

Report No	Date
WB03671/R1	November 2014
Project	Phase 1 Desk Study Land to the west of Chilgrove Drive, North of Camp Road and adjoining former RAF Upper Heyford, Upper Heyford, incorporating former MOD Gymnasium
Client	E P BARRUS LIMITED





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Issue Number	Status	Description of Amendments
01	Final	Former site use added
02	Planning	Report Title Amended
0	Final	-

Report prepared by:	
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CONTENTS

EXECUTIVE SUMMARY i
1.0 INTRODUCTION 1
1.1 Instruction and Brief 1
1.2 Scope of Works 1
1.3 Limitations 1
2.0 PHASE I ASSESSMENT 2
2.1 Site Location and Description 2
2.2 Geology 2
2.3 BGS Historical Borehole Records 2
2.4 Hydrology and Hydrogeology 3
2.5 Site History 3
2.6 Environmental Database 4
3.0 PRELIMINARY CONCEPTUAL MODEL 5
4.0 GEOTECHNICAL AND ENVIRONMENTAL CONSIDERATIONS 7
4.1 Proposed Development 7
4.2 Anticipated Ground Conditions 7
4.3 Geotechnical Considerations 7
4.4 Environmental Considerations 8
4.5 Recommendations for Ground Investigation 9
4.6 Outline Recommendations for Remediation and Risk Reduction 9

FIGURES

2.1 - Site Location Plan

APPENDICES

- Appendix A – Photofile
Appendix B - BGS Borehole Records
Appendix C – Historic Maps
Appendix D – GroundSure Reports
Appendix E – Proposed Development

EXECUTIVE SUMMARY

Client	EP Barrus Limited
Site and Location	The site is situated within the urban boundary of Upper Heyford in Oxfordshire to the north west of the junction of Camp Road and Chilgrove Drive, with the approximate Ordnance Survey Grid Reference of SP52157 25867 (WGS84 Geoid Lat/Long: 51.928885,-1.242885). The nearest post code is OX25 5LU.
Proposed Development	<ul style="list-style-type: none"> • Application for full planning permission for Phase One works comprising erection of 9,837 sq.m warehouse with associated service yard and access; and • Outline application for Phase Two works comprising office and training school and manufacturing, storage and distribution buildings with associated parking and landscaping.
History of Site and Surroundings	The site previously housed a gymnasium associated with the adjacent airbase. The surrounding area was mixed fields and woodland until 1954 when the airfield was established to the north. A small quarry was present south of the site in the early maps, but had vanished by 1974. Four ponds are shown to the north west of the site by the 2014 map. A pump and small tanks once lay close to the site.
Anticipated Geology	Topsoil/Subsoil: - Unknown type and depth Superficial: - None Solid: - Weathered Great Oolite Group (Clay) - Great Oolite Group (Limestone) – extending to depth
Hydrology and Hydrogeology	<ul style="list-style-type: none"> • The nearest surface water 24m to the west. • The Great Oolite beneath the site is a Principal Aquifer. • The site is not located within a Source Protection Zone. • A risk of Clearwater Flooding within 50m of the wider site's boundary. • The nearest licensed groundwater abstraction lies 716m southeast and thus is of low sensitivity.
Environmental Considerations	<p>Existing Made Ground – The possibility of localised unrecorded made ground on site cannot be ruled out, and if encountered should be tested for common contaminants.</p> <p>Herbicides & Pesticides – Following the gymnasium building the site has been agricultural and there is a possibility of herbicides and pesticides present in the shallow soils.</p> <p>Landfill Type Gases – These might occur locally on site due to the small quarry of unknown infill adjacent to the site.</p> <p>Radon Gas – No radon protection measures are required.</p> <p>Invasive Species – Japanese Knotweed has not been observed on site, a careful watch should be kept, particularly during the spring for any growth.</p>
Geotechnical Considerations	<p>Foundations The Great Oolite Formation should be suitable for conventional pad foundations with foundations anticipated to be within 2m of existing ground levels. An intrusive site investigation should be completed to confirm the soil profile across the site and the soil/rock strengths</p> <p>Floor Slabs - Ground bearing floor slabs should be appropriate depending on the nature of the shallow soils.</p>

Geotechnical Considerations (continued)	<p>Buried Concrete - Special measures for the protection of buried concrete may be required. Testing to establish soil chemistry is required to assess this risk.</p> <p>Flood Risk – A groundwater flooding risk is indicated possibly arising from shallow groundwater within the Kempton Park Gravel. Intrusive investigation is required to quantify effects and mitigation of this risk.</p> <p>Earthworks: The Great Oolite should also be suitable for re-use as engineered fill, thus retaining surplus soils on site. It can sometimes be excavated as large boulders and some breaking or crushing might be required prior to reuse.</p> <p>Drainage - Potential in limestone strata of the great Oolite Formation. Soakaway testing should be completed in line with BRE Digest 365: <i>Soakaway Design</i>, 2007.</p> <p>Tree Impacts: Ash trees (moderate water demand) on the perimeters of the site, giving the potential for localised soil desiccation. Natural moisture content and soil plasticity profiles should be defined at critical locations.</p> <p>Buried Concrete: Special measures for the protection of buried concrete are unlikely. Chemical analysis of the soils should be completed and the grade of concrete assessed in line with BRE Special Digest 1, <i>Concrete in Aggressive Ground</i>, 2005, 3rd Edition.</p>
Risk Rating	<p>The general geotechnical risk is considered to be LOW.</p> <p>The general risk of significant chemical contamination is considered LOW</p>
Site Investigation Recommendations	<ul style="list-style-type: none"> • Trial Pitting and soakaway testing • Window Sampling (to permit SPT strength testing, and allow the installation of gas monitoring wells) • Geotechnical laboratory testing that is recommended includes Atterberg Limits, moisture contents, pH and water soluble sulphate. • Contaminated land testing that is recommended that include a general indicator suite, speciated Total Petroleum and Polyaromatic Hydrocarbons, pesticides, herbicides and Topsoil condition.,

1.0 INTRODUCTION

1.1 Instruction and Brief

Clarkebond (UK) Limited was commissioned by E P Barrus Limited to undertake a Phase I Desk Study on a site known as Project Wings, Upper Heyford.

This document has been prepared in support of a hybrid application comprising:

- Application for full planning permission for Phase One works comprising erection of 9,837 sq.m warehouse with associated service yard and access; and
- Outline application for Phase Two works comprising office and training school and manufacturing, storage and distribution buildings with associated parking and landscaping.

1.2 Scope of Works

The objectives of the investigation were to determine the sub-surface conditions in respect of:

- Preliminary geotechnical advice relating to the anticipated ground conditions
- Preliminary contamination assessment to consider potential significant pollutant linkages arising from the historic and current use of the site and surroundings.

1.3 Limitations

This report is provided for the benefit only of the party to whom it is addressed and we do not accept responsibility to any third party for the whole or any part of the contents and we exercise no duty of care in relation to this report to any third party.

This assessment has been based to a large extent on third party data acquired from Third Parties. This data has been taken at face value and has not been subjected to any third party validation.

2.0 PHASE I ASSESSMENT

2.1 Site Location and Description

The site is situated within the urban boundary of Upper Heyford in Oxfordshire to the north west of the junction of Camp Road and Chilgrove Drive, with the approximate Ordnance Survey Grid Reference of SP52157 25867 (WGS84 Geoid Lat/Long: 51.928885,-1.242885). The nearest post code is OX25 5LU.

A site location plan is included as Figure 2.1

The current site covers approximately 5.7ha and is bound as follows;

- To the north and north west by the former RAF Upper Heyford airbase;
- To the east by Chilgrove Drive and agricultural land;
- To the south by Camp Road, with a mobile home site 90m to the south west; and
- To the west by a field and residential properties some 150m from the site boundary

The site was visited on 2nd October 2014. The weather at the time was sunny. Typical photos of the site are included in Appendix A.

The site is roughly rectangular in shape. It slopes gently down to the southwest, with site levels ranging between 122mAOD in the north and east and 118mAOD in the south and west.

The site is currently used as fields and surfaced with crop stubble, although previous use includes a gymnasium building associated with the adjoining airbase. It is bounded by semi mature hedgerows. There are limited mature trees, the main one being a large Ash within the northwest boundary. Along this and the northern boundary there is some security fencing which separates the site from the old Upper Heyford air base. All the boundaries are hedgerows.

The site is accessed from the southeast corner. Overhead electricity lines cross the north end of the site and run along the eastern boundary. At the southeast corner there are utility covers for BT and also water supply with a fire hydrant.

2.2 Geology

The geology of the site is shown on maps obtained from the Groundsure report which are extracted from the British Geological Survey (BGS) Digital Geological Map of Great Britain at 1:50,000 scale.

This indicates that the Great Oolite of Jurassic age, underlies the site. The maps do not show any superficial deposits. The BGS Lexicon describes the Great Oolite as '*Calcareous (rarely oolitic) and argillaceous formations.*' The Groundsure data further describes it as *Interbedded Limestone And [subequal/subordinate] Argillaceous Rocks.*

2.3 BGS Historical Borehole Records

Historical exploratory hole records available on the BGS website show that the closest recorded boreholes to the site are located on the eastern and southern edges of the site. A copy of the logs is included in Appendix B.

The borehole on the east of the site encountered 0.8m of Made Ground comprising brick, limestone and concrete rubble over firm brown sandy clay with brick fragments. This was

underlain by a dark brown clayey, sandy silt with limestone fragments, and some coarse rubble (weathered Oolite) This was further underlain at 1.4m depth by buff yellow, moderately strong limestone (Great Oolite Limestone), proven to 1.52m depth. This hole was dry.

The borehole to the south of the site encountered topsoil to 0.60m, over interbedded limestone, hard limestone and occasional blue grey clay to 20m depth, with water bearing clay strata at 18.60m and a standing water depth of about 2m

2.4 Hydrology and Hydrogeology

Numerous water features have been highlighted within 500m of the site, the closest being at 24m west. Due to the proximity of such to the site, the potential risk to these receptors from any contamination on the site should be deemed as medium.

Guidance from the Environment Agency indicates that the underlying Great Oolite strata are designated as a Principal aquifer. As such the site sensitivity is regarded as high.

The site is located within 50m of an area recorded to be vulnerable to groundwater flooding (Clearwater Flood Zone). The site is not located in an area affected by surface water flooding.

The site is not located within or near a Source Protection Zone (SPZ).

The nearest licensed groundwater abstraction lies 716m southeast and thus is of low sensitivity.

2.5 Site History

Historical maps of the site area have been obtained via Groundsure. Pertinent information determined from review of these maps is set out in the following table and the maps are contained in Appendix C:

Table 2.2 - Historic Mapping Review

Date	On-site	Off-site
1875-1889	Site is a discreet area of a slightly larger field and is shown to be empty.	The site is bounded by roads to the east and south. North Leys Farm to the northwest, Keys Farm to the south. The surrounding area is largely fields with some areas of woodland. By 1880 a small quarry is shown in the field adjacent south of the site and increases to about 50m by 50m by 1922. River shown running south from North Leys Farm, past the site to the west. Pump shown about 270m WNW of the site.
1954	No change	Airfield shown to the far northwest.
1965	No change	Numerous buildings (barracks?) to the west. Roads, taxiways and aircraft aprons associated with the airfield expand to the field adjacent north of the site. Slight expansion to the quarry adjacent south (~50m x ~80m). North Leys Farm now called Letchmere Farm.
1974-1981	Guide post shown in the south east corner of the site.	Further expansion to the buildings west of the site to include shopping centres, sewage works, hospitals, car park and caravan park. A second caravan park is shown adjacent east of the site. By 1974 quarry to S no longer shown. By 1975 small tanks are shown about 50m SW of the site and are no longer labelled by 1995.
2002-2010	No change	Additional buildings added to Heyford Airfield to the north
2014	No change	Four ponds shown to the west of the site.

In summary, the surrounding area was mixed fields and woodland until by 1954 an airfield was established to the north. A small quarry was already evident just south of the site by the 1875 map, enlarged slightly before vanishing by 1974. Significant residential development occurred to the north and west of the site between the 1965 map and the 2002 map. Four ponds are shown to the north west of the site by the 2014 map and some small tanks once lay near the site.

2.6 Environmental Database

Environmental reports were commissioned to provide an indication of the site history and surrounding land uses available on the public registers. The reports provide data from a number of service providers including the British Geological Survey, Environment Agency and English Nature. The reports are included in Appendix D.

The location of data point references is provided relative to the site boundary and the search radius extends 1km from it.

The following table provides a summary of which are considered **significant**, together with an indication of the potential hazard type.

Table 2.3 - Environmental Data Review

Data Type	Distance from site	Hazard
Discharge consents	143m SW	Heyford Park, Upper Heyford. Receiving water: Leys Farm Ditch.
Dangerous or Hazardous Sites	273m NW	Heyford Park Management Company Limited, Southern bomb store site. Current COMAH site.
Substantiated Pollution Incident Register	483m SW	Incident date: 22/05/2007 Pollutant: Sewage Materials Water Impact: Category 2 (Significant)
Groundwater Abstractions	716m SE	Manor Farm, Middleton Stoney. General farming & domestic.
Groundwater vulnerability	On Site	Major Aquifer, High leaching potential. Soil Vulnerability Category H3
Radon Affected Areas	On site	No radon protection measures are required on site.
Historical Ground Workings	8m-21m S	Unspecified quarry/sand pit
Current Ground Workings	24m S	Limestone quarry

3.0 PRELIMINARY CONCEPTUAL MODEL

The site characterisation attempts to identify potential previous and existing site sources of contamination. The conceptual model links the identified sources likely to cause significant possibility of significant harm via pathways to identified critical receptors. The conceptual model is therefore based on a number of identified source-pathway-receptor scenarios. For land to be classified as contaminated a significant pollutant linkage will need to be identified which will include each component of the conceptual model. The absence or removal of a source or interception of a pathway will 'break' the pollutant linkage.

The conceptual model is characterised by identification of the following:

- **On-site** sources, which may impact **on-site** receptors via plausible pathways.
- **On-site** source, which may impact **off-site** receptors via plausible pathways.
- **Off-site** sources, which may impact **on-site** receptors via plausible pathways.

In the event of a change of land use assessment will be required of the new site development layout within the context of introducing new exposure pathways. The planning regime will require assessment of the site to ensure any new development will not be classed as contaminated land.

Potential sources of risks are considered to be the following:

- Pesticide and herbicide contamination from long term agricultural site use.
- Landfill type gas risk from infilled quarry.

Table 3.1 below indicates the risk scoring used on the potential pollutant linkages identified from the historic data search. The degree of risk (R) is calculated by multiplying the likelihood (L) with the effect (E):

Table 3.1 - Degree of risk (R) = Likelihood (L) x Effect (E)

Likelihood (L)	Description	Probability	Effect (E)	Description	Increase In Cost And Time
5	Almost certain	>70%			
4	Probable	50-70%	4	Very high	>10%
3	Likely	30-50%	3	High	4-10%
2	Unlikely	10-30%	2	Low	1-4%
1	Negligible	<10%	1	Very low	<1%
Risk (R)	Risk Level	Action			
1-5	Trivial	None			
6-10	Significant	Undertake appropriate mitigation measures to reduce the risk level by appropriate on-site practice at little additional cost.			
>10	Substantial	Designers should take such risks into account and avoid or reduce risk level to acceptable levels. Additional resources required.			

A preliminary conceptual model is indicated in Tables 3.2 to 3.4. This indicates the site and environs are considered as **trivial to significant** risk with respect to contamination.

Indicators above trivial risk have been identified as potentially being only the infilled quarry.

Table 3.2 On-Site to On-Site Source - Pathway - Receptor Model

Source	Hazard	Migration Pathway	L	Exposure Pathway	E	Receptor	R
Farmed soils	Pesticides & herbicides	Migration of liquids & vapours through unsaturated zone; Migration through saturated zone/groundwater; Preferential flow paths (e.g. drains, service runs etc.)	1	Migration to groundwater	2	Groundwater and/or surface waters, and/or eco-system	2
Farmed soils	Pesticides & herbicides	Ingestion of soil & household dust; Dermal contact with soil and household dust; Inhalation of indoor vapours and household dust; Inhalation of outdoor vapours and fugitive dust.	2	Migration to site users	2	Human beings	4

Table 3.3 On-Site to Off-Site Source - Pathway - Receptor Model

Source	Hazard	Migration Pathway	L	Exposure Pathway	E	Receptor	R
Farmed soils	Pesticides & herbicides	Migration of liquids & vapours through unsaturated zone; Migration through saturated zone/groundwater; Preferential flow paths (e.g. drains, service runs etc.)	1	Migration to groundwater	2	Groundwater and/or surface waters, and/or eco-system	2
Farmed soils	Pesticides & herbicides	Ingestion of soil & household dust; Dermal contact with soil and household dust; Inhalation of indoor vapours and household dust; Inhalation of outdoor vapours and fugitive dust.	1	Migration to adjacent land users	2	Human beings	2

Table 3.4 Off-Site to On-Site Source - Pathway - Receptor Model

Source	Hazard	Migration Pathway	L	Exposure Pathway	E	Receptor	R
Made Ground soils and adjacent site uses (e.g. airfield)	Hydrocarbons, VOCs & SVOCs	Migration of liquids & vapours through unsaturated zone; Migration through saturated zone/groundwater; Preferential flow paths (e.g. drains, service runs etc.) Inhalation of indoor & outdoor vapours.	2	Migration to site users	2	Human beings	4
Made Ground soils and adjacent site uses	Heavy metals and/or hydrocarbons	Inhalation of fugitive dust.	1	Migration to site users	2	Human beings	2
Infilled Quarry	Landfill type gases	Migration of gases through unsaturated zone	2	Migration to site users	4	Human beings	8

4.0 GEOTECHNICAL AND ENVIRONMENTAL CONSIDERATIONS

4.1 Proposed Development

The Phase One works comprise erection of 9,837 sq. m warehouse with associated service yard and access and the Phase Two works comprise office and training school and manufacturing, storage and distribution buildings with associated parking and landscaping

Current development plans for the site are included in Appendix E.

4.2 Anticipated Ground Conditions

The anticipated ground conditions for the site are summarised in the table below and are based on the available geological information.

Table 4.1 Anticipated Ground Conditions

Depth (m)	Brief Description
0.00 to 0.60	TOPSOIL
0.60-1.40 to 1.00-2.00	Firm yellowish brown gravelly CLAY (WEATHERED GREAT OOLITE FORMATION)
1.00-2.00 to Depth	Buff yellow LIMESTONE with bands of blue clay (GREAT OOLITE FORMATION)

Whilst there is some Made Ground in a borehole close to the site, it is considered that it is unlikely to be encountered within the current site. Made Ground can sometimes be encountered at field entries, but that should be the limit.

Groundwater is not expected to be encountered at shallow depth beneath the site.

4.3 Geotechnical Considerations

The following geotechnical aspects should be considered:

- Foundation Types:** The Great Oolite Formation should be suitable for conventional pad foundations with foundations anticipated to found within 2m of existing ground levels. An intrusive site investigation should be completed to confirm the soil profile across the site and the soil/rock strengths.
- Earthworks:** The Great Oolite should also be suitable for re-use as engineered fill, thus retaining surplus soils on site. It can sometimes be excavated as large boulders and some breaking or crushing might be required prior to reuse. Some breaking may also be required for excavations such as for foundations and services.
- Floor Slabs:** Ground bearing floor slabs may be appropriate depending on the nature of the shallow soils.
- Soakaway Drainage:** Potentially possible in the limestone strata of the great Oolite Formation. To confirm this, soakaway testing should be completed in line with BRE Digest 365: *Soakaway Design*, 2007.

- **Tree Impacts:** A number of semi-mature to mature trees have been observed on the perimeters of the site, giving the potential for localised soil desiccation and thus deeper foundations. The main trees noted within potential influencing distance of foundations are Ash trees within the hedgerows. These are classified by NHBC Standards Chapter 4.2, *Building Near Trees*, 2007 as having moderate water demand. Natural moisture content and soil plasticity profiles should be defined at critical locations.
- **Buried Concrete:** Given the geology then special measures for the protection of buried concrete are unlikely to be required. Chemical analysis of the soils should be completed and the grade of concrete assessed in line with BRE Special Digest 1, *Concrete in Aggressive Ground*, 2005, 3rd Edition.

The general geotechnical risk is considered to be **LOW**.

4.4 Environmental Considerations

The desk study completed to date highlights the following sources of potential contamination/environmental risk on site:

- **Existing Made Ground** – An existing borehole on the east edge of the site did encounter made ground to 0.80m depth. Therefore the possibility of localised unrecorded made ground on site cannot be ruled out, and if encountered should be tested for common contaminants.
- **Herbicides & Pesticides** – As the site has been agricultural throughout its history, there is a possibility of herbicides and pesticides in the shallow soils.
- **Radon Gas** – The environmental database showed that 1-3% of homes in the site vicinity were above the action level. Therefore, no protection measures should be required in the construction of new dwellings or extensions.
- **Landfill Type Gases** – these may occur locally on site due to the small quarry of unknown infill, adjacent to the site.
- **Invasive Species** – Japanese Knotweed has not been observed although a detailed survey should be completed, recommend within the spring when growth is fastest.

