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Geo-Environmental Assessment
Proposed Allotment at Somerton, Bicester
Somerton, Bicester
OX25 6NQ

Client: Laxton Properties Ltd

Issue Date: November 2025
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Position	Consultant	Principal Consultant	Admin Assistant	Managing Director
Date	November 2025	November 2025	November 2025	November 2025

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1.0 EXECUTIVE SUMMARY

Phase 1 Desk Study	Comments	Risk Rating
Site Setting	Agricultural field which is currently used for the storage of hay bales, trailers and various agricultural equipment/machinery	**Low/Moderate**
Published Geology and Hydrogeology	• Bedrock geology: Great Oolite Group (Principal Aquifer) • Superficial Deposits: None recorded	**Moderate**
Hydrology/Flood Risk	• Outside of Flood Zone • Negligible flood risk	**Low**
Historical land use	Within curtilage of farm and the site is clear from c1880 until present, with no major development having occurred. Aerial photography indicates the site was an arable field in 1999 and by 2006 was being used for bale storage and makes up the current site configuration.	**Low**
Identified Areas of Concern	A: Potentially imported made ground B: Active farmyard (Offsite)	**Low/Moderate**
Landfill/Infilled land	No historical landfills within 250m of site.	**Low**
UXO	Low risk as indicated by Zetica online	**Low**
Phase 2 Intrusive	**Comments**	**Risk Rating**
Proven Ground Conditions	Topsoil (0.15m) overlaying brown/yellow gravelly clay (0.75m). Made Ground identified in 1no location (HP3) to max depth of 0.50m.	
Contamination	There have exceedances of PAHs of the adopted GAC criteria for allotment use, which are likely to require remedial actions.	**Moderate**
Recommendations	A Remedial Strategy will be required to manage the onsite contamination.	

2.0 INTRODUCTION

WDE Consulting Limited (WDE) was appointed by Laxton Properties Ltd (the *client*) to conduct a Geo-Environmental Assessment at Proposed Allotment at Somerton, Bicester, OX25 6NQ (Figure 1). The current site comprises an area of farmyard used for the storage of hay bales and is situated at NGR 450338, 228674, What 3 Words ounce.flagpole.neater (Figure 2).

2.1 Context

It is understood the proposed development consists of an allotment site as part of an adjacent residential development.

The works have been completed in line with the current regulations, guidance and good practice presented in Appendix A.

2.2 Agreed Scope of Works and Objectives

The scope of work that was agreed with the client is presented in Table 1.

Table 1 – Agreed Scope of Works and Objectives

Item	Scope of Works	Objectives
1	Phase 1 Desk Study	• Review of environmental database information • To identify any areas of potential areas of concern during site walkover
2	Intrusive site investigation	To identify whether there is any contamination onsite which is considered to pose an unacceptable risk to human health, controlled waters or the environment.
3	Laboratory analyses	Contamination and geotechnical soil samples are analysed at a UKAS accredited laboratory.
4	Reporting	• Complete a Preliminary Risk Assessment following review of Phase 1 information. • Conduct a Generic Risk Assessment following review of analytical laboratory tests.

3.0 PHASE 1 DESK STUDY

3.1 Information Sources

The sources of information that were used during the desk study included the following items:

- Site walkover (photos presented in Appendix B)
- Environmental database information (Appendix C)
- Publicly available information

3.2 Site Description and Walkover

The subject site measures ~90m E-W and ~45m N-S with an area of ~0.41ha and comprises an area of compacted fill (Photo 3) with vegetation around the boundary areas (Photo 1 and Photo 2). The site is currently used for storage of hay bales, trailers and various agricultural equipment/machinery (Photo 6).

Aerial photography indicates the site was an arable field in 1999 and by 2006 was being used for bale storage and makes up the current site configuration.

During the site walkover no signs of gross contamination, bulk fuel tanks or surface staining was observed.

3.3 Key Findings of Desk Study

The key findings from the desk study are presented in Table 2.

Table 2 – Key Findings of Desk Study

Item	Details
Published geology	• Bedrock: Great Oolite Group (sandstone, limestone and argillaceous rocks) • Superficial: None recorded
Hydrogeology	• Bedrock geology deemed a Principal aquifer • Site lies outside an Agency Source Protection Zone
Hydrology/flood risk	• Outside of Flood Zone • Nearest surface water is an unnamed stream 330m E • There is a negligible risk of flooding
Current land use on site	Agriculture
Current land use within 250m radius	The land to the immediate west of site is currently an active farmyard, with a curtilage of barns used for storage of machinery and farming supplies and

Item	Details
	cattle shed. The remaining surrounding land is open field used for arable farming.
Historical land use on site	Within curtilage of a farm and the site is clear from c1880 until present, with no major development having occurred. Aerial photography indicates the site was an arable field in 1999 and by 2006 was being used for bale storage and makes up the current site configuration.
Historical land use with 250m radius	• Oakwood House appears to the west of site • 2no agricultural buildings are present ~100m W of site by 2001 • 247m W - Cuttings (1880) • 250m SW - Unspecified pits (1880)
Landfills/infilled land	No historical landfills within 250m of site.
Identified potential areas of concern	• A: Potentially imported made ground • B: Active farmyard (Offsite)
Pollution incidents	None recorded
Radon risk	1-3% (Low risk).
UXO risk	Low risk.
Environmental Sensitive Land Uses	Existing surface water and groundwater nitrate vulnerable zones identified onsite.

3.4 Contamination Preliminary Risk Assessment

3.4.1 Identification of Critical Receptors

The identified potentially critical receptors are presented in Table 3.

Table 3 – Identification of Potential Receptors

Receptor Type	Current/Future	Receptor Details	Active
Human Health	Future	Allotment use	Yes
	Current	Agricultural fields	Yes
	Current	Public Open Space	No
Controlled waters	Current	Groundwater within aquifer	Yes
	Current	Groundwater within SPZ/licensed abstraction	No
	Current	Surface water body within 250m	No

The risks to onsite workers can be minimised by following appropriate health and safety guidance on site (i.e. wearing protective clothing and washing).

3.4.2 Identification of Potential Areas of Concern

The list of potential areas of concern on site and in the surrounding area are summarised in Table 4.

Table 4 – Identification of Potential Areas of Concern

Ref Area of Concern	Location	Potential Risk	Comments
A	Onsite	Potentially imported made ground	Hydrocarbons (TPH, BTEX, PAH), heavy metals, inorganics, asbestos, cyanide, phenols
B	Offsite	Active farmyard	Hydrocarbons (TPH, BTEX, PAH), heavy metals, inorganics, asbestos, cyanide, phenols,

3.4.3 Identified Potential Pathways

Human Health Pathways

The potential human health exposure pathways for allotment use receptor are indicated in Table 5.

Table 5 – Identification of Potentially Active Human Health Exposure Pathways

Potential Pathway	Active/ Inactive	Notes
Ingestion of soil and dusts	Active	Qualitative Risk Assessment required.
Dermal contact with soils and dust	Active	Qualitative Risk Assessment required.
Ingestion of home grown produce	Active	Qualitative Risk Assessment required.
Inhalation of dusts	Active	Qualitative Risk Assessment required.
Inhalation of organic vapours (generated by shallow soils) in external areas or inside buildings	Inactive	Qualitative Risk Assessment required.
Inhalation of organic vapours generated by dissolved phase groundwater migrating offsite to neighbouring residential properties	Active	Qualitative Risk Assessment required.
Inhalation of organic vapours generated by dissolved phase groundwater migrating onto site from surrounding offsite sources	Active	Qualitative Risk Assessment required.
Contaminants from site entering groundwater and migrating into public water abstraction borehole for human consumption	Inactive	No potable abstractions within 500m. No further assessment necessary.

Controlled Waters Pathways

The potentially active controlled waters migration pathways are indicated in Table 6.

Table 6 – Identification of Potentially Active Controlled Water Pathways

Potential Pathway	Active/ Inactive	Notes
Impacted soils leaching to groundwater within Principal Aquifer	Active	Qualitative Risk Assessment required
Impacted soils leaching to groundwater and migration to surface water	Inactive	No surface water within 250m. No further assessment necessary.

3.4.4 Qualitative Risk Assessment

A summary of the relevant pollutant linkages based on a source-pathway-receptors analysis is provided in Table 7.

Table 7 – Summary of Potentially Active Source-Pathway-Target Assessment

Sources	Potential Pathway	Potential Receptor	Risk Classification
Onsite Sources (See Table 4)	Dermal contact, outdoor inhalation, ingestion, homegrown produce	Human Health (Onsite Allotment)	Low/Moderate
	Vapour inhalation from dissolved phase groundwater migrating from site to neighbouring properties	Human Health (Offsite Residential)	Low
	Impacted soil leaching to groundwater within Principal Aquifer	Controlled Waters (Groundwater)	Low/Moderate
Offsite Source (See Table 4)	Vapour inhalation from dissolved phase migration from offsite sources	Human Health (Onsite Residential)	Low

3.5 Ground Gas Preliminary Risk Assessment

The proposed use of the site as allotment gardens is an open-air use with no permanent buildings or enclosed structures. As such, there are no potential human health receptors in enclosed spaces where ground gases (such as methane or carbon dioxide) could accumulate to hazardous concentrations. Ground gas risks are primarily associated with the potential for gas ingress and accumulation within buildings or confined spaces; in the absence of such receptors, this pathway is not present.

On this basis, ground gas risk assessment can reasonably be discounted for this development.

4.0 PHASE II INVESTIGATION WORKS

4.1 Summary Of Works

The locations of the intrusive investigation are presented on Figure 2 and comprised the following:

Table 8 – Summary of Phase II Intrusive Works

Item	Details	Appendix
Excavations	5no hand pits (HP1-HP5) to 1.00m max depth were excavated using hand digging methods	D
Analytical Testing	5no samples sent for analytical testing for standard QRA suite	E

4.2 Constraints/Selection of Intrusive Locations

The intrusive locations had to be moved slightly due to the hay bale storage limiting access across the site to the initial proposed locations.

4.3 Rationale for Selection of Intrusive Locations

The intrusive locations are indicated on Figure 2, with rationale used for the selection of locations presented in Table 9.

Table 9 – Rationale for Exploratory Hole Locations

Ref	Description	Location	Intrusive Locations
A	Adjacent farmyard	Western portion	HP3
-	Site coverage for proposed infrastructure	Remainder of site	All

4.4 Field Results

4.4.1 Geology

A summary of the geology encountered during the investigation is summarised in Table 10.

Table 10 - Summary of Geology Proved Onsite

Strata	Descriptions	Min - Max Depth (m bgl)	Average Depth (m bgl)	Locations
Topsoil		0.05 - 0.30	0.00 - 0.15	All except TP3
Made Ground	Brown silty gravelly clay with red bricks and black coal ash fill	Absent - 0.50	0.15 - 0.50	TP3 only
Gravelly Clay	Firm to stiff light brown/yellow gravelly CLAY. Gravels are fine to medium subrounded to subangular limestone	0.50 - 1.00+	0.50 - 0.75+	All

4.4.2 Record of Field Samples

A summary of the samples taken during the site visit is summarised in Table 11.

Table 11 – Sample Summary

Location	Sample Type	Sample Depth (m bgl)	PID (ppm)
HP1	Natural Clayey Gravel	0.30	0.00
HP2	Natural Clayey Gravel	0.40	0.00
HP3	Made Ground	0.40	0.00
HP4	Natural Clayey Gravel	0.30	0.00
HP5	Natural Clayey Gravel	0.30	0.00

4.4.3 Contamination Observations

No grossly contaminated material was encountered during the investigation.

4.4.4 Groundwater

Groundwater was not encountered during the investigation within the upper 1.00m.

5.0 CONTAMINATION ASSESSMENT

5.1 Soil Analytical Test Results

Based on the context of the assessment, the proposed land use is assumed to be allotment gardens. A comparison of the soil analytical test results with the adopted GACs is presented in Appendix E, along with laboratory certificates of analyses.

A total of 3 out 5 samples have complied with the adopted GACs, with the exceedances listed below:

- HP2 at 0.40m bgl - Benzo(b)fluoranthene (2.2mg/kg) and Benzo(a)pyrene (1.6mg/kg)
- HP3 at 0.40m bgl - Benzo(b)fluoranthene (4.5mg/kg), Benzo(a)pyrene (4mg/kg) and Dibenz(a,h)anthracene (0.37mg/kg)

5.2 Waste Classification/Onsite Reuse Options

Table 12 provides an overview of the likely waste classification for onsite materials, as well as onsite reuse options, with the waste classification sheets presented in Appendix E.

Table 12 – Likely Waste Classification/Reuse Options for Onsite Materials

Material	Waste Classification	On Site Reuse Options
Made Ground	Non-hazardous	Beneath surface cover/hardstanding
Natural Materials (HP2, HP3)	Non-hazardous	
Natural Materials	Inert	All scenarios

Reuse of site won materials is to be encouraged in line with a sustainable approach, which will require a CL:AIRE DoW:CoP Materials Management Plan (MMP) or U1 waste exemption form to be completed.

5.3 Comparison with Water UK Threshold Concentration Values

Selection of inappropriate water pipe materials for the conditions of the site could have significant consequences and pollute the water supply. An assessment of the chemical contamination and selection of suitable pipe material has been undertaken in line with current guidance[23, 24].

The soil laboratory results from the upper 1.35m have been compared to the UKWIR thresholds for the selection of water supply pipes in Table 13 with full results presented in Appendix E.

Table 13 - Comparison of Soil Laboratory Results from the upper 1.35m with UKWIR (mg/kg)

Parameter Group	No. of Samples	UKWIR Threshold for Pipe Type				Max	Samples Exceeded
		PE	PVC	Barrier	Steel/Fe/Cu		
Total BTEX & MTBE	5	0.1	0.03	Pass	Pass	BDL	-
C5-C10 aliphatic and aromatic	5	2	1.4	Pass	Pass	BDL	-
Mineral oil C11-C20	5	10	Pass	Pass	Pass	18	HP3
Mineral oil C21-EC40	5	500	Pass	Pass	Pass	354	-
Phenol	5	2	0.4	Pass	Pass	BDL	-
Cresols/chlorinated phenols	5	2	0.04	Pass	Pass	-	-
Corrosive	5	Various				8.1	-

There have been exceedances of the UKWIR threshold values which indicate that polyethylene (PE) is not likely to be suitable for water supply pipe due to potential pollutant degradation. Therefore, PVC, barrier (multi-layer plastic with protective metal barrier) or metal (steel, iron or copper) pipe should be considered to limit permeation of soil contaminants through the pipe and into the water supply.

Further consultation should be sought with the water supply company (if applicable) as they may issue a preferred list of materials.

5.4 Updated Contamination Risk Assessment

There have been exceedances of the GACs in HP2 and HP3 for PAHs. These can likely be managed via pathway control measures and/or small-scale source removal.

Further details of the pathway control measures, verification criteria, sampling frequency and discovery strategy will need to be presented within the Remedial Strategy in line with the planning conditions.

A revised *source-pathway-receptor* assessment is presented in Table 14.

Table 14 – Summary of Revised Active Source-Pathway-Target Assessment

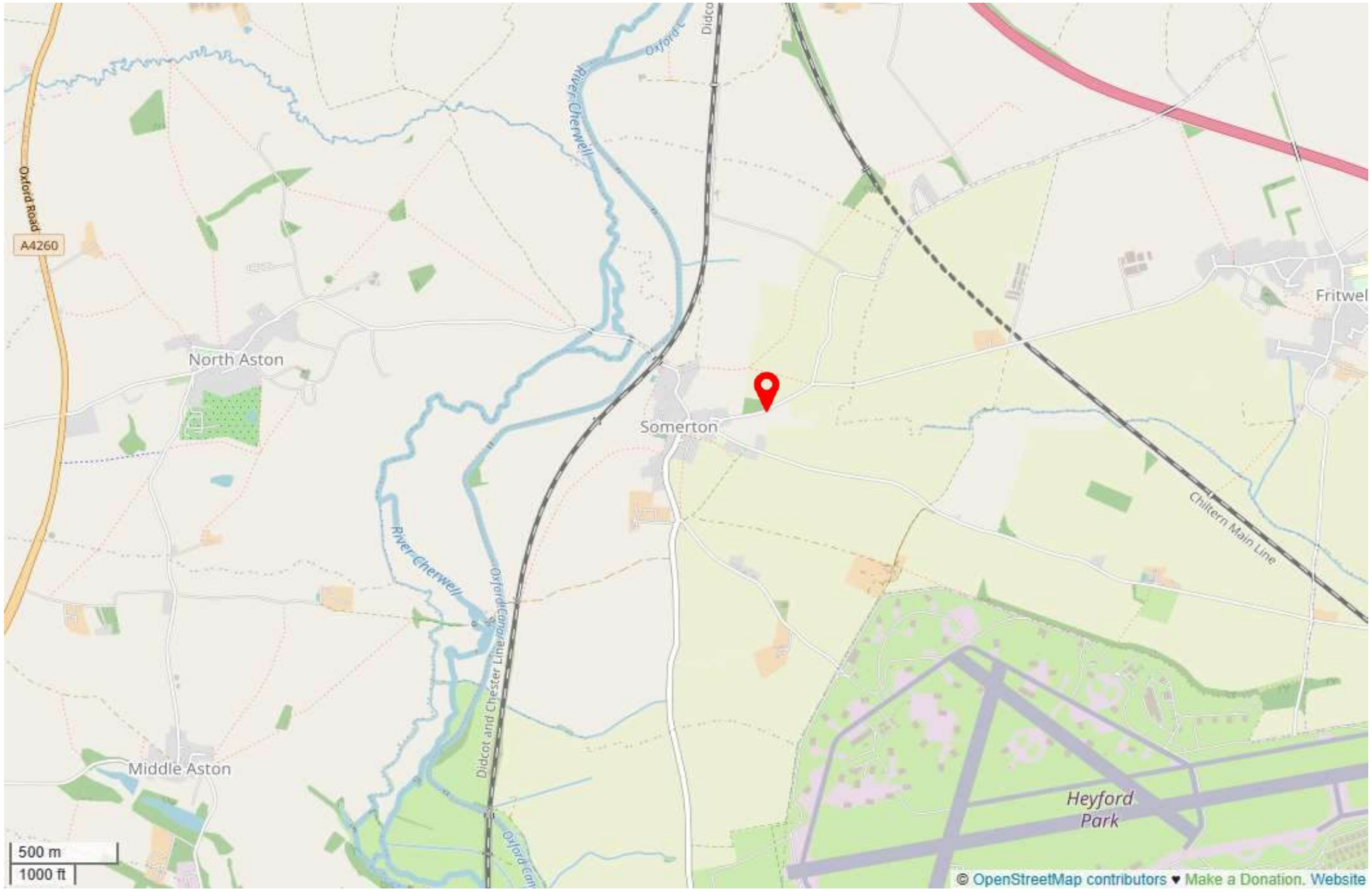
Sources	Potential Pathway	Potential Receptor	Risk Classification
Onsite Sources (See Table 4)	Dermal contact, outdoor inhalation, ingestion, homegrown produce	Human Health (Onsite Allotment)	Moderate
	Vapour inhalation from dissolved phase groundwater migrating from site to neighbouring properties	Human Health (Offsite Residential)	Low
	Impacted soil leaching to groundwater within Principal Aquifer	Controlled Waters (Groundwater)	Low
Offsite Source (See Table 4)	Vapour inhalation from dissolved phase migration from offsite sources	Human Health (Onsite Residential)	Low

6.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations have been made:

