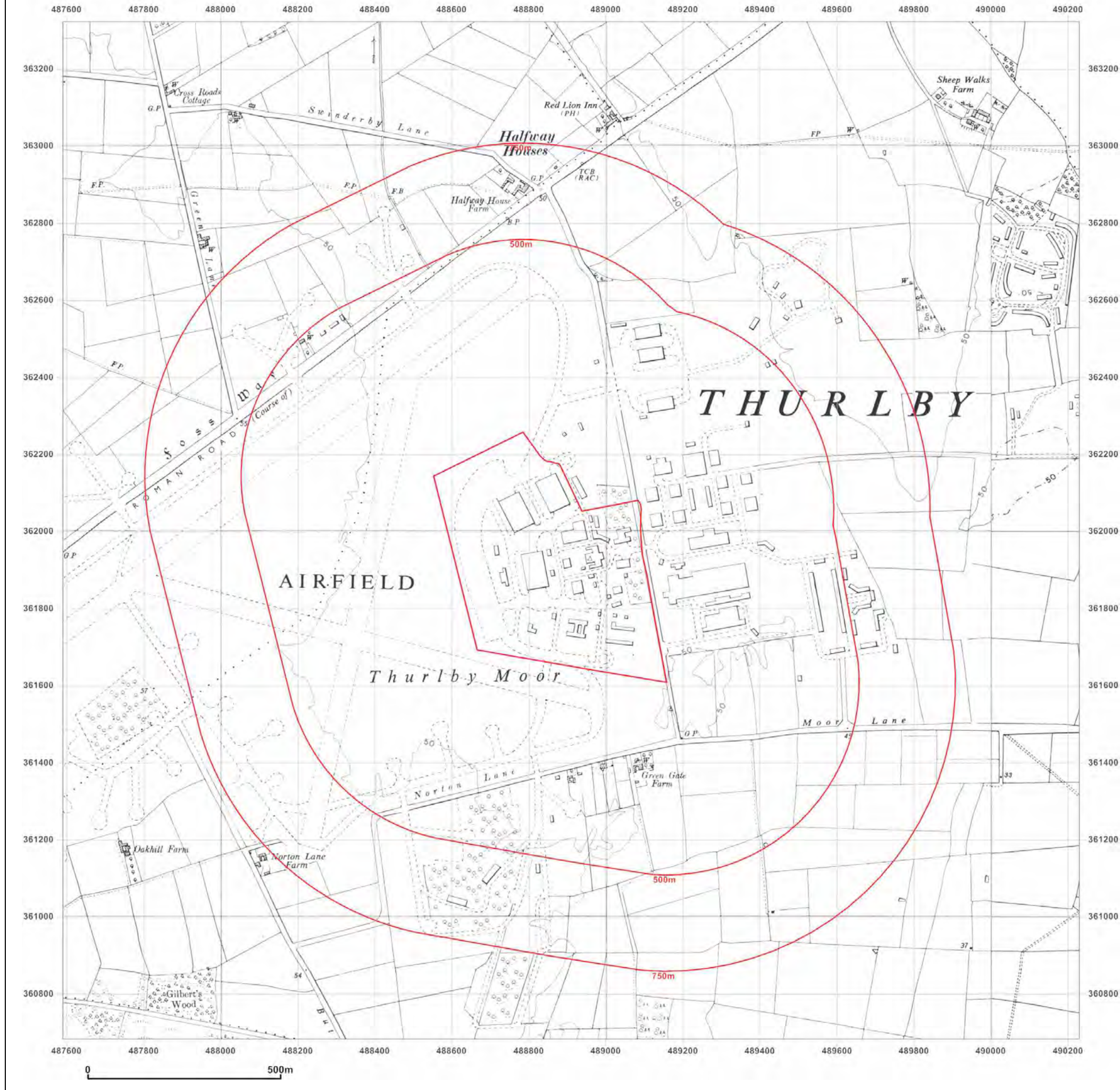


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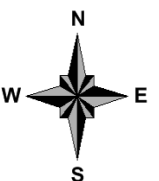
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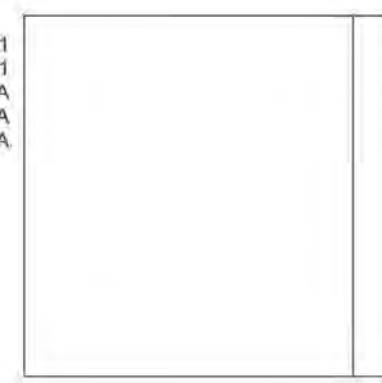
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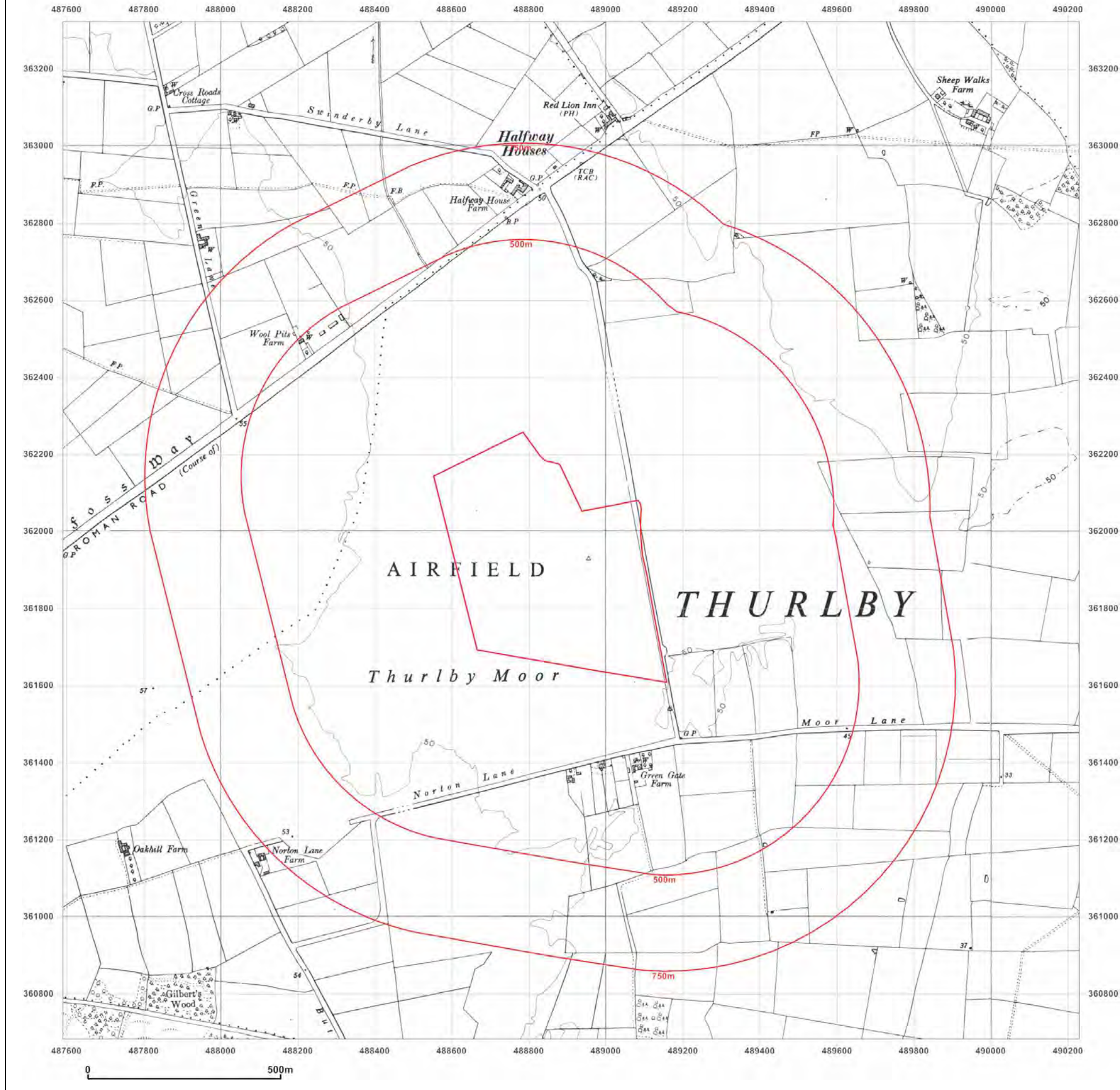


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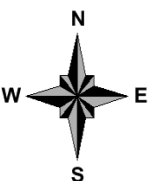
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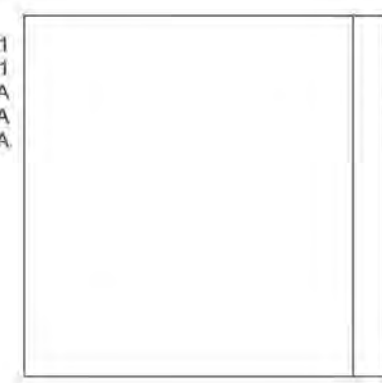
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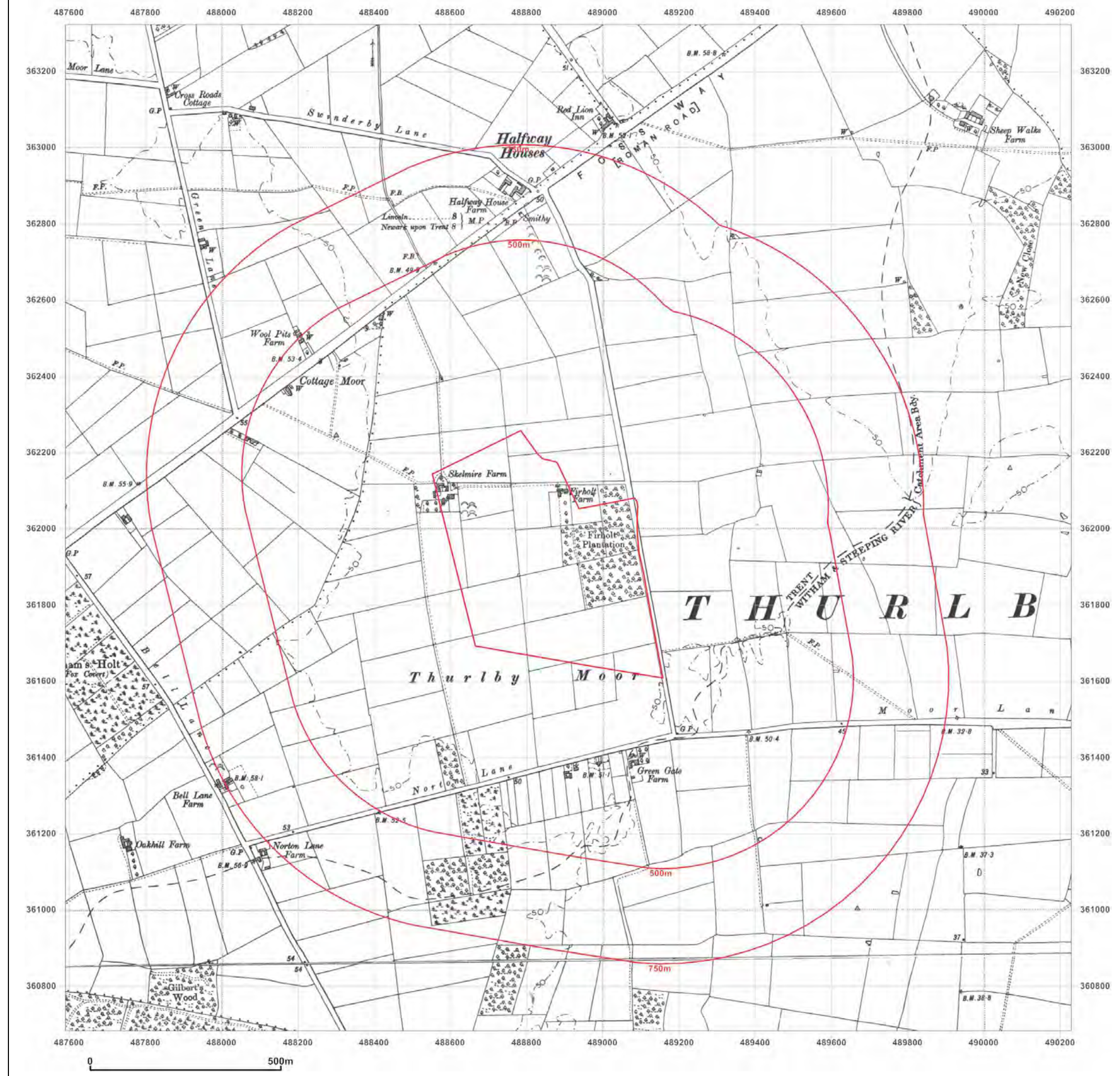