It is fast spreading and extremely invasive, travelling rapidly by watercourses, and by manmade transportation in cars, trains and lorries. Recently, it has spread widely by the use of fly tipping, soil movements about and to off-site, and via inappropriate treatments. Where poorly treated prior to construction, stands have re-grown post construction causing significant structural damage, failure in some instances and loss of use.

The plant is very fast growing, and as a result tends to smother all plants in the vicinity. It has a high tolerance of a range of environmental conditions and thrives in a variety of soils. It can establish stands with pH ranging from 3-8, on sites with elevated heavy metal contaminants, that may prevent native species growing, and soils with little available nitrogen and other nutrients.

Japanese Knotweed should be totally eliminated from the site before development is started. It should be noted that in order to eradicate the plant completely every stem and rhizome must be found and removed or treated. If even the smallest part of the plant is missed and/or not adequately treated there is a significant chance that it will grow back, in some recorded instances taking as many as 20 years.

The general risk of significant contamination is considered to be **LOW**. The potential impact to the groundwater (if feasible) and local environment should be assessed by appropriate analysis of the soils and groundwater together with a risk assessment based on the site-specific criteria.

4.5 Recommendations for Ground Investigation

Based on the desk study completed to date the following broad scope of investigation is recommended.

- 1 day of Trial Pitting (to permit soakaway testing).
- 1 day of dynamic (window) sampling (to complete the coverage of the site, permit SPTs for strength assessment and to permit gas monitoring wells to be installed).
- Geotechnical laboratory testing that is recommended includes Atterberg Limits, MC, pH and water soluble sulphate.
- Contaminated land testing that is recommended includes a general indicator suite, speciated Total Petroleum and Polyaromatic Hydrocarbons, pesticides, herbicides and Topsoil condition. Topsoil in particular should be tested for contaminant concentrations.

4.6 Outline Recommendations for Remediation and Risk Reduction

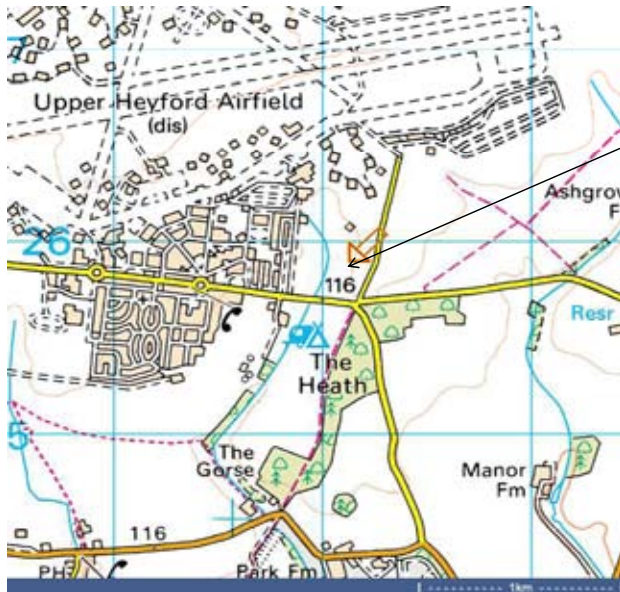
Based on the findings of this report, we envisage that remediation and risk reduction measures that will be required to render remaining risks on the site as acceptable are as follows:

- All imported topsoils and subsoils should be tested to prove that they do not contain any unacceptable (including naturally occurring) contamination. It is however expected that the site will yield a surplus of topsoil (it should be possible to transfer this to another development site following a *Definition Of Waste* CoP assessment by a *Qualified Person*).
- The local water company should accept normal PE or PVC water supply pipes for the entire site. They are unlikely to request barrier pipe (high risk situations).
- If there is Made Ground present on part of the site, then vigilance will be maintained during site clearance and construction, in case any further areas of suspected contamination are encountered. If areas are found, then work will stop in that area, a GeoEnvironmental engineer should be contacted to assess the situation and potentially undertake appropriate sampling, testing and further risk assessment.

All of the above measures will require validating by an independent party(ies) to prove correct implementation.

FIGURES

2.1 - Site Location Plan



Site Centre (approximate):
 OS X (Eastings) 452157
 OS Y (Northings) 225867

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Project: Land to the West of Chilgrove Drive
 North of Camp Road and adjoining former RAF Upper Heyford
 Phase I Geoenvironmental Assessment

Drawn: CES Scale: NTS
 Checked: CW Date: Oct-14

Title: Site Location Plan

Status: Final Issue
 Figure No. WB03671 Rev. 0
 Figure 2.1

APPENDICES

Appendix A – Photofile	(4 A4 Sheets)
Appendix B - BGS Borehole Records	(2 A4 Sheets)
Appendix C – Historic Maps	(23 A3 Sheets)
Appendix D – GroundSure Reports	(78 A4 Sheets)
Appendix E – Proposed Development	(1 A4 Sheet)

Appendix A – Photofile

(4 A4 Sheets)

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Plate 1 – North end of Chilgrove Drive blocked off with concrete infilled drums



Plate 2 – View of site from northeast corner



Plate 3 – View of site looking southwest from North east Corner



Plate 4 – View along northern boundary hedgerow



Plate 5 – View looking south from northern boundary



Plate 6 – View looking north from centre of site

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Plate 7 – Security Fencing and old power lines along northwest boundary



Plate 8 – Mature Ash tree in Northwest corner



Plate 9 – Power Lines off northwest boundary



Plate 10 – looking east down Camp Road



Plate 11 – Looking South from southeast corner of site



Plate 12 – Looking west along Camp Road

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Plate 13 – Looking northwest from southeast corner



Plate 14 – Looking north from southeast corner



Plate 15 – Looking north along eastern boundary with power lines



Plate 16 – Drainage cover close to southeast corner



Plate 17 – Looking west along Camp Road



Plate 18 – Fire Hydrant Southeast corner

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Plate 19 - Fire Hydrant Southeast corner



Plate 20 - Fire Hydrant Southeast corner



Plate 21 - Looking North along Chilgrove Drive



Plate 22 - Looking North along Chilgrove Drive



Plate 23 - Looking North along Chilgrove Drive

Appendix B - BGS Borehole Records (2 A4 Sheets)

LOCATION : R.A.F. Upper Heyford, Oxfordshire

BOREHOLE No. Thirty Seven

DATE OF BORING : 30.06.1987

Description of Strata	STRATA CHANGE		S P T C P T N-VALUE	SAMPLES		WATER LEVEL M	DEPTH of CASING M
	LEGEND	DEPTH M		DEPTH M	TYPE		
<p>MADE GROUND</p> <p>Red brick, concrete and limestone rubble</p> <p>Firm brown sandy clay with included fragments of red brick</p>		0.50					
<p>WEATHERED ZONE</p> <p>Medium to coarse dark brown clayey sandy SILT with included fragments of limestone rubble</p> <p>-occasional coarse hard limestone rubble</p>		1.00		1.00	B		
<p>GREAT OOLITE LIMESTONE</p> <p>Buff yellow moderately strong LIMESTONE</p>		1.50		1.50	B	DRY	
		2.00					

BOREHOLE DIAMETER : 100mm

LINING TUBES : None

GROUND LEVEL :

REMARKS : Borehole sunk from existing ground level

∇ - Water strike
 Y - Water (standing level)
 W - Water Sample
 B/J - Bulk/Jar Sample
 S.P.T. - Standard Penetration Test
 C.P.T. - Cone Penetration Test
 (U) - Undisturbed Sample (38mm & 100mm)

Date.
June 1987

BOREHOLE LOG

Report No.
S.894

Appendix C – Historic Maps

(23 A3 Sheets)

Site Details:

Upper Heyford

Client Ref: EMS_268500_362254**Report Ref:** EMS-268500_362254**Grid Ref:** 452154, 225863**Map Name:** County Series**Map date:** 1881**Scale:** 1:2,500**Printed at:** 1:2,500

Surveyed 1881
Revised 1881
Edition N/A
Copyright N/A
Levelled N/A



Produced by
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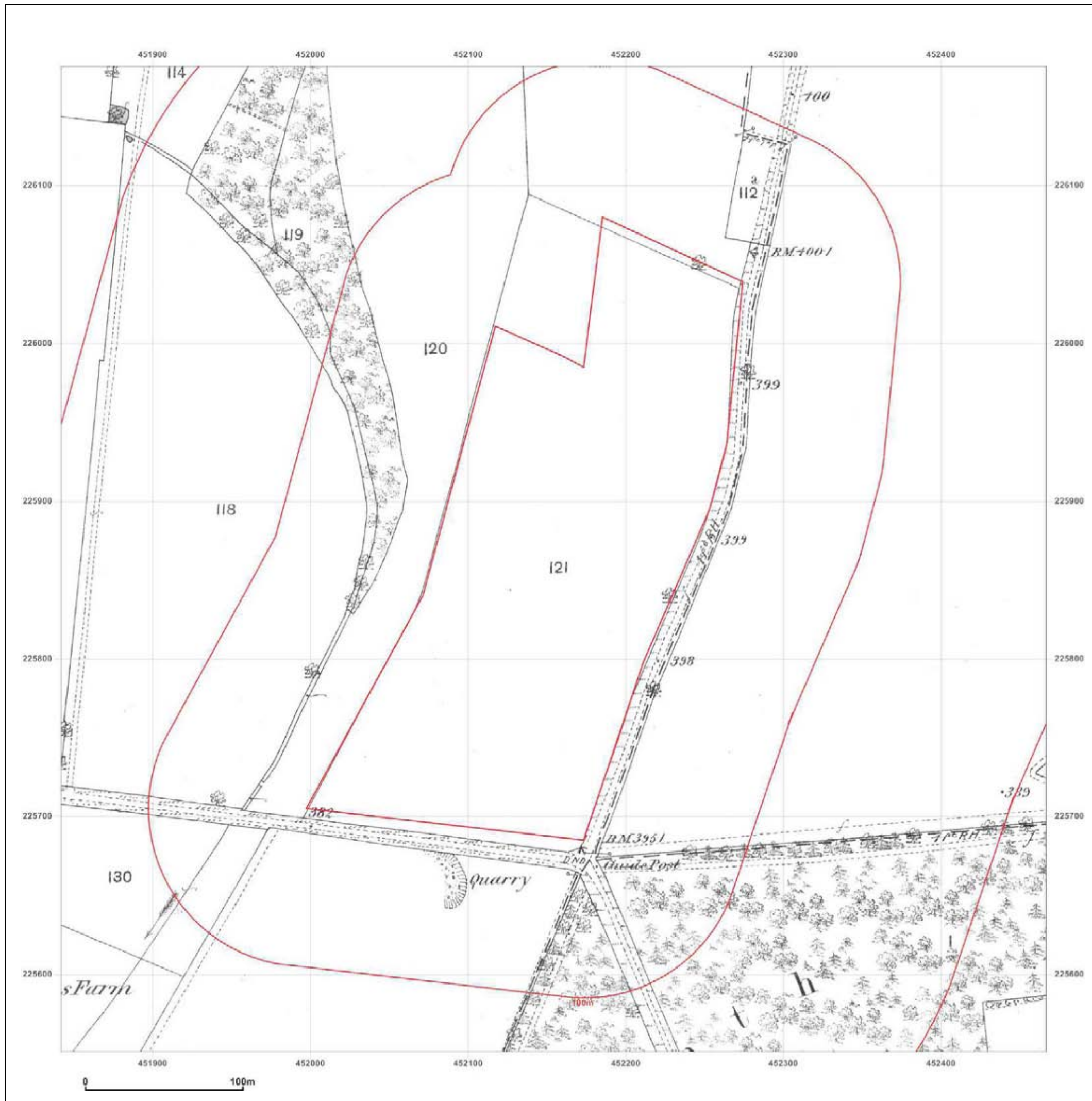


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Site Details:

Upper Heyford

Client Ref: EMS_268500_362254

Report Ref: EMS-268500_362254

Grid Ref: 452154, 225863

Map Name: County Series

Map date: 1900

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1900
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Edition N/A
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Site Details:

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Client Ref: EMS_268500_362254

Report Ref: EMS-268500_362254

Grid Ref: 452154, 225863

Map Name: County Series

Map date: 1922

Scale: 1:2,500

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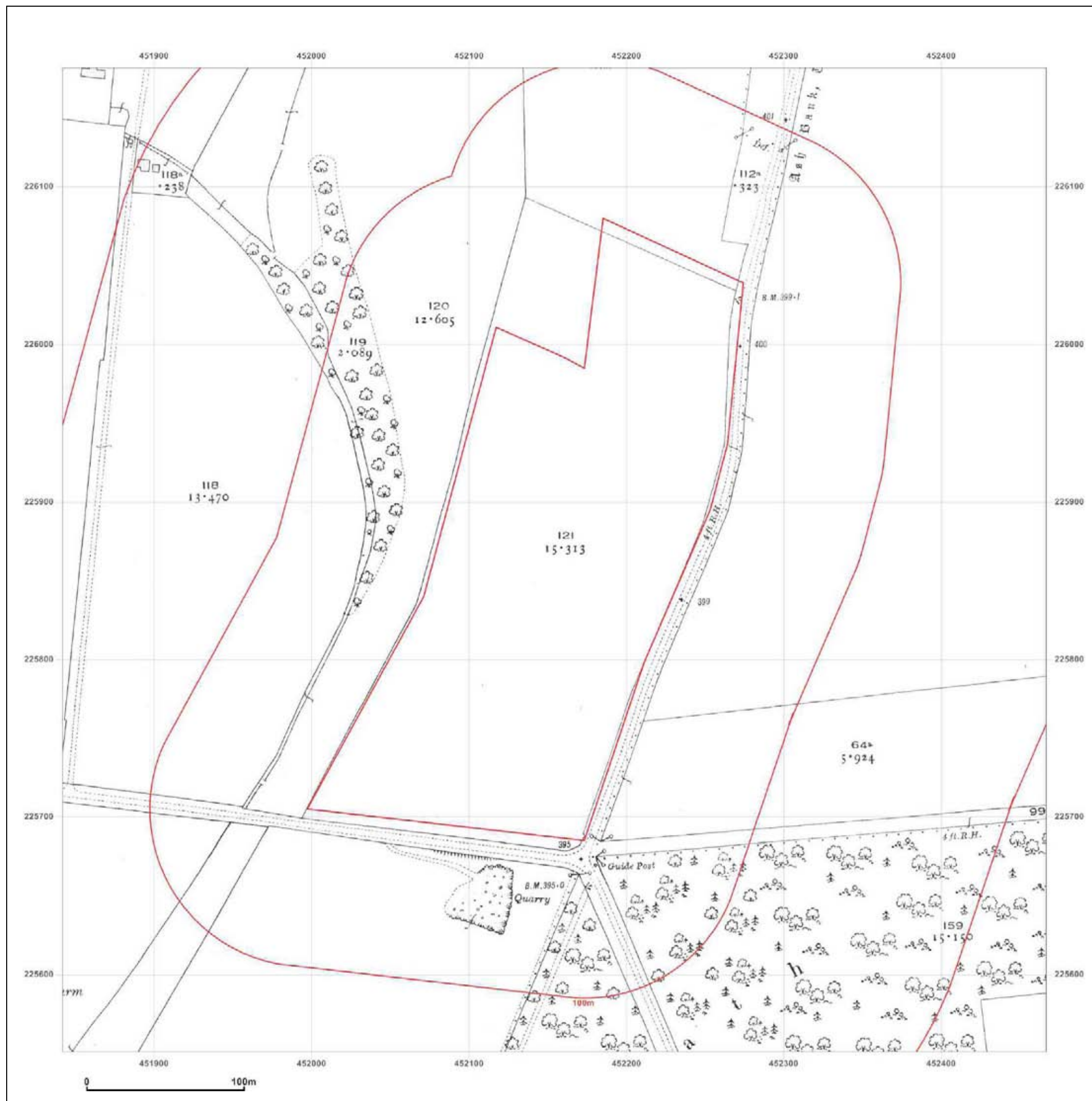


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Site Details:

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Client Ref: EMS_268500_362254
Report Ref: EMS-268500_362254
Grid Ref: 452154, 225863

Map Name: National Grid

Map date: 1974-1975

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1974
 Revised 1974
 Edition N/A
 Copyright 1976
 Levelled 1971

Surveyed 1974
 Revised 1974
 Edition N/A
 Copyright 1975
 Levelled 1970



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 Revised 1975
 Edition N/A
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Upper Heyford

Client Ref: EMS_268500_362254

Report Ref: EMS-268500_362254

Grid Ref: 452154, 225863

Map Name: National Grid

Map date: 1975-1976

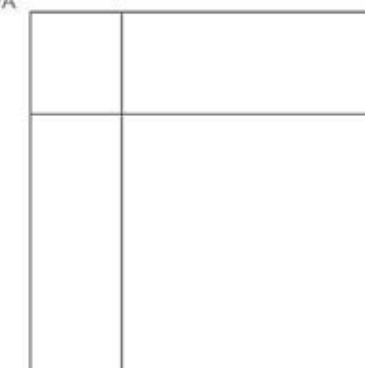
Scale: 1:2,500

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Edition N/A
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Site Details:

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Client Ref: EMS_268500_362254

Report Ref: EMS-268500_362254

Grid Ref: 452154, 225863

Map Name: National Grid

Map date: 1975-1976

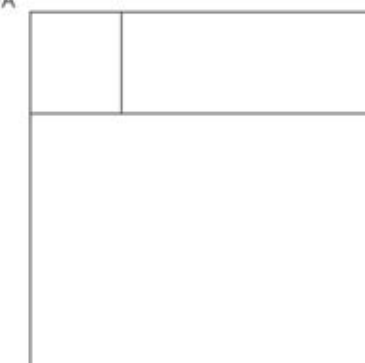
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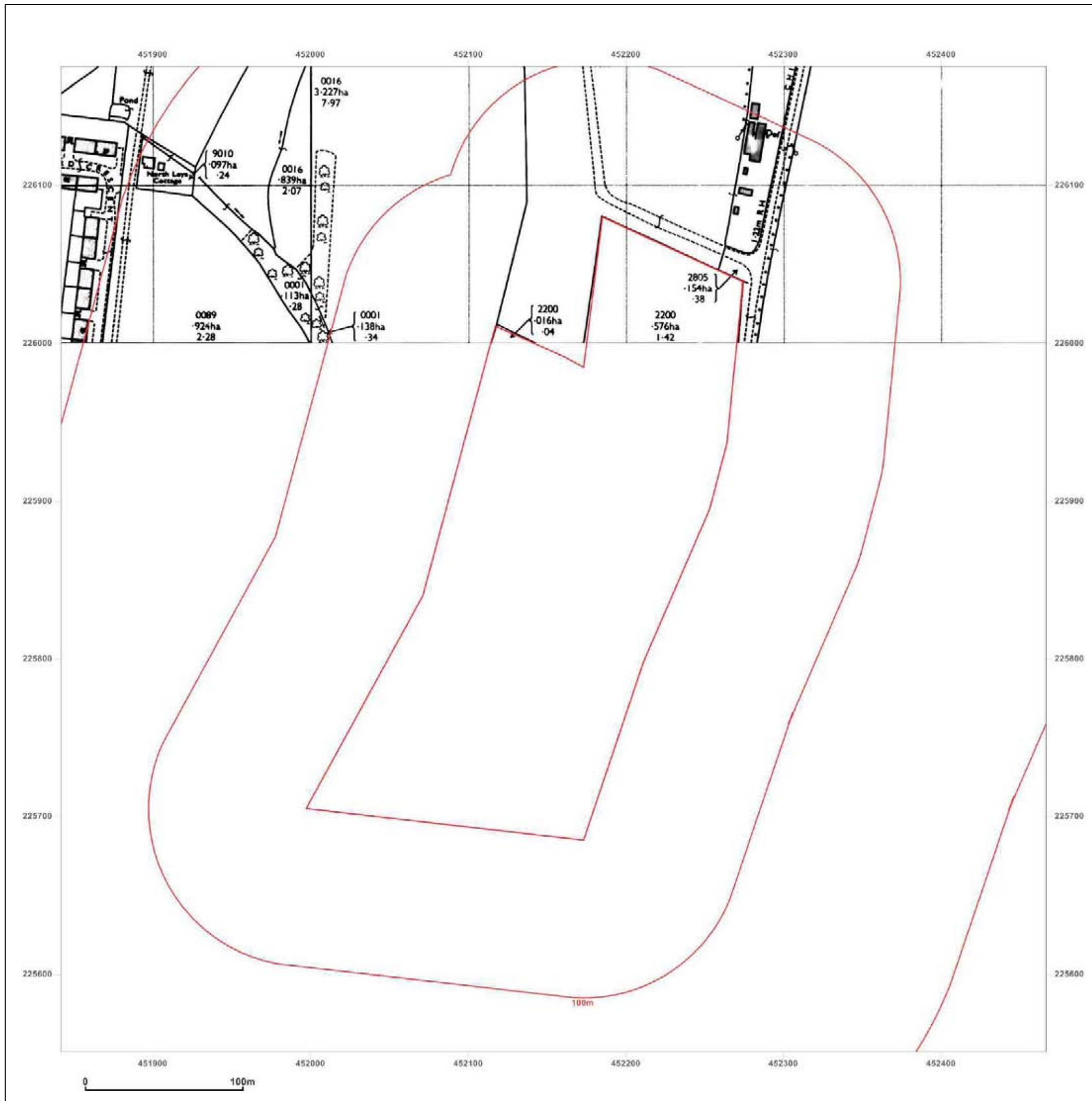