- There have been soil contamination exceedances of the adopted GACs in HP2 and HP3
- The site has been classified as a low to moderate risk for future allotments receptors
- The site is not likely to be classified as Part 2A
- Further protective measures are required before the site can be used as an allotment
- These will be outlined in a Remedial Strategy to help manage the onsite contamination

FIGURES



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Client

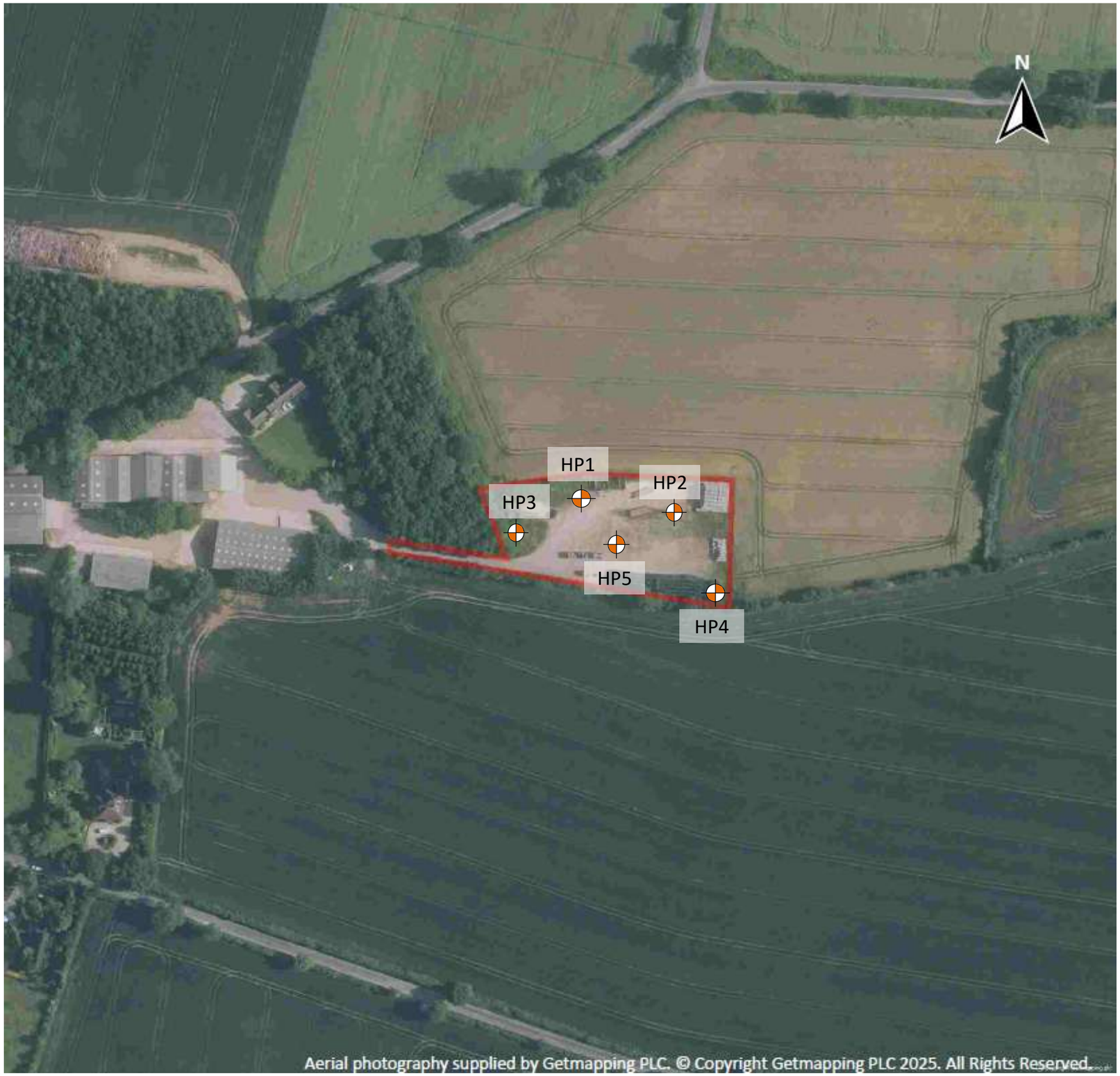
Laxton Properties Ltd

Project

21425 - Somerton, Bicester

Title

SITE LOCATION PLAN



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LEGEND

Sample Location

Client

Laxton Properties Ltd

Project

21425 - Somerton, Bicester

Title

Sample Location Plan

Approximate Scale

0 25 50m

Job number: 21425

Figure 2

31/10/2025

APPENDIX A: RELEVANT GUIDANCE AND LEGISLATION

WDE Consulting has duly taken account of the recommendation contained within relevant guidance documents and legislation during the preparation of this report.

CONTAMINATION

Part IIa of the Environmental Protection Act 1990 defined contamination in relation to continued land use and introduced the "polluter pays" principal. The Groundwater Regulations 1998 defined List 1 and List 2 substances and the procedures for preventing them from entering groundwater. The Water Resources Act of 1991 introduced the term "controlled waters" and gave powers to the Environment Agency to require remediation where there was pollution of controlled waters.

The National Planning Policy Framework[1] requires the following:

- The site is made suitable for its intended use, taking account of all ground conditions arising from natural and former activities, pollution arising from previous uses and proposals for mitigation including land remediation.
- After remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Ac 1990.
- Adequate site information, prepared by a competent person, is presented.

The methodology adopted for this report follows the guidance and procedures for Land Contamination Risk Management (LCRM) produced by the Agency[2]. The LCRM process provides a reasoned and structured mechanism to identify potential risk issues and, where necessary, provide a way forward to develop a robust risk management strategy to address potentially unacceptable risks in an appropriate manner. Contained within the LCRM Framework are the following stages:

1. Stage 1 risk assessment
2. Stage 2 options appraisal
3. Stage 3 remediation and verification

British Standards has issued guidance for the Investigation of Potentially Contaminated Sites[3] and for undertaking Site Investigations[4] which have duly been considered. An update to the potential human health exposure pathways is provided in the Environment Agency Soil Science Report SR3[5]. In 2008 the Environment Agency and the National House-Building Council (NHBC), Chartered Institute of Environmental Health (CIEH) released a joint publication for the Safe Development of Housing on Land

[1] Department of Communities and Local Government. March 2012
2 Environment Agency. 2020. Land Contamination Risk Management (LCRM)
[3] British Standards 2011. Investigation of Potentially Contaminated Sites-Codes of Practice. BS10175:2011
[4] British Standards. 2015. Code of Practice for Site Investigations. BS5930
[5] Environment Agency, August 2008, Updated technical background to the CLEA model, Science Report - SC050021/SR3

Affected by Contamination[6]. Guidance is provided in the CLR Report No 4 on sampling strategies for contaminated land[7].

An assessment of the potential risk from PCBs is provided in the DOE which takes into account their low solubility and potential for migration within the ground [8].

QUALITATIVE RISK ASSESSMENT

The potentially active human health are based on the Agency Soil Science Report SR3[9]. The potential contaminants of PCBs arising from the electricity substation located offsite have been discounted as PCBs are not considered to be sufficiently mobile or soluble[10].

To assess the potential for risk, the Source → Pathway → Receptor relationships have been evaluated to determine whether there are potentially active pollutant linkages between sources and receptors. Only when there is an active pollutant linkage, can there be a potential risk to a receptor from a source via a particular pathway. Each active pathway has been assigned a qualitative assessment as to the level of risk as shown in the below table and as per R&D 66[6] .

Qualitative Risk Classification Scheme

		CONSEQUENCE			
		Severe	**Medium**	**Mild**	**Minor**
PROBABILITY (Likelihood)	**High likelihood**	Very High Risk	High risk	Moderate risk	Low risk
	Likely	High risk	Moderate risk	Moderate/low risk	Low risk
	Low likelihood	Moderate risk	Moderate/low risk	Low risk	Very low risk
	Unlikely	Moderate/low risk	Low risk	Very low risk	Very low risk

6 Environment Agency. 2008. Guidance for the Safe Development of Housing on Land Affected by Contamination. R&D 66
7 DOE. 1994. Sampling Strategies for Contaminated Land. CLR Report No 4
8 Department of the Environment, 1996, Industry Profile: Engineering works. P.14 Sect 3.2.1
9 Environment Agency, August 2008, Updated technical background to the CLEA model, Science Report - SC050021/SR3
10 Department of the Environment, 1996, Industry Profile: Engineering works. P.14 Sect 3.2.1

ADOPTED GACS

The Generic Assessment Criteria (GACs) that have been adopted are based on the Land Quality Management (LQM) Suitable for Use Levels (S4UL)[11]. These published values are available for residential with/without home grown produce, commercial, allotment and public open space land use scenarios. As there is no current UK GAC for lead or cyanide, the Category 4 Screening Level (C4SL) will be adopted for lead and the Dutch Intervention Value (DIV) for cyanide. In the absence of any UK published value, the detection limits have been adopted.

For asbestos, there are no current GAC for asbestos fibres in soils. For surface soils within a residential/allotments setting, it is best practice to take a conservative approach and to adopt the detection limit (0.001%) as the threshold. A *very low quantity* threshold for asbestos of 0.01% had been proposed by CL:AIRE[27],which is considered to be appropriate for adoption within a commercial/public open space scenario.

GACs For Various Land Uses (mg/kg)

Contaminant of Concern	Residential with HGP	Residential without HGP	Allotments	Commercial	Public Open Space Res
Asbestos	DL	DL	DL	DL	DL
Asbestos Quantification %	0.001	0.001	0.001	0.01	0.01
Total Cyanide	50	50	50	50	50
Total Phenols	280	750	66	760	760
Naphthalene	2.3	2.3	4.1	190	4900
Acenaphthylene	170	2900	28	83000	15000
Acenaphthene	210	3000	34	84000	15000
Fluorene	170	2800	27	63000	9900
Phenanthrene	95	1300	15	22000	3100
Anthracene	2400	31000	380	520000	74000
Fluoranthene	280	1500	52	23000	3100
Pyrene	620	3700	110	54000	7400
Benzo(a)anthracene	7.2	11	2.9	170	29
Chrysene	15	30	4.1	350	57
Benzo(b)fluoranthene	2.6	3.9	0.99	44	7.1
Benzo(k)fluoranthene	77	110	37	1200	190
Benzo(a)pyrene	2.2	3.2	0.97	35	5.7
Indeno(1,2,3-cd)pyrene	27	45	9.5	500	82
Dibenz(a,h)anthracene	0.24	0.31	0.14	3.5	0.57
Benzo(ghi)perylene	320	360	290	3900	640
Arsenic	37	40	43	640	79
Beryllium	1.7	1.7	35	12	2.2
Boron	290	11000	45	240000	21000
Cadmium	11	85	1.9	190	120
Chromium	910	910	18000	8600	1500
Copper	2400	7100	520	68000	12000
Lead	210	330	84	6600	760
Mercury	40	56	19	1100	120
Nickel	180	180	230	980	230
Selenium	250	430	88	12000	1100
Vanadium	410	1200	91	9000	2000
Zinc	3700	40000	620	730000	81000

11 LQM/CIEH 2014. The LQM/CIEH S4ULs for Human Health Risk Assessment.

Contaminant of Concern	Residential with HGP	Residential without HGP	Allotments	Commercial	Public Open Space Res
Benzene	0.087	0.38	0.017	27	72
Toluene	130	880	22	56000	56000
Ethylbenzene	47	83	16	5700	24000
Xylenes (sum)	56	79	28	5900	41000
MTBE	49	73	23	7900	7900
TPH - Aliphatic >C5 - C6	42	42	730	3200	570000
TPH - Aliphatic >C6 - C8	100	100	2300	7800	600000
TPH - Aliphatic >C8 - C10	27	27	320	2000	13000
TPH - Aliphatic >C10 - C12	130	130	2200	9700	13000
TPH - Aliphatic >C12 - C16	1100	1100	11000	59000	13000
TPH - Aliphatic >C16 – C21	65000	65000	260000	1600000	250000
TPH - Aliphatic >C21 – C35	65000	65000	260000	1600000	250000
TPH - Aliphatic >C35 – C44	65000	65000	260000	1600000	250000
TPH - Aromatic >C5 - C7	70	370	13	26000	56000
TPH - Aromatic >C7 - C8	130	860	22	56000	56000
TPH - Aromatic >C8 - C10	34	47	8.6	3500	5000
TPH - Aromatic >C10 - C12	74	250	13	16000	5000
TPH - Aromatic >C12 - C16	140	1800	23	36000	5100
TPH - Aromatic >C16 - C21	260	1900	46	28000	3800
TPH - Aromatic >C21 - C35	1100	1900	370	28000	3800
TPH - Aromatic >C35 – C44	1100	1900	370	28000	3800

CONTROLLED WATER EALS

In the UK there are two published Environmental Assessment Levels (EALs) available for comparison with groundwater, the Water Framework Directive[12] and the Water Supply Regulations[13], apart from TPH fractions, Ethylbenzene and Xylenes where the DWS and EQS values has been adopted, respectively. Detection Limit (DL) is used where a standard has not been derived. SoBRA have calculated the risks from vapour inhalation from volatile dissolved phase contaminants for residential and commercial human health receptors.

Adopted Controlled Water Targets (mg/l)

Contaminant of Concern	EAL	Source	SoBRA Res	SoBRA Comm
Total Phenols	0.0077	UK WFD	-	-
Cyanide	0.05	UK WSR	-	-
Naphthalene	0.002	UK WFD	-	-
Acenaphthylene	0.0001	UK WSR	-	-
Acenaphthene	0.0001	UK WSR	-	-
Fluorene	0.0001	UK WSR	-	-
Phenanthrene	0.0001	UK WSR	-	-
Anthracene	0.0001	UK WSR	-	-
Fluoranthene	0.0001	UK WSR	-	-
Pyrene	0.0001	UK WSR	-	-
Benzo(a)anthracene	0.0001	UK WSR	-	-
Chrysene	0.0001	UK WSR	-	-
Benzo(b)fluoranthene	0.0001	UK WSR	-	-
Benzo(k)fluoranthene	0.0001	UK WSR	-	-

[12] The Water Framework Directive (Standards and Classifications) Directions (England and Wales). 2015.
[13] The Water Supply (Water Quality) Regulations. 2016.

Contaminant of Concern	EAL	Source	SoBRA Res	SoBRA Comm
Benzo(a)pyrene	0.00001	UK WSR	-	-
Indeno(1,2,3-cd)pyrene	0.0001	UK WSR	-	-
Dibenz(a,h)anthracene	0.0001	UK WSR	-	-
Benzo(ghi)perylene	0.0001	UK WSR	-	-
Arsenic	0.01	UK WSR	-	-
Boron	1	UK WSR	-	-
Cadmium	0.005	UK WSR	-	-
Chromium	0.05	UK WSR	-	-
Copper	2	UK WSR	-	-
Lead	0.01	UK WSR	-	-
Mercury	0.001	UK WSR	-	-
Nickel	0.02	UK WSR	-	-
Selenium	0.01	UK WSR	-	-
Zinc	0.0123	UK WFD	-	-
Benzene	0.001	UK WSR	0.21	20
Toluene	0.074	UK WFD	230	21000
Ethylbenzene	0.02	UK EQS	10	960
Xylenes (sum)	0.03	UK EQS	31.4	3020
MTBE	DL	WDE	-	-
TPH - Aliphatic >C5 - C6	0.01	UK DWS	1.9	190
TPH - Aliphatic >C6 - C8	0.01	UK DWS	1.5	150
TPH - Aliphatic >C8 - C10	0.01	UK DWS	0.057	5.7
TPH - Aliphatic >C10 - C12	0.01	UK DWS	0.037	3.6
TPH - Aliphatic >C12 - C16	0.01	UK DWS	-	-
TPH - Aliphatic >C16 – C21	0.01	UK DWS	-	-
TPH – Aliphatic >C21 – C35	0.01	UK DWS	-	-
TPH - Aromatic >C5 - C7	0.01	UK DWS	210	20000
TPH - Aromatic >C7 - C8	0.01	UK DWS	220	21000
TPH - Aromatic >C8 - C10	0.01	UK DWS	1.9	190
TPH - Aromatic >C10 - C12	0.01	UK DWS	6.8	660
TPH - Aromatic >C12 - C16	0.01	UK DWS	39	3700
TPH - Aromatic >C16 - C21	0.01	UK DWS	-	-
TPH - Aromatic >C21 - C35	0.01	UK DWS	-	-

GROUND GAS

The following relevant guidance will be used to assess the risks posed by ground gas:

- CIRIA Assessing risks posed by hazardous ground gases to buildings[14]
- NHBC: Guidance on evaluation of development proposals on sites where methane and carbon dioxide are present[15]
- NHBC: Technical Extra[16]
- The Building Regulations Site Preparation and resistance to contaminants and moisture. [17]
- British Standard. Guidance on Investigations for Ground Gas[18]
- NHBC guidance on Hazardous ground gas[19]

[14] CIRIA 2007. Assessing Risks Posed by Hazardous Ground Gases to Buildings. C665

[15] NHBC 2007. Guidance on Evaluation of Development Proposals on Sites where methane and carbon dioxide are present

[16] NHBC 2016. Technical Extra. Ground Gas Update. April 2016. Issue 20

[17] Building Regulations 2004. Approved Document C, Site Preparation and resistance to contaminants and moisture.

[18] British Standards 2013. Guidance on Investigation for Ground Gas. BS8576. 2013

[19] NHBC 2023. Hazardous Ground Gas – an essential guide for housebuilders. NF94

- EPG Limited. Screening Approach[20]

The NHBC guidance[19] states that the landfills from the 1960s and 1970s are unlikely to be able to generate ground gas and will have a declining source. Landfills from the 2000s are not likely suitable for residential development, which leaves the landfills from the 1980s and 1990s as the most critical. Additional guidance is also available from EPG Limited[20] which states that for landfills of 20 years, the gas generation will have reduced significantly, whereas over 40 years will have reached maturation phase and gas generation will be at very low levels. All published cases for offsite migration of ground gas have been from landfills which have either been operational or only recently closed.

Published guidance from GGS[21] also emphasises the importance of a conceptual model for the relationship between source-pathway-receptor.

The 2007 CIRIA guidance calculates a gas screening value to identify the protective measures required, as shown below.

Summary of CIRIA 2007 Guidance

Characterisation Situation	Risk Classification	Gas Screening Value (l/hr)	Typical Factors	Protective Measure
1	Very Low	<0.07	Methane <1% or carbon dioxide <5%; otherwise increase to Situation 2	No special precautions (See recommendation)
2	Low	<0.7	Air Flow rate <70l/hr; otherwise increase to Situation 3	Block and beam with 2,000g, Cast in situ with 1,200g. All joints and penetrations sealed
3	Moderate	<3.5	-	As above but with gas resistant membranes and passively ventilated or positive pressured sub-floor void
4	Moderate to High	<15	QRA recommended	As above but with oversite capping, in-ground venting layer and in ground wells or barriers
5 – 6	High to Very High	<70		Not suitable unless gas regime is reduced first and QRA completed

[20] EPG 2018. Screening Approach for landfill gas migration around landfill sites

[21] GGS 2024. Ground has Hazards, Desk Studies, CSM's and when not to monitor.