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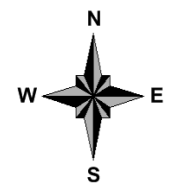
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**Site Details:**  
 Network 46 Swinderby, LN6 9TW

**Client Ref:** ENV131775~NTW2253  
**Report Ref:** HMD-214-1529294  
**Grid Ref:** 488909, 362002

**Map Name:** County Series  
**Map date:** 1948  
**Scale:** 1:10,560  
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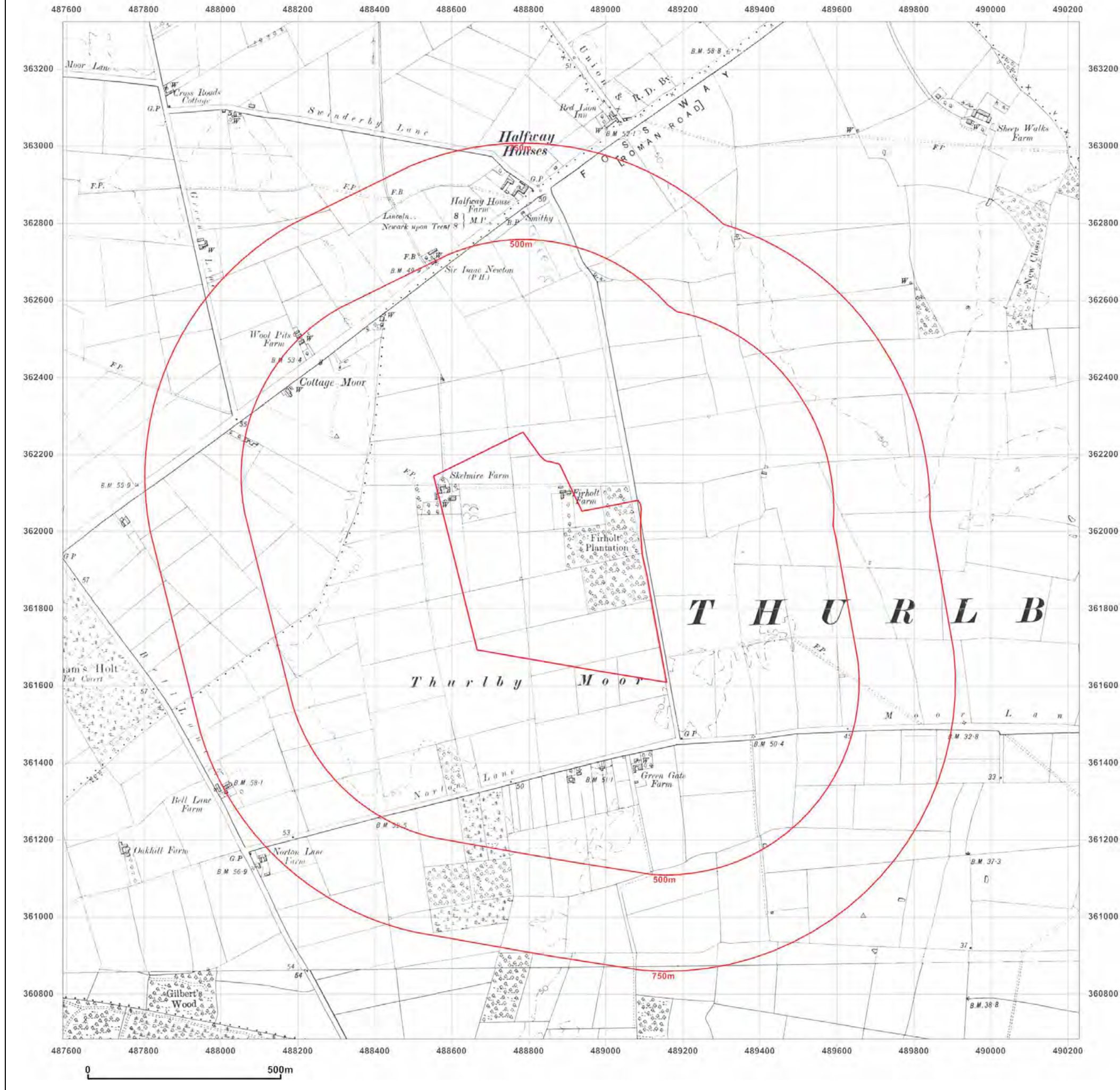


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**Site Details:**

Network 46 Swinderby, LN6 9TW

**Client Ref:** ENV131775~NTW2253  
**Report Ref:** HMD-214-1529294  
**Grid Ref:** 488909, 362002

**Map Name:** County Series

**Map date:** 1904

**Scale:** 1:10,560

**Printed at:** 1:10,560



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Surveyed 1886  
 Revised 1904  
 Edition N/A  
 Copyright N/A  
 Levelled N/A

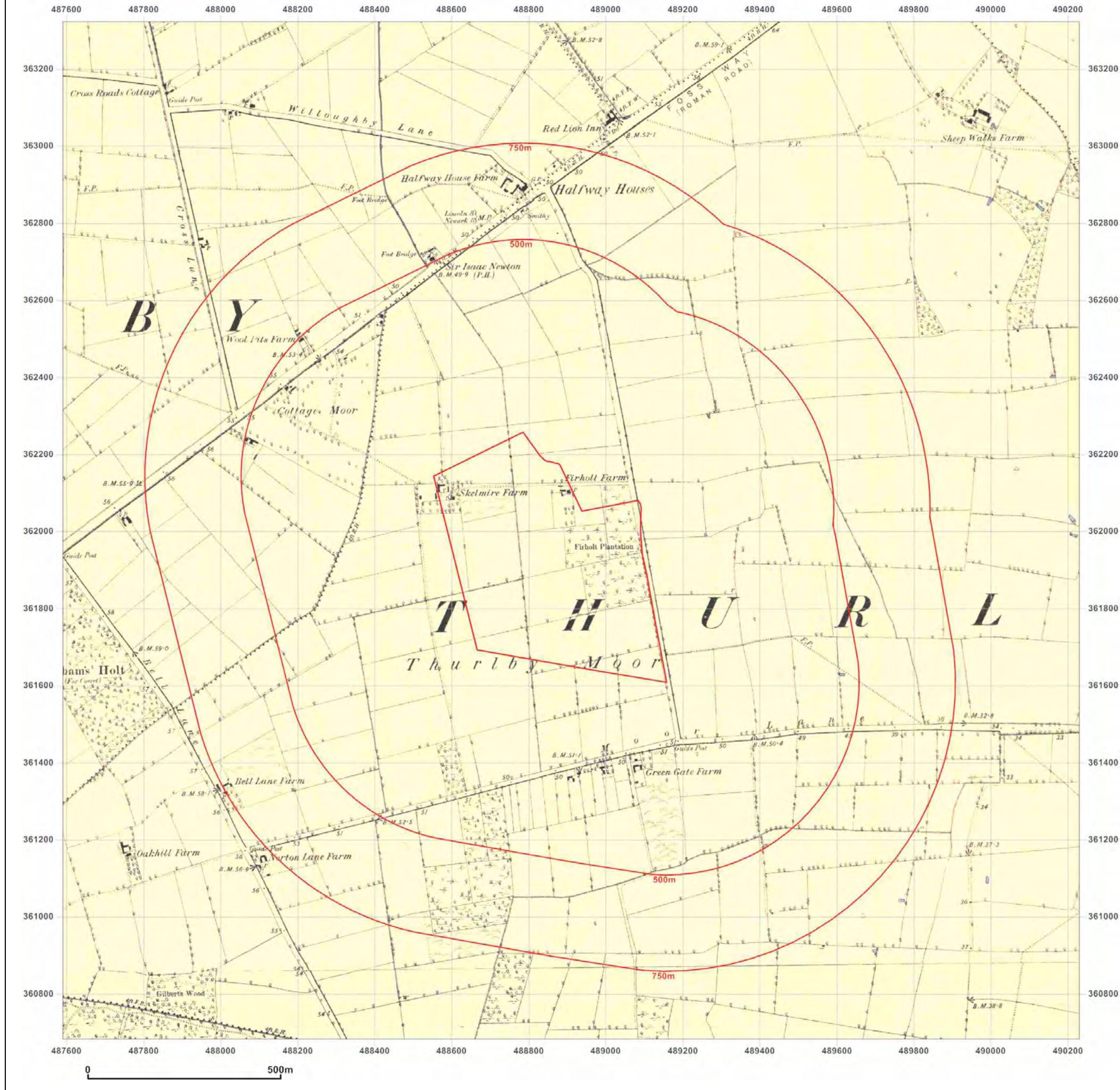


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 E: [info@groundsure.com](mailto:info@groundsure.com)  
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**Site Details:**

Network 46 Swinderby, LN6 9TW

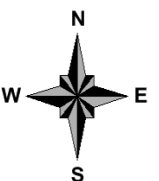
**Client Ref:** ENV131775~NTW2253  
**Report Ref:** HMD-214-1529294  
**Grid Ref:** 488909, 362002

**Map Name:** County Series

**Map date:** 1886

**Scale:** 1:10,560

**Printed at:** 1:10,560



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**APPENDIX II  
GROUNDSURE REPORT**



BWB Consulting Limited

5th Floor, Waterfront House, Station Street,  
Nottingham, NG2 3DQ

GroundSure  
Reference:

HMD-214-1529295

Your Reference:

ENV131775~NTW2253

Report Date

26 Jun 2014

Report Delivery  
Method:

Email - pdf

## GroundSure EnviroInsight

Address: Network 46 Swinderby, LN6 9TW

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,

A handwritten signature in black ink, appearing to be 'D. O.', written in a cursive style.

Managing Director  
Groundsure Limited

Enc.  
GroundSure EnviroInsight



# GroundSure Envirolnsight

Address: Network 46 Swinderby, LN6 9TW  
Date: 26 Jun 2014  
Reference: HMD-214-1529295  
Client: BWB Consulting Limited

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 18-Sep-2007  
Grid Reference: 488909,362002  
Site Size: 25.00ha

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# 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.

Section 1: Environmental Permits, Incidents and Registers		On-site	0-50m	51-250	251-500		
1.1 Industrial Sites Holding Environmental Permits and/or Authorisations							
1.1.1	Records of historic IPC Authorisations	0	0	0	0		
1.1.2	Records of Part A(1) and IPPC Authorised Activities	0	0	0	0		
1.1.3	Records of Water Industry Referrals (potentially harmful discharges to the public sewer)	0	0	0	0		
1.1.4	Records of Red List Discharge Consents (potentially harmful discharges to controlled waters)	0	0	0	0		
1.1.5	Records of List 1 Dangerous Substances Inventory sites	0	0	0	0		
1.1.6	Records of List 2 Dangerous Substances Inventory sites	0	0	0	1		
1.1.7	Records of Part A(2) and Part B Activities and Enforcements	0	0	0	0		
1.1.8	Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0		
1.1.9	Records of Licensed Discharge Consents	0	0	0	0		
1.1.10	Records of Planning Hazardous Substance Consents and Enforcements	0	0	0	0		
1.2	Records of COMAH and NIHHS sites	0	0	0	1		
1.3 Environment Agency Recorded Pollution Incidents							
1.3.1	National Incidents Recording System, List 2	0	0	0	0		
1.3.2	National Incidents Recording System, List 1	0	0	0	0		
1.4	Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0		
Section 2: Landfill and Other Waste Sites		On-site	0-50m	51-250	251-500	501-1000	1000-5000
2.1 Landfill Sites							
2.1.1	Environment Agency Registered Landfill Sites	0	0	0	0	0	Not searched
2.1.2	Environment Agency Historic Landfill Sites	0	0	0	0	0	0
2.1.3	BGS/DoE Landfill Site Survey	0	0	0	0	0	0
2.1.4	GroundSure Local Authority Landfill Sites Data	0	0	0	0	0	0
2.2 Landfill and Other Waste Sites Findings							
2.2.1	Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	Not searched	Not searched
2.2.2	Environment Agency Licensed Waste Sites	0	0	0	0	0	4

Section 3: Current Land Use	On-site	0-50m	51-250	251-500
3.1 Current Industrial Sites Data	5	0	4	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