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Client Ref: EMS_268500_362254
Report Ref: EMS-268500_362254
Grid Ref: 452154, 225863

Map Name: National Grid

Map date: 1994

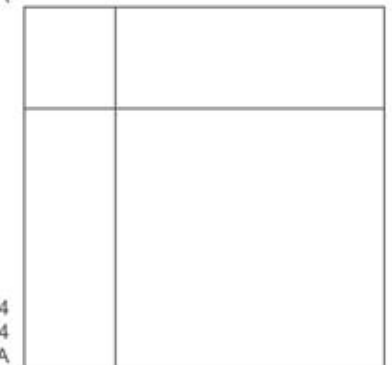
Scale: 1:2,500

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 Revised N/A
 Edition N/A
 Copyright 1994
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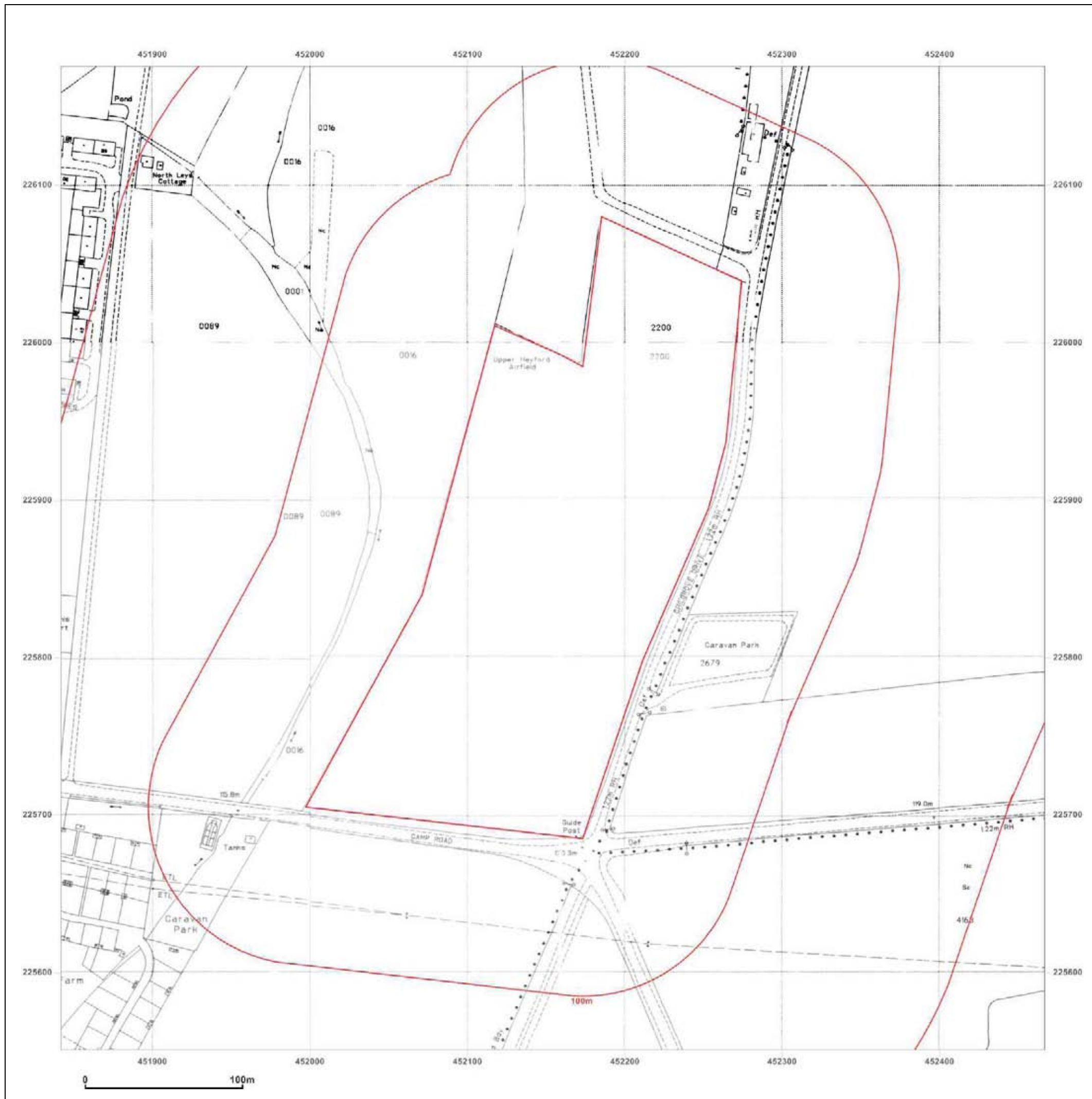


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Client Ref: EMS_268500_362254

Report Ref: EMS-268500_362254

Grid Ref: 452154, 225863

Map Name: National Grid

Map date: 1995

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
Revised N/A
Edition N/A
Copyright 1995
Levelled N/A



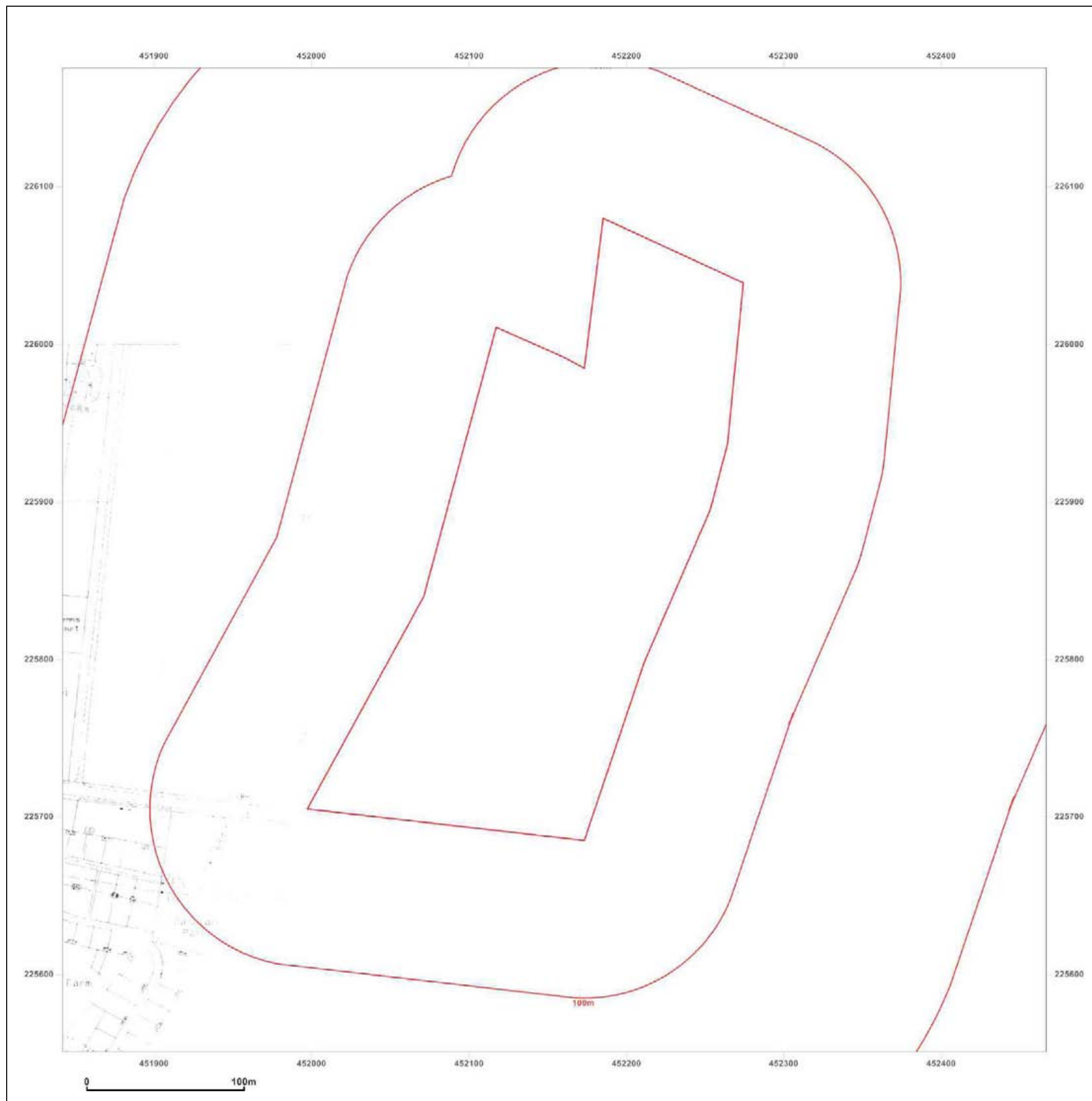
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Site Details:

Upper Heyford

Client Ref: EMS_268500_362254

Report Ref: EMS-268500_362254

Grid Ref: 452154, 225863

Map Name: National Grid

Map date: 1995

Scale: 1:2,500

Printed at: 1:2,500



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



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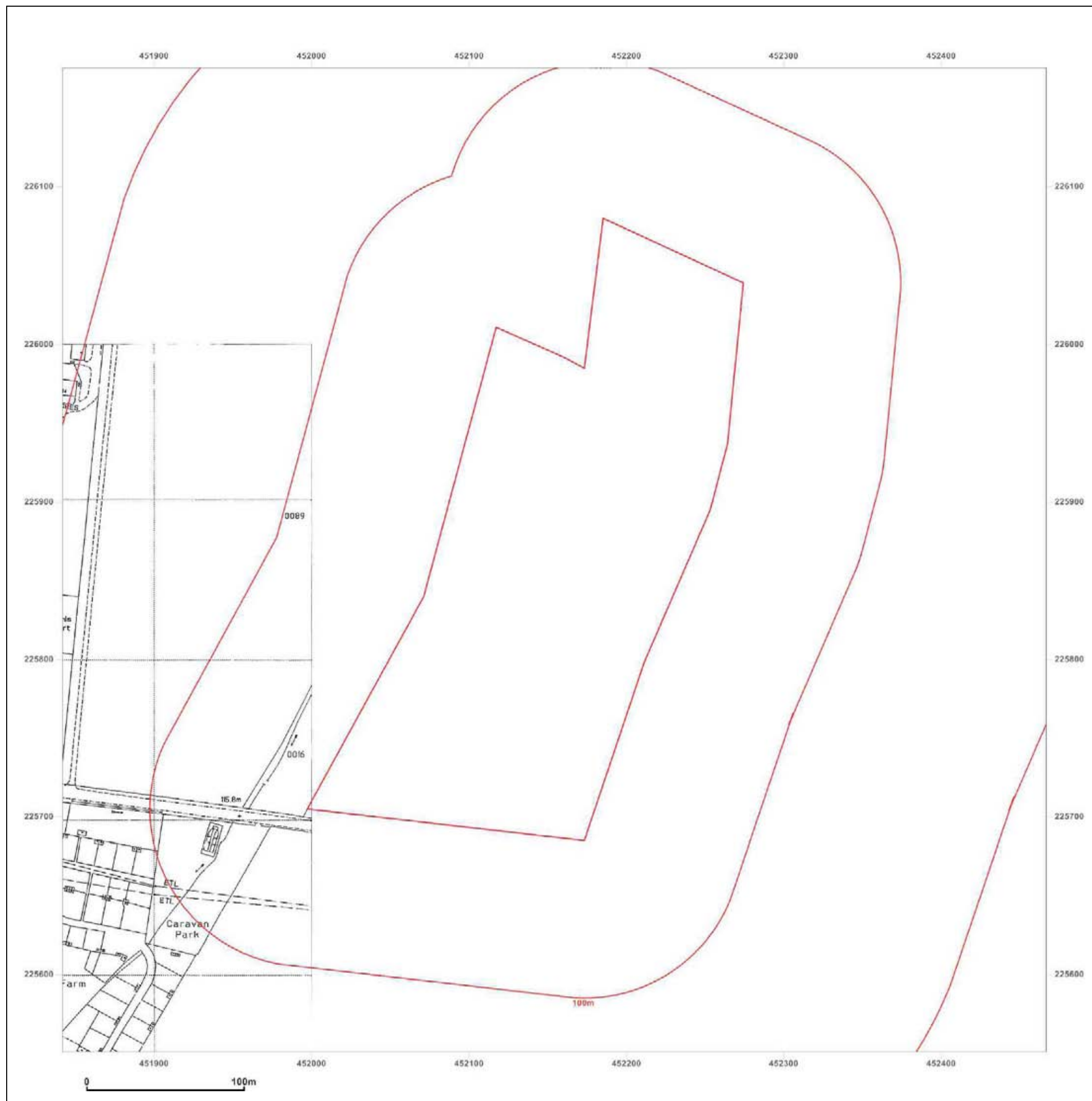


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Site Details:

Upper Heyford

Client Ref: EMS_268500_362254

Report Ref: EMS-268500_362254

Grid Ref: 452154, 225863

Map Name: County Series

Map date: 1875-1880

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1880
Revised 1880
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1875
Revised 1875
Edition N/A
Copyright N/A
Levelled N/A



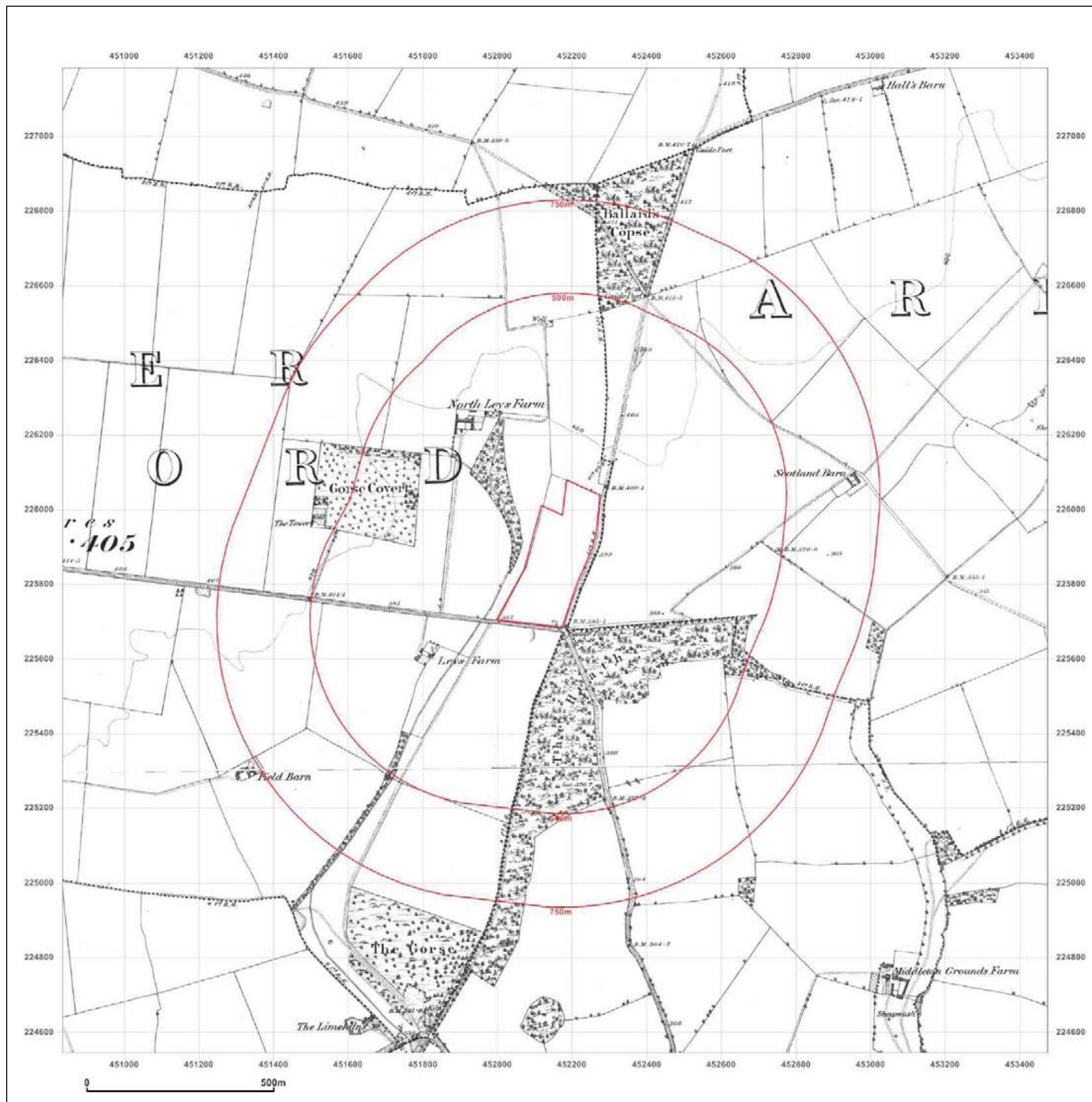
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Site Details:

Upper Heyford

Client Ref: EMS_268500_362254

Report Ref: EMS-268500_362254

Grid Ref: 452154, 225863

Map Name: County Series

Map date: 1919

Scale: 1:10,560

Printed at: 1:10,560



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

Surveyed 1879
Revised 1919
Edition N/A
Copyright N/A
Levelled N/A



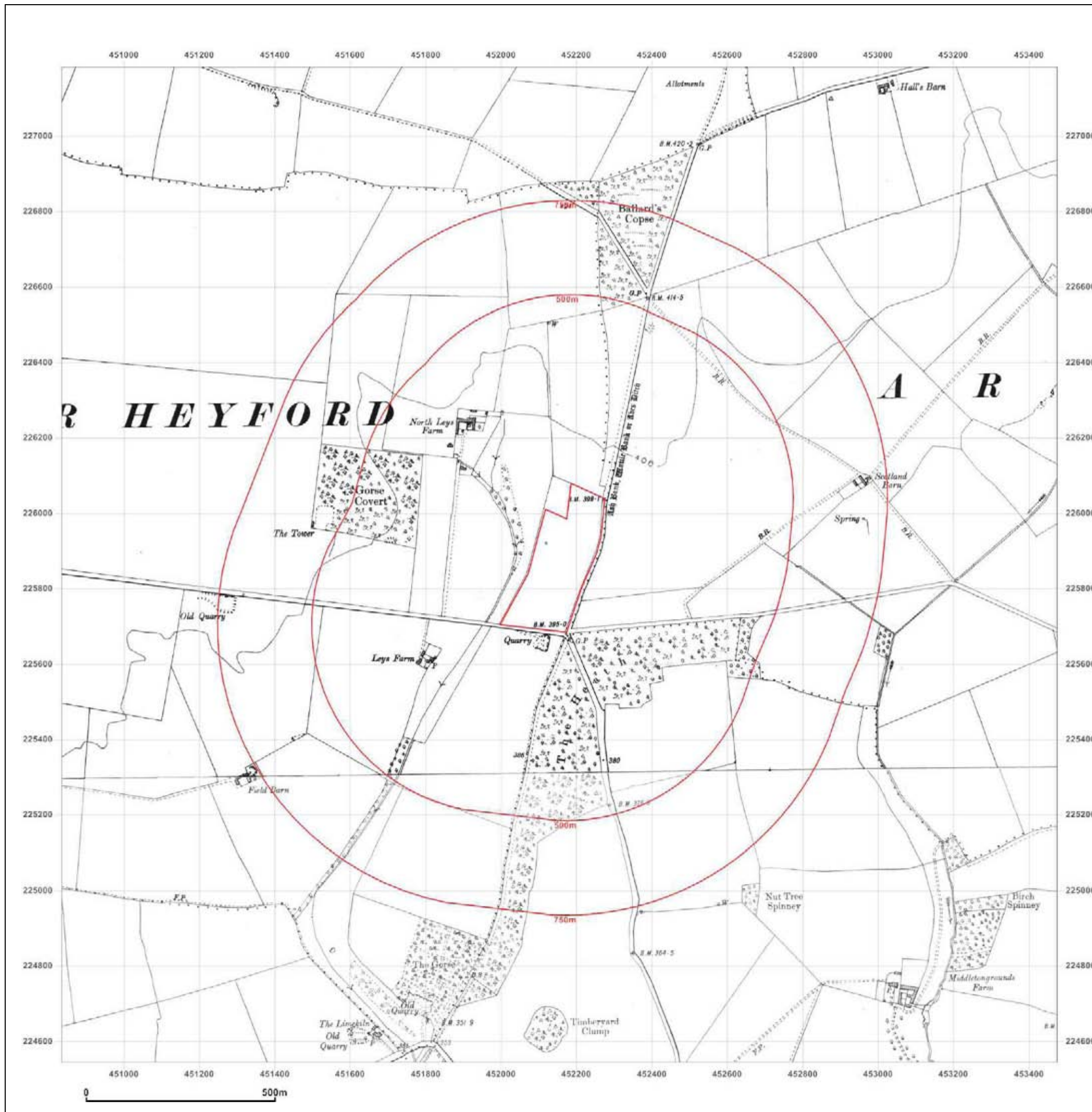
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Site Details:

Upper Heyford

Client Ref: EMS_268500_362254

Report Ref: EMS-268500_362254

Grid Ref: 452154, 225863

Map Name: County Series

Map date: 1923

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1880
Revised 1923
Edition N/A
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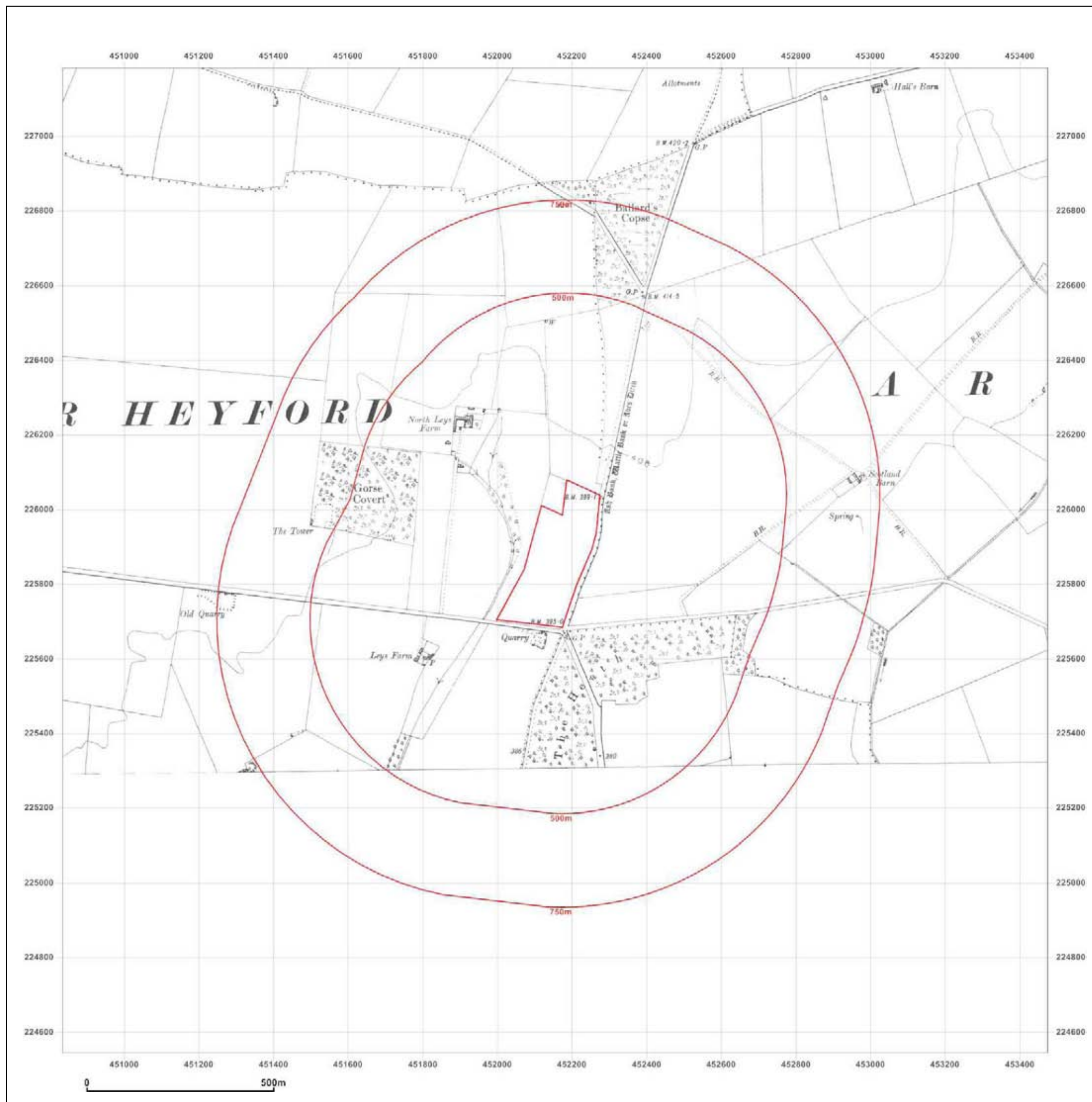


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Site Details:

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Client Ref: EMS_268500_362254
Report Ref: EMS-268500_362254
Grid Ref: 452154, 225863

Map Name: Provisional

Map date: 1954

Scale: 1:10,560

Printed at: 1:10,560



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 Revised 1954
 Edition N/A
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Surveyed N/A
 Revised 1954
 Edition N/A
 Copyright N/A
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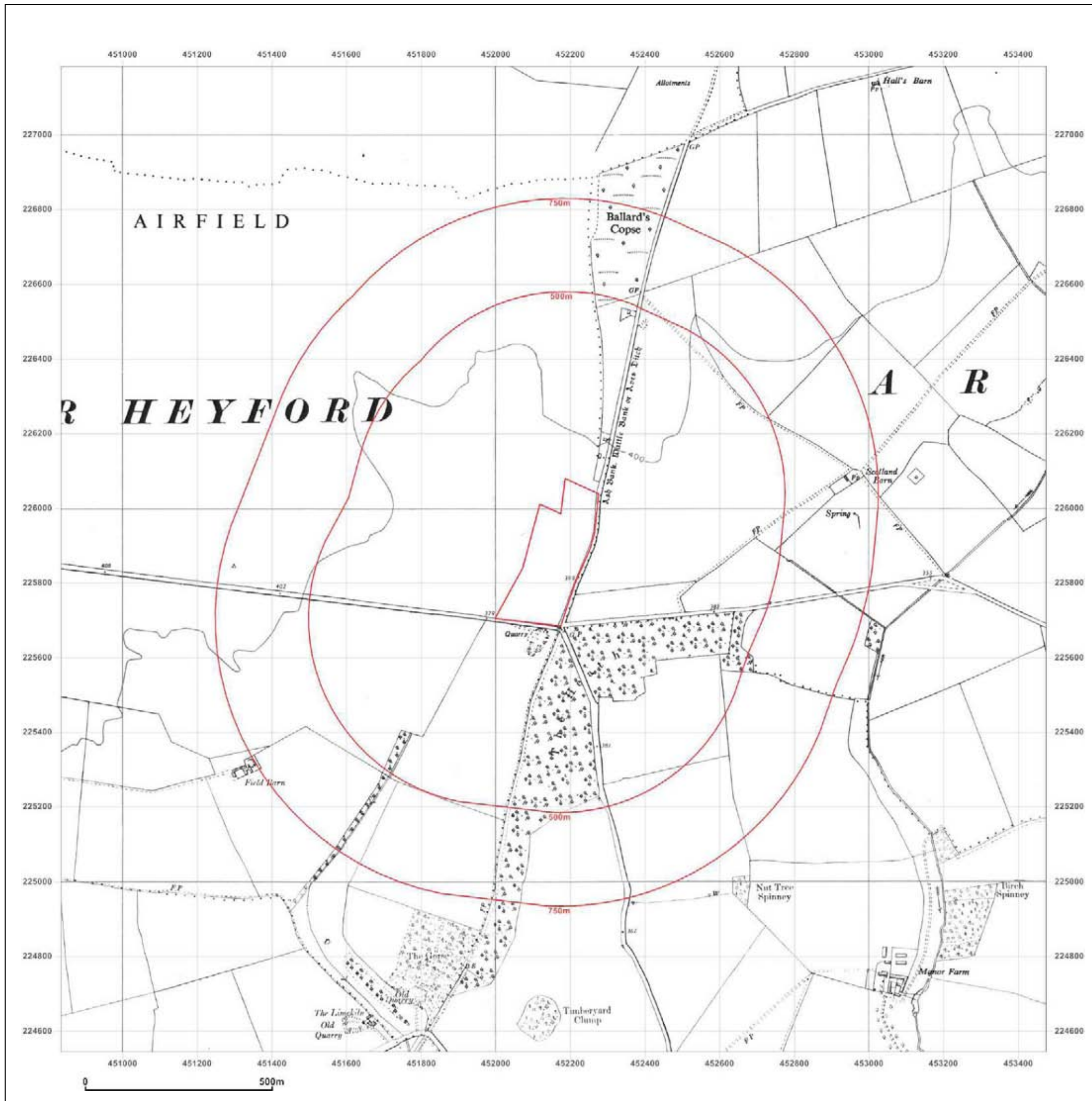


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Site Details:

Upper Heyford

Client Ref: EMS_268500_362254
Report Ref: EMS-268500_362254
Grid Ref: 452154, 225863

Map Name: Provisional

Map date: 1965

Scale: 1:10,560

Printed at: 1:10,560



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Revised 1965
Edition N/A
Copyright N/A
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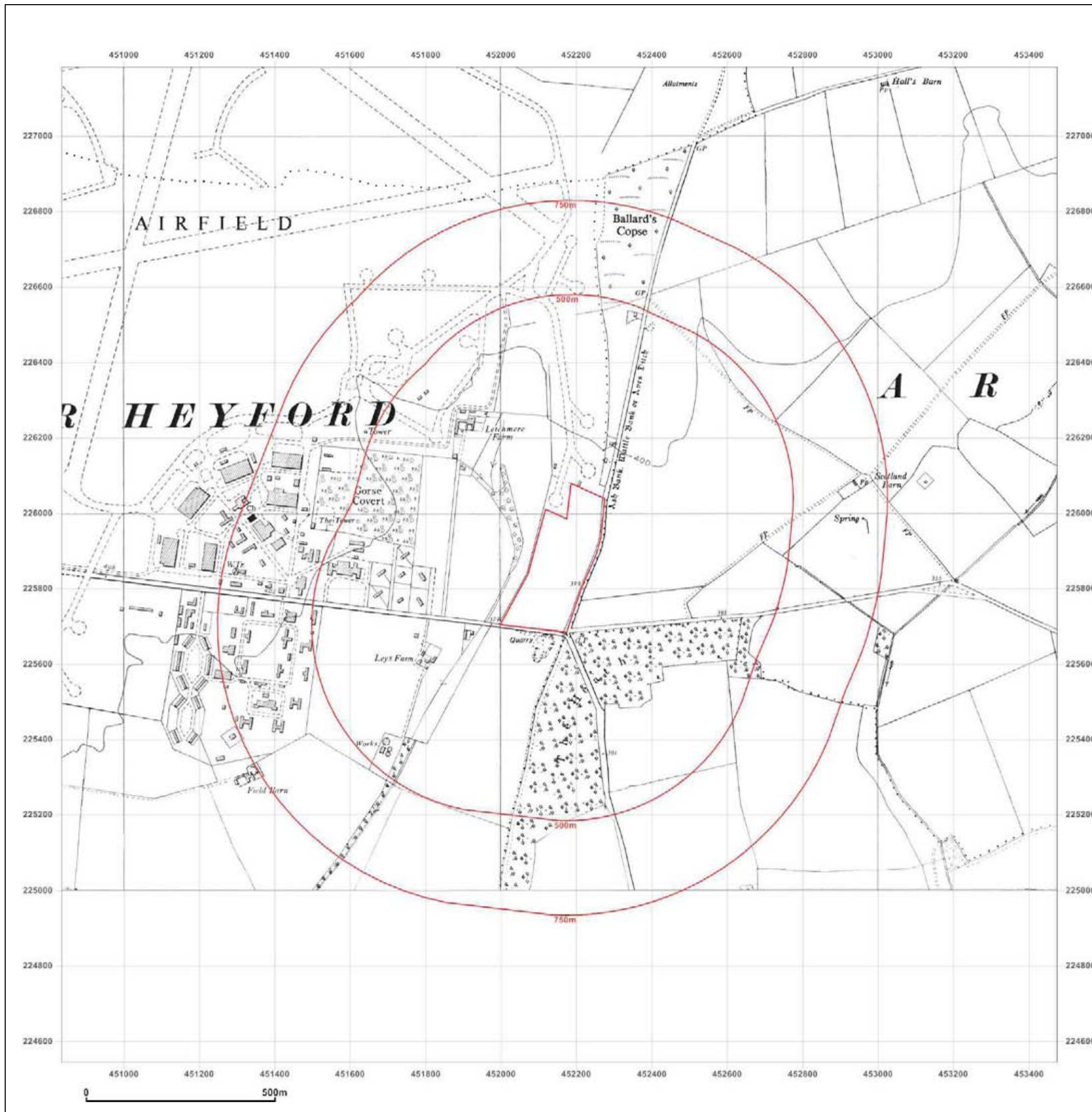


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Site Details:

Upper Heyford

Client Ref: EMS_268500_362254
Report Ref: EMS-268500_362254
Grid Ref: 452154, 225863

Map Name: National Grid

Map date: 1980-1981

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1975
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Edition N/A
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Surveyed 1977
Revised 1981
Edition N/A
Copyright N/A
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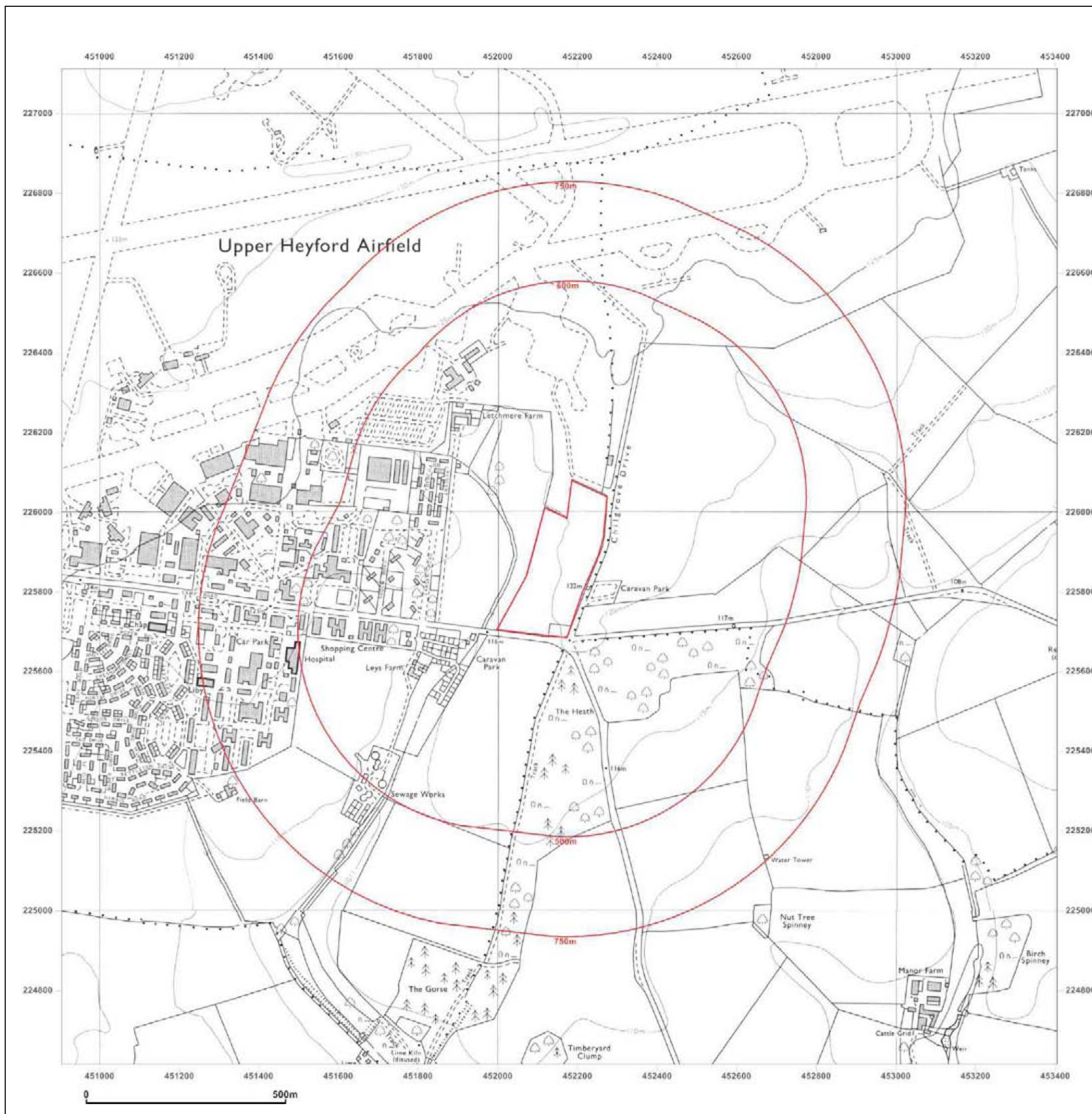


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Site Details:

Upper Heyford

Client Ref: EMS_268500_362254

Report Ref: EMS-268500_362254

Grid Ref: 452154, 225863

Map Name: National Grid

Map date: 1992

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1975
Revised 1992
Edition N/A
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Site Details:

Upper Heyford

Client Ref: EMS_268500_362254

Report Ref: EMS-268500_362254

Grid Ref: 452154, 225863

Map Name: 1:10,000 Raster

Map date: 2002

Scale: 1:10,000

Printed at: 1:10,000



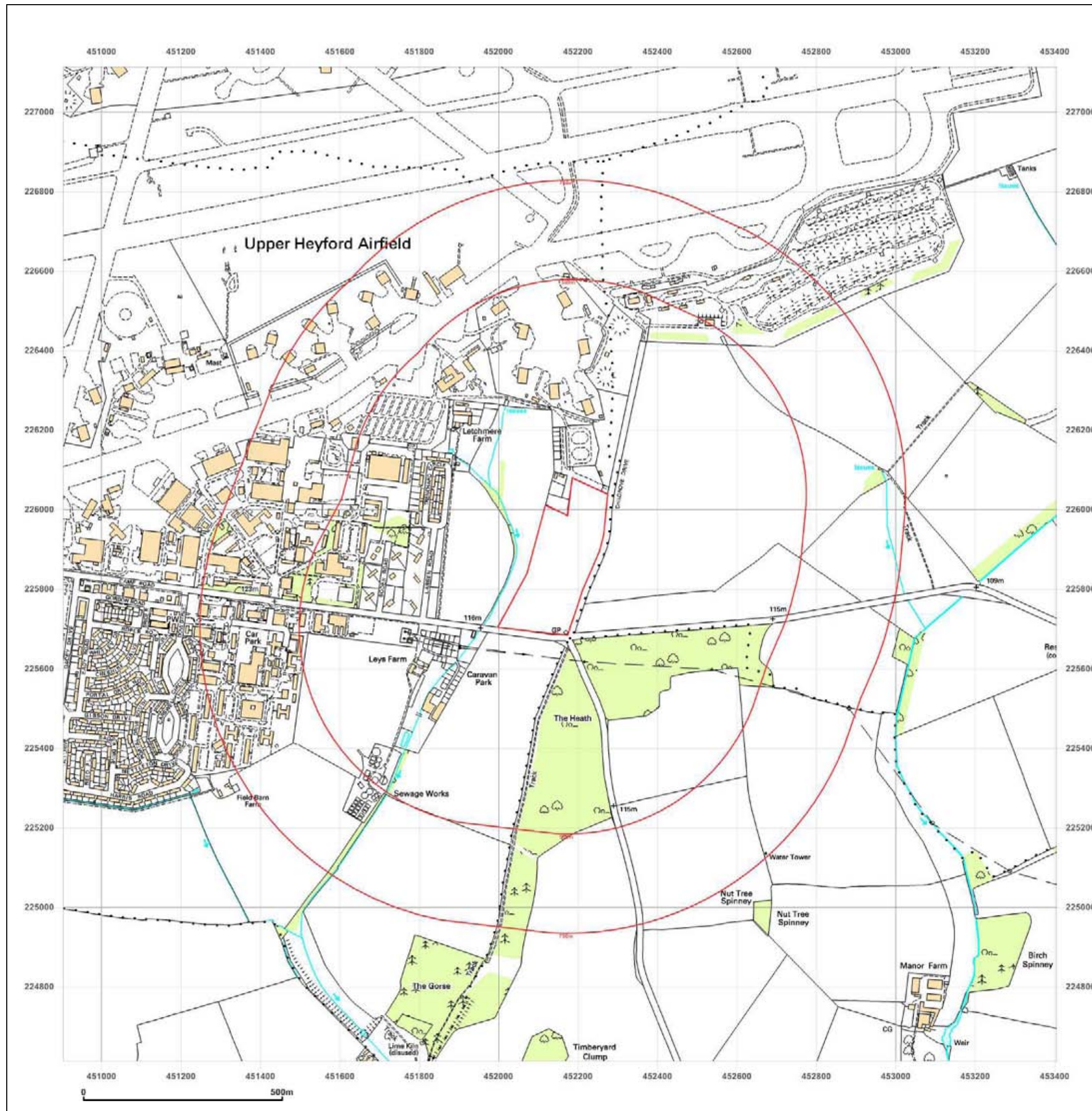
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Site Details:

Upper Heyford

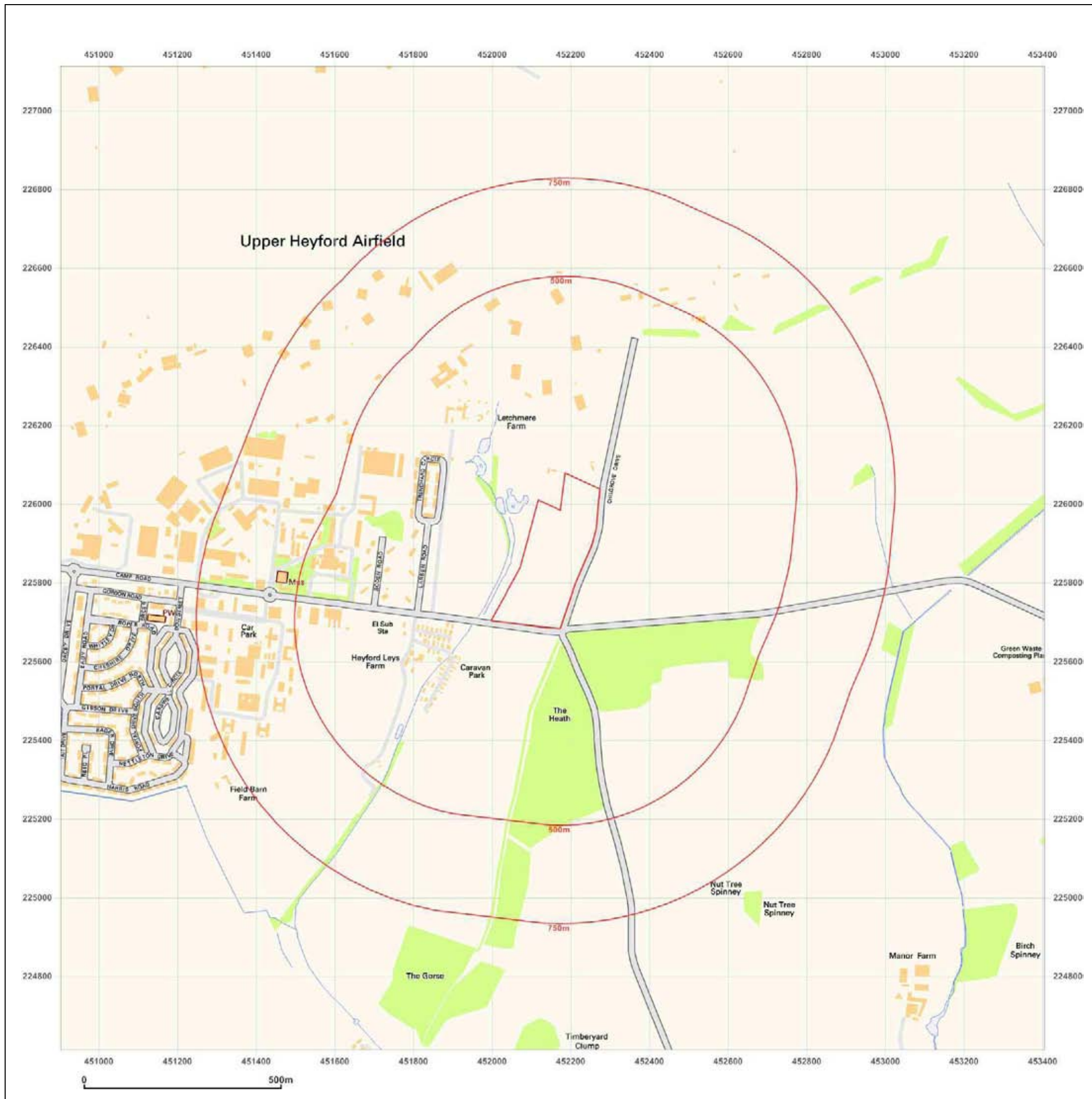
Client Ref: EMS_268500_362254
Report Ref: EMS-268500_362254
Grid Ref: 452154, 225863

Map Name: National Grid

Map date: 2014

Scale: 1:10,000

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Appendix D – GroundSure Reports

(78 A4 Sheets)



GroundSure Envirolnsight

Address: Upper Heyford,
Date: 22 Sep 2014
Reference: EMS-268500_362256
Client: EmapSite

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 19-Aug-2009
Grid Reference: 452154,225863
Site Size: 5.63ha

Contents Page

Contents Page	3
Overview of Findings.....	5
Using this report.....	9
1. Environmental Permits, Incidents and Registers Map.....	10
1. Environmental Permits, Incidents and Registers.....	11
1.1 Industrial Sites Holding Licences and/or Authorisations.....	11
1.1.1 Records of historic IPC Authorisations within 500m of the study site:.....	11
1.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:.....	11
1.1.3 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:.....	11
1.1.4 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:.....	11
1.1.5 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:.....	11
1.1.6 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:.....	12
1.1.7 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:	12
1.1.8 Records of Category 3 or 4 Radioactive Substances Authorisations:.....	12
1.1.9 Records of Licensed Discharge Consents within 500m of the study site:.....	12
1.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:.....	13
1.2 Dangerous or Hazardous Sites.....	13
1.3 Environment Agency Recorded Pollution Incidents.....	13
1.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:.....	13
1.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:.....	14
1.4 Sites Determined as Contaminated Land under Part 2A EPA 1990.....	14
2. Landfill and Other Waste Sites Map.....	15
2. Landfill and Other Waste Sites.....	16
2.1 Landfill Sites.....	16
2.1.1 Records from Environment Agency landfill data within 1000m of the study site:	16
2.1.2 Records of Environment Agency historic landfill sites within 1500m of the study site:	16
2.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:.....	16
2.1.4 Records of Local Authority landfill sites within 1500m of the study site:.....	16
2.2 Other Waste Sites.....	16
2.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:	16
2.2.2 Records of Environment Agency licensed waste sites within 1500m of the study site:	17
3. Current Land Use Map.....	18
3. Current Land Uses.....	19
3.1 Current Industrial Data.....	19
3.2 Petrol and Fuel Sites.....	19
3.3 Underground High Pressure Oil and Gas Pipelines.....	19
4. Geology.....	20
4.1 Artificial Ground and Made Ground.....	20
4.2 Superficial Ground and Drift Geology	20
4.3 Bedrock and Solid Geology	20
5. Hydrogeology and Hydrology.....	21
5a. Aquifer Within Superficial Geology.....	21
5b. Aquifer Within Bedrock Geology and Abstraction Licences.....	22
5c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences.....	23
5d. Hydrology – Detailed River Network and River Quality.....	24
5. Hydrogeology and Hydrology.....	25
5.1 Aquifer within Superficial Deposits.....	25
5.2 Aquifer within Bedrock Deposits.....	25
5.3 Groundwater Abstraction Licences.....	26
5.4 Surface Water Abstraction Licences.....	26

5.5 Potable Water Abstraction Licences.....	27
5.6 Source Protection Zones.....	27
5.7 Groundwater Vulnerability and Soil Leaching Potential.....	27
5.8 River Quality.....	27
5.8.1 Biological Quality.....	28
5.8.2 Chemical Quality.....	28
5.9 Detailed River Network.....	28
5.10 Surface Water Features	29
6. Environment Agency Flood Map for planning (from rivers and the sea).....	30
6. Flooding.....	31
6.1 Zone 2 Flooding.....	31
6.2 Zone 3 Flooding.....	31
6.3 Flood Defences.....	31
6.4 Areas benefiting from Flood Defences.....	31
6.5 Areas benefiting from Flood Storage.....	31
6.6 Groundwater Flooding Susceptibility Areas.....	32
6.6.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site?.....	32
6.6.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?.....	32
6.7 Groundwater Flooding Confidence Areas.....	32
7. Designated Environmentally Sensitive Sites Map.....	33
7. Designated Environmentally Sensitive Sites.....	34
7.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:.....	34
7.2 Records of National Nature Reserves (NNR) within 2000m of the study site:.....	34
7.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:.....	34
7.4 Records of Special Protection Areas (SPA) within 2000m of the study site:.....	34
7.5 Records of Ramsar sites within 2000m of the study site:.....	34
7.6 Records of Ancient Woodland within 2000m of the study site:	35
7.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:.....	35
7.8 Records of World Heritage Sites within 2000m of the study site:.....	35
7.9 Records of Environmentally Sensitive Areas within 2000m of the study site:	35
7.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:	35
7.11 Records of National Parks (NP) within 2000m of the study site:	35
7.12 Records of Nitrate Sensitive Areas within 2000m of the study site:.....	36
7.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:.....	36
8. Natural Hazards	
Findings.....	37
8.1 Detailed BGS GeoSure Data.....	37
8.1.1 Shrink Swell.....	37
8.1.2 Landslides.....	37
8.1.3 Soluble Rocks.....	38
8.1.4 Compressible Ground.....	38
8.1.5 Collapsible Rocks.....	38
8.1.6 Running Sand.....	39
9. Mining.....	40
9.1 Coal Mining.....	40
9.2 Shallow Mining.....	40
9.3 Brine Affected Areas	40
Contact Details.....	41
Standard Terms and Conditions.....	42

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	0		
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	4	1		
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	1		
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	2

Section 3: Current Land Use	On-site	0-50m	51-250	251-500
3.1 Current Industrial Sites Data	0	0	1	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?	None
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	4
5.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
5.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	1
5.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
5.7 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	0	1	0	Not searched	Not searched

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
5.8 Is there any Environment Agency information on river quality within 1500m of the study site?	No	No	Yes	No	No	No
5.9 Detailed River Network entries within 500m of the site	0	1	4	0	Not searched	Not searched
5.10 Surface water features within 250m of the study site	No	Yes	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?	No
6.2 Are there any Environment Agency Zone 3 floodplains within 250m of the study site?	No
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?	Low

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	2
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	3
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	0	1

Section 8: Natural Hazards

8.1 What is the maximum risk of natural ground subsidence?	Very Low
8.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?	Negligible
8.1.2 What is the maximum Landslides hazard rating identified on the study site?	Negligible
8.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?	Very Low
8.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?	Negligible
8.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?	Very Low
8.1.6 What is the maximum Running Sand hazard rating identified on the study site?	Negligible

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 |
|  250 |  Dangerous Substances (List 2) |  Part A(2) and Part B Authorised Processes |
|  500 |  Water Industry Referrals |  COMAH / NIHHS Sites |
| |  Licenced 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:

0

Database searched and no data found.

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

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:

5

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

ID	Distance	Direction	NGR	Details	
2	143.0	SW	451900 225600	Address: Heyford Park, Upper Heyford, Near B, Heyford Park, Upper Heyford, Nea, R Bicester, Oxfordshire Effluent Type: Trade Discharges - Site Drainage Permit Number: CATM.2850 Permit Version: 1	Receiving Water: Leys Farm Ditch Status: New Consent, By Application (wra 91, Section 88) Issue date: 27/3/1997 Effective Date: 27/3/1997 Revocation Date: -
3	220.0	NW	451921 226112	Address: Letchmere Farm Cottage, Letchmere Farm Cottage, Camp Road, Upper Heyford, Bicester, Oxfordshire, OX25 5LS Effluent Type: Sewage Discharges - Final/treated Effluent - Not Water Company Permit Number: CAWM.1362 Permit Version: 1	Receiving Water: Leys Farm Ditch Status: New Consent (wra 91, S88 & Sched 10 As Amended By Env Act 1995) Issue date: 17/7/2006 Effective Date: 17/7/2006 Revocation Date: -
4	221.0	NW	452000 226200	Address: Heyford Park, Upper Heyford, Near B, Heyford Park, Upper Heyford, Nea, R Bicester, Oxfordshire Effluent Type: Trade Discharges - Site Drainage Permit Number: CATM.2848 Permit Version: 1	Receiving Water: Leys Farm Ditch Status: New Consent, By Application (wra 91, Section 88) Issue date: 27/3/1997 Effective Date: 27/3/1997 Revocation Date: -
5	235.0	W	451900 226100	Address: Heyford Park, Upper Heyford, Near B, Heyford Park, Upper Heyford, Nea, R Bicester, Oxfordshire Effluent Type: Trade Discharges - Site Drainage Permit Number: CATM.2849 Permit Version: 1	Receiving Water: Leys Farm Ditch Status: New Consent, By Application (wra 91, Section 88) Issue date: 27/3/1997 Effective Date: 27/3/1997 Revocation Date: -

ID	Distance	Direction	NGR	Details	
6	277.0	SW	451850 225470	Address: Heyford Leys Mobile Home Park, Uppe, Heyford Leys Mobile Home Park, U, Pper Heyford, Oxfordshire Effluent Type: Sewage Discharges - Final/treated Effluent - Not Water Company Permit Number: CNTM.1883 Permit Version: 1	Receiving Water: Leys Farm Ditch Status: New Consent, By Application (wra 91, Section 88) Issue date: 30/6/1995 Effective Date: 30/6/1995 Revocation Date: -

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
7	273.0	NW	Heyford Park Management Company Limited	Heyford Park Management Company Limited, Southern Bomb Store/site, Heyford Park, Camp Road, Upper Heyford, Oxfordshire, Ox25 5hd	Current COMAH Site	COMAH Lower Tier Operator

1.3 Environment Agency Recorded Pollution Incidents

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

1

The following NIRS List 2 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance	Direction	NGR	Details	
1	483.0	SW	451720 225309	Incident Date: 22/05/2007 Incident Identification: 496617 Pollutant: Sewage Materials Pollutant Description: Final Effluent	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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 |
|  | Search Buffers (m) |  | E.A. Historic Landfill |  | E.A. Licensed Waste Site |
| | |  | Local Authority Landfill |  | BGS / DoE Survey Landfill |



2. Landfill and Other Waste Sites

2.1 Landfill Sites

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

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:

2

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	1300.0	E	453550 225750	Site Address: Ashgrove Farm, Ardley, Bicester, Oxfordshire, OX27 7PJ Type: Composting Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: AGR008 EPR reference: - Operator: Agrivert Ltd Waste Management licence No: 86429 Annual Tonnage: 24999.0	Issue Date: 28/06/2007 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Ardley Green Compost Centre Correspondence Address: -, The Stables, Radford, Chipping Norton, Oxfordshire, OX7 4EB
Not shown	1300.0	E	453550 225750	Site Address: Ashgrove Farm, Upper Heyford Road, Ardley, Bicester, Oxfordshire, OX27 7PJ Type: Composting in closed vessels Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: AGR008 EPR reference: EA/EPR/GP3295EN/V002 Operator: Agrivert Ltd Waste Management licence No: 86429 Annual Tonnage: 74999.0	Issue Date: 28/06/2007 Effective Date: - Modified: 09/07/2009 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Ardley Green Compost Centre Correspondence Address: -, -

3. Current Land Use Map



Current Land Use Legend



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



3. Current Land Uses

3.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site: 1

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	157.0	NE	Electricity Sub Station	452253 226221	OX25	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

Database searched and no data found.

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

4.3 Bedrock and Solid Geology

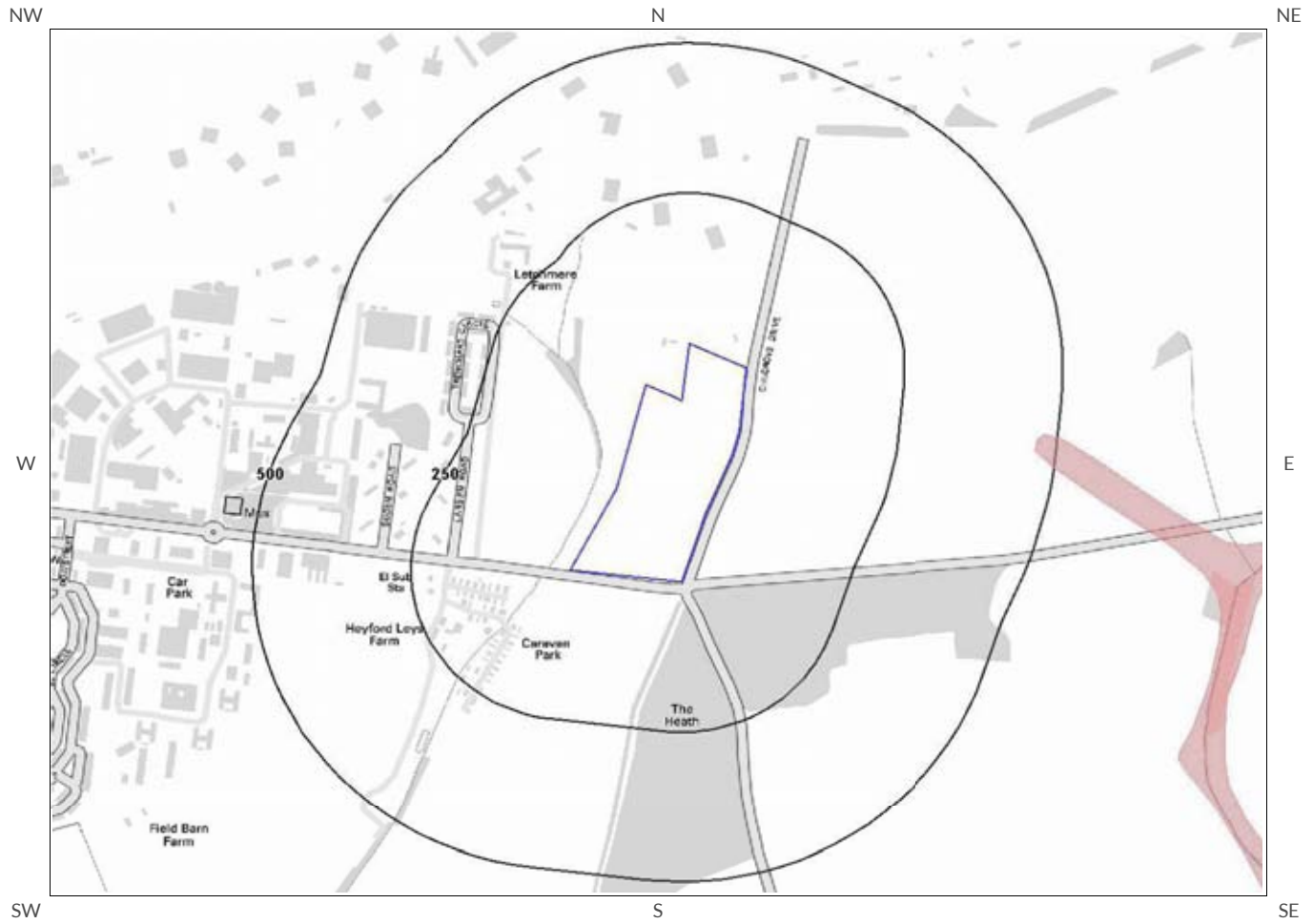
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
GOG-LMAR	GREAT OOLITE GROUP	INTERBEDDED LIMESTONE AND [SUBEQUAL/SUBORDINATE] ARGILLACEOUS ROCKS

(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)

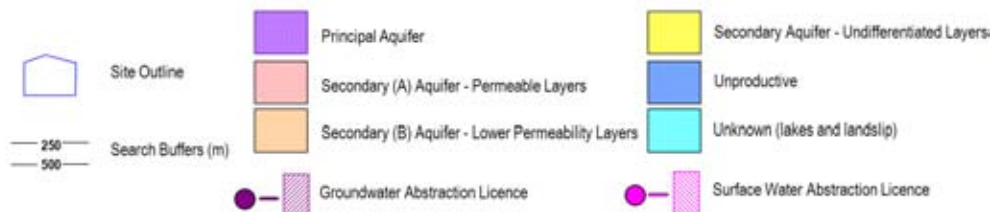
5b. Aquifer Within Bedrock Geology and Abstraction Licenses