Summary of NHBC Traffic Light System

Gas Regime	Methane		Carbon Dioxide	
	Typical max %	Gas Screening Value (l/hr)	Typical max %	Gas Screening Value (l/hr)
Green	<1	<0.16	<5	<0.78
Amber 1	1 – 5	0.16 – 0.63	5 – 10	0.78 – 1.56
Amber 2	5 – 20	0.63 – 1.56	10 – 30	1.56 – 3.13
Red	20+	1.56+	30+	3.13+

RADON GAS

The following guidance has been followed for the assessment of the risk from radon gas:

- UK Radon www.ukradon.org
- BRE 2023. Radon Guidance[22]

The UK Health Security Agency recommends that radon levels should be reduced in homes where the average is >200 Bq m^{-3} (known as the Action Level), with the Target Level of 100 Bq m^{-3}. Radon potential bands for having a building that is at least as high as the Action Level, are assigned across the UK in grids, with slight variations for the required actions across the Home Nations, as seen below:

Radon potential band (%)	General risk	Affected area?	Test advised?	Building Control Regulations?		
				England & Wales	Scotland	Northern Ireland
0 - 1	Low	No	No#	No#	No#	No#
1 - 3	Medium	Yes	Yes	No#	Yes - Stage 1	Yes - Zone 1
3 - 5	Medium	Yes	Yes	Yes - Basic	Yes - Stage 1	Yes - Zone 1
5 -10	Medium	Yes	Yes	Yes - Basic	Yes - Stage 1	Yes - Zone 1
10 - 30	High	Yes	Yes	Yes - Full	Yes - Stage 2	Yes - Zone 2
Over 30	High	Yes	Yes	Yes - Full	Yes - Stage 2	Yes - Zone 2

[22] BRE 2023. Radon. Guidance on the protective measures for new buildings (including supplementary advice for extensions, conversions and refurbishment projects)

Basic radon protection is relatively cheap and simple to install and requires a radon membrane, cavity tray, telescopic air vent and rigid installation. Full radon protection is more complicated and will require a radon sump chamber or a ventilated subfloor, which can if needed have extraction fan fitted.

UK WATER SUPPLY PIPES

The following guidance has been followed for the selection of water supply pipes:

- UKWIR Guidance for the selection of Water Supply Pipes[23]
- Water UK Contaminated Land Assessment Guidance[24]

These mainly apply to brownfield sites, although may apply to greenfield sites should the preliminary risk assessment identify there is a potential for contamination to be present.

WASTE MANAGEMENT

The EU Waste Framework Directive 2008 presents the legislative framework for the collection, transport, recovery, and disposal of waste. This framework provides a five-step hierarchical plan for managing waste comprising prevention, preparing for re-use, recycling, recovery, and disposal, which have been made into UK law via the UK Waste Regulations 2011. This requires all businesses/organisations that either produces or handles waste to either prevent waste or to apply the waste hierarchy for the transfer of waste. The Environment Protection (Duty of Care) Regulations 1991 require that transfer notes are used to identify the type of waste, volume, source and intended destination along with the details of the licensed carrier.

The Agency have published guidance on the classification of Hazardous Waste[25], which defines how man-made materials are classified as being hazardous by exceeding at least one of the fifteen hazardous properties (H1 to H15). Man Made materials can either be absolute hazardous, absolute non-hazardous or mirror and if mirror then an assessment needs to be made as to whether the materials poses any of the hazardous properties before classifying the materials as being either hazardous or non-hazardous. The Agency has also published guidance on the Waste Acceptance at Landfills[26]. Landfills are classified as to whether they can accept hazardous, non-hazardous, or inert materials. Waste Acceptance Criteria (WAC) thresholds have been set to determine the class of landfill that can accept the materials. Disposal of hazardous materials requires pre-treatment. WAC limits are not to be used for determining whether waste is hazardous.

[23] UK Water Industry Research 2011. Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites. 10/WM/03/21.
[24] Water UK 2014. Contaminated Land Assessment Guidance.
25 Environment Agency. 2013. Interpretation of the Definition and Classification of Hazardous Waste. Technical Guidance WM2
[26] Environment Agency. 2010 Waste Acceptance at Landfills. Version 1.

The CL:AIRE CoP of the Definition of Waste[27] was developed to provide clarity on when the reuse of site won materials will cease to the waste. It requires the development of Material Management Plan (MMP) that is specific to the site and the intended reuse of materials. The MMP will need to be based on a site-specific Remedial Strategy/Design Statement that will demonstrate that the reuse of the site won materials will not pose an unacceptable risk to sensitive receptors. There will then need to be a requirement for verification that the proposed reuse has been carried out as was planned.

CLIMATE CHANGE

The UK has signed up to achieving a net zero target by 2050 under the COP 21 Paris Agreement in 2015, which requires all industry to reduce its emissions by 78% by 2035 compared to 1990 levels. Approximately 1.25% of the UK total greenhouse gases are attributable to the built environment, with C02 emissions amounting to 40-50million tonnes, more than for aviation and shipping combined[28]. The use of low carbon materials, retrofitting old ones and the need for considering whole-life carbon of new buildings needs to be balanced with the need for additional housing.

The National Planning Policy Framework (NPPF) and LCRM advocates the adoption of sustainable development practices. The Sustainable Management Practices for the Management of Land Contamination issued in 2021 by CL:AIRE/SuRF-UK promote sustainability principles for all aspects of land contamination management, a summary of which is provided below.

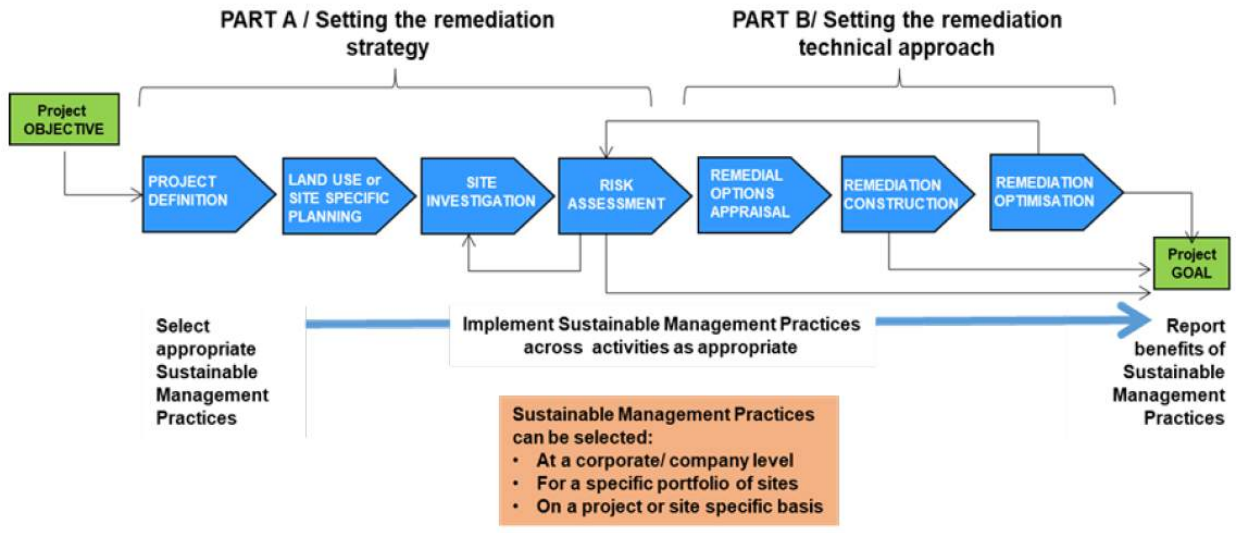


Figure 2.1: Application of sustainable management practices in context of life cycle of land contamination management and SuRF UK Framework

[27] CL:AIRE 2001. The Definition of Waste: Development Industry Code of Practice. Version 2.
28 UK Parliament. Building to new zero: costing carbon in construction. First Report of Session 2022-23

APPENDIX B: SITE PHOTOS

Photo 1 - Site overview (Storage area)

Photo 2 - Site Overview (Field)

Photo 3 - HP1

Photo 4 - HP2

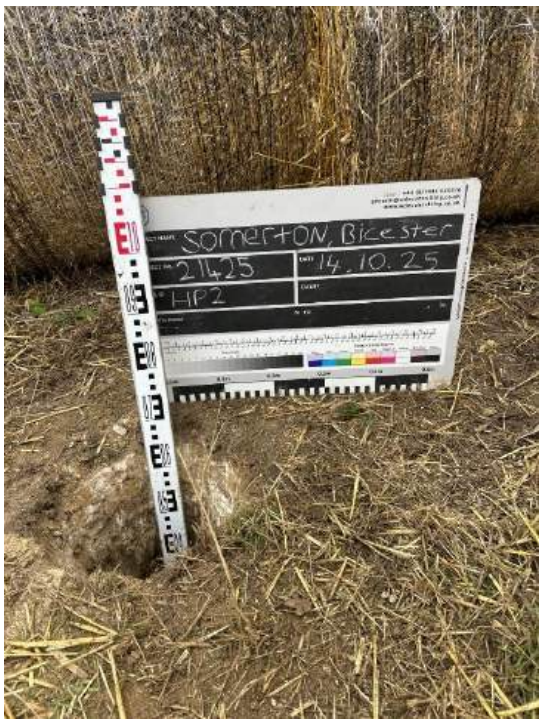


Photo 5 - HP3

Photo 6 - Hay Bale storage

APPENDIX C: ENVIRONMENTAL DATABASE

Appendix C - Environmental Database

Groundsure
LOCATION INTELLIGENCE

Enviro
Insight

Somerton, Bicester

Order Details

Date: 13/10/2025

Your ref: PO 25-465

Our Ref: GS-Q5A-VR9-VZQ-Q1Y

Site Details

Location: 450341 228670

Area: 0.44 ha

Authority: Cherwell District Council ↗

Contact us with any questions at:
info@groundsure.com ↗
01273 257 755

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
12 >	1.1 >	Historical industrial land uses >	0	0	1	28	-
14 >	1.2 >	Historical tanks >	0	0	0	2	-
14 >	1.3 >	Historical energy features >	0	0	0	1	-
14	1.4	Historical petrol stations	0	0	0	0	-
15	1.5	Historical garages	0	0	0	0	-
15	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
16 >	2.1 >	Historical industrial land uses >	0	0	1	31	-
18 >	2.2 >	Historical tanks >	0	0	0	3	-
18 >	2.3 >	Historical energy features >	0	0	0	3	-
19	2.4	Historical petrol stations	0	0	0	0	-
19	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
20	3.1	Active or recent landfill	0	0	0	0	-
20	3.2	Historical landfill (BGS records)	0	0	0	0	-
21	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
21	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
21	3.5	Historical waste sites	0	0	0	0	-
21	3.6	Licensed waste sites	0	0	0	0	-
21 >	3.7 >	Waste exemptions >	0	0	0	10	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
23	4.1	Recent industrial land uses	0	0	0	-	-
23	4.2	National Geographic Database (NGD) - Current or recent tanks	0	0	0	-	-
24	4.3	Current or recent petrol stations	0	0	0	0	-
24	4.4	Electricity cables	0	0	0	0	-
24	4.5	Gas pipelines	0	0	0	0	-

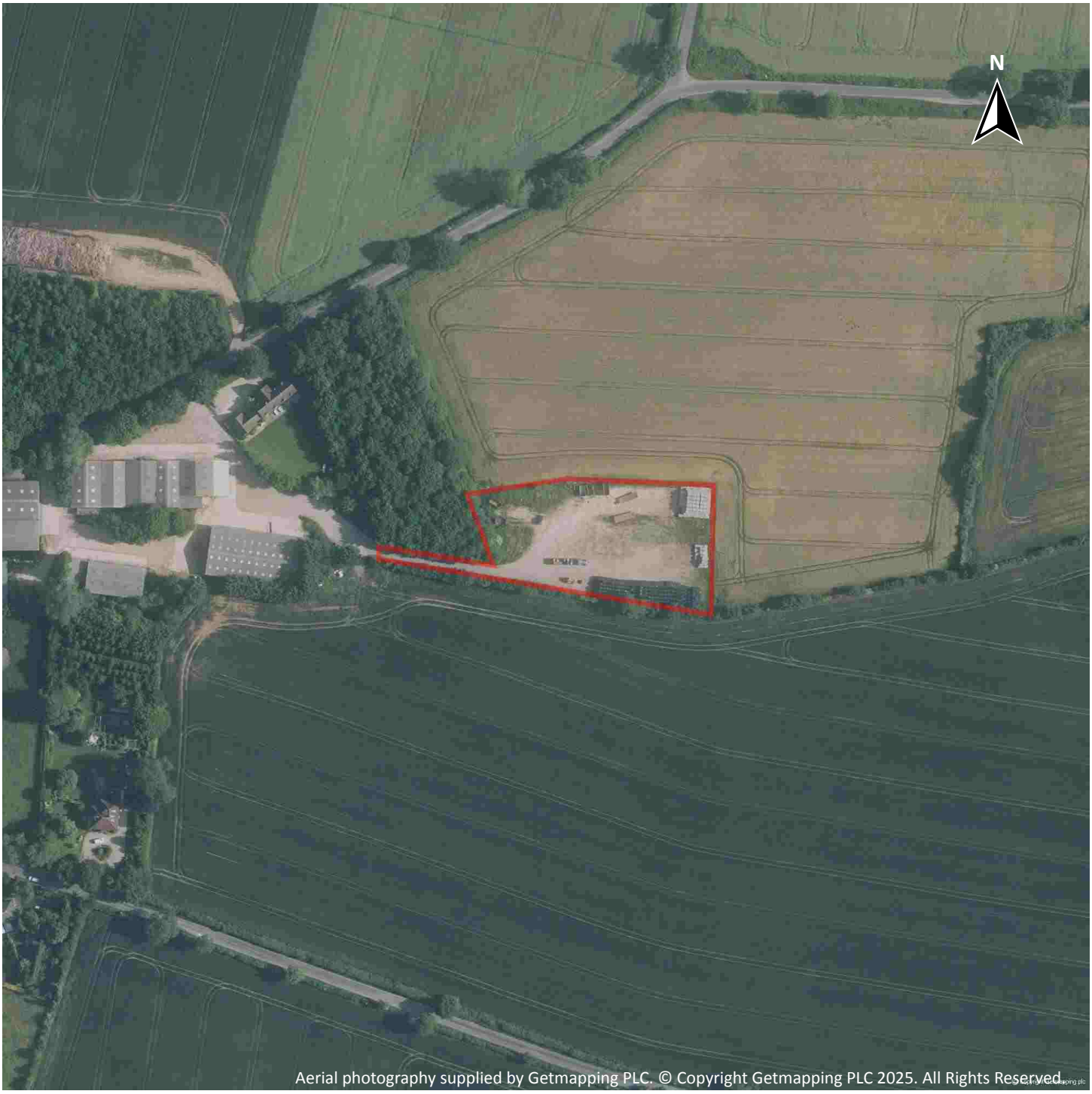
24	4.6	Sites determined as Contaminated Land	0	0	0	0	-
24	4.7	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
25	4.8	Regulated explosive sites	0	0	0	0	-
25	4.9	Hazardous substance storage/usage	0	0	0	0	-
25	4.10	Historical licensed industrial activities (IPC)	0	0	0	0	-
25	4.11	Licensed industrial activities (Part A(1))	0	0	0	0	-
25	4.12	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
26	4.13	Radioactive Substance Authorisations	0	0	0	0	-
26 >	**4.14 >**	**Licensed Discharges to controlled waters >**	0	0	0	1	-
26	4.15	Pollutant release to surface waters (Red List)	0	0	0	0	-
26	4.16	Pollutant release to public sewer	0	0	0	0	-
27	4.17	List 1 Dangerous Substances	0	0	0	0	-
27	4.18	List 2 Dangerous Substances	0	0	0	0	-
27	4.19	Pollution Incidents (EA/NRW)	0	0	0	0	-
27	4.20	Pollution inventory substances	0	0	0	0	-
27	4.21	Pollution inventory waste transfers	0	0	0	0	-
28	4.22	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	**Geology (basic) >**					
29	5.1	Superficial geology (625k)	None (within 500m)				
29 >	**5.2 >**	**Bedrock geology (625k) >**	Identified (within 500m)				
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
30	6.1	Superficial aquifer	None (within 500m)				
31 >	**6.2 >**	**Bedrock aquifer >**	Identified (within 500m)				
33 >	**6.3 >**	**Groundwater vulnerability >**	Identified (within 50m)				
34 >	**6.4 >**	**Groundwater vulnerability- soluble rock risk >**	Identified (within 0m)				
34	6.5	Groundwater vulnerability- local information	None (within 0m)				
35 >	**6.6 >**	**Groundwater abstractions >**	0	0	0	0	3
36 >	**6.7 >**	**Surface water abstractions >**	0	0	0	0	2
37 >	**6.8 >**	**Potable abstractions >**	0	0	0	0	1

38	6.9	Source Protection Zones	0	0	0	0	-
38	6.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	**Hydrology >**	On site	0-50m	50-250m	250-500m	500-2000m
39	7.1	Water Network (OS MasterMap)	0	0	0	-	-
39	7.2	Surface water features	0	0	0	-	-
40 >	**7.3 >**	**WFD Surface water body catchments >**	1	-	-	-	-
40 >	**7.4 >**	**WFD Surface water bodies >**	0	0	0	-	-
41 >	**7.5 >**	**WFD Groundwater bodies >**	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
42	8.1	Risk of flooding from rivers and the sea	None (within 50m)				
42	8.2	Historical Flood Events	0	0	0	-	-
42	8.3	Flood Defences	0	0	0	-	-
43	8.4	Areas Benefiting from Flood Defences	0	0	0	-	-
43	8.5	Flood Storage Areas	0	0	0	-	-
44	8.6	Flood Zone 2	None (within 50m)				
44	8.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
45	9.1	Surface water flooding	Negligible (within 50m)				
Page	Section	**Groundwater flooding >**					
46 >	**10.1 >**	**Groundwater flooding >**	Negligible (within 50m)				
Page	Section	**Environmental designations >**	On site	0-50m	50-250m	250-500m	500-2000m
47 >	**11.1 >**	**Sites of Special Scientific Interest (SSSI) >**	0	0	0	0	2
48	11.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
48	11.3	Special Areas of Conservation (SAC)	0	0	0	0	0
48	11.4	Special Protection Areas (SPA)	0	0	0	0	0
48	11.5	National Nature Reserves (NNR)	0	0	0	0	0
49	11.6	Local Nature Reserves (LNR)	0	0	0	0	0
49	11.7	Designated Ancient Woodland	0	0	0	0	0
49	11.8	Biosphere Reserves	0	0	0	0	0

49	11.9	Forest Parks	0	0	0	0	0
50	11.10	Marine Conservation Zones	0	0	0	0	0
50	11.11	Green Belt	0	0	0	0	0
50	11.12	Proposed Ramsar sites	0	0	0	0	0
50	11.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
50	11.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
51	11.15	Nitrate Sensitive Areas	0	0	0	0	0
51 >	**11.16 >**	**Nitrate Vulnerable Zones >**	3	0	0	0	0
52	11.17	SSSI Impact Risk Zones	0	-	-	-	-
53 >	**11.18 >**	**SSSI Units >**	0	0	0	0	2
Page	Section	**Visual and cultural designations >**	On site	0-50m	50-250m	250-500m	500-2000m
54	12.1	World Heritage Sites	0	0	0	-	-
55	12.2	Area of Outstanding Natural Beauty	0	0	0	-	-
55	12.3	National Parks	0	0	0	-	-
55	12.4	Listed Buildings	0	0	0	-	-
55 >	**12.5 >**	**Conservation Areas >**	0	0	1	-	-
56	12.6	Scheduled Ancient Monuments	0	0	0	-	-
56	12.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	**Agricultural designations >**	On site	0-50m	50-250m	250-500m	500-2000m
57 >	**13.1 >**	**Agricultural Land Classification >**	Grade 3b (within 250m)				
58	13.2	Open Access Land	0	0	0	-	-
58	13.3	Tree Felling Licences	0	0	0	-	-
58	13.4	Environmental Stewardship Schemes	0	0	0	-	-
59 >	**13.5 >**	**Countryside Stewardship Schemes >**	1	0	1	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
60	14.1	Priority Habitat Inventory	0	0	0	-	-
60	14.2	Habitat Networks	0	0	0	-	-
60	14.3	Open Mosaic Habitat	0	0	0	-	-
60	14.4	Limestone Pavement Orders	0	0	0	-	-