	0-500m
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

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
5.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	1	10
5.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	2
5.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
5.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
	On-site	0-50m	51-250	251-500	501-1000	1000-1500
5.7 Is there any Environment Agency information on river quality within 1500m of the study site?	No	No	No	No	No	No
5.8 Detailed River Network entries within 500m of the site	0	0	4	12	Not searched	Not searched
5.9 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 at Surface
6.7 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Moderate

## Section 7: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
7.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
7.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
7.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
7.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
7.5 Records of Ramsar sites	0	0	0	0	0	0
7.6 Records of Ancient Woodlands	0	0	0	0	0	2
7.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
7.8 Records of World Heritage Sites	0	0	0	0	0	0
7.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0
7.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
7.11 Records of National Parks	0	0	0	0	0	0
7.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
7.13 Records of Nitrate Vulnerable Zones	1	0	0	0	1	2

## Section 8: Natural Hazards

8.1 What is the maximum risk of natural ground subsidence? Very Low

## Section 9: Mining

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

9.2 What is the risk of subsidence relating to shallow mining within 150m of the study site? Negligible

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

# 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.

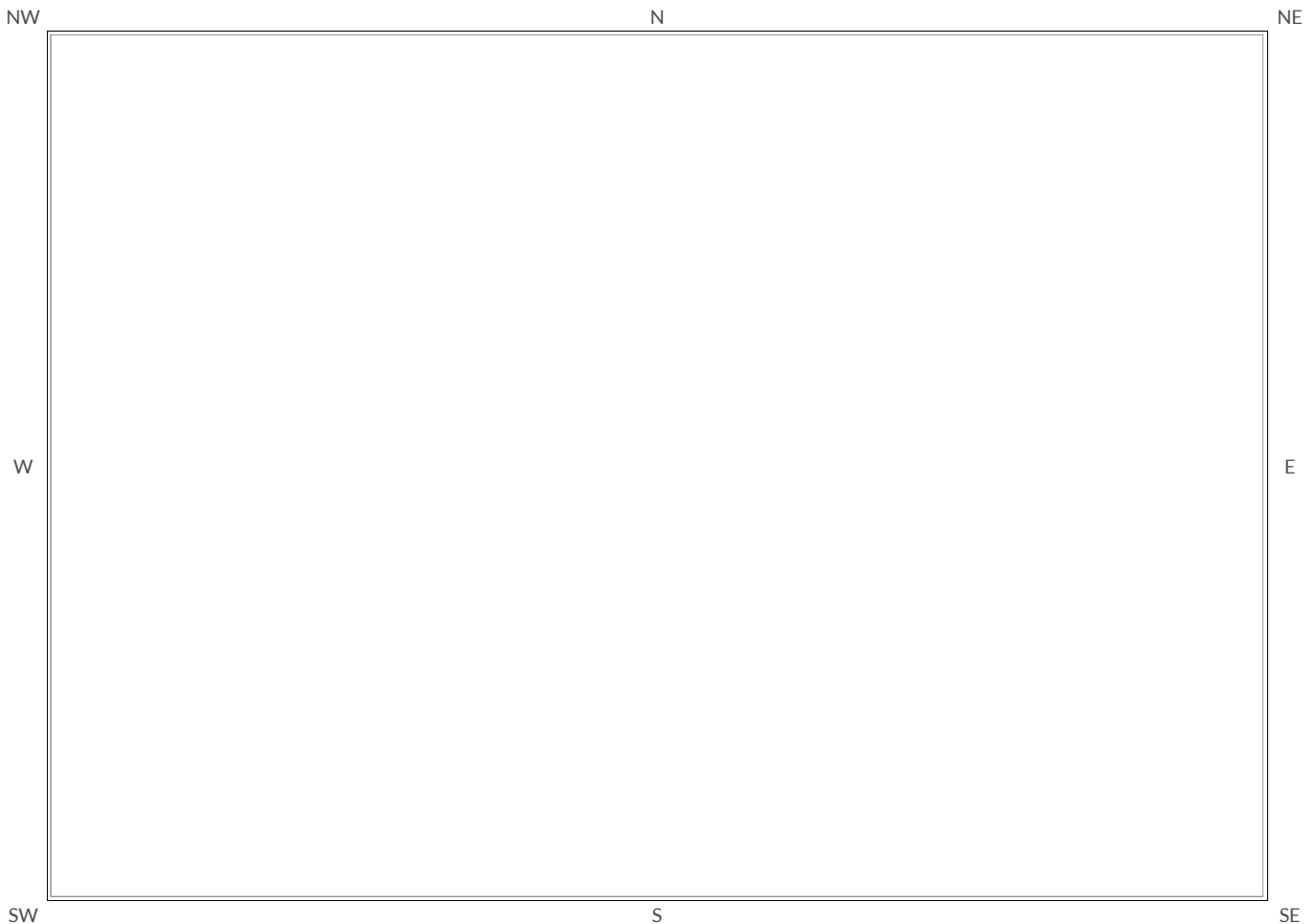
### Note: Maps

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



Environmental Permits,  
Incidents and Registers Legend



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- |   |                    |   |                               |   |  |
|---|--------------------|---|-------------------------------|---|--|
|  | Site Outline       |  | Recorded Pollution Incident   |  | RAS 3 & 4 Authorisations                                       |
|  | Search Buffers (m) |  | Dangerous Substances (List 1) |  | Part A(1) Authorised Processes and Historic IPC Authorisations |
|   |                    |  | Dangerous Substances (List 2) |  | Part A(2) and Part B Authorised Processes                      |
|   |                    |  | Water Industry Referrals      |  | COMAH / NIHHS Sites  |
|   |                    |  | Licensed Discharge Consents   |  | Sites Determined as Contaminated Land                          |
|   |                    |  | Red List Discharge Consents   |  | Hazardous Substance Consents and Enforcements                  |



# 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:

0

Database searched and no data found.

---

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

0

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:

0

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:

0

Database searched and no data found.

---

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

0

Database searched and no data found.

---

### 1.1.6 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

1

The following List 2 Dangerous Substance Inventory Site records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance	Direction	NGR	Details
1	274.0	E	489400 361800	Name: Vip Bin Cleaning Status: Not Active Receiving Water: Na Authorised Substances: pH

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

0

Database searched and no data found.

### 1.1.8 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

## 1.2 Dangerous or Hazardous Sites

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

1

The following COMAH & NIHHS Authorisation records provided by the Health and Safety Executive are represented as polygons or buffered points on the Environmental Permits, Incidents and Registers Map:

ID	Distance	Direction	Company	Address	Operational Status	Tier
2	330.0	NE	British Gas Lp Gas (t/a Supergas Ltd)	British Gas Lp Gas (t/a Supergas Ltd), Camp Road, Witham St Hughs, Ln6 9tw	Historical NIHHS Site	-

---

### 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



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



## 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:

0

Database searched and no data found.

---

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

0

Database searched and no data found.

---

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

0

Database searched and no data found.

---

2.1.4 Records of Local Authority landfill sites within 1500m of the study site:

0

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:

0

Database searched and no data found.

---

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

4

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
Not shown	1327.0	NW	488100 363400	Site Address: Ansons Farm, Swinderby, Lincoln, Lincs, LN6 9HS Type: Treatment of waste wood <75000 tps Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MEC013 EPR reference: EA/EPR/FB3032AZ/A001 Operator: M E C Recycling Ltd Waste Management licence No: 103878 Annual Tonnage: 74999.0 Issue Date: 18/03/2013 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Ansons Farm Correspondence Address: -, -
Not shown	1385.0	NW	488126 363478	Site Address: Ansons Farm, Swinderby, Lincoln, Lincolnshire, LN6 9HS Type: Composting Facility Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MEC005 EPR reference: EA/EPR/UP3298EH/V003 Operator: M E C Recycling Ltd Waste Management licence No: 100297 Annual Tonnage: 45000.0 Issue Date: 17/09/2008 Effective Date: - Modified: 26/03/2012 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Ansons Farm Correspondence Address: -, -
Not shown	1385.0	NW	488126 363478	Site Address: Ansons Farm, Swinderby, Lincoln, Lincolnshire, LN6 9HS Type: Composting Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MEC005 EPR reference: - Operator: M E C Recycling Ltd Waste Management licence No: 100297 Annual Tonnage: 0.0 Issue Date: 9/17/2008 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Ansons Farm Correspondence Address: -, Ansons Farm, Swinderby, Lincoln, Lincolnshire, LN6 9HS
Not shown	1451.0	NW	488108 363543	Site Address: Ansons Farm, Eagle Road, Swinderby, Lincoln, Lincolnshire, LN6 9HS Type: Composting Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MEC001 EPR reference: EA/EPR/WP3990CK/A001 Operator: M E C Recycling Ltd Waste Management licence No: 43663 Annual Tonnage: 24999.0 Issue Date: 26/04/2005 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: M E C Recycling Correspondence Address: -, -

# 3. Current Land Use Map



Current Land Use Legend



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## 3. Current Land Uses

### 3.1 Current Industrial Data

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

9

The following records are represented as points on the Current Land Uses map.

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	0.0	On Site	Tanks	488879 362162	LN6	Tanks (Generic)	Industrial Features
2	0.0	On Site	Electricity Sub Station	488900 361885	LN6	Electrical Features	Infrastructure and Facilities
3	0.0	On Site	Electricity Sub Station	488807 362130	LN6	Electrical Features	Infrastructure and Facilities
4	0.0	On Site	Electricity Sub Station	488859 362167	LN6	Electrical Features	Infrastructure and Facilities
5	0.0	On Site	Electricity Sub Station	489067 361928	LN6	Electrical Features	Infrastructure and Facilities
6	67.0	W	Swinderby Airfield (Disused)	488523 361984	LN6	Airports and Landing Strips	Air
7	91.0	NE	Turbine Efficiency Ltd	488971 362191	Unit 3, Electric Avenue, Witham St. Hughs, Lincoln, LN6 9BJ	Electrical Production and Manipulation Equipment	Industrial Products
8	144.0	NE	Electricity Sub Station	489189 362179	LN6	Electrical Features	Infrastructure and Facilities
9	167.0	E	Electricity Sub Station	489286 361831	LN6	Electrical Features	Infrastructure and Facilities

### 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.

Lex Code	Description	Rock Type
BDTN-SAGR	BALDERTON SAND AND GRAVEL MEMBER	SAND AND GRAVEL

---

## 4.3 Bedrock and Solid Geology

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

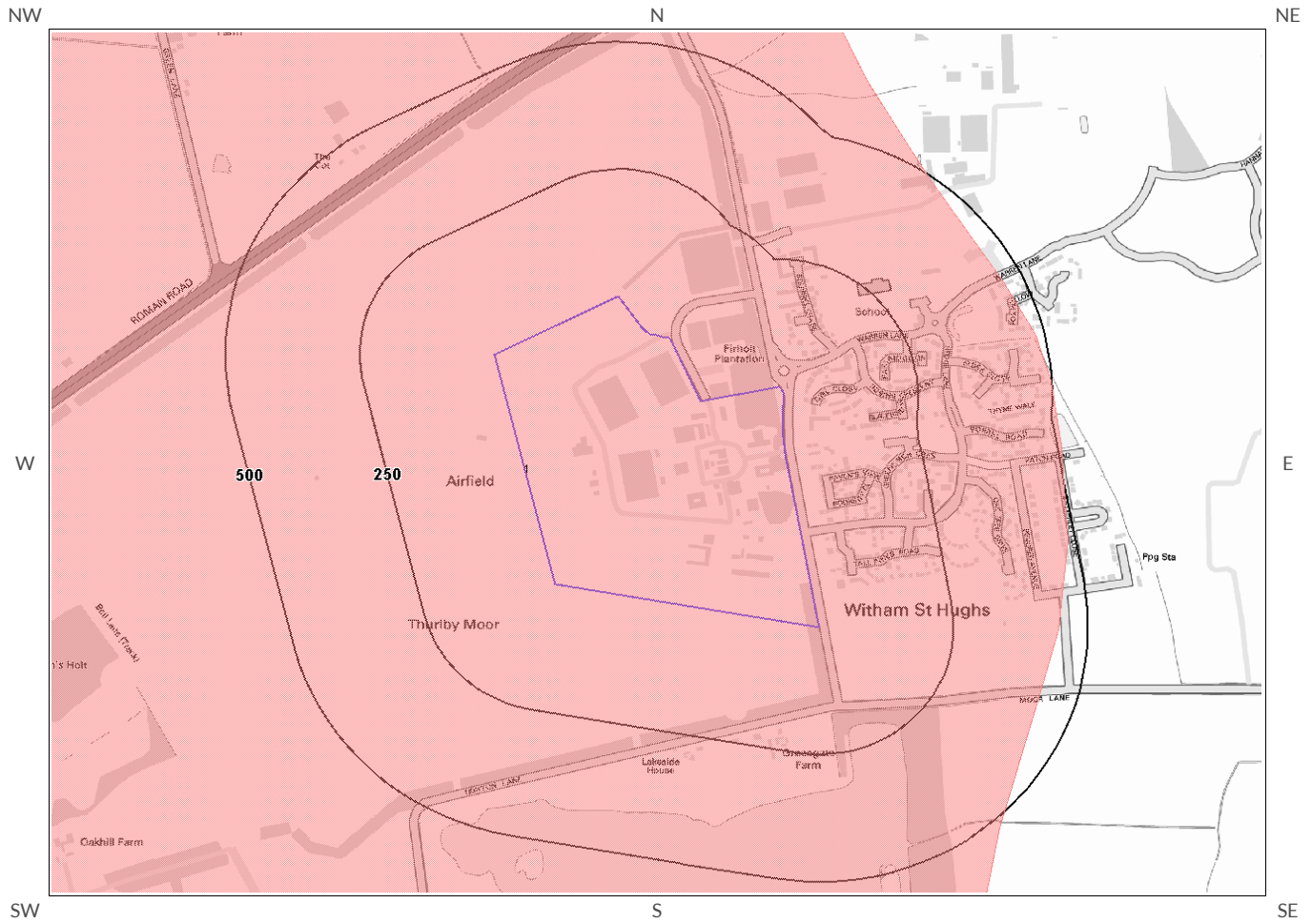
Lex Code	Description	Rock Type
SMCM-MDST	SCUNTHORPE MUDSTONE FORMATION AND CHARMOUTH MUDSTONE FORMATION (UNDIFFERENTIATED)	MUDSTONE