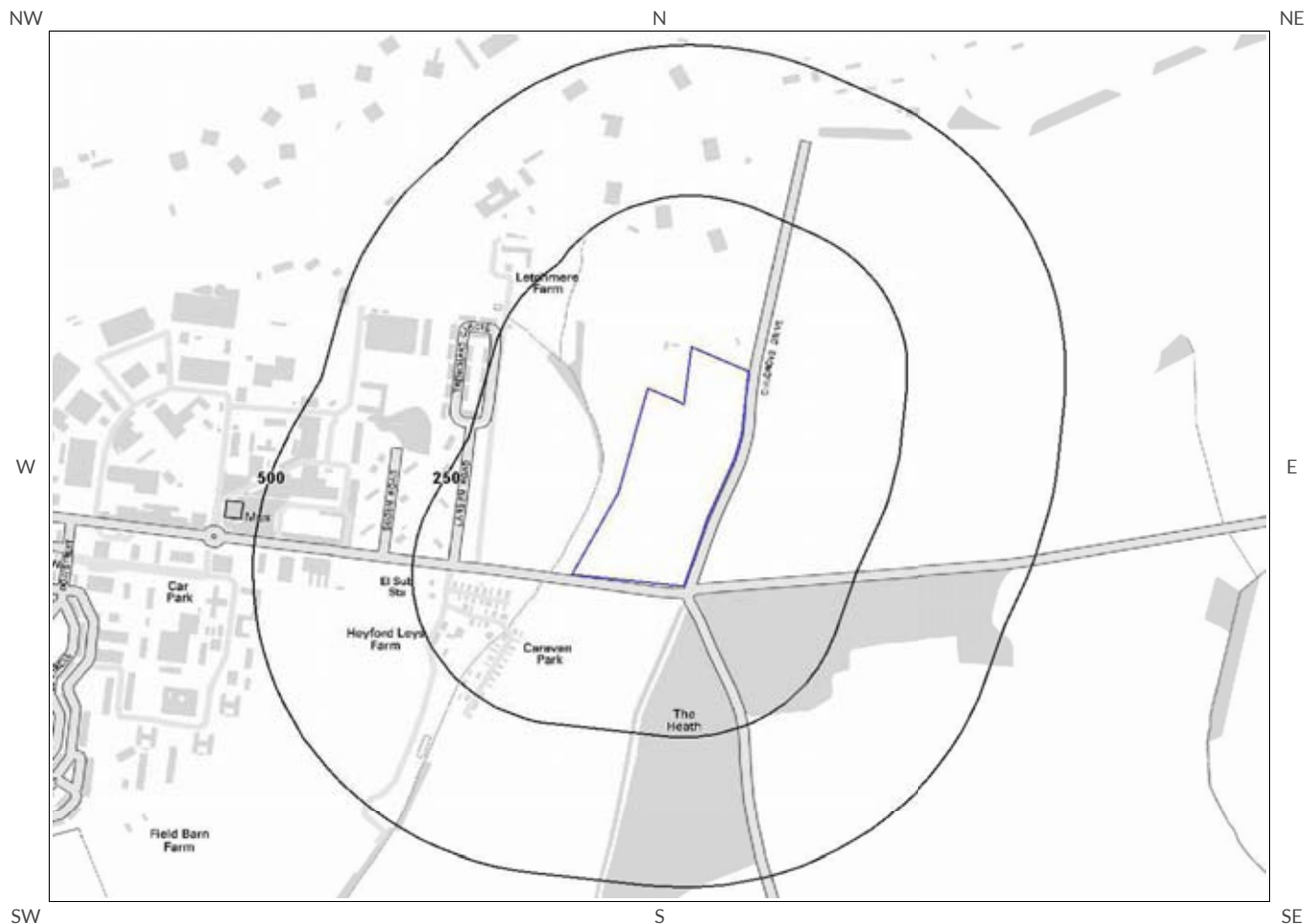
Map Legend



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



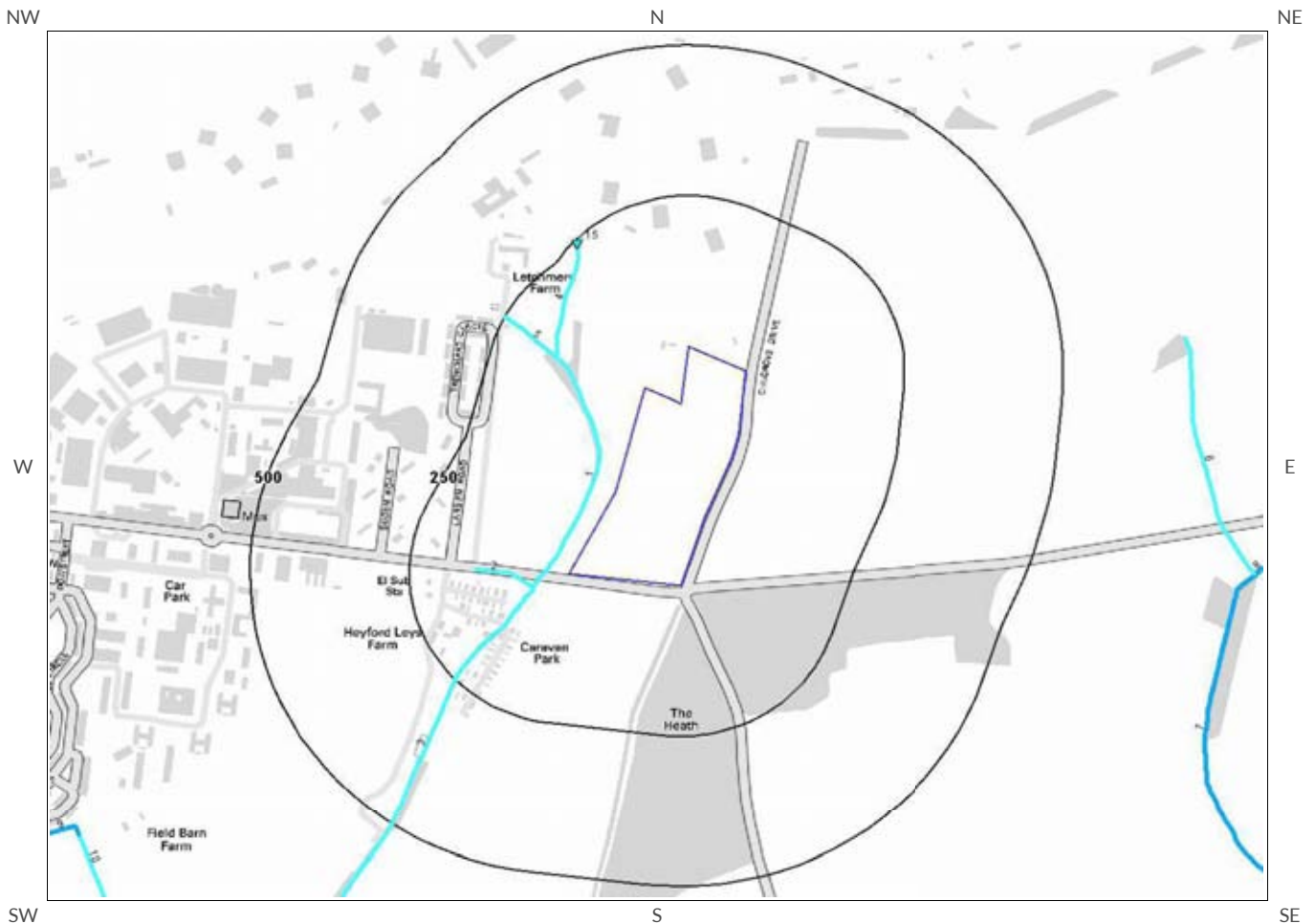
Map Legend



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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
-  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 |
| | 250 Search Buffers (m) | | Secondary River | | Canal Tunnel |
| | 500 Search Buffers (m) | | 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	468.0	E	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	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

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	716.0	SE	452700 225200	<p>Licence No: 28/39/14/0102 Details: General Farming & Domestic Direct Source: Thames Groundwater Point: Manor Farm, Middleton Stoney (a) Data Type: Point</p> <p>Annual Volume (m³): 7319 Max Daily Volume (m³): 20.23 Original Application No: WR.A/3468 Original Start Date: 12/12/1996 Expiry Date: - Issue No: 100 Version Start Date: 1/9/1998 Version End Date:</p>
Not shown	1285.0	S	452200 224400	<p>Licence No: 28/39/14/0304 Details: General Farming & Domestic Direct Source: Thames Groundwater Point: Park Farm, Middleton Stoney (a) Data Type: Point</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: WR.A/5743 Original Start Date: 9/11/1989 Expiry Date: - Issue No: 100 Version Start Date: 9/11/1989 Version End Date:</p>
Not shown	1795.0	N	452700 227800	<p>Licence No: 6/33/02/*G/0092 Details: General Farming & Domestic Direct Source: Ground Water Source Of Supply Point: Borehole At Ardley Data Type: Point</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 1/11/1967 Expiry Date: - Issue No: 100 Version Start Date: 1/3/1977 Version End Date:</p>
Not shown	1836.0	N	451940 227900	<p>Licence No: 6/33/02/*G/0128 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Ground Water Source Of Supply Point: Borehole At Somerton Data Type: Point</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 1/3/1994 Expiry Date: - Issue No: 100 Version Start Date: 1/3/1994 Version End Date:</p>
Not shown	1836.0	N	451940 227900	<p>Licence No: 6/33/02/*G/0128 Details: General Farming & Domestic Direct Source: Ground Water Source Of Supply Point: Borehole At Somerton Data Type: Point</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 1/3/1994 Expiry Date: - Issue No: 100 Version Start Date: 1/3/1994 Version End Date:</p>

5.4 Surface Water Abstraction Licences

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

No

Database searched and no data found.

5.5 Potable Water Abstraction Licences

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

The following Potable Water Abstraction Licences records are represented as points, lines and regions on the SPZ and Potable Water Abstraction Licences Map (5c):

ID	Distance (m)	Direction	NGR	Details	
Not shown	1836.0	N	451940 227900	Licence No: 6/33/02/*G/0128 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Ground Water Source Of Supply Point: Borehole At Somerton Data Type: Point	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 1/3/1994 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:

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 Groundwater Vulnerability and Soil Leaching Potential

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

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Major Aquifer/High Leaching Potential	H3	Coarse textured or moderately shallow soils which readily transmit non-adsorbed pollutants and liquid discharges but have some ability to attenuate adsorbed pollutants because of their clay or organic matter content.
222	W	Major Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.

5.8 River Quality

Is there any Environment Agency information on river quality within 1500m of the study site? Yes

5.8.1 Biological Quality:

Biological Quality data describes water quality in terms of 83 groups of macroinvertebrates, some of which are pollution sensitive. The results are graded from A ('Very Good') to F ('Bad').

The following Biological Quality records are shown on the Hydrology Map (5d):

ID	Distance (m)	Direction	NGR	River Quality Grade	Biological Quality Grade				
					2005	2006	2007	2008	2009
15	244.0	NW	452010 226250	River Name: Leys Farm Ditch Reach: Upper Heyford - Gallos Brook End/Start of Stretch: Start of Stretch NGR	C	C	C	C	C

5.8.2 Chemical Quality:

Database searched and no data found.

5.9 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	30.0	NW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
2	60.0	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
3	60.0	SW	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
4	148.0	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
5	148.0	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined

5.10 Surface Water Features

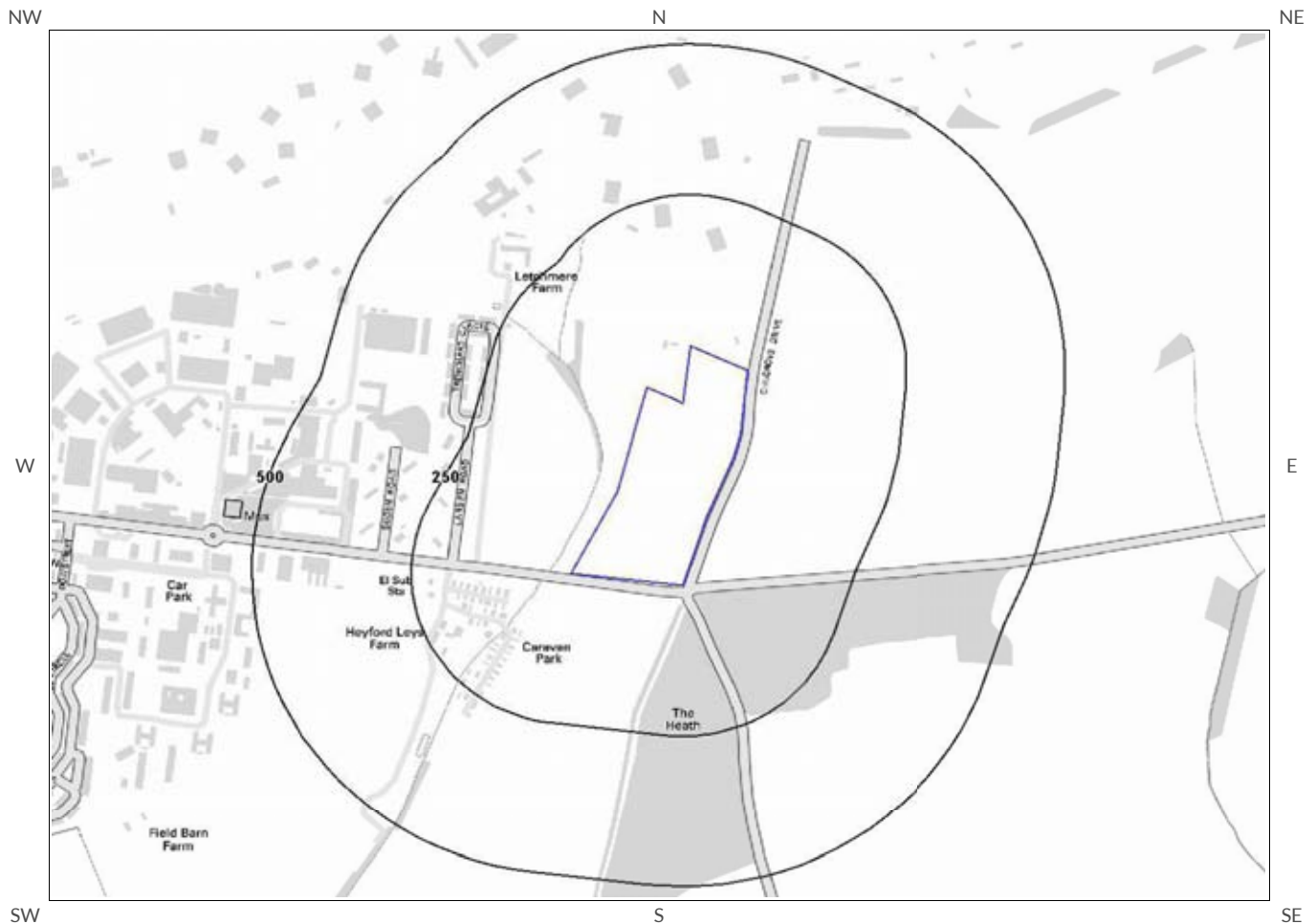
Are there any surface water features within 250m of the study site?

Yes

The following surface water records are not represented on mapping:

Distance (m)	Direction
24.0	W
25.0	W
32.0	NW
32.0	NW
46.0	W
72.0	W
91.0	W
102.0	W
137.0	SW
152.0	NW
179.0	NW
200.0	NW
214.0	NW
241.0	NW









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



Map Legend



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-  Site Outline
-  250 Search Buffers (m)
-  500 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? No

Database searched and no data found.

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? No

Database searched and no data found.

6.3 Flood Defences

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

Database searched and no data found.

6.4 Areas benefiting from Flood Defences

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

6.5 Areas benefiting from Flood Storage

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

6.6 Groundwater Flooding Susceptibility Areas

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

Yes

Does this relate to Clearwater Flooding or Superficial Deposits Flooding?

Clearwater Flooding

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

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

Potential 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

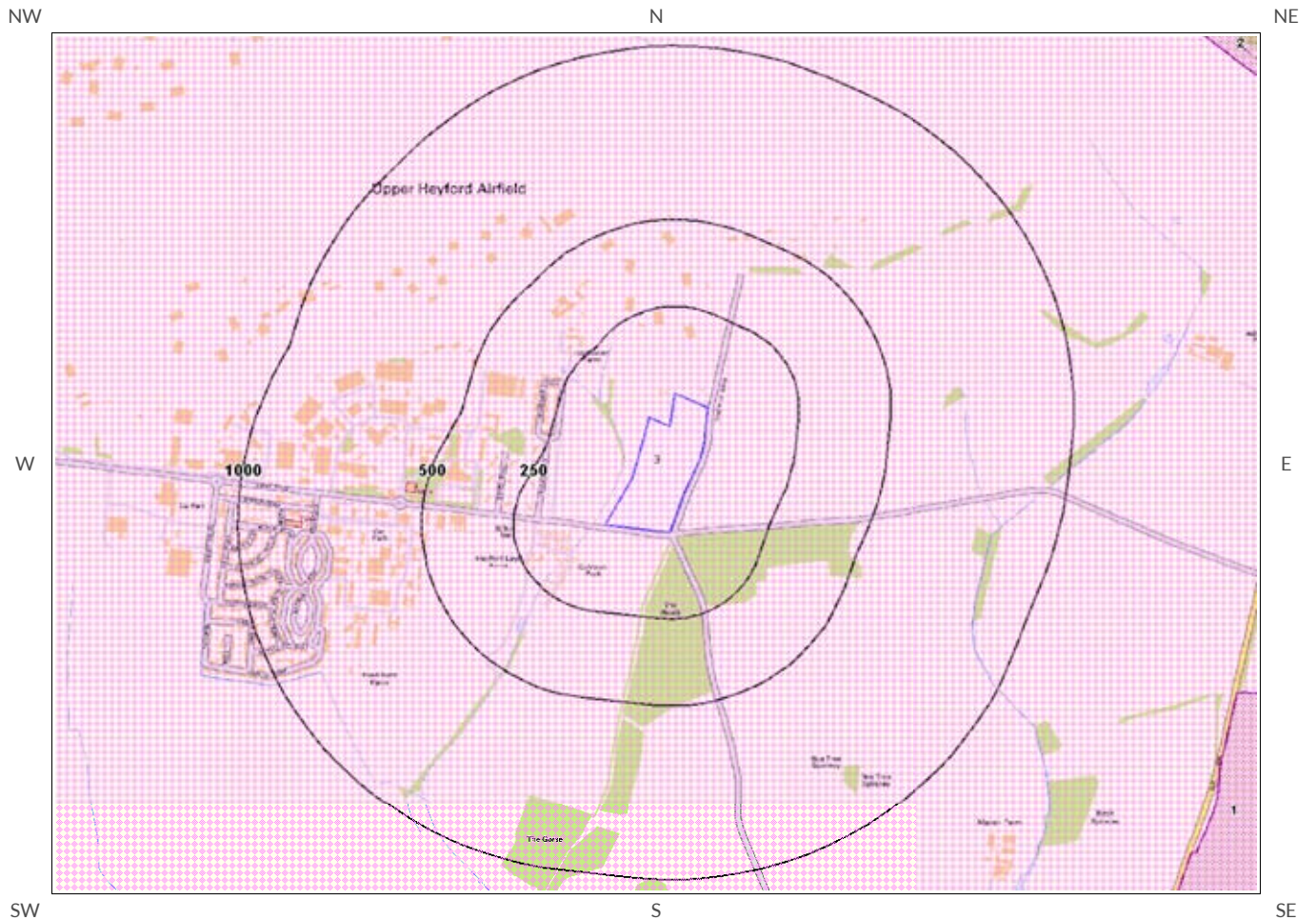
What is the British Geological Survey confidence rating in this result?

Low

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 Ordnance Survey®

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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: 2

The following Site of Special Scientific Interest (SSSI) records provided by Natural England/Countryside Council for Wales and Scottish Natural Heritage are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SSSI Name	Data Source
1	1611.0	SE	Ardley Trackways	Natural England
2	1703.0	NE	Ardley Cutting and Quarry	Natural England

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:

3

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
Not shown	1289.0	N	UNKNOWN	Ancient and Semi-Natural Woodland
Not shown	1736.0	S	HOME WOOD	Ancient Replanted Woodland
Not shown	1758.0	S	OLD NURSERY	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:

2

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
3	0.0	On Site	NVZ Area	DEFRA
Not shown	1997.0	W	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? Negligible

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

Hazard

No indicators for slope instability identified. No special actions required to avoid problems due to landslides. No special ground investigation required and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

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

8.1.3 Soluble Rocks

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

Very Low

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

Hazard

Significant soluble rocks are present. Problems unlikely except with considerable surface or subsurface water flow. No special actions required to avoid problems due to soluble rocks. No special ground investigation required or increased construction costs are likely. An increase in financial risk due to potential problems with soluble rocks is unlikely.

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?