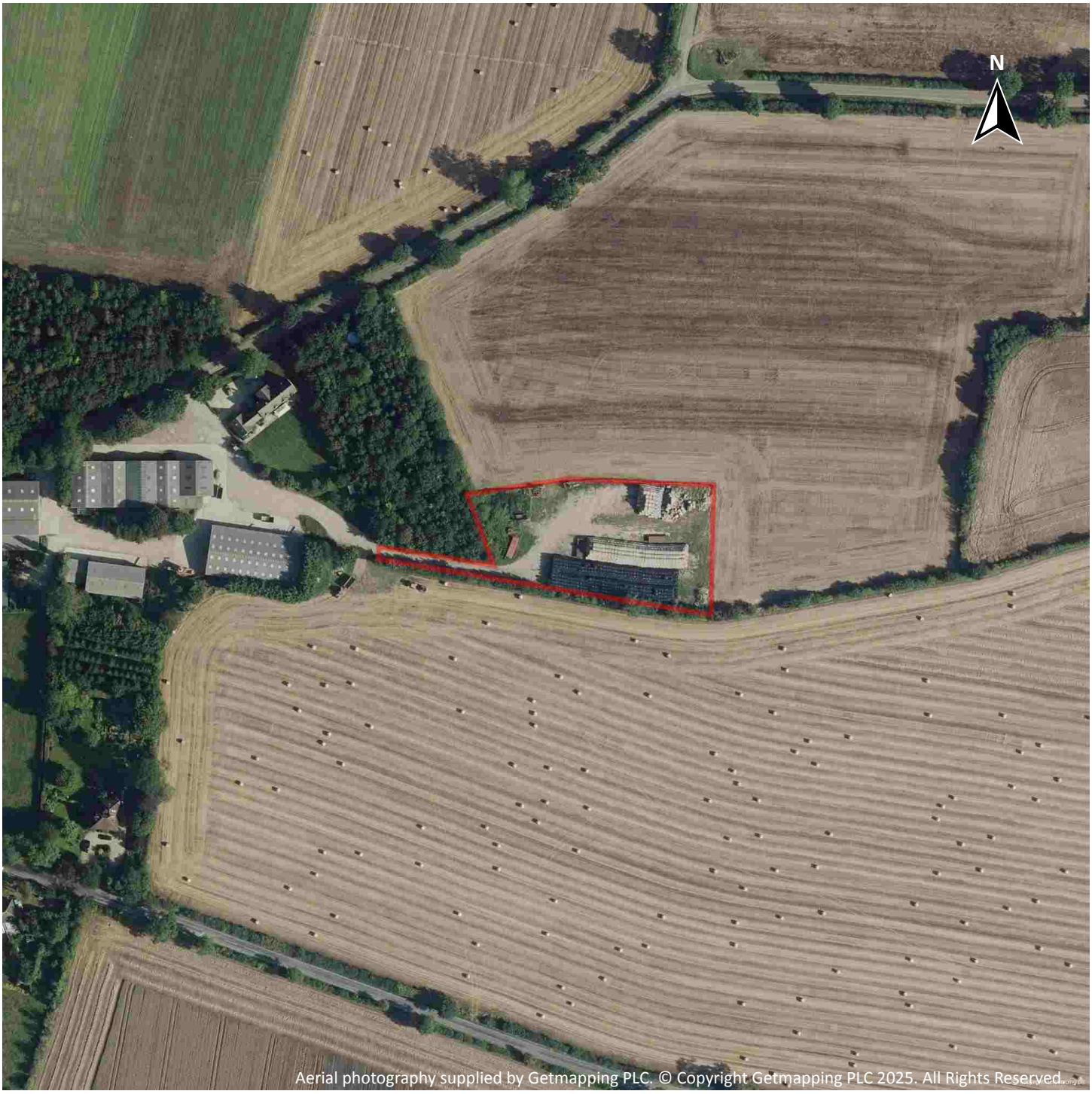
Recent aerial photograph



Capture Date: 12/06/2022

Site Area: 0.44ha

Recent site history - 2019 aerial photograph



Capture Date: 24/08/2019

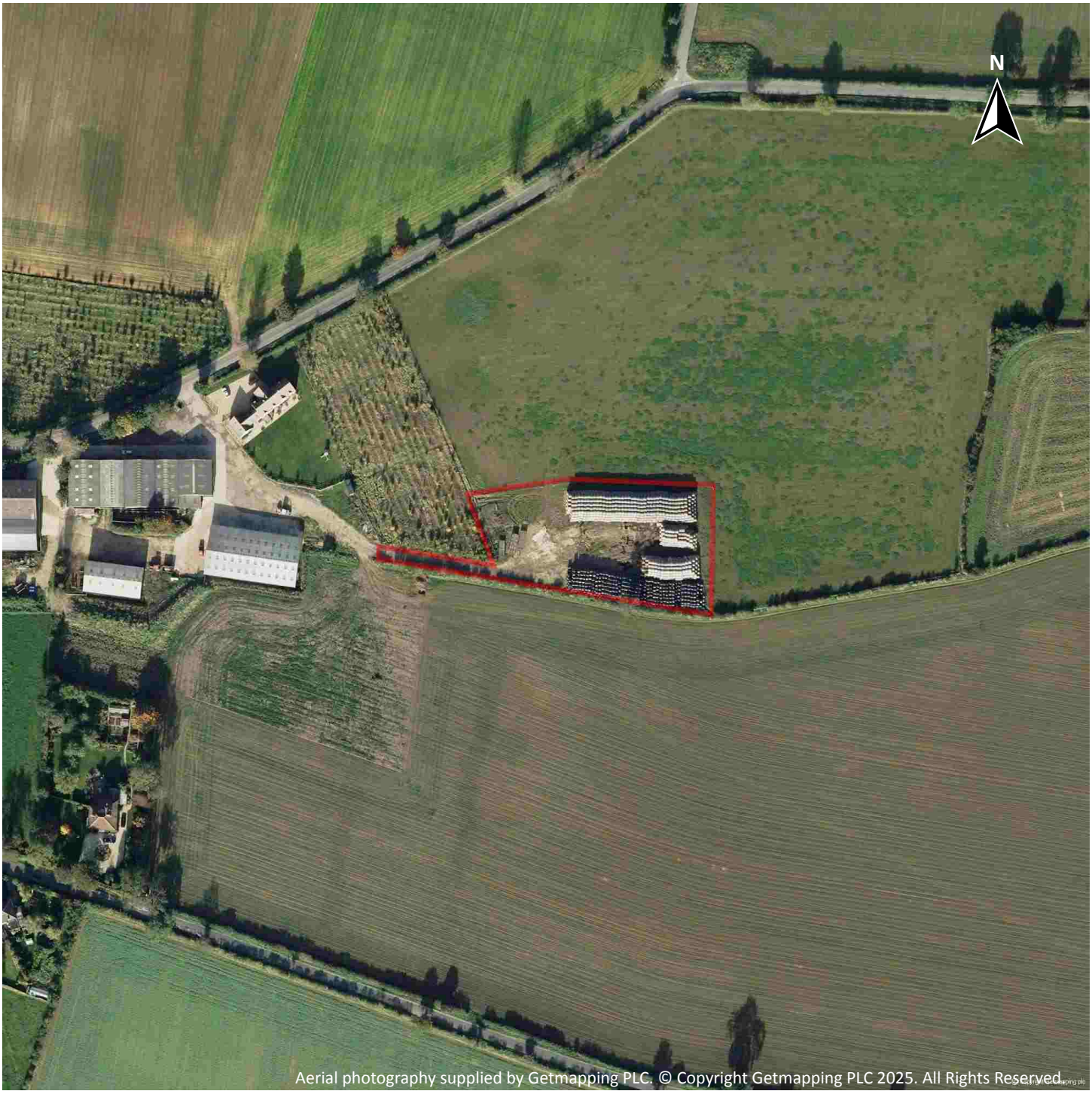
Site Area: 0.44ha

Recent site history - 2014 aerial photograph

Capture Date: 12/06/2014

Site Area: 0.44ha

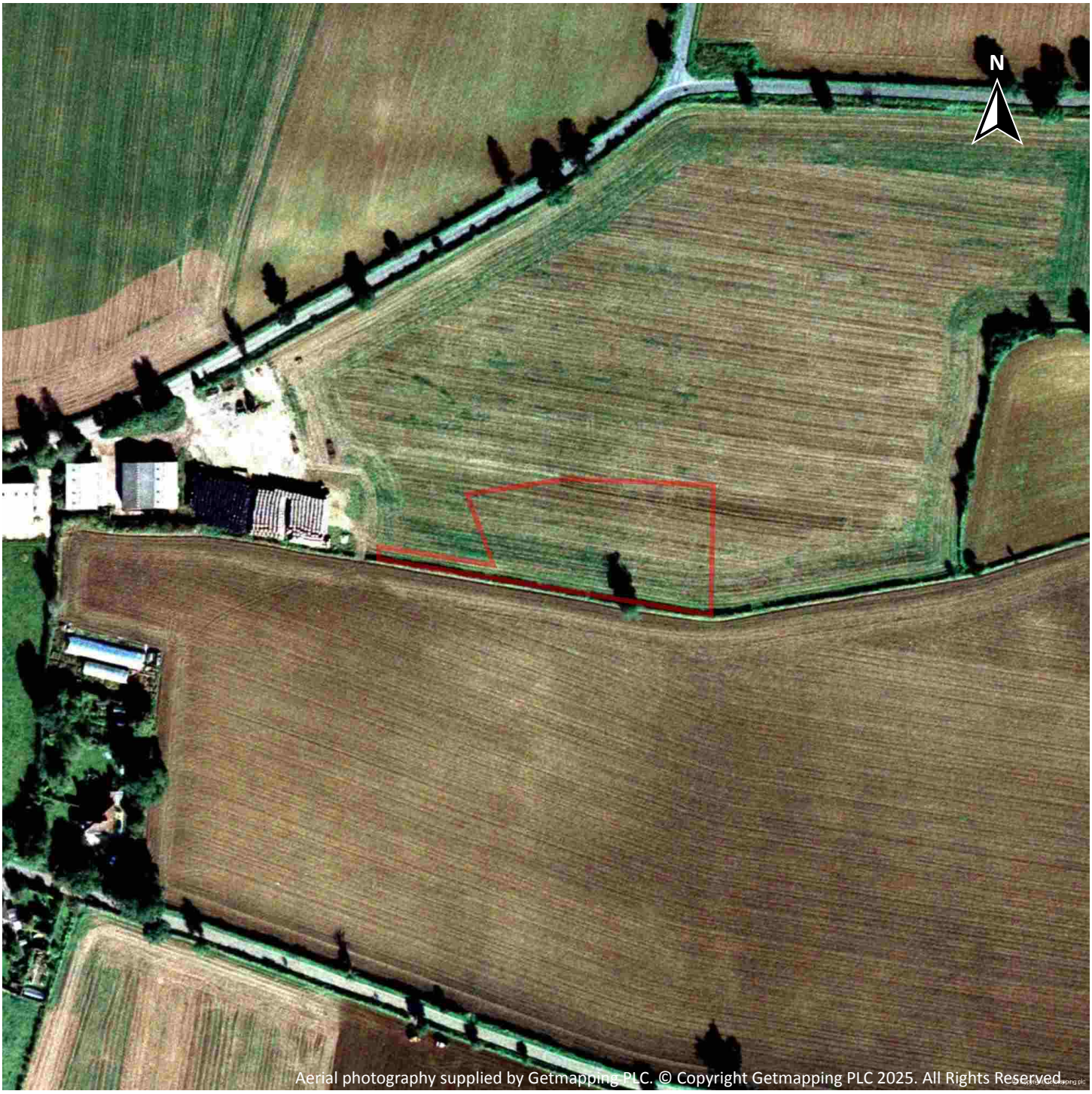
Recent site history - 2006 aerial photograph



Capture Date: 29/10/2006

Site Area: 0.44ha

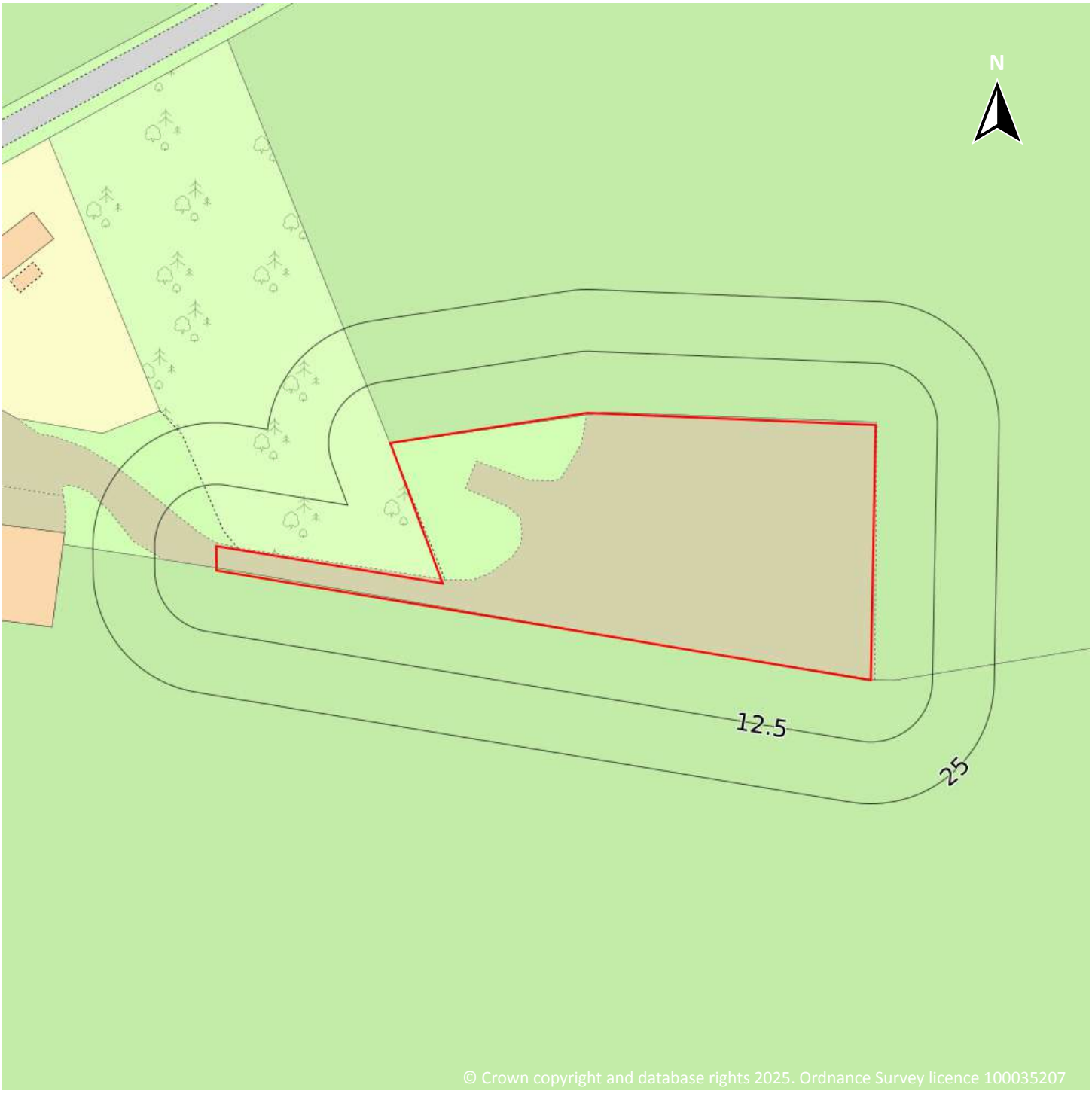
Recent site history - 1999 aerial photograph



Capture Date: 05/10/1999

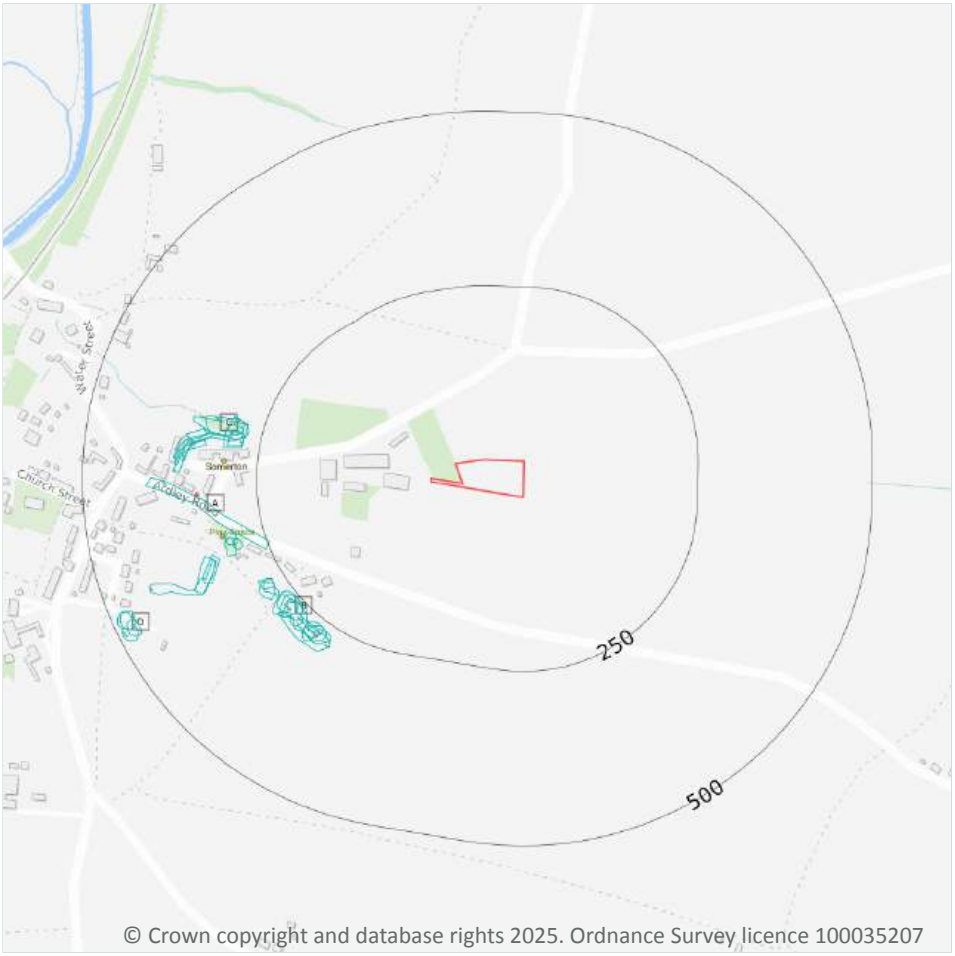
Site Area: 0.44ha

OS MasterMap site plan



Site Area: 0.44ha

1 Past land use



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

1.1 Historical industrial land uses

Records within 500m	29

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 12 >**

ID	Location	Land use	Dates present	Group ID
A	247m W	Cuttings	1880	1781805

ID	Location	Land use	Dates present	Group ID
B	250m SW	Unspecified Pits	1880	1804977
B	253m SW	Unspecified Old Quarries	1923	1838203
B	254m SW	Unspecified Old Quarries	1954	1860087
B	257m SW	Unspecified Old Quarries	1923	1824674
B	259m SW	Unspecified Old Quarries	1923	1863148
B	260m SW	Unspecified Old Quarries	1898	1828284
B	265m SW	Unspecified Old Quarries	1898	1848331
B	267m SW	Unspecified Pit	1880	1816589
B	268m SW	Unspecified Pit	1954	1852336
B	268m SW	Unspecified Old Quarries	1923	1862421
C	270m W	Unspecified Pit	1880	1825387
C	274m W	Pumping House	1923	1832137
C	275m W	Unspecified Pit	1923	1843572
C	277m W	Unspecified Ground Workings	1923	1845544
C	278m W	Unspecified Pit	1954	1838550
A	285m W	Unspecified Pit	1880	1778166
C	287m W	Pumping House	1923	1879286
A	291m W	Unspecified Pits	1954	1804976
A	295m W	Unspecified Old Quarries	1923	1861167
C	318m W	Unspecified Ground Workings	1880	1858123
A	323m W	Unspecified Heap	1880	1873207
C	326m W	Unspecified Ground Workings	1923	1819058
C	328m W	Unspecified Heap	1954	1798631
A	329m W	Unspecified Heaps	1923	1796385
A	329m W	Unspecified Heap	1900	1862825
D	466m SW	Unspecified Pit	1880	1857295
D	468m SW	Unspecified Pit	1954	1839952
D	472m SW	Unspecified Pit	1923	1864637