(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

---

# 5. Hydrogeology and Hydrology









## 5a. Aquifer Within Superficial Geology



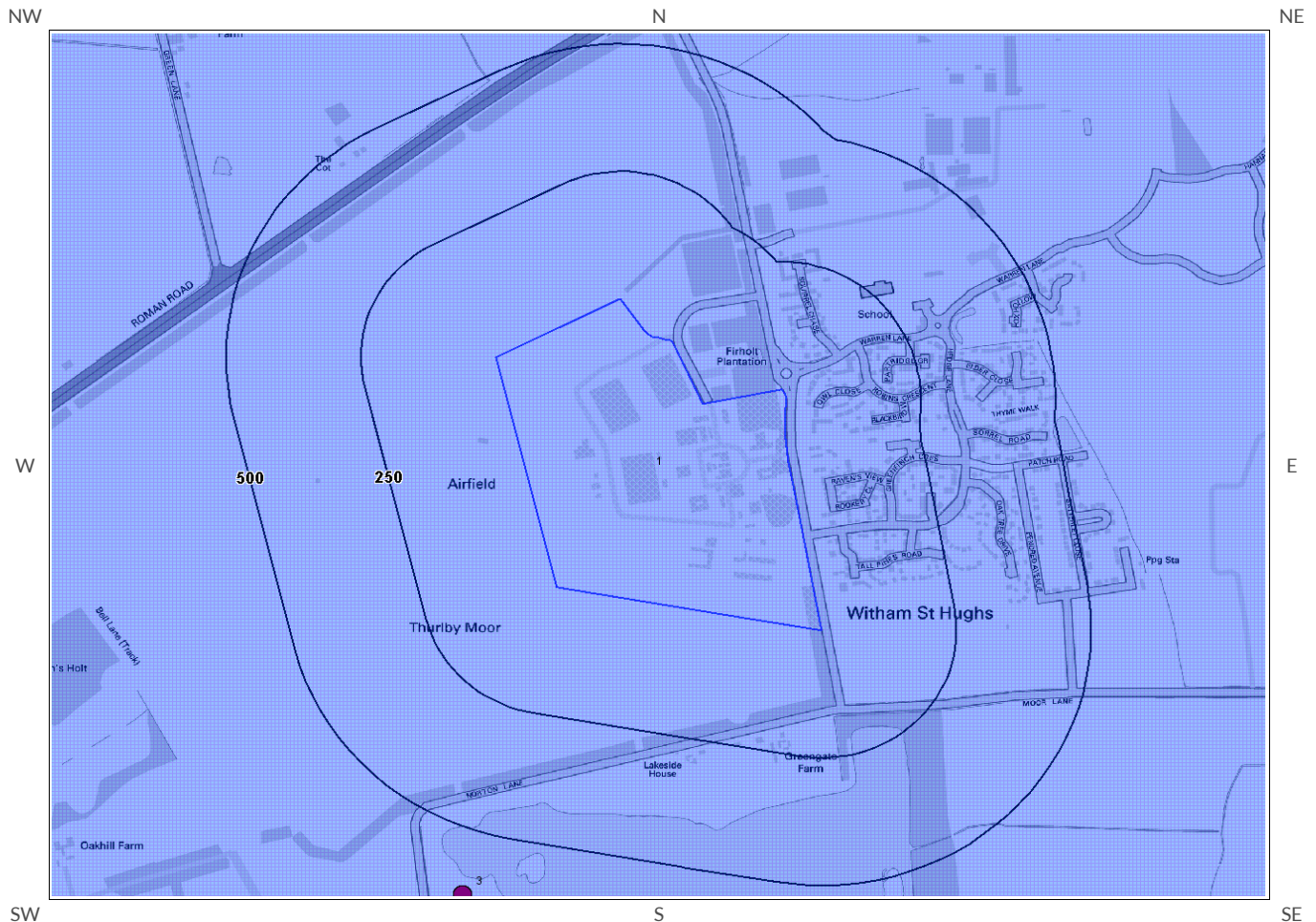
Map Legend



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-  Site Outline
-  Principal Aquifer
-  Secondary Aquifer - Undifferentiated Layers
-  Search Buffers (m)
-  Secondary (A) Aquifer - Permeable Layers
-  Unproductive
-  Secondary (B) Aquifer - Lower Permeability Layers
-  Unknown (lakes and landslip)

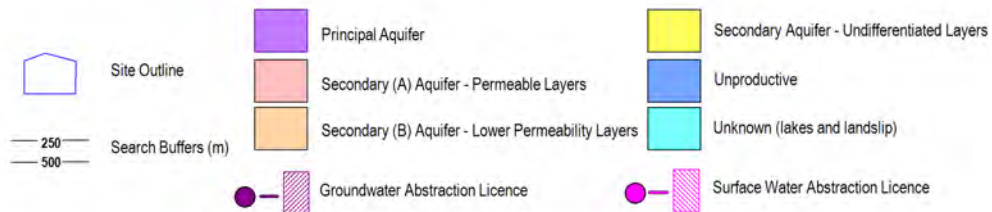
# 5b. Aquifer Within Bedrock Geology and Abstraction Licenses



Map Legend



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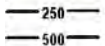


# 5c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses



Map Legend



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-  Site Outline
-  Source Protection Zone 1 - Inner Catchment
-  Source Protection Zone 2 - Outer Catchment
-  Source Protection Zone 3 - Total Catchment
-  Source Protection Zone 4 - Zone of Special Interest
-  250 Search Buffers (m)
-  500 Search Buffers (m)
-  Potable Water Abstraction Licence
















# 5d. Hydrology – Detailed River Network and River Quality



### Map Legend



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- |   |                    |   |                                       |  |                                     |
|---|--------------------|---|---------------------------------------|--|-------------------------------------|
|  | Site Outline       |  | Primary River                         |  | Canal                               |
|  | Search Buffers (m) |  | Secondary River                       |  | Canal Tunnel                        |
|   |                    |  | Tertiary River                        |  | Culvert                             |
|   |                    |  | Lake/Reservoir                        |  | Multiple Channel Culvert            |
|   |                    |  | Underground River (inferred)          |  | Underground River (Potential Sewer) |
|   |                    |  | General Quality Assessment: Biology   |  | Underground River (local knowledge) |
|   |                    |  | General Quality Assessment: Chemistry |  |                                     |



# 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):

ID	Distance (m)	Direction	Designation	Description
1	0.0	On Site	Secondary A	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

## 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):

ID	Distance (m)	Direction	Designation	Description
1	0.0	On Site	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

### 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):

ID	Distance (m)	Direction	NGR	Details	
3	628.0	S	488490 361090	Licence No: 4/30/03/*G/0049 Details: Mineral Washing Direct Source: Ground Water Source Of Supply Point: Gravel Pit - Thurlby Data Type: Point	Annual Volume (m <sup>3</sup> ): 509163 Max Daily Volume (m <sup>3</sup> ): 2046 Original Application No: NPS/WR/015161 Original Start Date: 1/6/1973 Expiry Date: - Issue No: 103 Version Start Date: 8/1/2014 Version End Date:
Not shown	1029.0	S	488360 360710	Licence No: 4/30/03/*G/0108 Details: Spray Irrigation - Direct Direct Source: Ground Water Source Of Supply Point: Thurlby Lake Data Type: Point	Annual Volume (m <sup>3</sup> ): 50000 Max Daily Volume (m <sup>3</sup> ): 650 Original Application No: NPS/WR/004108 Original Start Date: 24/6/2005 Expiry Date: 31/3/2016 Issue No: 2 Version Start Date: 20/4/2012 Version End Date:
Not shown	1084.0	SW	487700 361200	Licence No: 03/28/69/0039 Details: General Farming & Domestic Direct Source: Groundwater Midlands Region Point: Oakhill Farm - Well Data Type: Point	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 7/12/1965 Expiry Date: - Issue No: 100 Version Start Date: 1/4/2000 Version End Date:
Not shown	1127.0	W	487490 362520	Licence No: 03/28/69/0280 Details: Spray Irrigation - Direct Direct Source: Groundwater Midlands Region Point: Swinderby - Borehole (3) Data Type: Point	Annual Volume (m <sup>3</sup> ): 113650 Max Daily Volume (m <sup>3</sup> ): 1137 Original Application No: A/28/69/0165 Original Start Date: 27/4/1999 Expiry Date: - Issue No: 1 Version Start Date: 27/4/1999 Version End Date:
Not shown	1146.0	W	487480 362550	Licence No: 03/28/69/0280 Details: Spray Irrigation - Direct Direct Source: Groundwater Midlands Region Point: Swinderby - Borehole (2) Data Type: Point	Annual Volume (m <sup>3</sup> ): 113650 Max Daily Volume (m <sup>3</sup> ): 1137 Original Application No: A/28/69/0165 Original Start Date: 27/4/1999 Expiry Date: - Issue No: 1 Version Start Date: 27/4/1999 Version End Date:
Not shown	1154.0	W	487480 362570	Licence No: 03/28/69/0280 Details: Spray Irrigation - Direct Direct Source: Groundwater Midlands Region Point: Swinderby - Borehole (1) Data Type: Point	Annual Volume (m <sup>3</sup> ): 113650 Max Daily Volume (m <sup>3</sup> ): 1137 Original Application No: A/28/69/0165 Original Start Date: 27/4/1999 Expiry Date: - Issue No: 1 Version Start Date: 27/4/1999 Version End Date:
Not shown	1583.0	NW	487290 363100	Licence No: 03/28/69/0288 Details: Vegetable washing Direct Source: Groundwater Midlands Region Point: Borehole At Swinderby - B Data Type: Point	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: A/28/69/0166 Original Start Date: 4/2/2000 Expiry Date: 31/3/2008 Issue No: 1 Version Start Date: 4/2/2000 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1583.0	NW	487290 363100	Licence No: 03/28/69/0288/1 Details: Vegetable Washing Direct Source: Groundwater Midlands Region Point: Borehole At Swinderby - B Data Type: Point	Annual Volume (m <sup>3</sup> ): 65000 Max Daily Volume (m <sup>3</sup> ): 240 Original Application No: A/28/69/0166 Original Start Date: 8/8/2003 Expiry Date: 31/3/2015 Issue No: 1 Version Start Date: 8/8/2003 Version End Date:
Not shown	1697.0	NW	487200 363170	Licence No: 03/28/69/0288 Details: Vegetable washing Direct Source: Groundwater Midlands Region Point: Borehole At Swinderby-a Data Type: Point	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: A/28/69/0166 Original Start Date: 4/2/2000 Expiry Date: 31/3/2008 Issue No: 1 Version Start Date: 4/2/2000 Version End Date:
Not shown	1697.0	NW	487200 363170	Licence No: 03/28/69/0288/1 Details: Vegetable Washing Direct Source: Groundwater Midlands Region Point: Borehole At Swinderby-a Data Type: Point	Annual Volume (m <sup>3</sup> ): 65000 Max Daily Volume (m <sup>3</sup> ): 240 Original Application No: A/28/69/0166 Original Start Date: 8/8/2003 Expiry Date: 31/3/2015 Issue No: 1 Version Start Date: 8/8/2003 Version End Date:
Not shown	1958.0	SW	487600 360050	Licence No: 4/30/03/*G/0028 Details: General Farming & Domestic Direct Source: Ground Water Source Of Supply Point: White Hall Well Norton Disney Data Type: Point	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 1/4/1966 Expiry Date: - Issue No: 100 Version Start Date: 1/4/2004 Version End Date:

## 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):

ID	Distance (m)	Direction	NGR	Details	
Not shown	1644.0	SE	489290 358750	Licence No: 4/30/03/*S/0102 Details: Spray Irrigation - Direct Direct Source: Surface Water Source Of Supply Point: River Witham - Scotwater To Aubourn Br Data Type: Line	Annual Volume (m <sup>3</sup> ): 91000 Max Daily Volume (m <sup>3</sup> ): 1500 Application No: NPS/WR/009506 Original Start Date: 21/5/2002 Expiry Date: 31/3/2022 Issue No: 4 Version Start Date: 16/12/2011 Version End Date:
Not shown	1925.0	E	491020 361120	Licence No: 4/30/03/*S/0059 Details: Spray Irrigation - Direct Direct Source: Surface Water Source Of Supply Point: River Witham Basingham Data Type: Line	Annual Volume (m <sup>3</sup> ): 20457 Max Daily Volume (m <sup>3</sup> ): 900 Application No: - Original Start Date: 1/6/1983 Expiry Date: - Issue No: 100 Version Start Date: 1/12/1993 Version End Date:

---

## 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 River Quality

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

---

### 5.7.1 Biological Quality:

Database searched and no data found.

---

### 5.7.2 Chemical Quality:

Database searched and no data found.

---

## 5.8 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 (5d):

ID	Distance (m)	Direction	Details
1	68.0	NE	River Name: - Welsh River Name: - Alternative Name: - River Type: Tertiary River Main River Status: Currently Undefined
2	85.0	E	River Name: Drain Welsh River Name: - Alternative Name: - River Type: Tertiary River Main River Status: Currently Undefined
3	154.0	S	River Name: Drain Welsh River Name: - Alternative Name: - River Type: Tertiary River Main River Status: Currently Undefined
4	162.0	S	River Name: Drain Welsh River Name: - Alternative Name: - River Type: Tertiary River Main River Status: Currently Undefined
5	316.0	E	River Name: - Welsh River Name: - Alternative Name: - River Type: Tertiary River Main River Status: Currently Undefined
6	318.0	E	River Name: - Welsh River Name: - Alternative Name: - River Type: Culvert Main River Status: Currently Undefined
7	335.0	E	River Name: Drain Welsh River Name: - Alternative Name: - River Type: Tertiary River Main River Status: Currently Undefined
8	336.0	E	River Name: - Welsh River Name: - Alternative Name: - River Type: Secondary River Main River Status: Currently Undefined
9	360.0	E	River Name: - Welsh River Name: - Alternative Name: - River Type: Culvert Main River Status: Currently Undefined
10	445.0	NW	River Name: - Welsh River Name: - Alternative Name: - River Type: Tertiary River Main River Status: Currently Undefined
11	452.0	S	River Name: - Welsh River Name: - Alternative Name: - River Type: Lake/Reservoir Main River Status: Currently Undefined
12	455.0	E	River Name: - Welsh River Name: - Alternative Name: - River Type: Culvert Main River Status: Currently Undefined
13	457.0	S	River Name: Drain Welsh River Name: - Alternative Name: - River Type: Secondary River Main River Status: Currently Undefined
14	463.0	NW	River Name: - Welsh River Name: - Alternative Name: - River Type: Secondary River Main River Status: Currently Undefined
15	477.0	NW	River Name: - Welsh River Name: - Alternative Name: - River Type: Tertiary River Main River Status: Currently Undefined
16	492.0	NW	River Name: Drain Welsh River Name: - Alternative Name: - River Type: Secondary River Main River Status: Currently Undefined

## 5.9 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:

Distance (m)	Direction
68.0	NE
85.0	E
109.0	E
131.0	NE
154.0	S
162.0	S
180.0	NE
187.0	SE
202.0	S
204.0	E
227.0	NE








# 6. Environment Agency Flood Map for planning (from rivers and the sea)



Map Legend



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-  Site Outline
-  Search Buffers (m)
-  Zone 2 Floodplain
-  Zone 3 Floodplain
-  Flood Storage Area
-  Area Benefiting from Flood Defences
-  Flood Defences



# 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:

ID	Distance (m)	Direction	Update	Type
1A	203.0	S	10-Jun-2014	Zone 2 - (Fluvial Models)

## 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:

ID	Distance (m)	Direction	Update	Type
3A	203.0	S	10-Jun-2014	Zone 3 - (Fluvial Models)

## 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?

Superficial Deposits 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 at Surface

Where potential for groundwater flooding to occur at surface is indicated, this means that given the geological conditions in the area groundwater flooding hazard should be considered in all land-use planning decisions. It is recommended that other relevant information e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information 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?

Moderate

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

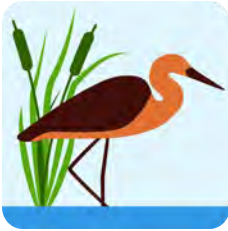


Map Legend

Mapping sourced from 

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- |   |  |   |   |   |
|---|--|---|---|---|
|  Site Outline                        |  SAC                      |  SSSI                    |  NNR            |  World Heritage Sites            |
|  Areas of Outstanding Natural Beauty |  SPA                      |  Ramsar                  |  LNR            |  Environmentally Sensitive Areas |
|   |  Nitrate Vulnerable Zones |  Nitrate Sensitive Areas |  National Parks |  Ancient Woodlands               |



# 7. Designated Environmentally Sensitive Sites

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

---

7.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site: 0

Database searched and no data found.

---

7.2 Records of National Nature Reserves (NNR) within 2000m of the study site: 0

Database searched and no data found.

---

7.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site: 0

Database searched and no data found.

---

7.4 Records of Special Protection Areas (SPA) within 2000m of the study site: 0

Database searched and no data found.

---

7.5 Records of Ramsar sites within 2000m of the study site: 0

Database searched and no data found.

---

7.6 Records of Ancient Woodland within 2000m of the study site:

2

The following Ancient Woodland records are supplied by English Nature/Scottish Natural Heritage/Countryside Council for Wales and are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
5	1101.0	S	HAWDINS/NORTON BIG WOOD	Ancient and Semi-Natural Woodland
Not shown	1349.0	SW	HAWDINS/NORTON BIG WOOD	Ancient Replanted Woodland

---

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

0

Database searched and no data found.

---

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

0

Database searched and no data found.

---

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

0

Database searched and no data found.

---

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

0

Database searched and no data found.

---

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

0

Database searched and no data found.

---

7.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

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

4

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

ID	Distance (m)	Direction	NVZ Name	Data Source
1	0.0	On Site	NVZ Area	DEFRA
2	843.0	E	NVZ Area	DEFRA
Not shown	1609.0	S	NVZ Area	DEFRA
Not shown	1816.0	SE	NVZ Area	DEFRA



# 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? Negligible

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

---

**Hazard**

---

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.

---

### 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:

---

**Hazard**

---

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.

---

### 8.1.3 Soluble Rocks

What is the maximum Soluble Rocks\* hazard rating identified on the study site? Null - Negligible

Soluble rocks are not present in the search area. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

---



---

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

### 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:

---

**Hazard**

---

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.

---

### 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:

---

**Hazard**

---

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.

---

### 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:

---

**Hazard**

---

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.

---



---

\* 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](mailto:enquiries@bgs.ac.uk)  
Web: [www.bgs.ac.uk](http://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](http://www.environment-agency.gov.uk)  
Email: [enquiries@environment-agency.gov.uk](mailto: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](mailto: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](http://www.coal.gov.uk)



## Ordnance Survey

Adanac Drive, Southampton  
SO16 0AS  
Tel: 08456 050505



## Local Authority

Authority: North Kesteven District Council  
Phone: 01529 414155  
Web: [www.n-kesteven.gov.uk](http://www.n-kesteven.gov.uk)  
Address: District Council Offices, Kesteven Street, Sleaford, Lincs, NG34 7EF

## 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, English Nature 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.

# 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, 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.

**"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](http://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 reliable.

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 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 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, as the case may be, 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 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. © GroundSure Limited June 2013



BWB Consulting Limited

5th Floor, Waterfront House, Station Street,  
Nottingham, NG2 3DQ

GroundSure Reference: HMD-214-1529296

Your Reference: ENV131775~NTW2253

Report Date 26 Jun 2014

Report Delivery Method: Email - pdf

## GroundSure Geoinsight

Address: Network 46 Swinderby, LN6 9TW

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,

A handwritten signature in black ink, appearing to be 'A. J. O.', followed by a large, stylized flourish.

Managing Director  
Groundsure Limited

Enc.  
GroundSure GeoInsight



# GroundSure GeoInsight

Address: Network 46 Swinderby, LN6 9TW  
Date: 26 Jun 2014  
Reference: HMD-214-1529296  
Client: BWB Consulting Limited

NW N NE

W E



SW S SE

Aerial Photograph Capture date: 18-Sep-2007  
Grid Reference: 488909,362002  
Site Size: 25.00ha

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# 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* 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.	
	1.3.2 Are there any records relating to permeability of bedrock within the study site boundary?	Yes
	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 not in a Radon Affected Area, as less than 1% 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

	On-site	0-50m	51-250	251-500	501-1000
2.1 Historical Surface Ground Working Features from Small Scale Mapping	0	0	0	Not Searched	Not Searched
2.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	0
2.3 Current Ground Workings	0	0	0	0	1

Section 3: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
3.1 Historical Mining	0	0	0	0	0
3.2 Coal Mining	0	0	0	0	0
3.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
3.4 Non-Coal Mining	0	0	0	0	0
3.5 Non-Coal Mining Cavities	0	0	0	0	0
3.6 Natural Cavities	0	0	0	0	0
3.7 Brine Extraction	0	0	0	0	0
3.8 Gypsum Extraction	0	0	0	0	0
3.9 Tin Mining	0	0	0	0	0
3.10 Clay Mining	0	0	0	0	0

Section 4: Natural Ground Subsidence	On-site
4.1 Shrink Swell Clay	Negligible
4.2 Landslides	Very Low
4.3 Ground Dissolution of Soluble Rocks	Null
4.4 Compressible Deposits	Negligible
4.5 Collapsible Deposits	Very Low
4.6 Running Sand	Very Low

Section 5: Borehole Records	On-site	0-50m	51-250
5 BGS Recorded Boreholes	101	15	47

Section 6: Estimated Background Soil Chemistry	On-site	0-50m	51-250
6 Records of Background Soil Chemistry	4	0	0

# 1 Geology

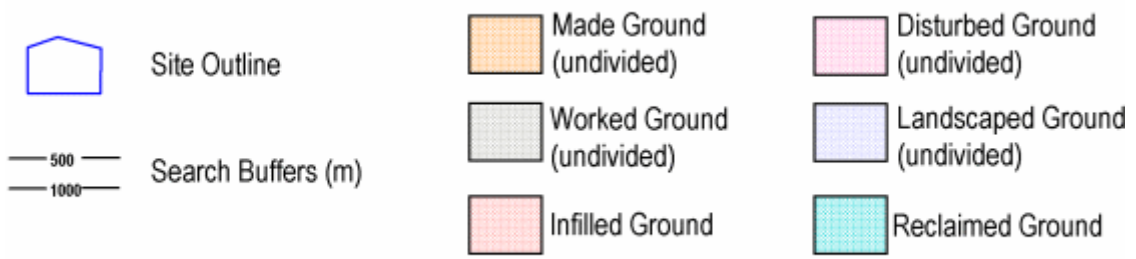
## 1.1 Artificial Ground Map



Artificial Ground Legend



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# 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:114

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

Database searched and no data found.

