PRELIMINARY RISK ASSESSMENT REPORT FOR SYMMETRY PARK, ARDLEY

TE1628-TE-00-XX-RP-GE-001-V02

VERSION 1

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FINAL

Prepared for:

Tritax Symmetry

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EXECUTIVE SUMMARY

Introduction	Tier Environmental was commissioned by Tritax Symmetry to undertake a desk study and Phase I Preliminary Risk Assessment of the proposed commercial / industrial development at Symmetry Park, Ardley. The purpose of this investigation was to establish land use history and review the available information to determine the geoenvironmental setting of the Site and develop a preliminary conceptual site model with due consideration of potential soil and groundwater contamination, hazardous ground gases and mining.
Proposed land use	It is proposed that the site will be developed as distribution warehouse units with associated office space, trailer bays, roadways, carparking, and soft landscaped areas.
Site location and surrounding land uses	The site is located to the east of the Baynards Green Roundabout, off the A43 and B4100, Bicester, OX27 7SS. The surrounding land use of the Site is primarily open fields used for agricultural purposes, and commercial properties located immediately west.
Site history	The Site has remained undeveloped since earliest available mapping (1880) with the exception of the appearance of 1 No. well. surrounding Site uses are mainly agricultural with development of commercial properties immediately west of the site from 1992 (including a 'garage', later shown as a petrol station).
Geology, Hydrogeology and Hydrology	A localised area of artificial ground is annotated in the northwestern part of the Site and a former quarry in the southeastern part of the Site is potentially infilled; however, no other Made Ground / artificial ground is annotated elsewhere on Site. The vast majority of the Site is not shown to be underlain by any Superficial Deposits with the exception of the far southern extent of the Site shown to be locally underlain by Head Deposits comprising clay and silt. Alluvium comprising sandy gravelly clay is shown immediately south of the Site. These superficial deposits are Secondary A Aquifers. Bedrock is made up of 3 No. strata; the White Limestone Formation (Principal Aquifer), the Bladon Member (Secondary A Aquifer) and the Forest Marble Formation (Secondary A Aquifer). The 3 No rock types are shown in a concentric shape on Site, likely associated with a synformal syncline (most likely), a geologically infilled depression or a potentially geologically infilled dissolution feature (unlikely, but possible). No active groundwater or surface water abstractions are recorded within 250m of the Site; however, a potable water abstraction is shown 505m north of the Site. No source protection zones are recorded within 250m of the Site. The nearest water body to Site is 5m south, an inland river not influenced by tidal action. It is anticipated that groundwater will flow southeast based on topography.
Ground Stability	In total, 5 No. records on Site of significant soluble rocks likely present on Site detailed in GroundSure report. BGS records show that the White Limestone Formation and the Limestone beds within the Forest Marble Formation may be prone to dissolution along joints. White Limestone is shown as 'Low' hazard of ground dissolution: Soluble rocks are present within the ground. Some dissolution features may be present *"Potential for difficult ground conditions are at a level where they may be considered."* Tier Environmental recommends further works are conducted to investigate any risk of dissolution at the Site.
Ground Gases	There are no landfills shown within 250m of the Site; however, there is potentially localised artificial ground in the northwestern part of the Site, a potentially infilled old quarry in the southeast and other off-site potentially infilled quarries within 250m of the Site that may represent potential ground gas sources.
Radon Requirements	The central part of the Site lies within an area where between 1% and 3% of properties are above the Action Level and the remainder of the Site lies within an area where less than 1% of properties are above the Action Level. It is recommended that it is confirmed with local Building Control as to whether precautionary basic radon protection measures are required.
Potential contaminative features	A potentially infilled small, localised, former quarry is located in the southeast, 1 No. historic well has been recorded within the northwestern part of the Site and a small, localised, area of artificial ground is shown in the northwestern part of the Site. Immediately west off-Site is a current (and historical garage) petrol station.
Mining and quarrying	Historic quarries have been recorded on and off-Site with a historic limestone BritPit recorded on Site.
Previous investigations	Tier Environmental have not been provided with any additional ground investigation reports pertaining to the Site.
Unexploded Ordnance	Publicly available online Zetica maps indicate that the Site lies within a low risk of UXO.
Ecological sensitivity	The Site is not located within an ecologically sensitive area.
Preliminary Conceptual Site Model	Moderate to moderate / low risks have been identified to human health and moderate / low to low risks to controlled waters from the potentially localised artificial ground / potentially infilled well and former quarry. Moderate/ low risks have been identified to human heath from the former garage and petrol station off-site to the west. Finally moderate risks have been identified associated with potential hazardous ground gases at the Site.