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	2

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 12 >**

ID	Location	Land use	Dates present	Group ID
C	294m W	Unspecified Tank	1974 - 1994	310023
A	306m W	Unspecified Tank	1994	301118

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	1

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 12 >**

ID	Location	Land use	Dates present	Group ID
A	334m W	Electricity Substation	1974 - 1997	204191

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

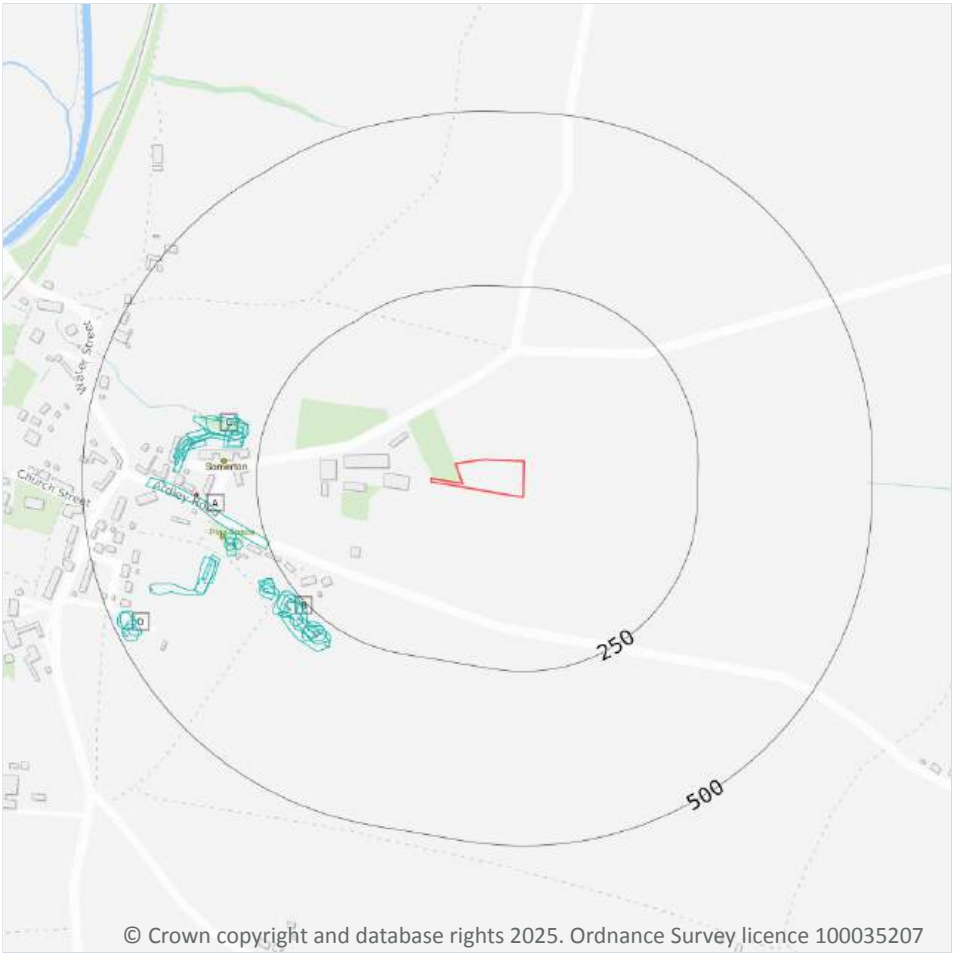
1.6 Historical military land

Records within 500m	0

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey / Groundsure / other sources.

2 Past land use - un-grouped



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

2.1 Historical industrial land uses

Records within 500m	32

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 16 >**

ID	Location	Land Use	Date	Group ID
A	247m W	Cuttings	1880	1781805
B	250m SW	Unspecified Pits	1880	1804977
B	253m SW	Unspecified Old Quarries	1923	1838203

ID	Location	Land Use	Date	Group ID
B	254m SW	Unspecified Old Quarries	1954	1860087
B	257m SW	Unspecified Old Quarries	1923	1824674
B	259m SW	Unspecified Old Quarries	1923	1863148
B	260m SW	Unspecified Old Quarries	1898	1828284
B	265m SW	Unspecified Old Quarries	1898	1848331
B	267m SW	Unspecified Pit	1880	1816589
B	268m SW	Unspecified Pit	1954	1852336
B	268m SW	Unspecified Old Quarries	1923	1862421
C	270m W	Unspecified Pit	1880	1825387
B	273m SW	Unspecified Old Quarries	1923	1862421
C	274m W	Pumping House	1923	1832137
C	275m W	Unspecified Pit	1923	1843572
C	277m W	Unspecified Ground Workings	1923	1845544
C	278m W	Unspecified Pit	1954	1838550
A	285m W	Unspecified Pit	1880	1778166
C	287m W	Pumping House	1923	1879286
A	291m W	Unspecified Pits	1954	1804976
A	295m W	Unspecified Old Quarries	1923	1861167
A	295m W	Unspecified Old Quarries	1923	1861167
C	318m W	Unspecified Ground Workings	1880	1858123
A	323m W	Unspecified Heap	1880	1873207
C	326m W	Unspecified Ground Workings	1923	1819058
C	328m W	Unspecified Heap	1954	1798631
A	329m W	Unspecified Heaps	1923	1796385
A	329m W	Unspecified Heap	1900	1862825
D	466m SW	Unspecified Pit	1880	1857295
D	468m SW	Unspecified Pit	1954	1839952
D	472m SW	Unspecified Pit	1923	1864637

ID	Location	Land Use	Date	Group ID
D	472m SW	Unspecified Pit	1923	1864637

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	**3**

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 16 >**

ID	Location	Land Use	Date	Group ID
C	294m W	Unspecified Tank	1974	310023
C	295m W	Unspecified Tank	1994	310023
A	306m W	Unspecified Tank	1994	301118

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	**3**

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 16 >**

ID	Location	Land Use	Date	Group ID
A	334m W	Electricity Substation	1974	204191
A	335m W	Electricity Substation	1997	204191
A	335m W	Electricity Substation	1994	204191

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

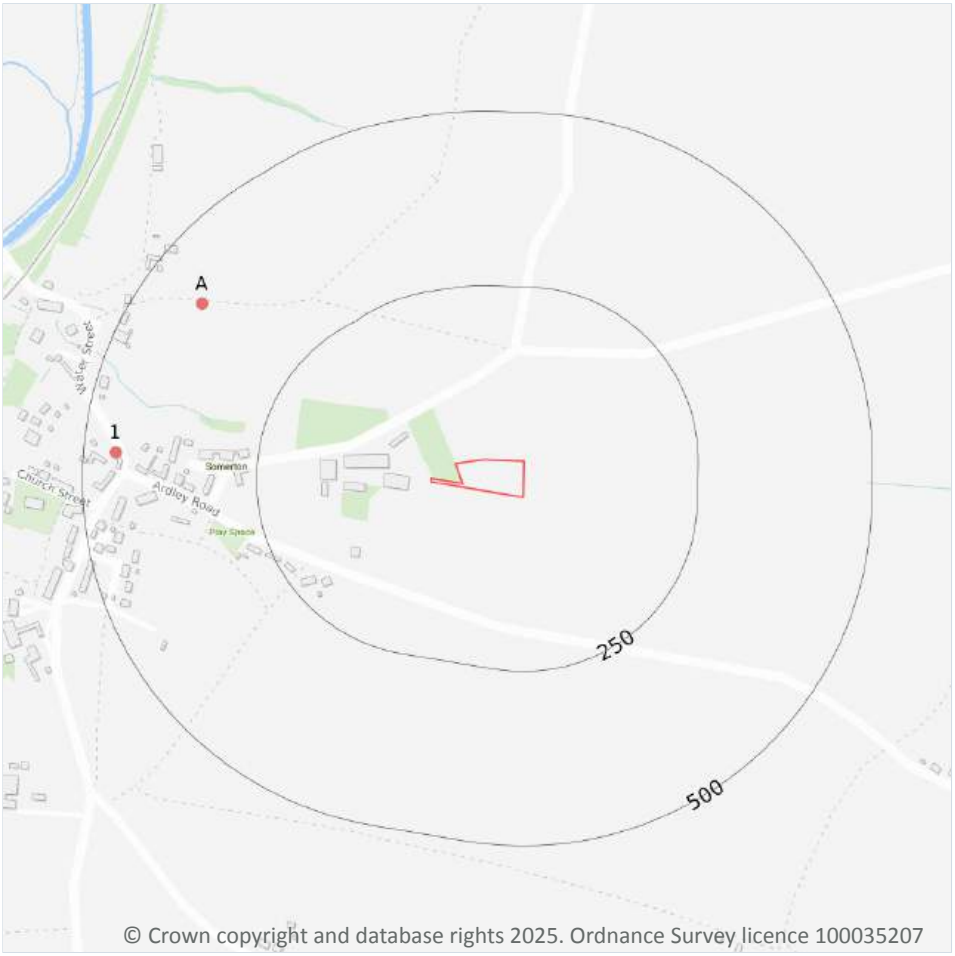
2.5 Historical garages

Records within 500m	0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



Site Outline

Search buffers in metres (m)

Waste exemptions

3.1 Active or recent landfill

Records within 500m	0

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.2 Historical landfill (BGS records)

Records within 500m	0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

Landfill sites identified from Local Authority records and high detail historical mapping.

This data is sourced from the Ordnance Survey/Groundsure and Local Authority records.

3.4 Historical landfill (EA/NRW records)

Records within 500m	0

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.5 Historical waste sites

Records within 500m	0

Waste site records derived from Local Authority planning records and high detail historical mapping.

This data is sourced from Ordnance Survey/Groundsure and Local Authority records.

3.6 Licensed waste sites

Records within 500m	0

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.7 Waste exemptions

Records within 500m	10

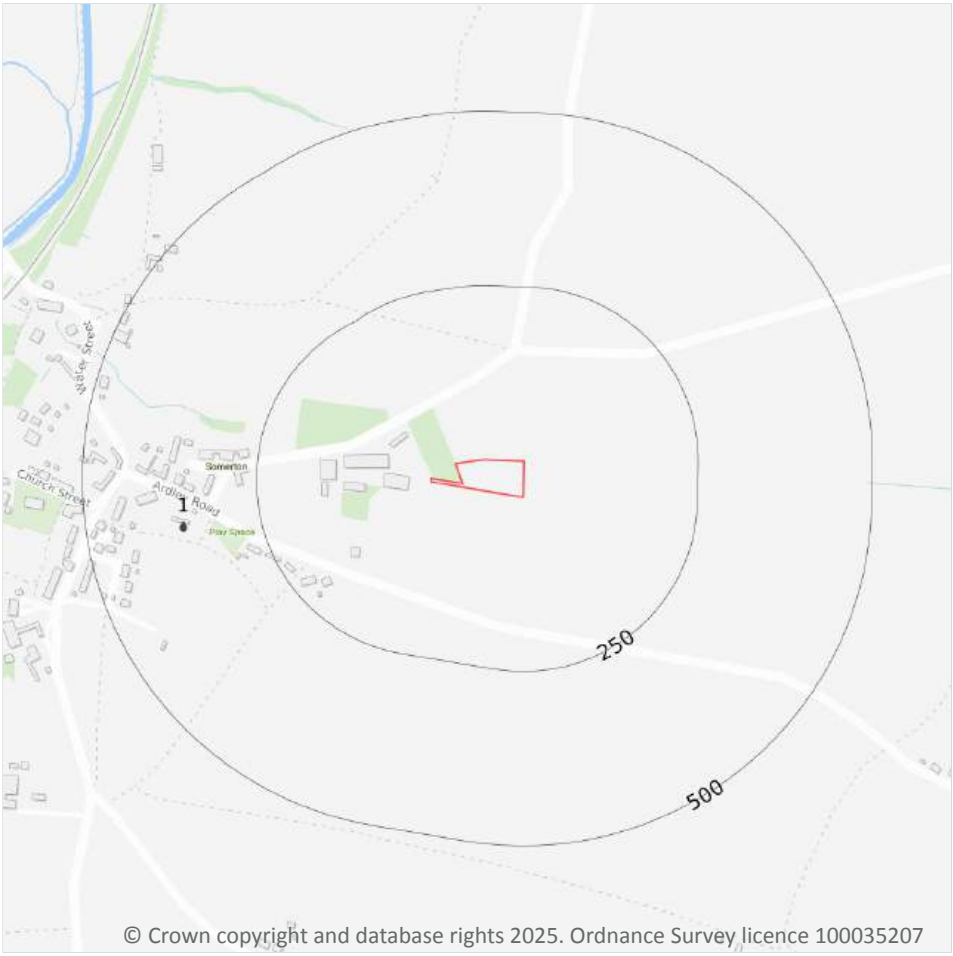
Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on **page 20 >**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	413m NW	Bicester To Oxford Railway Consent Section I	EPR/WE5641PV/A001	Disposing of waste exemption	Non-agricultural waste only	Deposit of waste from dredging of inland waters
A	413m NW	Bicester To Oxford Railway Consent Section I	EPR/WE5641PV/A001	Storing waste exemption	Non-agricultural waste only	Storage of waste in secure containers
A	413m NW	Bicester To Oxford Railway Consent Section I	EPR/WE5641PV/A001	Storing waste exemption	Non-agricultural waste only	Storage of waste in a secure place
A	413m NW	Bicester To Oxford Railway Consent Section I	EPR/WE5641PV/A001	Treating waste exemption	Non-agricultural waste only	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
A	413m NW	Bicester To Oxford Railway Consent Section I	EPR/WE5641PV/A001	Using waste exemption	Non-agricultural waste only	Use of waste in construction
A	413m NW	Bicester To Oxford Railway Consent Section I	EPR/WE5641PV/A001	Using waste exemption	Non-agricultural waste only	Spreading of plant matter to confer benefit
A	413m NW	Bicester To Oxford Railway Consent Section I	EPR/WE5641PV/A001	Using waste exemption	Non-agricultural waste only	Use of waste for a specified purpose
A	413m NW	Bicester To Oxford Railway Consent Section I	EPR/WE5641PV/A001	Treating waste exemption	Non-agricultural waste only	Treatment of waste aerosol cans
A	413m NW	Bicester To Oxford Railway Consent Section I	EPR/WE5641PV/A001	Using waste exemption	Non-agricultural waste only	Use of mulch
1	455m W	Dovecote Farm Heyford Road Bicester Oxfordshire Ox25 6ln	EPR/HE5782CD/A001	Disposing of waste exemption	Agricultural waste only	Burning waste in the open

This data is sourced from the Environment Agency and Natural Resources Wales.

4 Current industrial land use



Site Outline

Search buffers in metres (m)

Licensed Discharges to controlled waters

4.1 Recent industrial land uses

Records within 250m	0

Current potentially contaminative industrial sites.

This data is sourced from Ordnance Survey.

4.2 National Geographic Database (NGD) - Current or recent tanks

Records within 250m	0

Current or recent tanks identified from the Ordnance Survey NGD.

This data is sourced from Ordnance Survey.

4.3 Current or recent petrol stations

Records within 500m	0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.4 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.5 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.6 Sites determined as Contaminated Land

Records within 500m	0

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.

4.7 Control of Major Accident Hazards (COMAH)

Records within 500m	0

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

This data is sourced from the Health and Safety Executive.

4.8 Regulated explosive sites

Records within 500m	0

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

This data is sourced from the Health and Safety Executive.

4.9 Hazardous substance storage/usage

Records within 500m	0

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

This data is sourced from Local Authority records.

4.10 Historical licensed industrial activities (IPC)

Records within 500m	0

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.11 Licensed industrial activities (Part A(1))

Records within 500m	0

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.12 Licensed pollutant release (Part A(2)/B)

Records within 500m	0

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from Local Authority records.

4.13 Radioactive Substance Authorisations

Records within 500m	0

Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.14 Licensed Discharges to controlled waters

Records within 500m	1

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

Features are displayed on the Current industrial land use map on **page 23 >**

ID	Location	Address	Details	
1	361m W	GLYDE FARM BARNS, FRITWELL ROAD, SO, GLYDE FARM BARNS, FRITWELL ROAD, SOMERTON, OXFORDSHIRE	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: CTWC.3457 Permit Version: 1 Receiving Water: TRIBUTARY OFTHE OXFORDCANAL	Status: REVOKED - UNSPECIFIED Issue date: 11/07/1989 Effective Date: 11/07/1989 Revocation Date: 08/02/1991

This data is sourced from the Environment Agency and Natural Resources Wales.

4.15 Pollutant release to surface waters (Red List)

Records within 500m	0

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.16 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.17 List 1 Dangerous Substances

Records within 500m	0

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.18 List 2 Dangerous Substances

Records within 500m	0

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.19 Pollution Incidents (EA/NRW)

Records within 500m	0

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.20 Pollution inventory substances

Records within 500m	0

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.21 Pollution inventory waste transfers

Records within 500m	0

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.22 Pollution inventory radioactive waste

Records within 500m	0

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

5 Geology (basic)

5.1 Superficial geology (625k)

Records within 500m	0

Generalised geology data based on BGS's published poster maps of the UK (North and South). Superficial related themes digitised from 1977 first edition Quaternary map (North and South).

This data is sourced from the British Geological Survey.

5.2 Bedrock geology (625k)

Records within 500m	3

Generalised geology data based on BGS's published poster maps of the UK (North and South). Bedrock related themes created through generalisation of 1:50,000 data.

Location	Lex code	Description	Rock type
On site	**GOG-SLAR**	**GREAT OOLITE GROUP**	**SANDSTONE, LIMESTONE AND ARGILLACEOUS ROCKS**
18m NW	INO-LSSM	INFERIOR OOLITE GROUP	LIMESTONE, SANDSTONE, SILTSTONE AND MUDSTONE
349m NW	LI-MSLS	LIAS GROUP	MUDSTONE, SILTSTONE, LIMESTONE AND SANDSTONE

This data is sourced from the British Geological Survey.