---

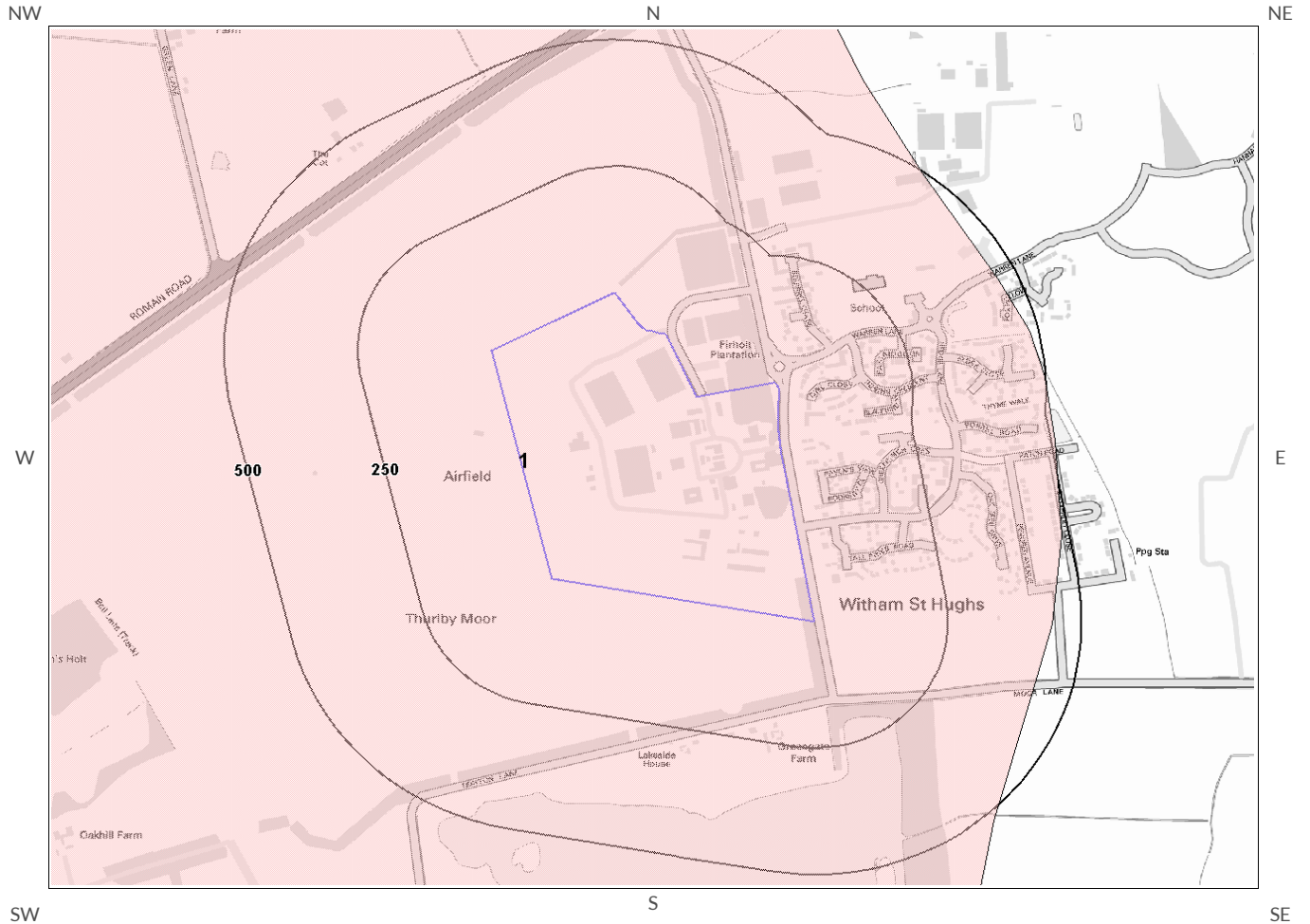
### 1.1.2 Permeability of Artificial Ground

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



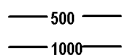
Superficial Deposits and Landslips Legend



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Site Outline



Search Buffers (m)

# 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

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	BDTN-SAGR	BALDERTON SAND AND GRAVEL MEMBER	SAND AND GRAVEL

## 1.2.2 Permeability of Superficial Ground

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

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Intergranular	Very High	High

## 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

# 1.3 Bedrock and Faults Map



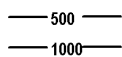
Bedrock and Faults Legend



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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:114

## 1.3.1 Bedrock/ Solid Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	SMCM-MDST	Scunthorpe Mudstone Formation And Charmouth Mudstone Formation (undifferentiated) - Mudstone	Pliensbachian / Rhaetian

## 1.3.2 Permeability of Bedrock Ground

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

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Low	Low

## 1.3.3 Faults

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

Database searched and no data found.

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

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

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

# 1.4 Radon Data

## 1.4.1 Radon Affected Areas

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

---

## 1.4.2 Radon Protection

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

---



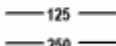

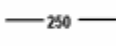

# 2 Ground Workings Map



Ground Workings Legend



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-  Site Outline
-  Historic Surface Ground Workings
-  125 Search Buffers (m)
-  Historic Underground Workings
-  250 Search Buffers (m)
-  Current Ground Workings



## 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? No

Database searched and no data found.

### 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:

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	677.0	S	488700 361000	Sand & Gravel	Thurlby	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

# 3 Mining, Extraction & Natural Cavities Map



Mining, Extraction and Natural Cavities Legend



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# 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 dataset provides information from the Brine Compensation Board which has been discontinued and is now covered by the Coal Authority.

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

Database searched and no data found.

---

### 3.8 Gypsum Extraction

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

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

Database searched and no data found.

---

### 3.9 Tin Mining

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

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

Database searched and no data found.

---

### 3.10 Clay Mining

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

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

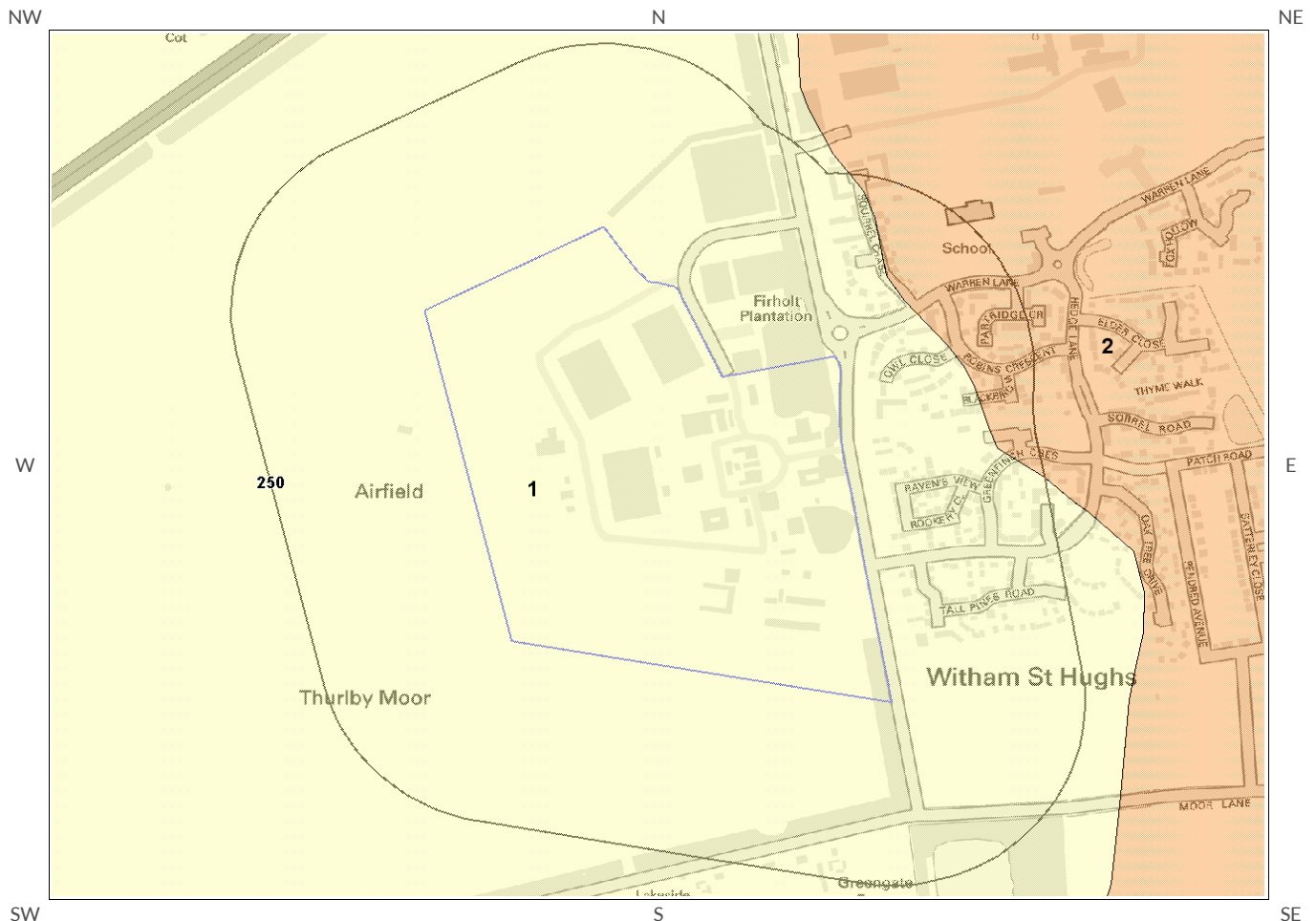
No

Database searched and no data found.