Negligible

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

Hazard

No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

* 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

EmapSite
Telephone: 0118 9736883
sales@emapsite.com

emapsite™

British Geological Survey Enquiries

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email: enquiries@bgs.ac.uk
Web: www.bgs.ac.uk

BGS Geological Hazards Reports and general geological enquiries



Environment Agency

National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 08708 506 506

Web: www.environment-agency.gov.uk
Email: enquiries@environment-agency.gov.uk



Public Health England

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



The Coal Authority

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



Ordnance Survey

Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505



Local Authority

Authority: Cherwell District Council
Phone: 01295 252535
Web: www.cherwell-dc.gov.uk
Address: Bodicote House, Bodicote, Banbury, OX15 4AA

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) 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

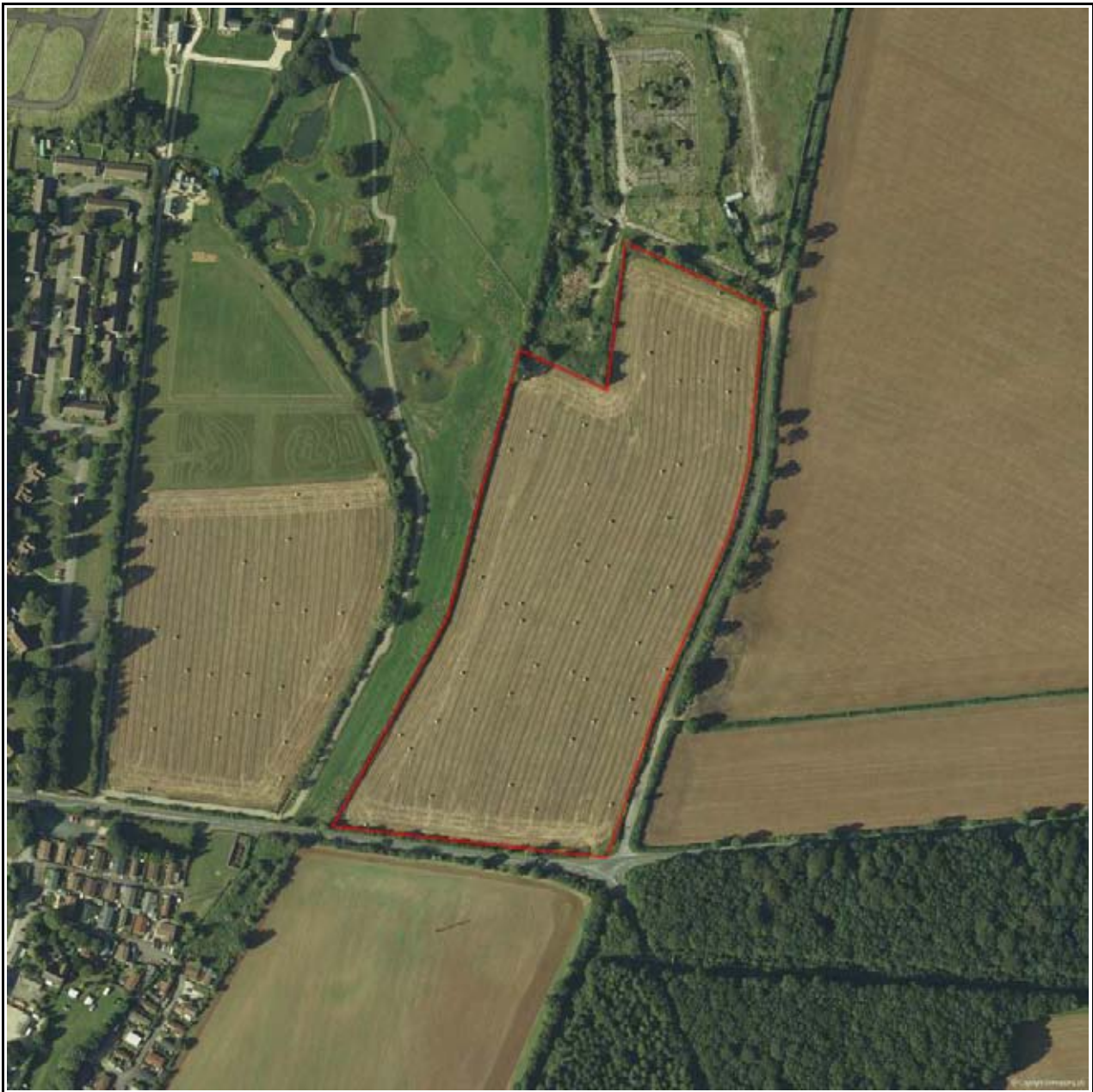


GroundSure GeoInsight

Address: Upper Heyford,
Date: 22 Sep 2014
Reference: EMS-268500_362255
Client: EmapSite

NW N NE

W E



SW S SE

Aerial Photograph Capture date: 19-Aug-2009
Grid Reference: 452154,225863
Site Size: 5.63ha

Contents Page

Overview of Findings.....	5
1 Geology.....	8
1.1 Artificial Ground Map.....	8
1 Geology.....	9
1.1 Artificial Ground.....	9
1.1.1 Artificial/ Made Ground.....	9
1.1.2 Permeability of Artificial Ground.....	9
1.2 Superficial Deposits and Landslips Map.....	10
1.2 Superficial Deposits and Landslips.....	11
1.2.1 Superficial Deposits/ Drift Geology.....	11
1.2.2 Permeability of Superficial Ground.....	11
1.2.3 Landslip.....	11
1.2.4 Landslip Permeability.....	11
1.3 Bedrock and Faults Map.....	12
1.3 Bedrock, Solid Geology & Faults.....	13
1.3.1 Bedrock/ Solid Geology.....	13
1.3.2 Permeability of Bedrock Ground.....	13
1.3.3 Faults.....	13
1.4 Radon Data.....	14
1.4.1 Radon Affected Areas.....	14
1.4.2 Radon Protection.....	14
2 Ground Workings Map.....	15
2 Ground Workings.....	16
2.1 Historical Surface Ground Working Features derived from Historical Mapping.....	16
2.2 Historical Underground Working Features derived from Historical Mapping.....	16
2.3 Current Ground Workings.....	16
3 Mining, Extraction & Natural Cavities Map.....	18
3 Mining, Extraction & Natural Cavities.....	19
3.1 Historical Mining.....	19
3.2 Coal Mining.....	19
3.3 Johnson Poole and Bloomer.....	19
3.4 Non-Coal Mining.....	19
3.5 Non-Coal Mining Cavities.....	20
3.6 Natural Cavities.....	20
3.7 Brine Extraction.....	20
3.8 Gypsum Extraction.....	20
3.9 Tin Mining.....	20
3.10 Clay Mining.....	21
4 Natural Ground Subsidence.....	22
4.1 Shrink-Swell Clay Map.....	22
4.2 Landslides Map.....	23
4.3 Ground Dissolution Soluble Rocks Map.....	24
4.4 Compressible Deposits Map.....	25
4.5 Collapsible Deposits Map.....	26
4.6 Running Sand Map.....	27
4 Natural Ground Subsidence.....	28
4.1 Shrink-Swell Clays.....	28
4.2 Landslides.....	28
4.3 Ground Dissolution of Soluble Rocks.....	28
4.4 Compressible Deposits.....	29
4.5 Collapsible Deposits.....	29
4.6 Running Sands.....	29
5 Borehole Records Map.....	30
5 Borehole Records.....	31

6 Estimated Background Soil Chemistry.....32

7 Railways and Tunnels Map.....33

7 Railways and Tunnels.....34

 7.1 Tunnels34

 7.2 Historical Railway and Tunnel Features34

 7.3 Historical Railways.....34

 7.4 Active Railways.....35

 7.5 Railway Projects.....35

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?	No
	1.2.2 Are there any records relating to permeability of superficial geology within the study site boundary?	No
	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 in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level
	1.4.2 Is the property in an area where Radon Protection Measures are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary

Section 2:Ground Workings

	On-site	0-50m	51-250	251-500	501-1000
2.1 Historical Surface Ground Working Features from Small Scale Mapping	0	5	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	1	0	2	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

Section 3: Mining, Extraction & Natural Cavities					
	On-site	0-50m	51-250	251-500	501-1000
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	Negligible				
4.3 Ground Dissolution of Soluble Rocks	Very Low				
4.4 Compressible Deposits	Negligible				
4.5 Collapsible Deposits	Very Low				
4.6 Running Sand	Negligible				
Section 5: Borehole Records					
	On-site	0-50m	51-250		
5 BGS Recorded Boreholes	0	5	1		
Section 6: Estimated Background Soil Chemistry					
	On-site	0-50m	51-250		
6 Records of Background Soil Chemistry	3	0	1		
Section 7: Railways and Tunnels					
	On-site	0-50m	51-250	251-500	
7.1 Tunnels	0	0	0	Not Searched	
7.2 Historical Railway and Tunnel Features	0	0	0	Not Searched	
7.3 Historical Railways	0	0	0	Not Searched	
7.4 Active Railways	0	0	0	Not Searched	

Section 7:Railways and Tunnels	On-site	0-50m	51-250	251-500
7.5 Railway Projects	0	0	0	0



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:218

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

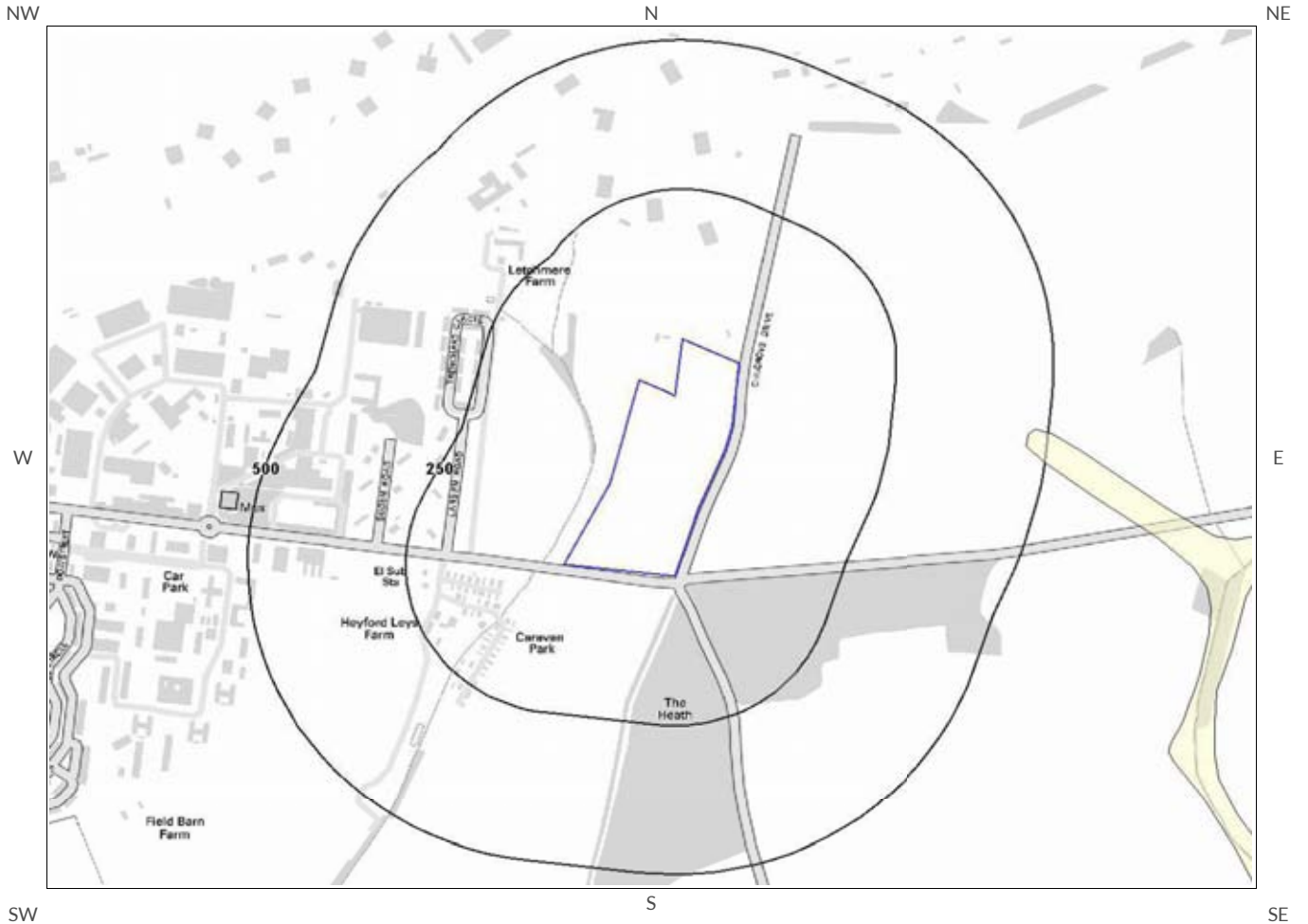
Database searched and no data found.

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



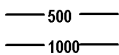
Superficial Deposits and Landslips
Legend



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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	468.0	E	ALV-CSSG	ALLUVIUM	CLAY, SILT, 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? No

Database searched and no data found.

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.

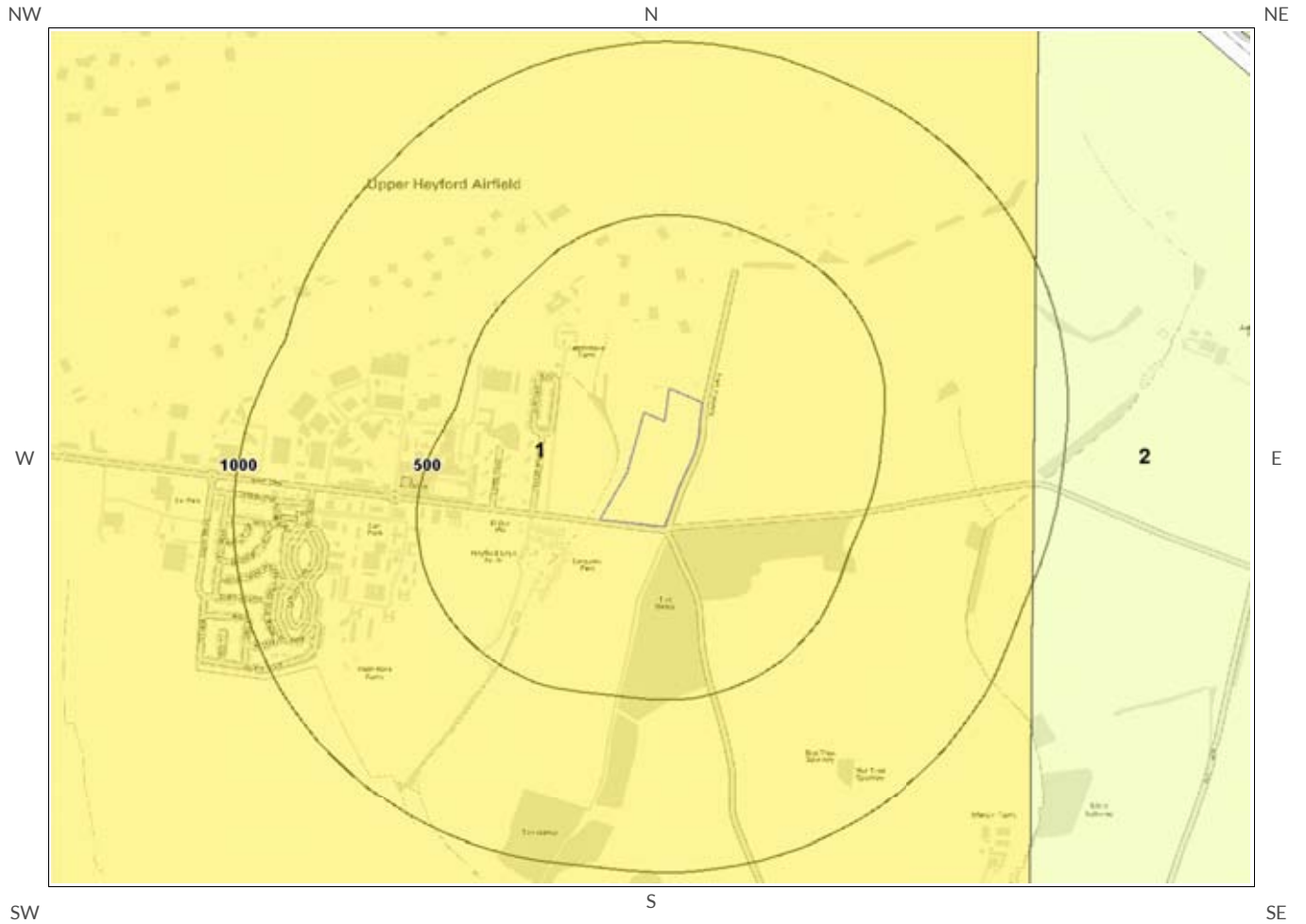
1.2.4 Landslip Permeability

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



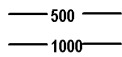
Bedrock and Faults Legend



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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:218

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	GOG-LMAR	Great Oolite Group - Interbedded Limestone And [subequal/subordinate] Argillaceous Rocks	Bathonian

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	Very High	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 in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level

1.4.2 Radon Protection

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



2 Ground Workings Map



Ground Workings Legend



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

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

ID	Distance (m)	Direction	NGR	Use	Date
1A	8.0	S	452091 225668	Unspecified Quarry	1898
2A	11.0	S	452090 225661	Sand Pit	1880
3B	12.0	S	452112 225641	Unspecified Quarry	1950
4B	18.0	S	452109 225649	Unspecified Quarry	1920
5B	21.0	S	452108 225647	Unspecified Quarry	1923

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
6A	24.0	S	452081 225671	Limestone	Leys Farm	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
7	363.0	NW	451705 225928	Limestone	Gorse Covert	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	459.0	NE	452393 226490	Limestone	North Leys Farm	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	777.0	W	451224 225780	Limestone	The Tower	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 data provides information from the Coal Authority issued on behalf of the Cheshire Brine Subsidence Compensation Board.

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

Database searched and no data found.

3.8 Gypsum Extraction

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

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

Database searched and no data found.

3.9 Tin Mining

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

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

Database searched and no data found.

3.10 Clay Mining

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

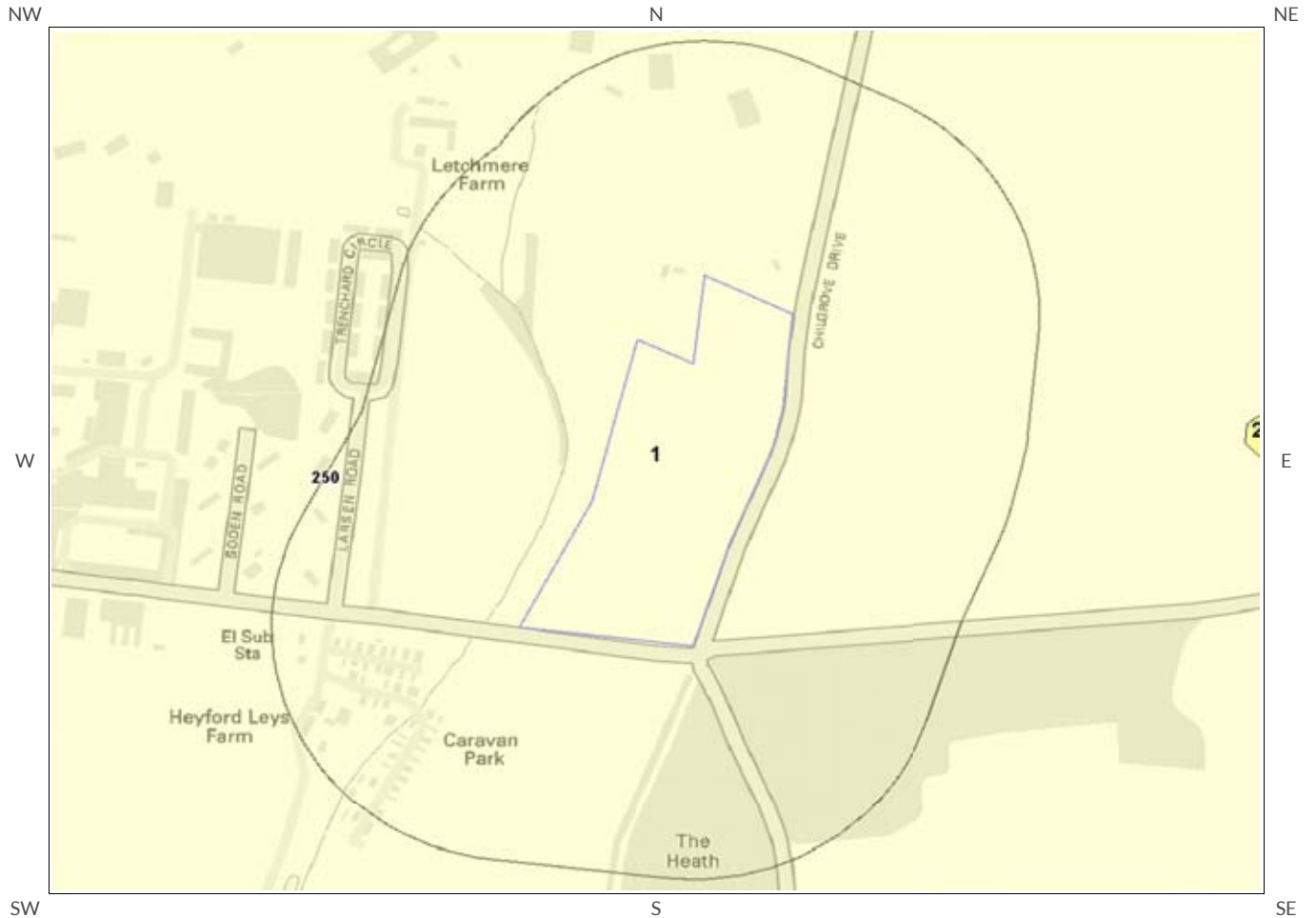
Are there any Clay Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