6 Hydrogeology - Superficial aquifer

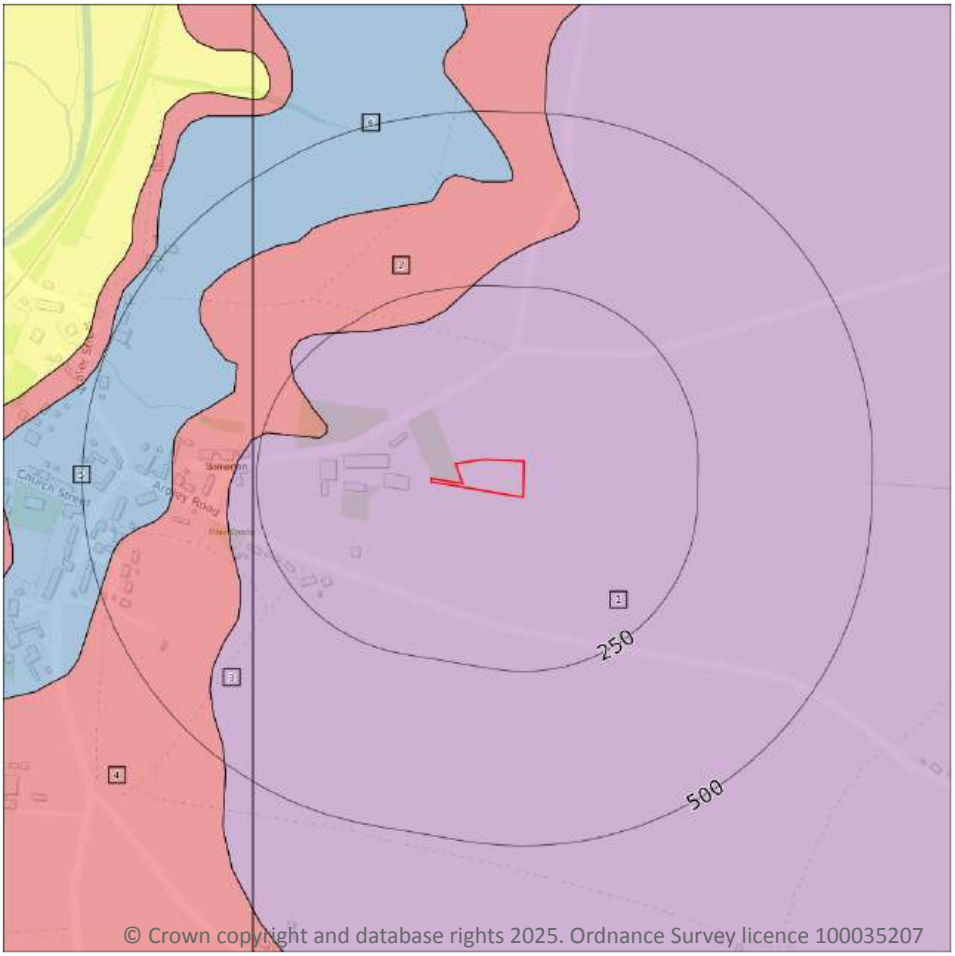
6.1 Superficial aquifer

Records within 500m	0

Aquifer status of groundwater held within superficial geology.

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

Bedrock aquifer



Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive

6.2 Bedrock aquifer

Records within 500m **6**

Aquifer status of groundwater held within bedrock geology.

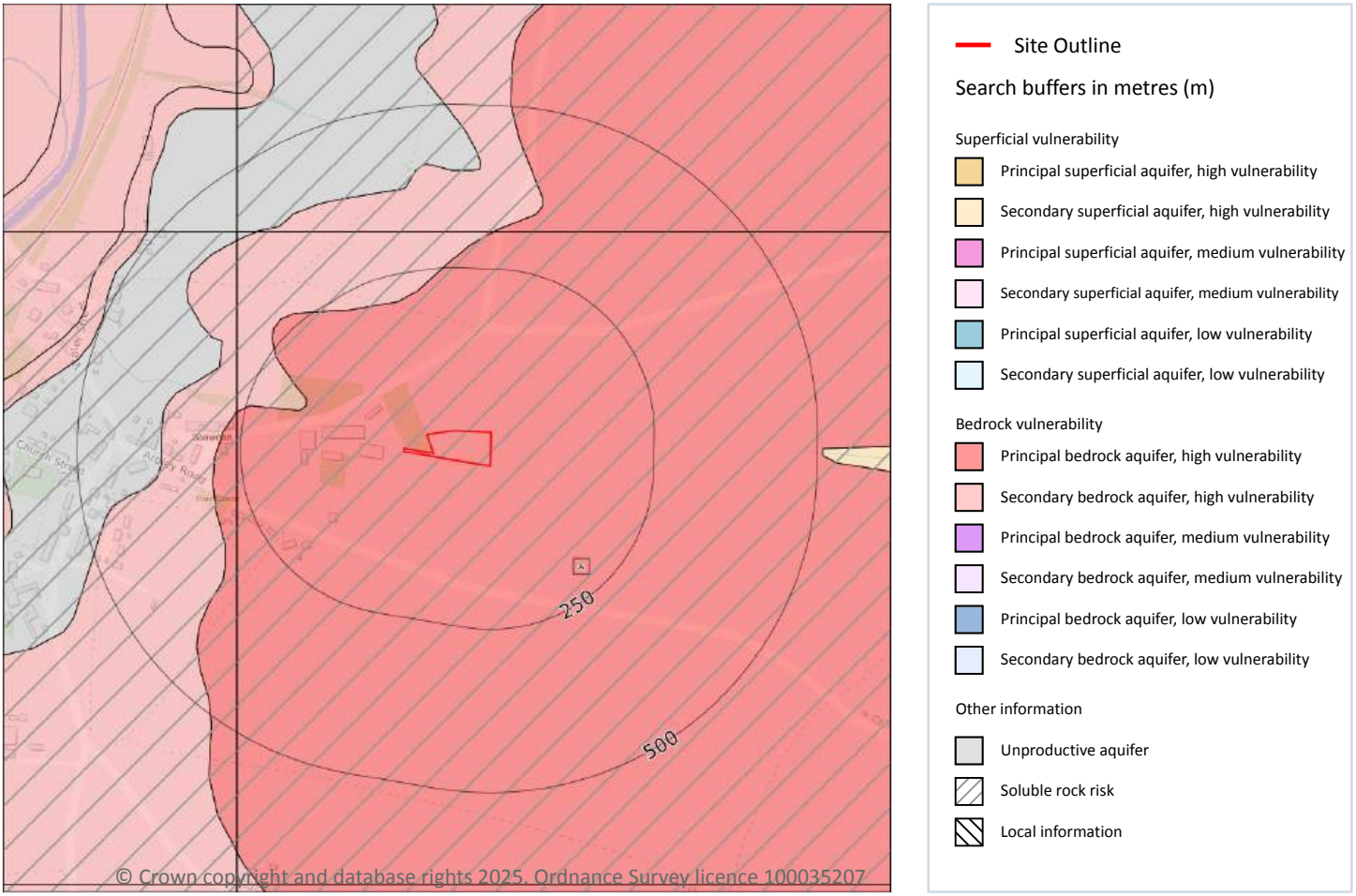
Features are displayed on the Bedrock aquifer map on **page 31 >**

ID	Location	Designation	Description
1	**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**
2	163m NW	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

ID	Location	Designation	Description
3	255m W	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
4	261m W	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	309m NW	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
6	377m N	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

Groundwater vulnerability



6.3 Groundwater vulnerability

Records within 50m	1

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on **page 33 >**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
A	**On site**	**Summary Classification: Principal bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer**	**Leaching class: High Infiltration value: >70% Dilution value: <300mm/year**	**Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data**	**Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures**

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

6.4 Groundwater vulnerability- soluble rock risk

Records on site	**1**

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

ID	Maximum soluble risk category	Percentage of grid square covered by maximum risk
A	**Significant soluble rocks are likely to be present. Low possibility of localised subsidence or dissolution-related degradation of bedrock occurring naturally, but may be possible in adverse conditions such as high surface or subsurface water flow.**	**0.0%**

This data is sourced from the British Geological Survey and the Environment Agency.

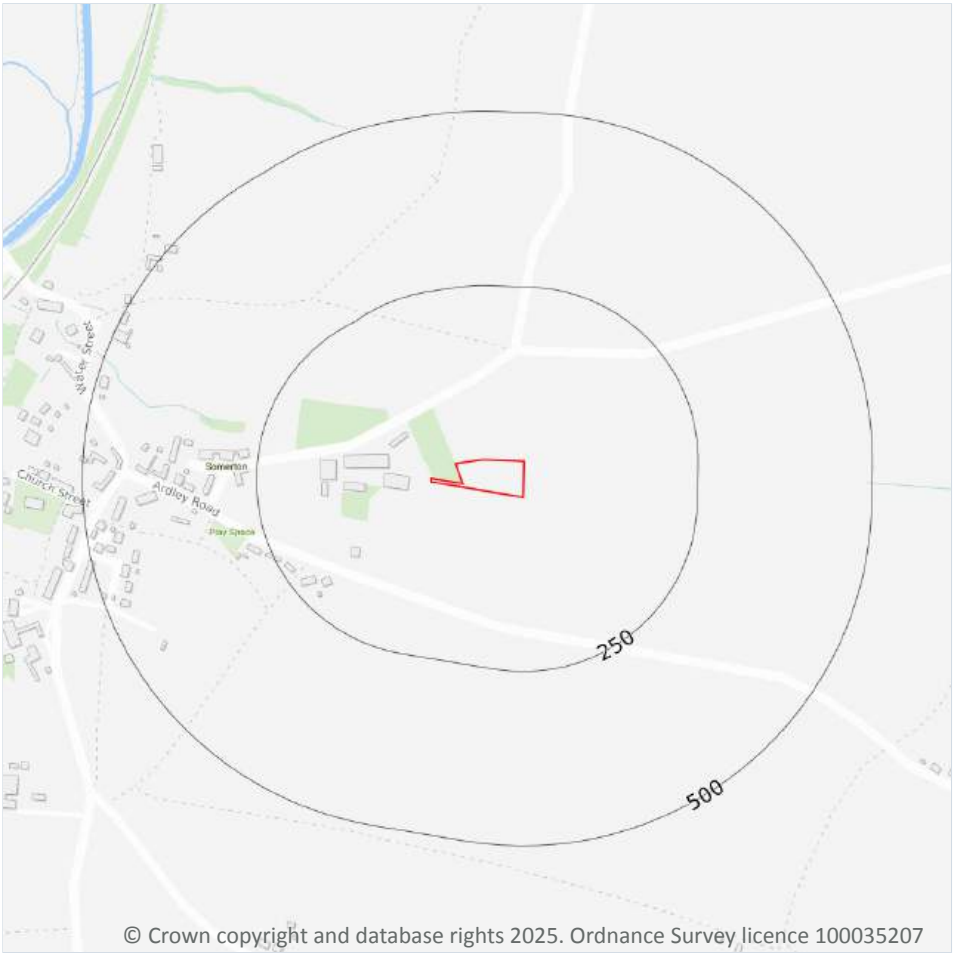
6.5 Groundwater vulnerability- local information

Records on site	**0**

This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk ↗.

This data is sourced from the British Geological Survey and the Environment Agency.

Abstractions and Source Protection Zones



Site Outline

Search buffers in metres (m)

- 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
- Source Protection Zone 1c — Inner catchment - confined aquifer
- Source Protection Zone 2c — Outer catchment - confined aquifer
- Source Protection Zone 3c — Total catchment - confined aquifer
- Drinking water abstraction licences
- Drinking water abstraction licences — Polygon features
- Drinking water abstraction licences — Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

6.6 Groundwater abstractions

Records within 2000m	3

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 35 >**

ID	Location	Details	
-	1676m NE	Status: Historical Licence No: 28/39/14/0093 Details: General Farming & Domestic Direct Source: THAMES GROUNDWATER Point: SOULDERN GROUNDS, NR BICESTER (A) Data Type: Point Name: ABERNETHY Easting: 451300 Northing: 230100	Annual Volume (m^3): 4546 Max Daily Volume (m^3): 22.73 Original Application No: - Original Start Date: 14/11/1966 Expiry Date: - Issue No: 100 Version Start Date: 14/11/1966 Version End Date: -
-	1720m SE	Status: Historical 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 Name: POWER Easting: 451940 Northing: 227900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/03/1994 Expiry Date: - Issue No: 100 Version Start Date: 01/03/1994 Version End Date: -
-	1720m SE	Status: Historical 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 Name: POWER Easting: 451940 Northing: 227900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/03/1994 Expiry Date: - Issue No: 100 Version Start Date: 01/03/1994 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

6.7 Surface water abstractions

Records within 2000m	**2**

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 35 >**

ID	Location	Details	
-	1692m SW	Status: Historical Licence No: 28/39/14/0340 Details: Supply To A Leat For Throughflow Direct Source: THAMES SURFACE WATER - NON TIDAL Point: SOMERTON MILL, OXON - R.CHERWELL MILL RACE Data Type: Point Name: BRYDEN Easting: 448800 Northing: 227800	Annual Volume (m^3): 438000 Max Daily Volume (m^3): 1200 Original Application No: - Original Start Date: 08/06/1998 Expiry Date: 30/06/2008 Issue No: 100 Version Start Date: 08/06/1998 Version End Date: -
-	1692m SW	Status: Historical Licence No: 28/39/14/0340 Details: Supply to a Leat for Throughflow Direct Source: THAMES SURFACE WATER - NON TIDAL Point: SOMERTON MILL, OXON Data Type: Point Name: BRYDEN Easting: 448800 Northing: 227800	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 08/06/1998 Expiry Date: 30/06/2008 Issue No: 100 Version Start Date: 08/06/1998 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

6.8 Potable abstractions

Records within 2000m **1**

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 35 >**

ID	Location	Details	
-	1720m SE	Status: Historical 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 Name: POWER Easting: 451940 Northing: 227900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/03/1994 Expiry Date: - Issue No: 100 Version Start Date: 01/03/1994 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

6.9 Source Protection Zones

Records within 500m	0

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

This data is sourced from the Environment Agency and Natural Resources Wales.

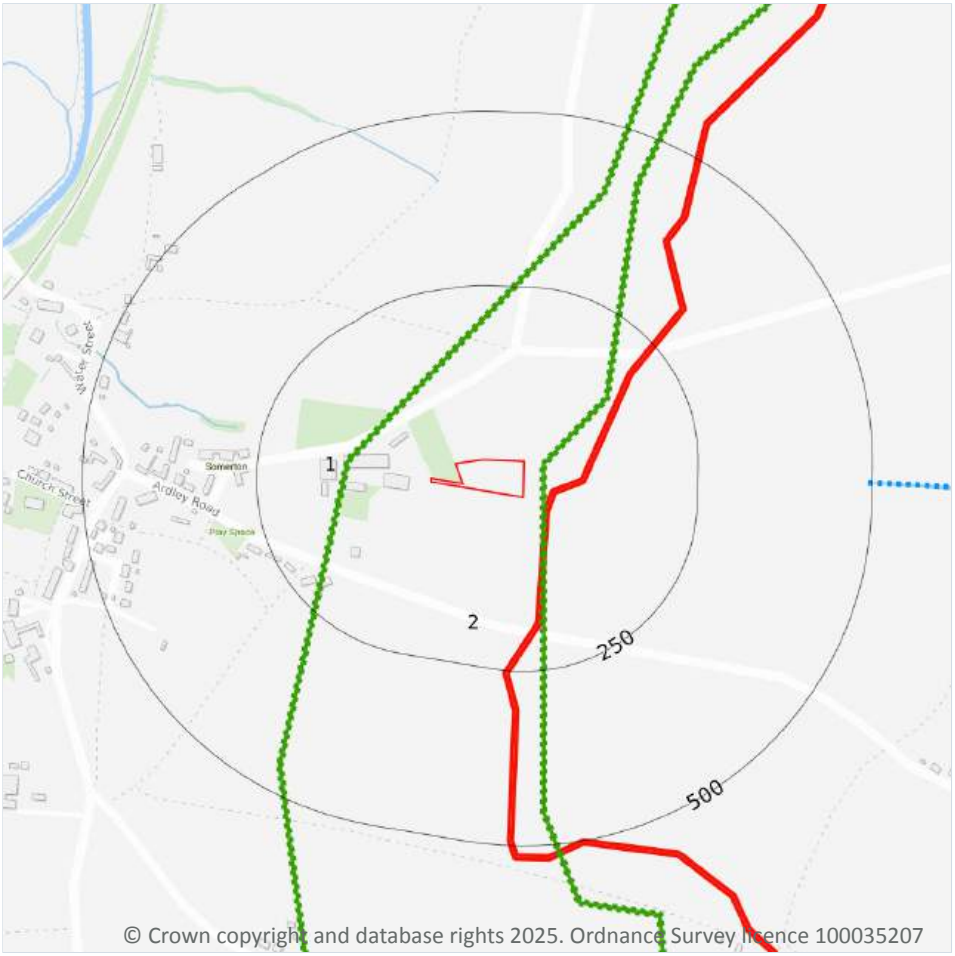
6.10 Source Protection Zones (confined aquifer)

Records within 500m	0

Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

This data is sourced from the Environment Agency and Natural Resources Wales.

7 Hydrology



Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

7.1 Water Network (OS MasterMap)

Records within 250m	0

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

This data is sourced from the Ordnance Survey.

7.2 Surface water features

Records within 250m	0

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

This data is sourced from the Ordnance Survey.

7.3 WFD Surface water body catchments

Records on site	1

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on **page 39 >**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	**On site**	**River**	**Cherwell (Nell Bridge to Bletchingdon)**	**GB106039037431**	**Cherwell**	**Cherwell and Ray**

This data is sourced from the Environment Agency and Natural Resources Wales.

7.4 WFD Surface water bodies

Records identified	1

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on **page 39 >**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	809m NW	River	Cherwell (Nell Bridge to Bletchingdon)	GB106039037431 ↗	Moderate	Fail	Moderate	2019

This data is sourced from the Environment Agency and Natural Resources Wales.

7.5 WFD Groundwater bodies

Records on site	1

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on **page 39 >**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
2	**On site**	**Tackley Jurassic**	**GB40601G603100** ↗	**Good**	**Good**	**Good**	**2019**

This data is sourced from the Environment Agency and Natural Resources Wales.

8 River and coastal flooding

8.1 Risk of flooding from rivers and the sea

Records within 50m	0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

This data is sourced from the Environment Agency and Natural Resources Wales.

8.2 Historical Flood Events

Records within 250m	0

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

This data is sourced from the Environment Agency and Natural Resources Wales.

8.3 Flood Defences

Records within 250m	0

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

This data is sourced from the Environment Agency and Natural Resources Wales.

8.4 Areas Benefiting from Flood Defences

Records within 250m	0

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

8.5 Flood Storage Areas

Records within 250m	0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

This data is sourced from the Environment Agency and Natural Resources Wales.

River and coastal flooding - Flood Zones

8.6 Flood Zone 2

Records within 50m	0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

This data is sourced from the Environment Agency and Natural Resources Wales.