---

# 4 Natural Ground Subsidence

## 4.1 Shrink-Swell Clay Map



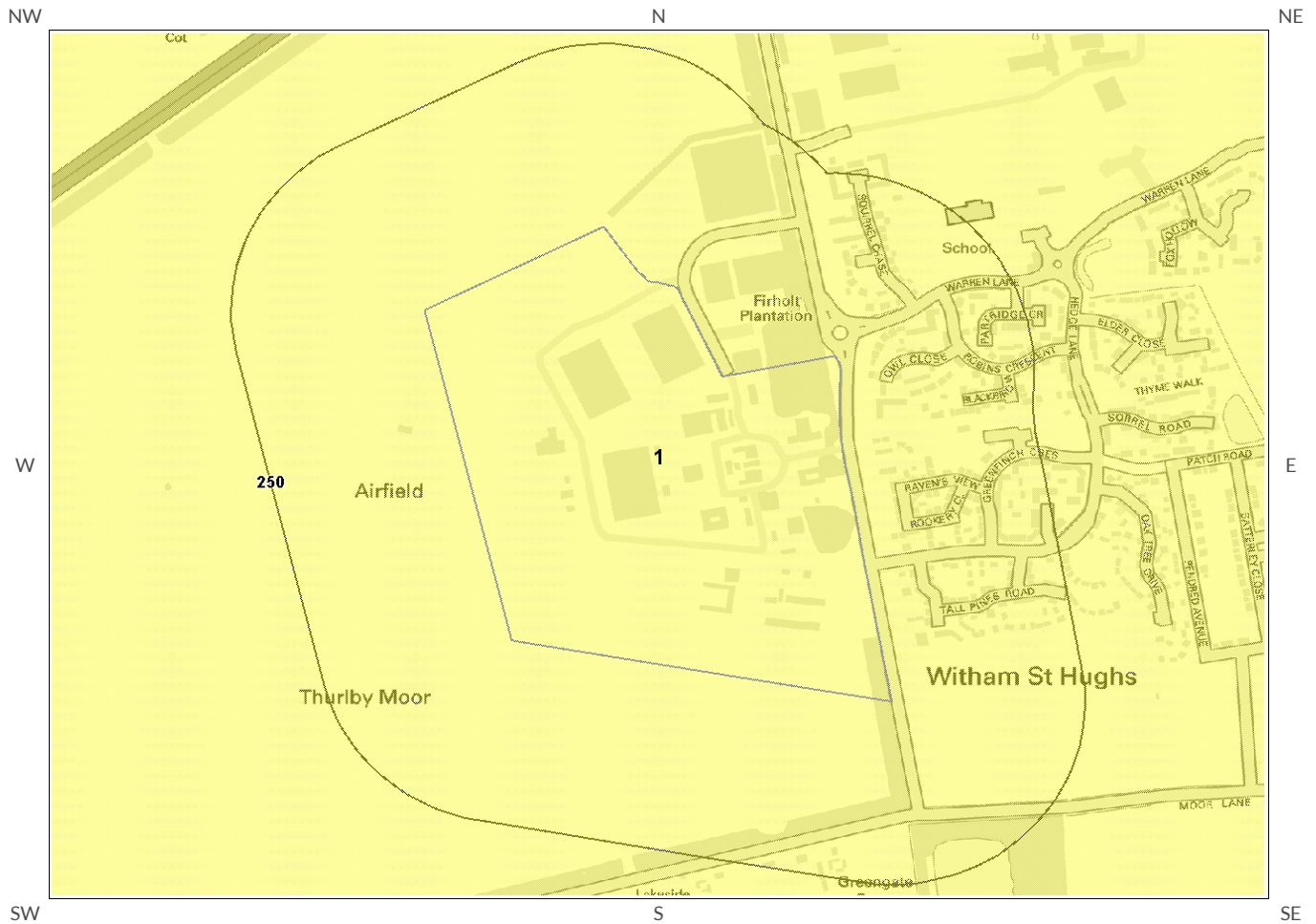
Shrink Swell Clay Legend



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# 4.2 Landslides Map



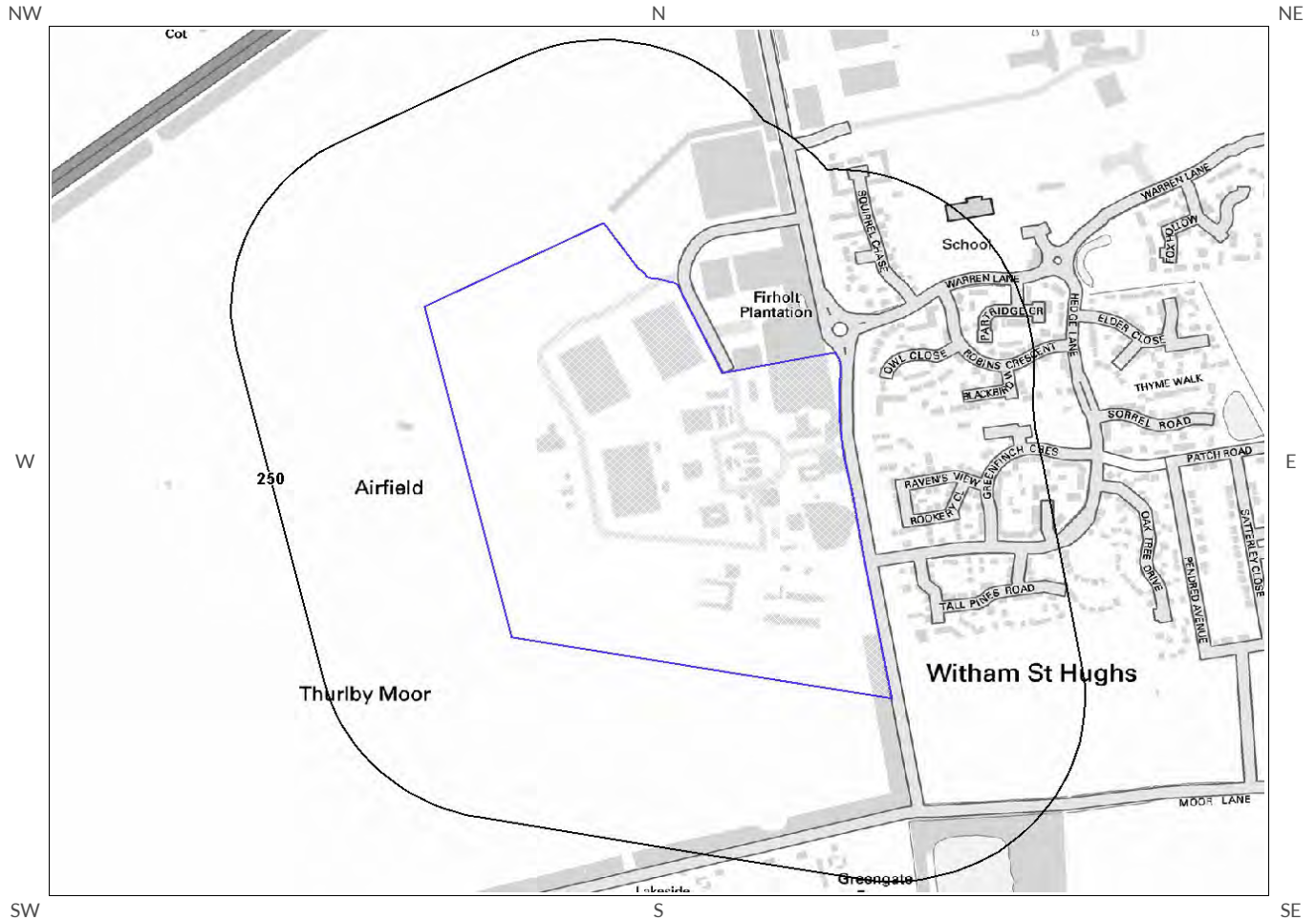
Landslides Legend



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# 4.3 Ground Dissolution Soluble Rocks Map



Ground Dissolution Soluble Rocks Legend



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# 4.4 Compressible Deposits Map



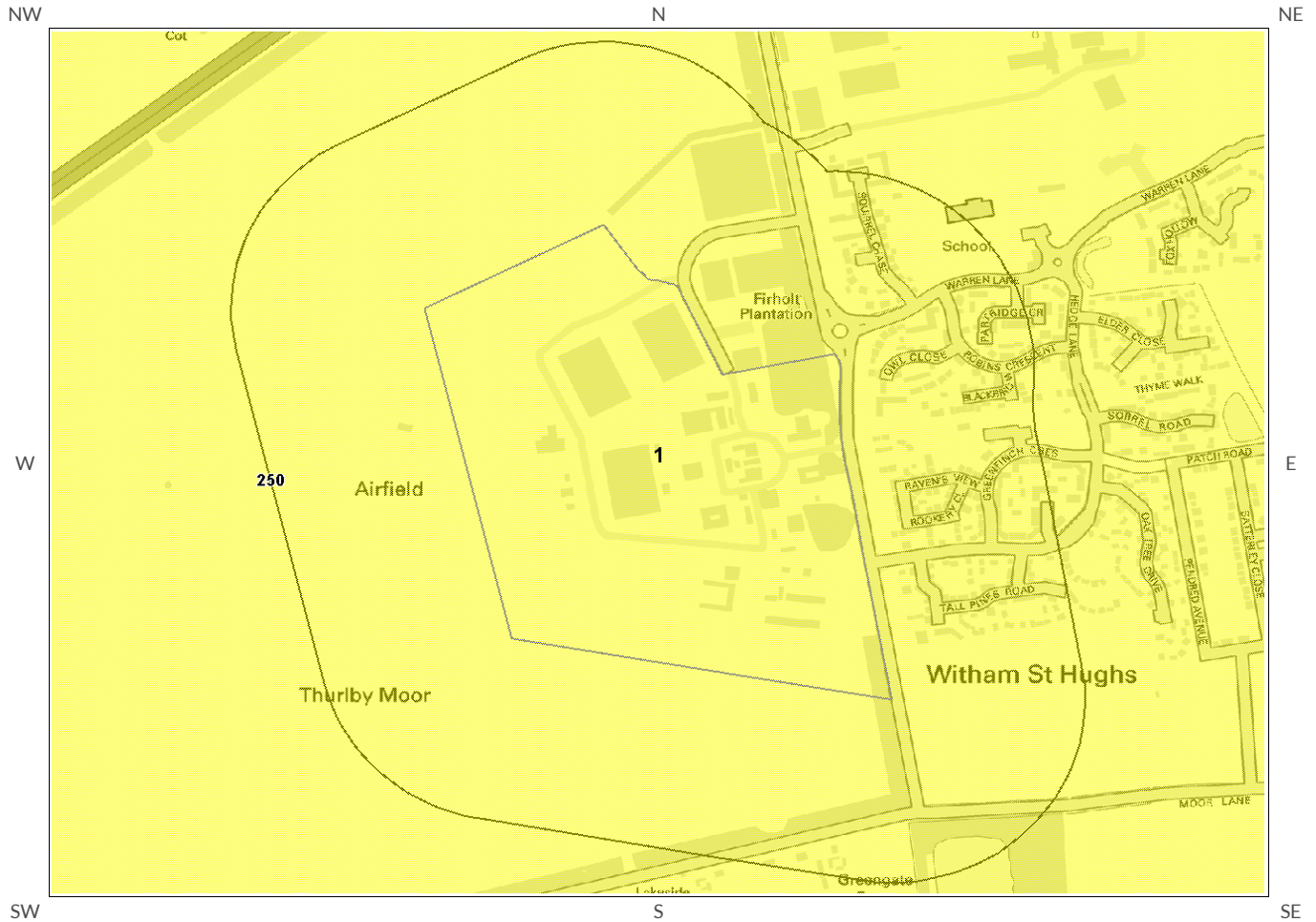
Compressible Deposits Legend



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# 4.5 Collapsible Deposits Map



Collapsible Deposits Legend



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# 4.6 Running Sand Map



Running Sand Legend



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# 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? Very Low

## 4.1 Shrink-Swell Clays

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.

## 4.2 Landslides

The following Landslides information provided by the British Geological Survey:

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

## 4.3 Ground Dissolution of Soluble Rocks

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

Distance (m)	Direction	Hazard Rating	Details
0	On site	Null-Negligible	Soluble rocks are not present in the search area. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

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

## 4.4 Compressible Deposits

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible 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.

## 4.5 Collapsible Deposits

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

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

## 4.6 Running Sands

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.





# 5 Borehole Records Map



Borehole Records Legend



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



## 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:

163

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1F	0.0	On Site	488950 361710	SK86SE258	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP61
2A	0.0	On Site	488920 361720	SK86SE261	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP64
3A	0.0	On Site	488910 361720	SK86SE262	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP65
4B	0.0	On Site	489030 361710	SK86SE254	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP57
5A	0.0	On Site	488930 361730	SK86SE264	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP67
6	0.0	On Site	488990 361710	SK86SE252	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP55
7	0.0	On Site	489040 361730	SK86SE211	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C WS20
8	0.0	On Site	489060 361740	SK86SE210	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C WS19
9E	0.0	On Site	489020 361740	SK86SE209	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C WS18
10	0.0	On Site	488750 361750	SK86SE222	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP10
11B	0.0	On Site	489010 361710	SK86SE253	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP56
12	0.0	On Site	488920 361750	SK86SE218	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP6
13	0.0	On Site	488840 361750	SK86SE220	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP8
14A	0.0	On Site	488920 361710	SK86SE260	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP63
15B	0.0	On Site	489010 361700	SK86SE250	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP53
16B	0.0	On Site	489030 361700	SK86SE251	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP54
17	0.0	On Site	488950 361690	SK86SE256	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP59
18C	0.0	On Site	489000 361690	SK86SE249	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP52
19C	0.0	On Site	488990 361680	SK86SE255	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP58
20	0.0	On Site	488970 361670	SK86SE257	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP60
21	0.0	On Site	488790 361780	SK86SE199	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C 3B
22	0.0	On Site	488690 361780	SK86SE200	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C 13

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
23I	0.0	On Site	489030 361670	SK86SE248	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP51
24D	0.0	On Site	489070 361780	SK86SE203	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C 17
25	0.0	On Site	489000 361660	SK86SE247	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP50
26D	0.0	On Site	489060 361790	SK86SE231	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP31
27E	0.0	On Site	489010 361730	SK86SE212	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C WS21
28	0.0	On Site	488960 361730	SK86SE217	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP5
29A	0.0	On Site	488910 361710	SK86SE198	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C 2
30	0.0	On Site	489120 361750	SK86SE230	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP30
31J	0.0	On Site	489060 361760	SK86SE229	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP29
32F	0.0	On Site	488940 361710	SK86SE265	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP68
33	0.0	On Site	489120 361700	SK86SE214	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP2
34H	0.0	On Site	488920 361690	SK86SE216	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP4
35G	0.0	On Site	489030 361800	SK86SE259	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP62
36	0.0	On Site	489040 361690	SK86SE197	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C 1
37G	0.0	On Site	489020 361800	SK86SE228	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP28
38	0.0	On Site	488890 361800	SK86SE219	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP7
39	0.0	On Site	488810 361800	SK86SE221	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP9
40K	0.0	On Site	489110 361800	SK86SE233	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP33
41	0.0	On Site	488980 361690	SK86SE208	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C WS10
42	0.0	On Site	488810 361690	SK86SE204	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C WS1
43H	0.0	On Site	488900 361690	SK86SE263	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP66
44M	0.0	On Site	489050 361810	SK86SE234	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP37
45C	0.0	On Site	489010 361680	SK86SE215	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP3
46I	0.0	On Site	489010 361670	SK86SE202	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C 16
47	0.0	On Site	489050 361660	SK86SE213	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP1
48J	0.0	On Site	489070 361760	SK86SE239	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP42
49	0.0	On Site	488660 361850	SK86SE205	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C WS2
50K	0.0	On Site	489090 361800	SK86SE244	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP47
51L	0.0	On Site	489040 361760	SK86SE240	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP43
52	0.0	On Site	488650 361870	SK86SE266	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP69