Waste Soils Classification	Based on the history of the Site and the anticipated potential contaminants of concern it is considered unlikely that hazardous waste soil materials would be extensive beneath the Site (if at all); however, this will be subject to confirmatory investigation, sampling, laboratory analysis and waste classification in accordance with the Guidance on the Classification and Assessment of Waste (WM3).
Materials re-use	Subject to volumetric fill requirements and a future assessment of suitability of re-use (both chemically and geotechnically), the majority of materials *may* be considered for potential re-use in line with an appropriate end-of-waste protocol such as WRAP Quality Protocol for Aggregates from Inert Waste, U1 Exemption or a Materials Management Plan in accordance with the CL:AIRE Definition of Waste Code of Practice (DoWCoP).

1. INTRODUCTION

Tier Environmental was commissioned by Tritax Symmetry to undertake a Land Contamination Risk Management (LCRM) Preliminary Risk Assessment for an area of land referred to as Symmetry Park, Ardley, located to the east of the Baynards Green Roundabout, off the A43 and B4100, Bicester, OX27 7SS. (the "Site").

The full title of this report, a *'Stage 1 - LCRM Tier 1 Preliminary Risk Assessment Report'*, is in accordance with that described in the Land Contamination Risk Management guidance (available at https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm) which has superseded CLR 11.

1.1. Proposed Development

Under current proposals the development will comprise be developed as distribution warehouse units with associated office space, trailer bays, roadways, carparking, and soft landscaped areas. As such, in accordance with the *'Updated technical background to the CLEA model'* (Environment Agency, 2009) and *'Suitable 4 Use Levels'* (LQM / CIEH 2015) the proposed generic land use for this development is commercial / industrial.

1.2. Previous Reports

No previous pertinent reports pertaining to this Site have been made available.

1.3. Objectives

Taking into account the proposed development of the Site, the objectives of this appraisal were:

- To determine the historical and current land use.
- To establish the environmental setting of the Site.
- To evaluate whether past mining or other extractive industries could have an influence on the Site.
- To determine likely ground and groundwater conditions.
- To determine the potential risks to human health and the wider environment.
- To determine potential risks posed to the Site from hazardous ground gases and / or vapours.
- To derive a Preliminary Conceptual Site Model.

1.4. Assumptions

The following assumptions are made in this report:

- It is assumed that ground levels will not change significantly from those described in this report or a shown on proposed development drawings. If this is not the case, then amendments to the recommendations made in this report may be required.
- Any references to observations of suspected asbestos-containing materials are for information only and should be verified by a suitably qualified asbestos specialist and/or confirmed by laboratory analysis.
- The use of the term 'Topsoil' within this report is based on a visual identification only and that these materials have not been classified in accordance with BS3882:2015.

- The use of the terms 'shallow' and 'deep' within this report assume *typically* between ground level to circa 5.00m below ground level (bgl) for 'shallow' and greater than 5.00m bgl regarded as 'deep';
- The comments and opinions presented in this report are based on the findings of the desk study performed by Tier Environmental. There may be other conditions prevailing on the Site which have not been revealed by this investigation and which have not been taken into account by this report at this stage.
- Responsibility cannot be accepted for any conditions not revealed by this investigation. Any diagram or opinion on the possible configuration of the findings is conjectural and given for guidance only. Confirmation of ground conditions should be undertaken if deemed necessary.

This report has been prepared for the sole use of Tritax Symmetry. No other third party may rely upon or reproduce the contents of this report without the written approval of Tier Environmental. If any unauthorised third party comes into possession of this report, they rely on it entirely at their own risk and the authors do not owe them any Duty of Care or Skill.

2. SITE DETAILS AND DESCRIPTION

Table 2.1 Current Site Overview.

Site name	Symmetry Park, Ardley
Site address	The site is located to the east of the Baynards Green Roundabout, off the A43 and B4100, Bicester, OX27 7SS. The surrounding land use of the Site is primarily open fields used for agricultural purposes, and commercial properties located immediately west. A site location plan is included as SGP Drawing No. 14-019-SGP-XX-XX-DR-A-001002 within Appendix A.
National Grid Reference (NGR)	455480 229089
Approximate Site area	80.87ha
Site shape	The Site is irregular in shape
Current land use on the Site	The Site is currently open green field, likely used for agriculture.
Surrounding land uses	The surrounding land use of the Site is primarily open fields used for agricultural purposes, and commercial properties located immediately west.
General topography and ground levels	The Site lies approximately 115mAOD, sloping to 113mAOD in the east.