8.7 Flood Zone 3

Records within 50m	0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

9 Surface water flooding

9.1 Surface water flooding

Highest risk on site	**Negligible**
Highest risk within 50m	**Negligible**

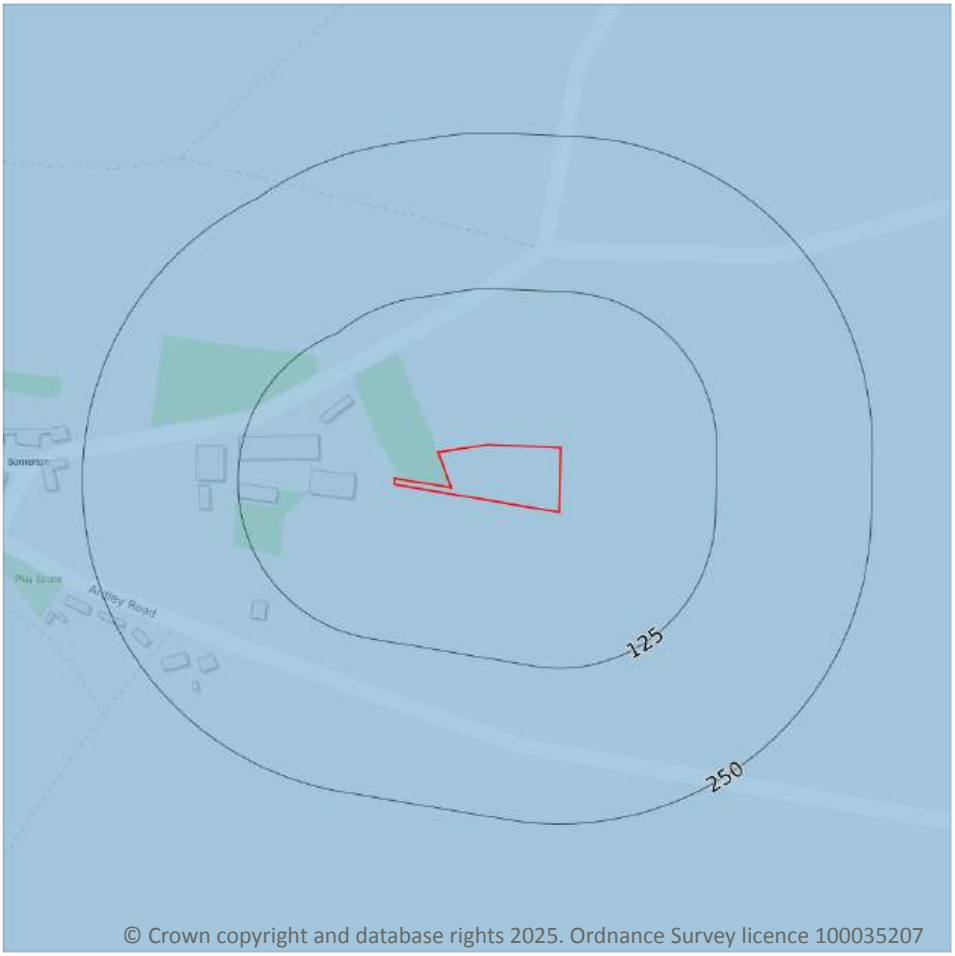
Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site. The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Negligible
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambiental Risk Analytics.

10 Groundwater flooding



Site Outline

Search buffers in metres (m)

High

Moderate - High

Moderate

Low

Negligible

10.1 Groundwater flooding

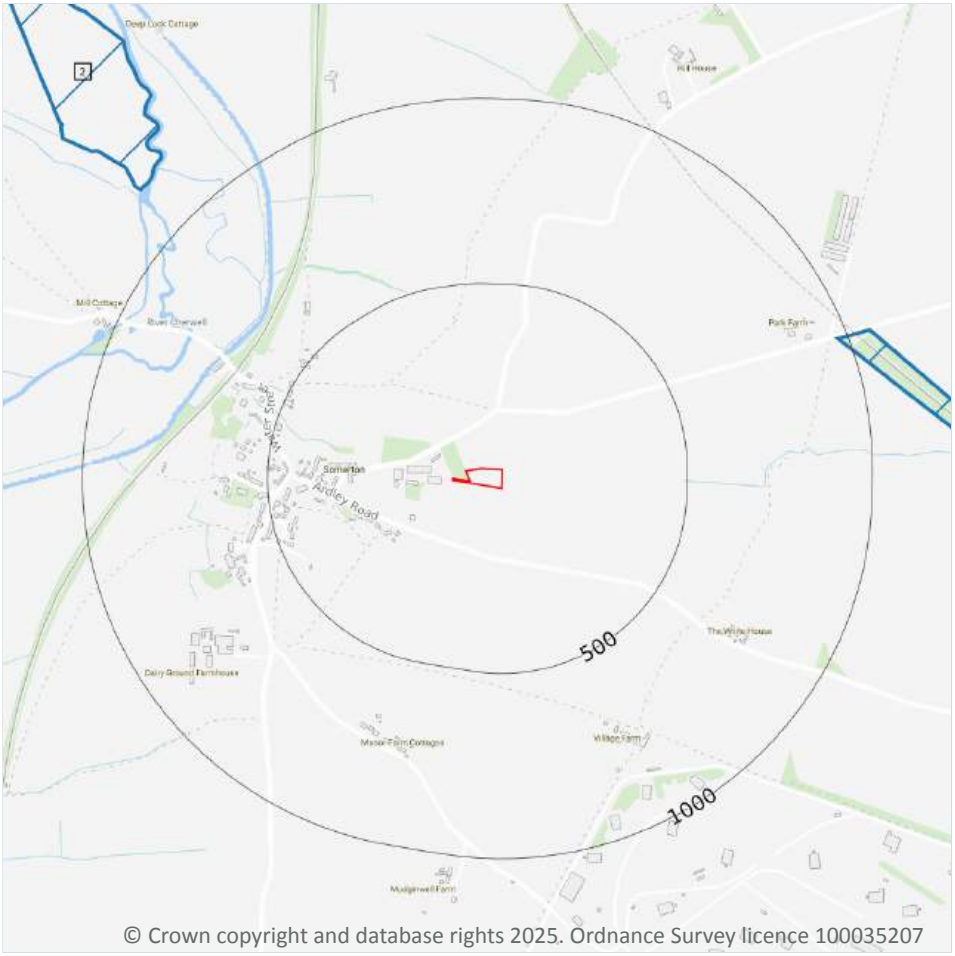
Highest risk on site	**Negligible**
Highest risk within 50m	**Negligible**

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on **page 46 >**

This data is sourced from Ambiental Risk Analytics.

11 Environmental designations



Site Outline

Search buffers in metres (m)

Sites of Special Scientific Interest (SSSI)

11.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	2

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

Features are displayed on the Environmental designations map on **page 47 >**

ID	Location	Name	Data source
1	973m E	Ardley Cutting and Quarry SSSI	Natural England

ID	Location	Name	Data source
2	1147m NW	Bestmoor SSSI	Natural England

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.3 Special Areas of Conservation (SAC)

Records within 2000m	0

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.4 Special Protection Areas (SPA)

Records within 2000m	0

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.5 National Nature Reserves (NNR)

Records within 2000m	0

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.6 Local Nature Reserves (LNR)

Records within 2000m	0

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.7 Designated Ancient Woodland

Records within 2000m	0

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.8 Biosphere Reserves

Records within 2000m	0

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.9 Forest Parks

Records within 2000m	0

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.

11.10 Marine Conservation Zones

Records within 2000m	0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.11 Green Belt

Records within 2000m	0

Areas designated to prevent urban sprawl by keeping land permanently open.

This data is sourced from the Ministry of Housing, Communities and Local Government.

11.12 Proposed Ramsar sites

Records within 2000m	0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

11.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

This data is sourced from Natural England and Natural Resources Wales.

11.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

Special Protection Areas (SPAs) are areas designated (or ‘classified’) under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

11.15 Nitrate Sensitive Areas

Records within 2000m	0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

11.16 Nitrate Vulnerable Zones

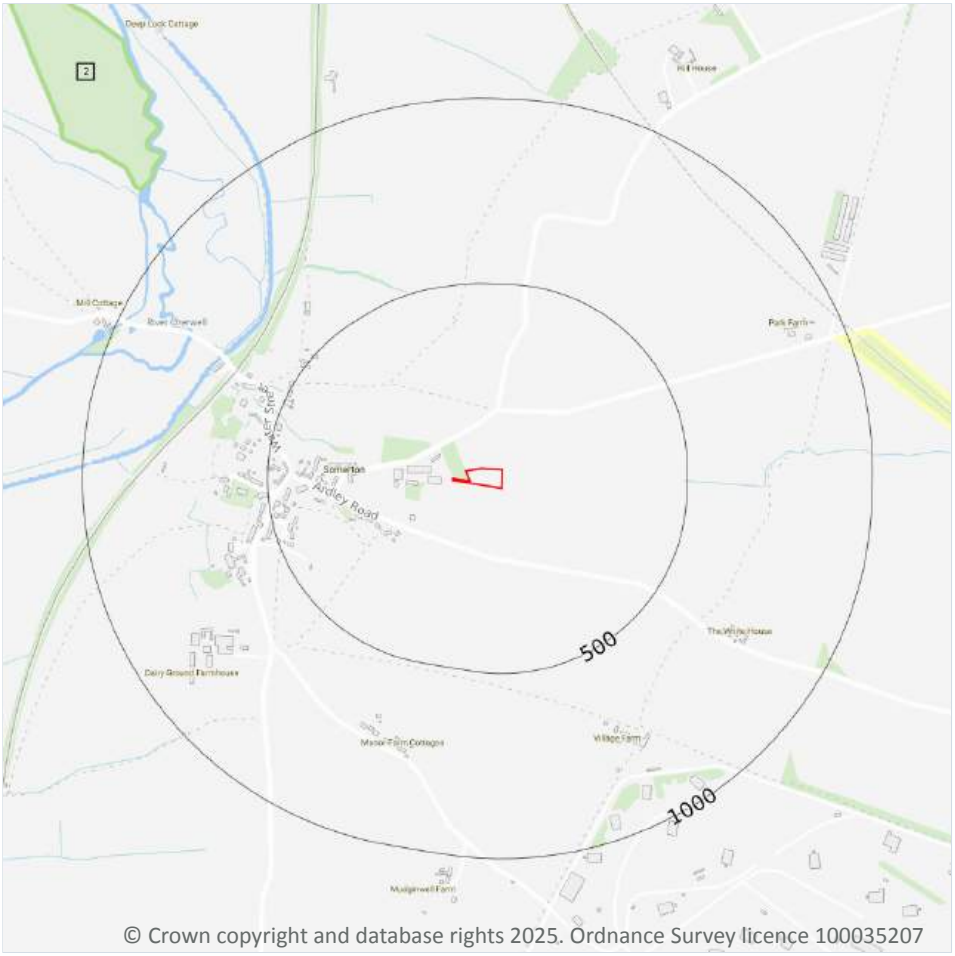
Records within 2000m	3

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
On site	**Great Ouse NVZ**	**Surface Water**	**391**	**Existing**
On site	**Cherwell (Ray to Thames) and Woodeaton Brook NVZ**	**Surface Water**	**472**	**Existing**
On site	**Anglian Great Oolite**	**Groundwater**	**73**	**Existing**

This data is sourced from Natural England and Natural Resources Wales.

SSSI Impact Zones and Units



Site Outline

Search buffers in metres (m)

SSSI Impact Risk Zones

SSSI Units

- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

11.17 SSSI Impact Risk Zones

Records on site	0

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

This data is sourced from Natural England.

11.18 SSSI Units

Records within 2000m	2

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

Features are displayed on the SSSI Impact Zones and Units map on **page 52 >**

ID: 1
Location: 973m E
SSSI name: Ardley Cutting and Quarry
Unit name: Cutting
Broad habitat: Calcareous Grassland - Lowland
Condition: Unfavourable - Recovering
Reportable features:

Feature name	Feature condition	Date of assessment
ER - Bathonian	Favourable	22/08/2012
Invert. assemblage F112 open short sward	Unfavourable - Recovering	19/01/2022
Lowland calcareous grassland (CG3-5)	Unfavourable - Recovering	22/08/2012
Population of nationally scarce butterfly species - Hamearis lucina, Duke of Burgundy	Unfavourable - Recovering	19/01/2022

ID: 2
Location: 1147m NW
SSSI name: Bestmoor
Unit name: Grassland
Broad habitat: Neutral Grassland - Lowland
Condition: Favourable
Reportable features:

Feature name	Feature condition	Date of assessment
Population of declining plant species and species at the edge of their range - Oenanthe silaifolia, Narrow-leaved water dropwort	Favourable	01/02/2023

This data is sourced from Natural England and Natural Resources Wales.

12 Visual and cultural designations

Site Outline

Search buffers in metres (m)

Listed buildings

Conservation areas

Conservation areas - no data

National Parks

Areas of Outstanding Natural Beauty

Registered parks and gardens

Scheduled Monuments

World Heritage Sites

12.1 World Heritage Sites

Records within 250m	0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

12.2 Area of Outstanding Natural Beauty

Records within 250m	0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

12.3 National Parks

Records within 250m	0

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

12.4 Listed Buildings

Records within 250m	0

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

12.5 Conservation Areas

Records within 250m	1

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

Features are displayed on the Visual and cultural designations map on **page 54 >**

ID	Location	Name	District	Date of designation
1	205m SW	Somerton	Cherwell	10/1992

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

12.6 Scheduled Ancient Monuments

Records within 250m	**0**

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

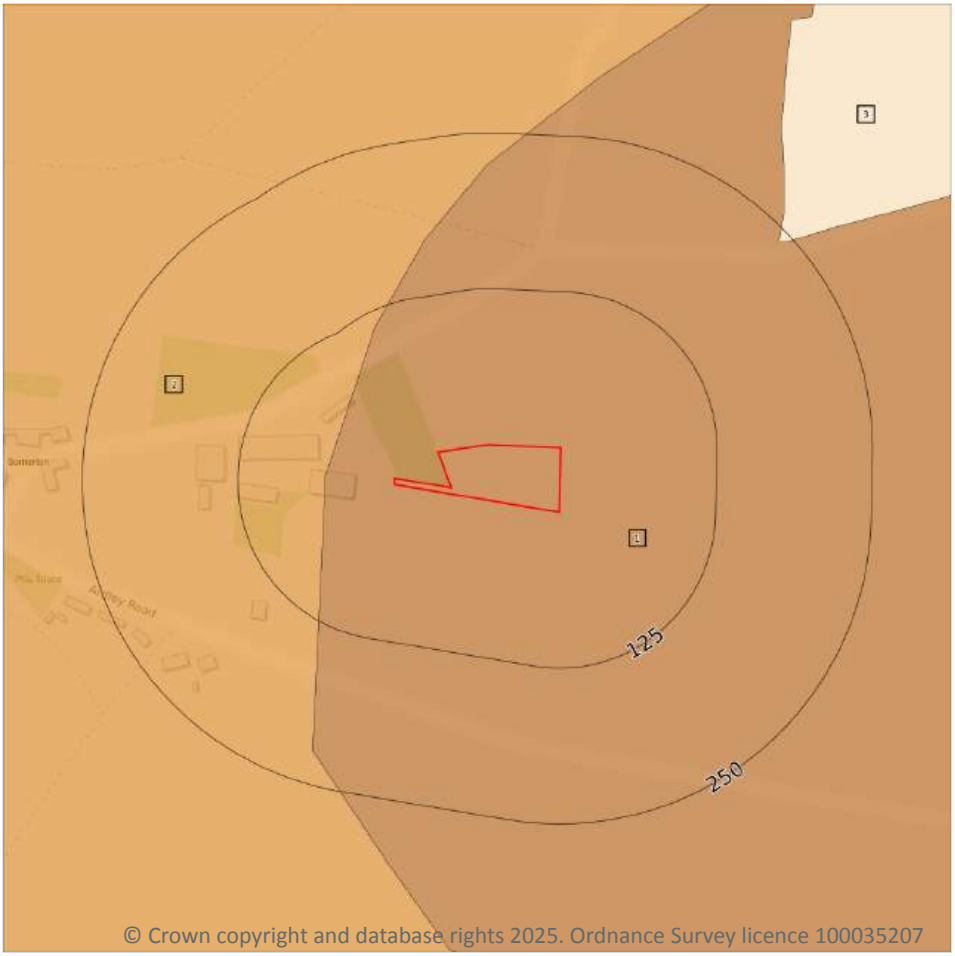
12.7 Registered Parks and Gardens

Records within 250m	**0**

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

13 Agricultural designations



Site Outline

Search buffers in metres (m)

- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

13.1 Agricultural Land Classification

Records within 250m	3

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on **page 57 >**

ID	Location	Classification	Description
1	**On site**	**Grade 2**	**Very good quality agricultural land. Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.**
2	53m W	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.
3	241m NE	Grade 3b	Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

This data is sourced from Natural England.

13.2 Open Access Land

Records within 250m	**0**

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

This data is sourced from Natural England and Natural Resources Wales.

13.3 Tree Felling Licences

Records within 250m	**0**

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

This data is sourced from the Forestry Commission.

13.4 Environmental Stewardship Schemes

Records within 250m	**0**

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.

13.5 Countryside Stewardship Schemes

Records within 250m	**2**

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

Location	Reference	Scheme	Start Date	End Date
On site	**1481652**	**Countryside Stewardship (Higher Tier)**	**01/08/2023**	**31/07/2026**
205m SW	1253478	Countryside Stewardship (Middle Tier)	01/01/2022	31/12/2026

This data is sourced from Natural England.

14 Habitat designations

14.1 Priority Habitat Inventory

Records within 250m	0

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

This data is sourced from Natural England.

14.2 Habitat Networks

Records within 250m	0

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

14.3 Open Mosaic Habitat

Records within 250m	0

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

14.4 Limestone Pavement Orders

Records within 250m	0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.

Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see https://www.groundsure.com/sources-reference ↗.

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: www.groundsure.com/terms-and-conditions-april-2023/ ↗.