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
53L	0.0	On Site	489040 361770	SK86SE237	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP40
54M	0.0	On Site	489060 361800	SK86SE246	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP49
55N	0.0	On Site	489090 361800	SK86SE235	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP38
56	0.0	On Site	488770 361890	SK86SE184	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE B WS7
57	0.0	On Site	488700 361920	SK86SE224	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP12
58N	0.0	On Site	489080 361810	SK86SE245	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP48
59O	0.0	On Site	488940 361930	SK86SE147	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A WS11
60	0.0	On Site	488860 361930	SK86SE193	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE B TP22
61O	0.0	On Site	488930 361930	SK86SE179	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE B 6
62	0.0	On Site	488740 361940	SK86SE225	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP13
63	0.0	On Site	489050 361940	SK86SE150	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A WS17
64D	0.0	On Site	489060 361770	SK86SE238	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP41
65	0.0	On Site	488920 361950	SK86SE192	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE B TP21
66	0.0	On Site	488630 361970	SK86SE206	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C WS3
67D	0.0	On Site	489080 361770	SK86SE236	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP39
68P	0.0	On Site	488710 362000	SK86SE226	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP14
69P	0.0	On Site	488730 362000	SK86SE183	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE B WS6
70	0.0	On Site	488830 362000	SK86SE186	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE B WS12
71	0.0	On Site	489030 362000	SK86SE149	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A WS16
72	0.0	On Site	488970 362020	SK86SE151	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP20
73	0.0	On Site	488910 362020	SK86SE187	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE B WS13
74	0.0	On Site	488670 362040	SK86SE201	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C 15
75	0.0	On Site	488700 362060	SK86SE227	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP15
76	0.0	On Site	488840 362060	SK86SE190	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE B TP17
77	0.0	On Site	488910 362060	SK86SE191	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE B TP19
78	0.0	On Site	488840 361810	SK86SE185	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE B WS8
79	0.0	On Site	488830 362090	SK86SE180	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE B 7
80	0.0	On Site	488660 362100	SK86SE207	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C WS4
81	0.0	On Site	488770 362110	SK86SE189	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE B TP16
82	0.0	On Site	488710 362120	SK86SE181	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE B 12

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
83D	0.0	On Site	489080 361780	SK86SE242	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP45
84	0.0	On Site	489090 361780	SK86SE243	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP46
85D	0.0	On Site	489060 361790	SK86SE241	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP44
86	0.0	On Site	488840 362150	SK86SE188	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE B WS15
87	0.0	On Site	489000 361830	SK86SE146	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A WS9
88D	0.0	On Site	489080 361790	SK86SE232	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP32
89	0.0	On Site	488730 362170	SK86SE182	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE B WS5
90	0.0	On Site	488910 361840	SK86SE178	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE B 4
91	0.0	On Site	488740 361850	SK86SE223	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE C TP11
92	0.0	On Site	488880 361850	SK86SE194	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE B TP23
93	0.0	On Site	488950 361870	SK86SE195	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE B TP24
94	0.0	On Site	489010 361880	SK86SE152	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP25
95	0.0	On Site	489080 361910	SK86SE153	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP26
96	0.0	On Site	489000 361960	SK86SE141	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A 5
97Q	0.0	On Site	489070 361820	SK86SE157	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP36
98Q	0.0	On Site	489090 361820	SK86SE156	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP35
99	0.0	On Site	489110 361820	SK86SE155	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP34
100	0.0	On Site	488870 362160	SK86SE196	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE B TP71
101	0.0	On Site	489070 361840	SK86SE154	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP27
102	7.0	NE	488820 362220	SK86SE158	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP70
103	17.0	NE	488850 362200	SK86SE159	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP72
104	22.0	N	488960 362080	SK86SE172	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP85
105S	26.0	NE	488920 362150	SK86SE173	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP86
106	27.0	NE	488930 362130	SK86SE171	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP84
107R	35.0	NE	488920 362170	SK86SE144	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A 10
108R	35.0	NE	488920 362170	SK86SE169	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP82
109T	35.0	NE	488840 362240	SK86SE142	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A 8
110V	38.0	E	489130 361960	SK86SE286	-1.0	RAF SWINDERBY CELL 3 TP C3/4
111	41.0	E	489140 361920	SK86SE285	-1.0	RAF SWINDERBY CELL 3 TP C3/3
112	42.0	E	489160 361820	SK86SE283	-1.0	RAF SWINDERBY CELL 3 TP C3/1

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
113	42.0	E	489150 361880	SK86SE284	-1.0	RAF SWINDERBY CELL 3 TP C3/2
114R	44.0	NE	488930 362170	SK86SE170	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP83
115U	47.0	NE	488910 362210	SK86SE175	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP88
116S	49.0	NE	488940 362160	SK86SE177	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP90
117T	51.0	N	488870 362230	SK86SE160	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP73
118R	53.0	NE	488940 362170	SK86SE174	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP87
119	54.0	E	489180 361780	SK86SE267	-1.0	CELLS 1&2 WITHAM ST HUGHS LINCS TP1
120U	63.0	NE	488930 362210	SK86SE176	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP89
121V	67.0	E	489160 361960	SK86SE287	-1.0	RAF SWINDERBY CELL 3 TP C3/5
122W	68.0	N	488980 362130	SK86SE167	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP80
123W	72.0	N	489010 362140	SK86SE166	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP79
124	85.0	E	489190 361900	SK86SE294	-1.0	RAF SWINDERBY CELL 3 TP C3/12
125X	91.0	NE	488850 362320	SK86SE148	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A WS14
126	91.0	E	489200 361880	SK86SE289	-1.0	RAF SWINDERBY CELL 3 TP C3/7
127	92.0	E	489190 361930	SK86SE288	-1.0	RAF SWINDERBY CELL 3 TP C3/6
128Z	102.0	NE	488980 362200	SK86SE168	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP81
129A A	102.0	E	489220 361830	SK86SE290	-1.0	RAF SWINDERBY CELL 3 TP C3/8
130X	114.0	NE	488880 362320	SK86SE161	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP74
131Y	117.0	E	489210 361960	SK86SE311	-1.0	RAF SWINDERBY CELL 5 TP C5/10
132	119.0	NE	488950 362270	SK86SE164	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP77
133	125.0	E	489260 361740	SK86SE268	-1.0	CELLS 1&2 WITHAM ST HUGHS LINCS TP2
134Y	128.0	E	489220 361970	SK86SE310	-1.0	RAF SWINDERBY CELL 5 TP C5/9
135Z	129.0	NE	489010 362200	SK86SE145	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A 11
136A A	132.0	E	489250 361830	SK86SE291	-1.0	RAF SWINDERBY CELL 3 TP C3/9
137A C	133.0	E	489230 361940	SK86SE293	-1.0	RAF SWINDERBY CELL 3 TP C3/11
138	136.0	SE	489239 361500	SK86SE16	4.5	GREEN GATE FARM
139	142.0	NE	489010 362230	SK86SE165	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP78
140A B	142.0	E	489250 361890	SK86SE315	-1.0	RAF SWINDERBY TPC4/4
141A B	142.0	E	489250 361890	SK86SE292	-1.0	RAF SWINDERBY CELL 3 TP C3/10
142	147.0	E	489240 361960	SK86SE309	-1.0	RAF SWINDERBY CELL 5 TP C5/8

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
143A C	150.0	E	489250 361930	SK86SE314	-1.0	RAF SWINDERBY TPC4/3
144	156.0	E	489274 361831	SK86SE275	-1.0	CELLS 3 4 & 5 WITHAM ST HUGHS LINCOLNSHIRE TP 5
145A D	158.0	NE	488960 362310	SK86SE143	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A 9
146	167.0	NE	488940 362330	SK86SE162	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP75
147A G	172.0	E	489270 361940	SK86SE308	-1.0	RAF SWINDERBY CELL 5 TP C5/7
148A F	176.0	E	489286 361881	SK86SE274	-1.0	CELLS 3 4 & 5 WITHAM ST HUGHS LINCOLNSHIRE TP 4
149A D	177.0	NE	488980 362320	SK86SE163	-1.0	SWINDERBY INDUSTRIAL ESTATE ZONE A TP76
150A H	179.0	E	489270 361980	SK86SE307	-1.0	RAF SWINDERBY CELL 5 TP C5/6
151A E	184.0	E	489290 361900	SK86SE296	-1.0	RAF SWINDERBY CELL 4 TP C4/2
152	184.0	E	489310 361790	SK86SE269	-1.0	CELLS 1&2 WITHAM ST HUGHS LINCS TP3
153A E	185.0	E	489290 361910	SK86SE313	-1.0	RAF SWINDERBY TPC4/2
154	186.0	E	489300 361860	SK86SE295	-1.0	RAF SWINDERBY CELL 4 TP C4/1
155A F	188.0	E	489300 361870	SK86SE312	-1.0	RAF SWINDERBY TPC4/1
156A G	189.0	E	489288 361937	SK86SE273	-1.0	CELLS 3 4 & 5 WITHAM ST HUGHS LINCOLNSHIRE TP 3
157	206.0	E	489340 361750	SK86SE270	-1.0	CELLS 1&2 WITHAM ST HUGHS LINCS TP4
158A H	209.0	E	489300 361980	SK86SE306	-1.0	RAF SWINDERBY CELL 5 TP C5/5
159	213.0	E	489310 361950	SK86SE305	-1.0	RAF SWINDERBY CELL 5 TP C5/4
160AI	220.0	E	489340 361830	SK86SE299	-1.0	RAF SWINDERBY CELL 4 TP C4/5
161AI	220.0	E	489340 361830	SK86SE316	-1.0	RAF SWINDERBY TPC4/5
162	229.0	E	489340 361880	SK86SE298	-1.0	RAF SWINDERBY CELL 4 TP C4/4
163	244.0	E	489350 361910	SK86SE297	-1.0	RAF SWINDERBY CELL 4 TP C4/3

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

#138: [scans.bgs.ac.uk/sobi\\_scans/boreholes/243404](https://scans.bgs.ac.uk/sobi_scans/boreholes/243404)



# 6 Estimated Background Soil Chemistry

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

4

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

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	<15 mg/kg	<150 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	<15 mg/kg	<150 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	<15 mg/kg	<150 mg/kg
0.0	On Site	RuralSoil	<15 mg/kg	<1.8 mg/kg	40 - 60 mg/kg	<15 mg/kg	<150 mg/kg

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

# 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](mailto:enquiries@bgs.ac.uk)  
Web: [www.bgs.ac.uk](http://www.bgs.ac.uk)

BGS Geological Hazards Reports and general geological enquiries



## British Gypsum

British Gypsum Ltd  
East Leake  
Loughborough  
Leicestershire  
LE12 6HX



## The Coal Authority

200 Lichfield Lane  
Mansfield  
Notts NG18 4RG  
Tel: 0345 7626 848  
DX 716176 Mansfield 5  
[www.coal.gov.uk](http://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](mailto:enquiries@phe.gov.uk)  
Main switchboard: 020 7654 8000



## Johnson Poole & Bloomer Limited

Harris and Pearson Building, Brettel Lane  
Brierley Hill, West Midlands  
DY5 3LH  
Tel: +44 (0) 1384 262 000  
Email: [enquiries.gs@jpb.co.uk](mailto:enquiries.gs@jpb.co.uk)  
Website: [www.jpb.co.uk](http://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  
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## Peter Brett Associates

Caversham Bridge House  
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Report Reference: HMD-214-1529296

Client Reference: ENV131775~NTW2253

## 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, 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.

**"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](http://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 reliable.

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 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 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, as the case may be, 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 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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