4 Natural Ground Subsidence

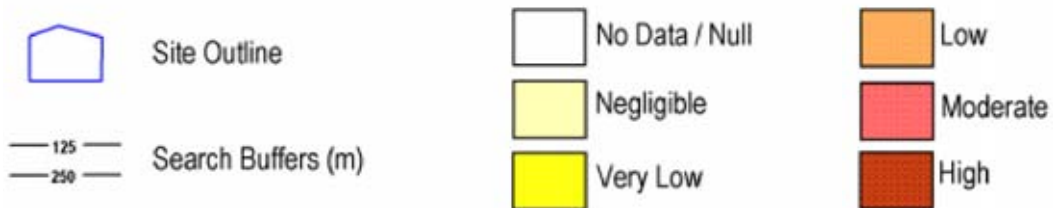
4.1 Shrink-Swell Clay Map



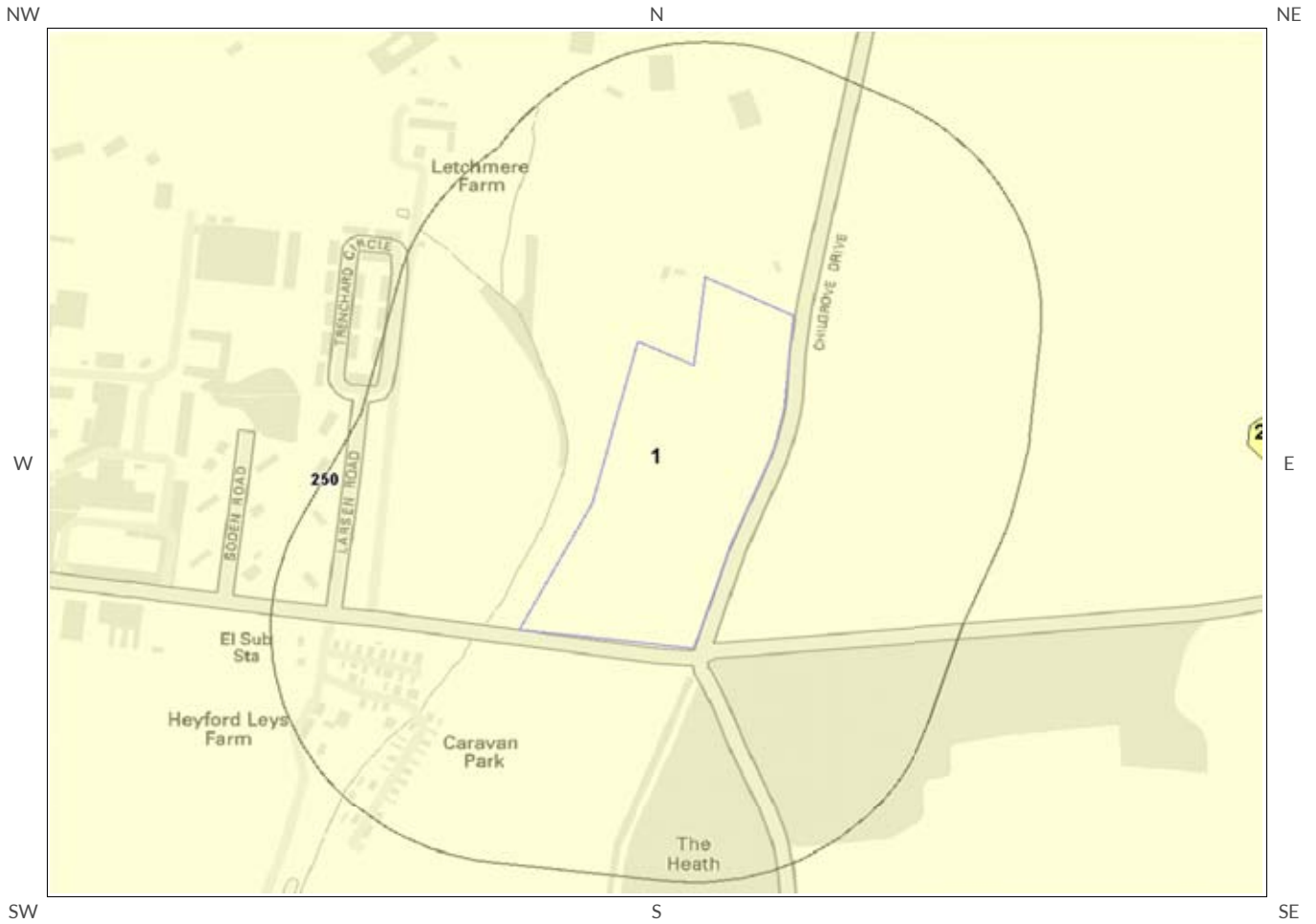
Shrink Swell Clay Legend



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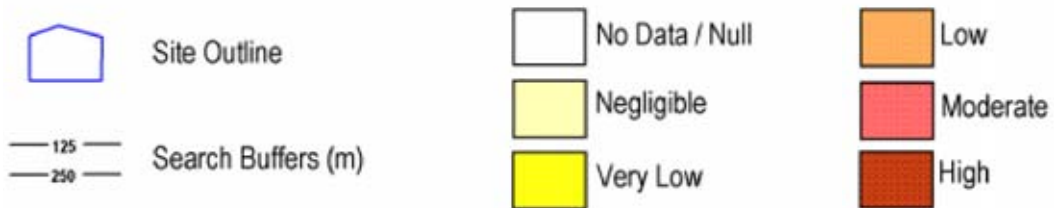
4.2 Landslides Map



Landslides Legend



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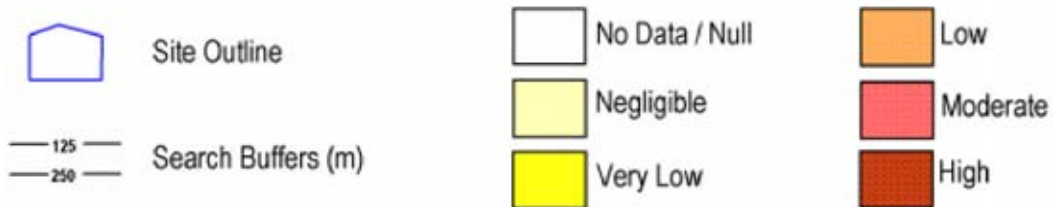
4.3 Ground Dissolution Soluble Rocks Map



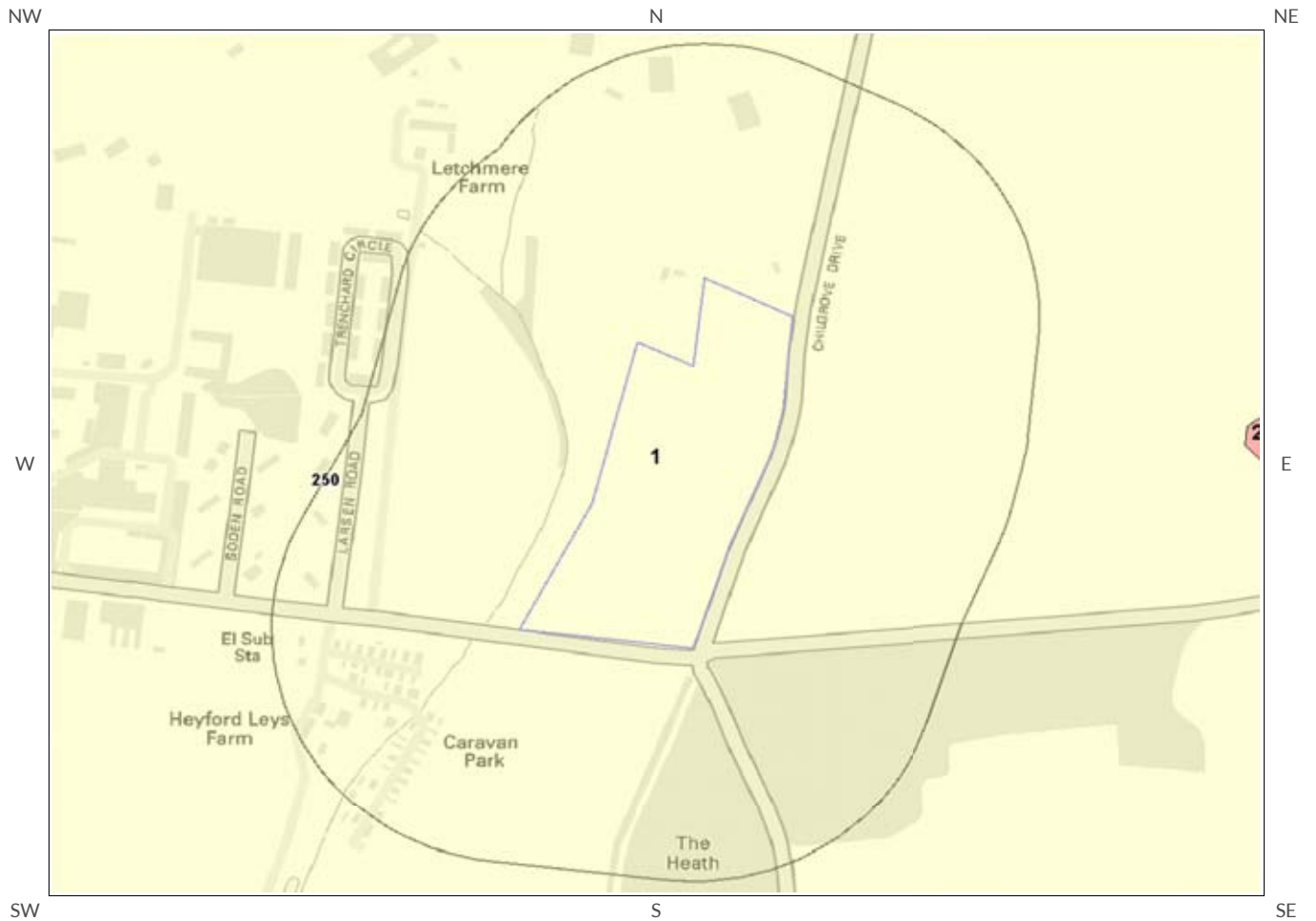
Ground Dissolution Soluble Rocks Legend



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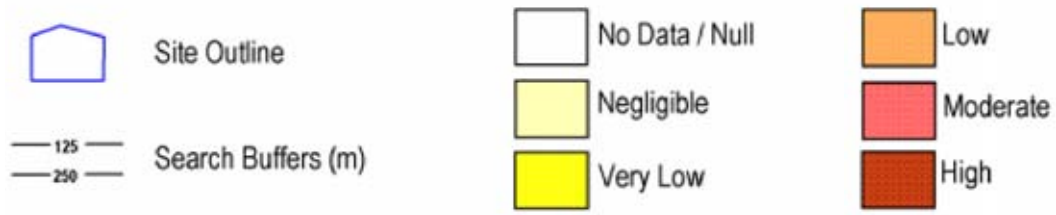
4.4 Compressible Deposits Map



Compressible Deposits Legend



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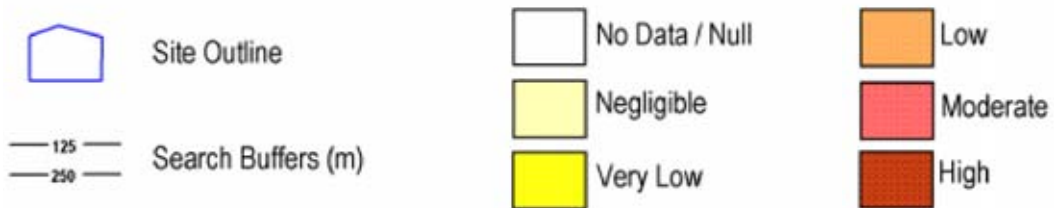
4.5 Collapsible Deposits Map



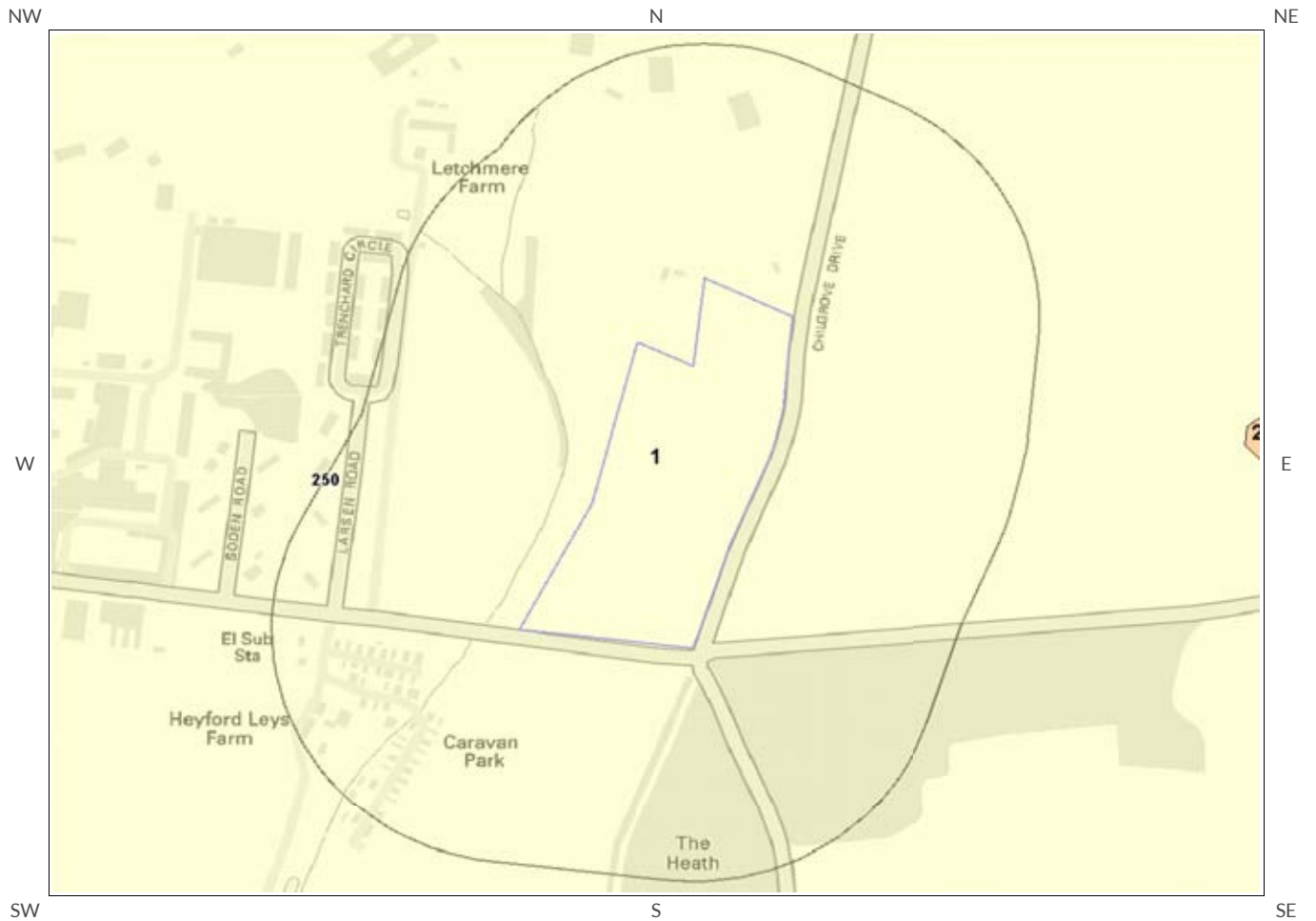
Collapsible Deposits Legend



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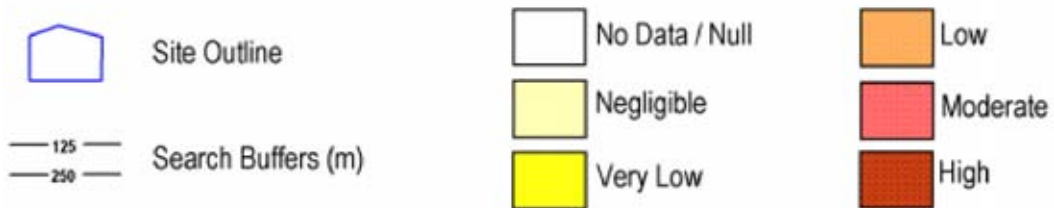
4.6 Running Sand Map



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	Negligible	No indicators for slope instability identified. 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 Ground Dissolution information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Significant soluble rocks are present. Problems unlikely except with considerable surface or subsurface water flow. No special actions required to avoid problems due to soluble rocks. No special ground investigation required or increased construction costs are likely. An increase in financial risk due to potential problems with soluble rocks is unlikely.

* 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	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.



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:

6

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1A	5.0	S	452000 225700	SP52NW258	19.81	UPPER HEYFORD AERODROME
2A	5.0	S	452000 225700	SP52NW208	19.81	RAF UPPER HEYFORD OXON 218/33D
3A	5.0	S	452000 225700	SP52NW257	18.29	UPPER HEYFORD AERODROME
4A	5.0	S	452000 225700	SP52NW207	18.29	RAF UPPER HEYFORD OXON 218/33C
5	40.0	NE	452280 226080	SP52NW273	1.51	RAF UPPER HEYFORD OXFORDSHIRE 37
6	62.0	SW	451940 225680	SP52NW18	26.82	UPPER HEYFORD AERODROME

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

- #1A: scans.bgs.ac.uk/sobi_scans/boreholes/336692
- #2A: scans.bgs.ac.uk/sobi_scans/boreholes/336642
- #3A: scans.bgs.ac.uk/sobi_scans/boreholes/336691
- #4A: scans.bgs.ac.uk/sobi_scans/boreholes/336641
- #5: scans.bgs.ac.uk/sobi_scans/boreholes/15951662
- #6: scans.bgs.ac.uk/sobi_scans/boreholes/336450



6 Estimated Background Soil Chemistry

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

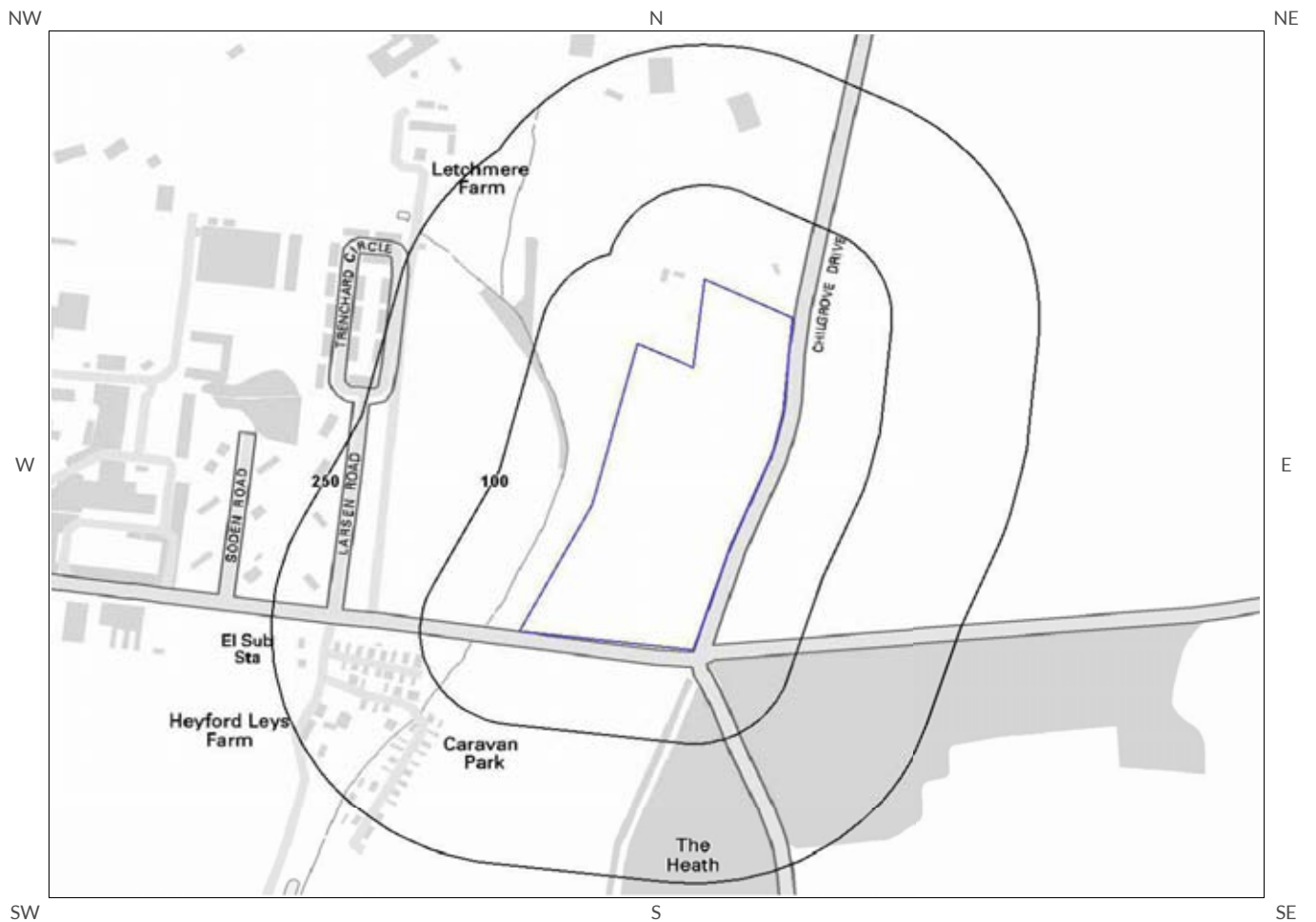
4

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 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
0.0	On Site	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<150 mg/kg
110.0	W	RuralSoil	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 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.











7 Railways and Tunnels Map



Railways and Tunnels Legend



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Ordnance Survey license 100035207.
© OpenStreetMapContributors

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



7 Railways and Tunnels

7.1 Tunnels

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

Have any underground railway lines been identified within the study site boundary? No

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

Database searched and no data found.

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

This data is derived from Ordnance Survey mapping and provides information on the possible locations of railway tunnels forming part of the UK overground railway network.

Have any other railway tunnels been identified within the site boundary? No

Have any other railway tunnels been identified within 250m of the site boundary? No

Database searched and no data found.

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

7.2 Historical Railway and Tunnel Features

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

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

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

Database searched and no data found.

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

7.3 Historical Railways

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

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

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

Database searched and no data found.

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

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

7.4 Active Railways

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

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

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

Database searched and no data found.

Note: multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels Map.

7.5 Railway Projects

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

Is the study site within 5km of the route of the High Speed 2 rail project? No

Is the study site within 500m of the route of the Crossrail rail project? No

Further information on proximity to these routes, the project construction status and associated works can be obtained through the purchase of a GroundSure HS2 and Crossrail Report.

Contact Details

EmapSite
Telephone: 0118 9736883
sales@emapsite.com



British Geological Survey Enquiries

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email: enquiries@bgs.ac.uk
Web: www.bgs.ac.uk

BGS Geological Hazards Reports and general geological enquiries



British Gypsum

British Gypsum Ltd
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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



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
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Report Reference: EMS-268500_362255

Client Reference: EMS_268500_362255

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) 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

Appendix E – Proposed Development (1 A4 Sheet)