APPENDIX D: FIELD LOGS

Hand Pit

HP1

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
HP				1:25

Project Name	Project No.	Start Date	End Date
Somerton, Bicester	21425	2025-10-14	2025-10-14

Client
Laxton Properties Ltd

Consultant
Cameron Burchell

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
						(0.30) 0.30		TOPSOIL
		0.30 0.30	PID J J1	0.00 (ppmv)				Firm light brown/yellow gravelly CLAY. Gravels are fine to medium subrounded to subangular limestone
						(0.70) 1.00		*End of Trial Pit at 1.00m*

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
Groundwater not encountered

Method, Plant, Stability, Dimensions
0.00 - 1.00m HP

Logger
JP

Hand Pit

HP2

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
HP				1:25

Project Name	Project No.	Start Date	End Date
Somerton, Bicester	21425	2025-10-14	2025-10-14

Client
Laxton Properties Ltd

Consultant
Cameron Burchell

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
						(0.05) 0.05		TOPSOIL
		0.40 0.40	PID J J1	0.00 (ppmv)		(0.65)		Firm to stiff light brown/yellow gravelly CLAY. Gravels are fine to medium subrounded to subangular limestone
						0.70		*End of Trial Pit at 0.70m*

0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0

Remarks
Groundwater not encountered

Method, Plant, Stability, Dimensions
0.00 - 0.70m HP

Logger
JP

Hand Pit

HP3

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
HP				1:25

Project Name	Project No.	Start Date	End Date
Somerton, Bicester	21425	2025-10-14	2025-10-14

Client
Laxton Properties Ltd

Consultant
Cameron Burchell

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
		0.40 0.40	PID J J1	0.00 (ppmv)		(0.50) 0.50 (0.40) 0.90		MADE GROUND: Brown silty gravelly clay with red bricks and black coal ash fill Firm light brown/yellow gravelly CLAY. Gravels are fine to medium subrounded to subangular limestone *End of Trial Pit at 0.90m*

Remarks
Groundwater not encountered

Method, Plant, Stability, Dimensions
0.00 - 0.90m HP

Logger
JP

Hand Pit

HP4

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
HP				1:25

Project Name	Project No.	Start Date	End Date
Somerton, Bicester	21425	2025-10-14	2025-10-14

Client
Laxton Properties Ltd

Consultant
Cameron Burchell

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
		0.30 0.30	PID J J1	0.00 (ppmv)		(0.05) 0.05 (0.45) 0.50		TOPSOIL Firm to stiff light brown/yellow gravelly CLAY. Gravels are fine to medium subrounded to subangular limestone *End of Trial Pit at 0.50m*

0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0

Remarks
Groundwater not encountered

Method, Plant, Stability, Dimensions
0.00 - 0.50m HP

Logger
JP

Hand Pit

HP5

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
HP				1:25

Project Name	Project No.	Start Date	End Date
Somerton, Bicester	21425	2025-10-14	2025-10-14

Client
Laxton Properties Ltd

Consultant
Cameron Burchell

Contractor

Inst/ Backfill	Water Levels	Samples and Tests: Depth (m)	Samples and Tests: Type/ Ref	Samples and Tests: Results	Level (m)	Depth (thickness) (m)	Strata: Legend	Strata: Description
						(0.20) 0.20		TOPSOIL
		0.30 0.30	PID J J1	0.00 (ppmv)		(0.30) 0.50		Firm to stiff light brown/yellow gravelly CLAY. Gravels are fine to medium subrounded to subangular limestone
								End of Trial Pit at 0.50m

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Remarks
Groundwater not encountered

Method, Plant, Stability, Dimensions
0.00 - 0.50m HP

Logger
JP

APPENDIX E: ANALYTICAL TEST RESULTS

WDE consulting
Grounded Solutions

WDE Standard QRA Suite

	No. of Samples	Unit	Target Concentration Allotments	Source	Min	Max	No. That Exceed	ACM Lab	HP1	HP2	HP3	HP4	HP5
Sample Ref									HP1	HP2	HP3	HP4	HP5
Type									SOIL	SOIL	SOIL	SOIL	SOIL
Depth									0.30	0.40	0.40	0.30	0.30
Date									15/10/2025	15/10/2025	15/10/2025	15/10/2025	15/10/2025
Moisture Content	5	%	-						13	8.1	8.2	7.4	7.1
Asbestos	5	N/A	DL	WDE					Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification	0	%	0.001	DL	0	BDL	0						
pH	5	pH Units	-	-	8.1	8.3	0		8.1	8.2	8.3	8.1	8.3
Total Cyanide	5	mg/kg	50	DIV	0	BDL	0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Sulphate Total	5	%	-	-	0.094	0.13	-		0.094	0.099	0.105	0.1	0.13
Sulphate as SO_4	5	g/l	-	-	0.029	0.092	-		0.081	0.064	0.065	0.029	0.092
Sulphide	5	mg/kg	-	-	1	6.9	-		1	1.2	6.9	< 1.0	2.1
Total Organic Carbon (TOC)	5	%	-	-	1	2.4	-		1.8	1.5	2.4	2	1
Total Phenols (monohydric)	5	mg/kg	66	LQM	0	BDL	0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	5	mg/kg	4.1	LQM	0	BDL	0		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	5	mg/kg	28	LQM	0.08	0.08	0		< 0.05	< 0.05	0.08	< 0.05	< 0.05
Acenaphthene	5	mg/kg	34	LQM	0.12	0.31	0		< 0.05	0.31	0.12	< 0.05	< 0.05
Fluorene	5	mg/kg	27	LQM	0.1	0.21	0		< 0.05	0.21	0.1	< 0.05	< 0.05
Phenanthrene	5	mg/kg	15	LQM	0.06	1.6	0		0.1	1.6	1.1	0.09	0.06
Anthracene	5	mg/kg	380	LQM	0.37	0.42	0		< 0.05	0.42	0.37	< 0.05	< 0.05
Fluoranthene	5	mg/kg	52	LQM	0.2	3.9	0		0.35	2.6	3.9	0.23	0.2
Pyrene	5	mg/kg	110	LQM	0.22	4	0		0.34	2.2	4	0.23	0.22
Benzo(a)anthracene	5	mg/kg	2.9	LQM	0.15	2.3	0		0.23	1.5	2.3	0.16	0.15
Chrysene	5	mg/kg	4.1	LQM	0.16	2.6	0		0.22	1.4	2.6	0.17	0.16
Benzo(b)fluoranthene	5	mg/kg	0.99	LQM	0.27	4.5	2		0.3	2.2	4.5	0.33	0.27
Benzo(k)fluoranthene	5	mg/kg	37	LQM	0.09	1.7	0		0.16	0.78	1.7	0.09	0.09
Benzo(a)pyrene	5	mg/kg	0.97	LQM	0.25	4	2		0.28	1.6	4	0.29	0.25
Indeno(1,2,3-cd)pyrene	5	mg/kg	9.5	LQM	0.13	2.3	0		0.14	0.87	2.3	0.19	0.13
Dibenz(a,h)anthracene	5	mg/kg	0.14	LQM	0.2	0.37	2		< 0.05	0.2	0.37	< 0.05	< 0.05
Benzo(ghi)perylene	5	mg/kg	290	LQM	0.15	2.9	0		0.18	0.93	2.9	0.19	0.15
Total EPA-16 PAHs	5	mg/kg		-	1.66	30.2	0		2.31	16.9	30.2	1.96	1.66
Arsenic (dissolved)	5	mg/kg	43	LQM	6.1	14	0		13	14	13	14	6.1
Beryllium	5	mg/kg	35	LQM	0.36	0.89	0		0.8	0.73	0.77	0.89	0.36
Boron (dissolved)	5	mg/kg	45	LQM	0.5	1.5	0		1.2	1.5	0.9	1.4	0.5
Cadmium (dissolved)	5	mg/kg	1.9	LQM	0.2	0.2	0		< 0.2	< 0.2	< 0.2	0.2	< 0.2
Chromium (dissolved)	5	mg/kg	18000	LQM	11	27	0		24	21	22	27	11
Copper (dissolved)	5	mg/kg	520	LQM	6.1	15	0		13	12	15	15	6.1
Lead (dissolved)	5	mg/kg	84	C4SL	7	24	0		21	17	24	23	7
Mercury (dissolved)	5	mg/kg	19	LQM	0	BDL	0		< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (dissolved)	5	mg/kg	230	LQM	7.5	17	0		15	13	13	17	7.5
Selenium (dissolved)	5	mg/kg	88	LQM	0	BDL	0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium	5	mg/kg	91	LQM	17	44	0		39	38	41	44	17
Zinc (dissolved)	5	mg/kg	620	LQM	26	59	0		52	43	55	59	26
Benzene	5	mg/kg	0.017	LQM	0	BDL	0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	5	mg/kg	22	LQM	0	BDL	0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	5	mg/kg	16	LQM	0	BDL	0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Xylenes (o)	5	mg/kg	28	LQM	0	BDL	0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Xylenes (m p)	5	mg/kg	28	LQM	0	BDL	0		< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
MTBE (Methyl Tertiary Butyl Ether)	5	mg/kg	23	CLAIRE	0	BDL	0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	0	mg/kg		-	0	BDL	0						
TPH-CWG - Aliphatic >C5 - C6	5	mg/kg	730	LQM	0	BDL	0		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aliphatic >C6 - C8	5	mg/kg	2300	LQM	0	BDL	0		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aliphatic >C8 - C10	5	mg/kg	320	LQM	0	BDL	0		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aliphatic >C10 - C12	5	mg/kg	2200	LQM	0	BDL	0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C12 - C16	5	mg/kg	11000	LQM	0	BDL	0		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >C16 - C21	5	mg/kg	260000	LQM	0	BDL	0		< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >C21 - C35	5	mg/kg	260000	LQM	29	29	0		< 8.0	< 8.0	29	< 8.0	< 8.0
TPH-CWG - Aliphatic >C35 - C44	5	mg/kg	260000	LQM	25	25	0		< 8.4	< 8.4	25	< 8.4	< 8.4
Total Aliphatic Hydrocarbons	5	mg/kg		-	54	54	0		< 10	< 10	54	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	5	mg/kg	13	LQM	0	BDL	0		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >C7 - C8	5	mg/kg	22	LQM	0	BDL	0		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPH-CWG - Aromatic >C8 - C10	5	mg/kg	8.6	LQM	0	BDL	0		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPH-CWG - Aromatic >C10 - C12	5	mg/kg	13	LQM	0	BDL	0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C12 - C16	5	mg/kg	23	LQM	0	BDL	0		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >C16 - C21	5	mg/kg	46	LQM	18	18	0		< 10	< 10	18	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	5	mg/kg	370	LQM	29	180	0		< 10	29	180	< 10	< 10
TPH-CWG - Aromatic >C35 - C44	5	mg/kg	370	LQM	120	120	0		< 8.4	< 8.4	120	< 8.4	< 8.4
Total Aromatic Hydrocarbon	5	mg/kg		-	29	320	0		< 10	29	320	< 10	< 10

Below GAC
Exceedence

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Analytical Report Number : 25-055940

Project / Site name:	Somerton	**Samples received on:**	15/10/2025
Your job number:	21425	**Samples instructed on/ Analysis started on:**	15/10/2025
Your order number:	25-467	**Analysis completed by:**	28/10/2025
Report Issue Number:	1	**Report issued on:**	28/10/2025
Samples Analysed:	5 soil samples		

[redacted]

Signed: _____

Anna Goc
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting
air	- once the analysis is complete

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Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 25-055940
Project / Site name: Somerton
Your Order No: 25-467

Lab Sample Number				717564	717565	717566	717567	717568
Sample Reference				HP1	HP2	HP3	HP4	HP5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.30	0.40	0.40	0.30	0.30
Date Sampled				15/10/2025	15/10/2025	15/10/2025	15/10/2025	15/10/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	25.5	< 0.1	22.5
Moisture Content	%	0.01	NONE	13	8.1	8.2	7.4	7.1
Total mass of sample received	kg	0.1	NONE	0.9	1.7	0.8	0.6	0.9
Asbestos								
Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	WIK	WIK	WIK	WIK	WIK
Analysis completed	N/A	N/A	N/A	22/10/2025	22/10/2025	22/10/2025	22/10/2025	22/10/2025
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	8.1	8.2	8.3	8.1	8.3
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO_4	%	0.005	MCERTS	0.094	0.099	0.105	0.1	0.13
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	81	64	65	29	92
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	40.7	32	32.7	14.2	46
Sulphide	mg/kg	1	MCERTS	1	1.2	6.9	< 1.0	2.1
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	1.8	1.5	2.4	2	1
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.08	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	0.31	0.12	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	0.21	0.1	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.1	1.6	1.1	0.09	0.06
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.42	0.37	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.35	2.6	3.9	0.23	0.2
Pyrene	mg/kg	0.05	MCERTS	0.34	2.2	4	0.23	0.22
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.23	1.5	2.3	0.16	0.15
Chrysene	mg/kg	0.05	MCERTS	0.22	1.4	2.6	0.17	0.16
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.3	2.2	4.5	0.33	0.27
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.16	0.78	1.7	0.09	0.09
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.28	1.6	4	0.29	0.25
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.14	0.87	2.3	0.19	0.13
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.2	0.37	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.18	0.93	2.9	0.19	0.15
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	2.31	16.9	30.2	1.96	1.66

Analytical Report Number: 25-055940
Project / Site name: Somerton
Your Order No: 25-467

Lab Sample Number				717564	717565	717566	717567	717568
Sample Reference				HP1	HP2	HP3	HP4	HP5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.30	0.40	0.40	0.30	0.30
Date Sampled				15/10/2025	15/10/2025	15/10/2025	15/10/2025	15/10/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	13	14	13	14	6.1
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.8	0.73	0.77	0.89	0.36
Boron (water soluble)	mg/kg	0.2	MCERTS	1.2	1.5	0.9	1.4	0.5
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	0.2	< 0.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	24	21	22	27	11
Copper (aqua regia extractable)	mg/kg	1	MCERTS	13	12	15	15	6.1
Lead (aqua regia extractable)	mg/kg	1	MCERTS	21	17	24	23	7
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	15	13	13	17	7.5
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	39	38	41	44	17
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	52	43	55	59	26
Petroleum Hydrocarbons								
TPHCWG - Aliphatic >EC5 - EC6 $_{HS\_1D\_AL}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 $_{HS\_1D\_AL}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 $_{HS\_1D\_AL}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 $_{EH\_CU\_1D\_AL}$	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 $_{EH\_CU\_1D\_AL}$	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >EC21 - EC35 $_{EH\_CU\_1D\_AL}$	mg/kg	8	MCERTS	< 8.0	< 8.0	29	< 8.0	< 8.0
TPHCWG - Aliphatic >EC35 - EC44 $_{EH\_CU\_1D\_AL}$	mg/kg	8.4	NONE	< 8.4	< 8.4	25	< 8.4	< 8.4
TPHCWG - Aliphatic >EC5 - EC35 $_{EH\_CU+HS\_1D\_AL}$	mg/kg	10	NONE	< 10	< 10	29	< 10	< 10
TPHCWG - Aliphatic >EC5 - EC44 $_{EH\_CU+HS\_1D\_AL}$	mg/kg	10	NONE	< 10	< 10	54	< 10	< 10
TPHCWG - Aromatic >EC5 - EC7 $_{HS\_1D\_AR}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 $_{HS\_1D\_AR}$	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 $_{HS\_1D\_AR}$	mg/kg	0.02	MCERTS	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aromatic >EC10 - EC12 $_{EH\_CU\_1D\_AR}$	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 $_{EH\_CU\_1D\_AR}$	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10	< 10	18	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 $_{EH\_CU\_1D\_AR}$	mg/kg	10	MCERTS	< 10	29	180	< 10	< 10
TPHCWG - Aromatic >EC35 - EC44 $_{EH\_CU\_1D\_AR}$	mg/kg	8.4	NONE	< 8.4	< 8.4	120	< 8.4	< 8.4
TPHCWG - Aromatic >EC5 - EC35 $_{EH\_CU+HS\_1D\_AR}$	mg/kg	10	NONE	< 10	29	200	< 10	< 10
TPHCWG - Aromatic >EC5 - EC44 $_{EH\_CU+HS\_1D\_AR}$	mg/kg	10	NONE	< 10	29	320	< 10	< 10
VOCs								
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

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Project / Site name: Somerton
Your Order No: 25-467

Lab Sample Number				717564	717565	717566	717567	717568
Sample Reference				HP1	HP2	HP3	HP4	HP5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.30	0.40	0.40	0.30	0.30
Date Sampled				15/10/2025	15/10/2025	15/10/2025	15/10/2025	15/10/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Pesticides (GC-MS)								
Alpha-BHC (Benzene Hexachloride)	µg/kg	10	NONE	-	-	< 10	< 10	-
Alachlor	µg/kg	10	NONE	-	-	< 10	< 10	-
Gamma-BHC (Lindane, gamma HCH)	µg/kg	10	NONE	-	-	< 10	< 10	-
1,2,3-Trichlorobenzene	µg/kg	10	NONE	-	-	< 10	< 10	-
1,3,5-Trichlorobenzene	µg/kg	10	NONE	-	-	< 10	< 10	-
2,6-Dichlorobenzonitrile	µg/kg	10	NONE	-	-	< 10	< 10	-
Hexachlorobutadiene	µg/kg	10	NONE	-	-	< 10	< 10	-
1,2,4,5-Tetrachlorobenzene	µg/kg	10	NONE	-	-	< 10	< 10	-
Endosulfan sulfate	µg/kg	10	NONE	-	-	< 10	< 10	-
Hexachlorobenzene	µg/kg	10	NONE	-	-	< 10	< 10	-
Pentachlorobenzene	µg/kg	10	NONE	-	-	< 10	< 10	-
Tecnazene	µg/kg	10	NONE	-	-	< 10	< 10	-
Aldrin	µg/kg	10	NONE	-	-	< 10	< 10	-
Beta-BHC	µg/kg	10	NONE	-	-	< 10	< 10	-
Cis-Chlordane	µg/kg	10	NONE	-	-	< 10	< 10	-
Chlorothalonil	µg/kg	10	NONE	-	-	< 10	< 10	-
Delta-BHC	µg/kg	10	NONE	-	-	< 10	< 10	-
Dieldrin	µg/kg	10	NONE	-	-	< 10	< 10	-
Heptachlor Exo-epoxide	µg/kg	10	NONE	-	-	< 10	< 10	-
Endrin	µg/kg	10	NONE	-	-	< 10	< 10	-
Endosulfan I (alpha isomer)	µg/kg	10	NONE	-	-	< 10	< 10	-
Endosulfan II (beta isomer)	µg/kg	10	NONE	-	-	< 10	< 10	-
Isodrin	µg/kg	10	NONE	-	-	< 10	< 10	-
O,p'-DDD	µg/kg	10	NONE	-	-	< 10	< 10	-
O,p'-DDE	µg/kg	10	NONE	-	-	< 10	< 10	-
O,p'-DDT	µg/kg	10	NONE	-	-	< 10	< 10	-
P,p'-DDD	µg/kg	10	NONE	-	-	< 10	< 10	-
P,p'-DDE	µg/kg	10	NONE	-	-	< 10	< 10	-
P,p'-DDT	µg/kg	10	NONE	-	-	< 10	< 10	-
P,p'-Methoxychlor	µg/kg	10	NONE	-	-	< 10	< 10	-
Trans-Chlordane	µg/kg	10	NONE	-	-	< 10	< 10	-
Trifluralin	µg/kg	10	NONE	-	-	< 10	< 10	-

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

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* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
717564	HP1	None Supplied	0.3	Brown loam and clay with gravel
717565	HP2	None Supplied	0.4	Brown loam and sand with gravel
717566	HP3	None Supplied	0.4	Brown loam and clay with vegetation and stones
717567	HP4	None Supplied	0.3	Brown loam and sand with gravel and vegetation
717568	HP5	None Supplied	0.3	Brown loam and clay with vegetation and stones

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Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode	In-house method	L010-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES	In-house method based on Second Site Properties version 3	L038B	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES	In-house method	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID in soil	Determination of total petroleum hydrocarbons in soil by GC-FID with carbon banding aliphatic and aromatic	In-house method	L076B	D	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil (Summed Bands)	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic (Summed Bands).	Calculation	L076B/L088-PL	D/W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Total petroleum hydrocarbons with carbon banding by HS-GC/MS in soil	Determination of total petroleum hydrocarbons in soil by HS-GC/MS with carbon banding aliphatic and aromatic	In-house method	L088-PL	W	MCERTS

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Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)
Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE
Pesticides by GC-MS/MS	Detemination of Pesticides in soil by GC MS/MS	In-house method	L055B	W	NONE

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

WDE RANGE OF SERVICES

OUR SERVICES

- Phase 1 Desk Studies
- Geo-Environmental Assessments
- Geo-Site Assessments
- Remedial Strategies and DQRAs
- Soakage Testing: BRE365 and borehole permeability testing
- Remedial Verification & Closure Reports
- Environmental Monitoring Programmes
- Material Management Plans (MMP)
- Construction Environmental Management Plans (CEMP)
- Site Waste Management Plans on construction sites
- Developing sustainable waste strategies