An aerial photograph (from the Groundsure report) of the Site and site boundary is shown below.

Figure 2.1 Recent Aerial Photograph from Groundsure

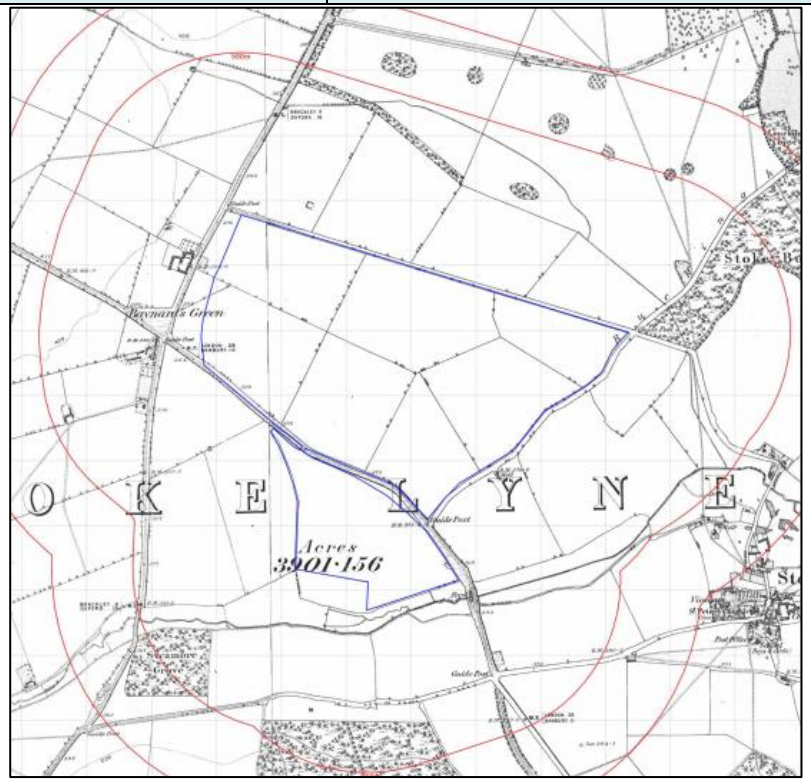
3. SITE HISTORY

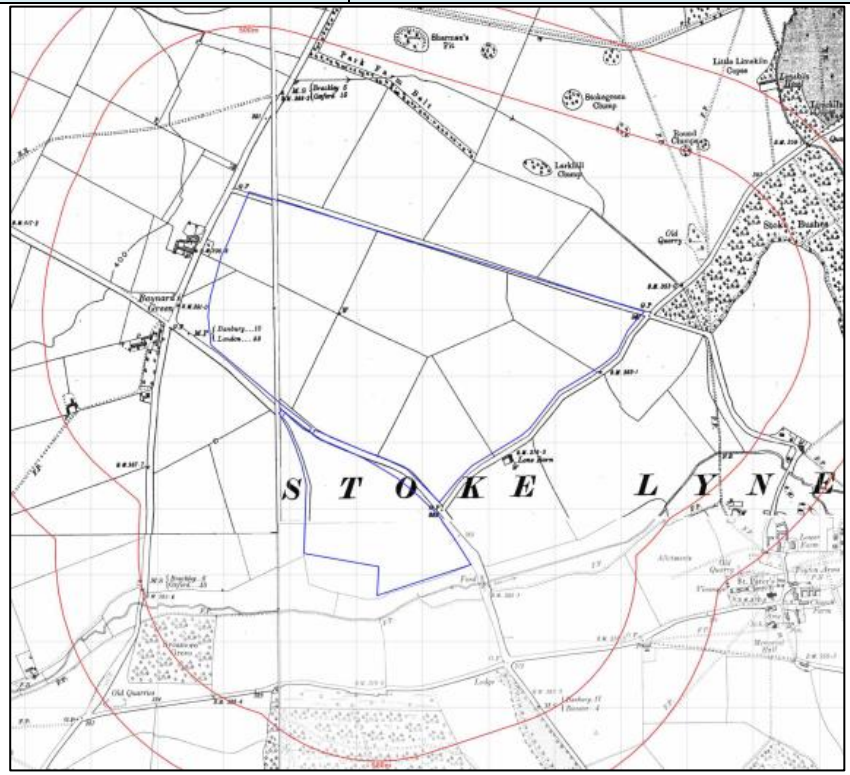
3.1. Site History Review

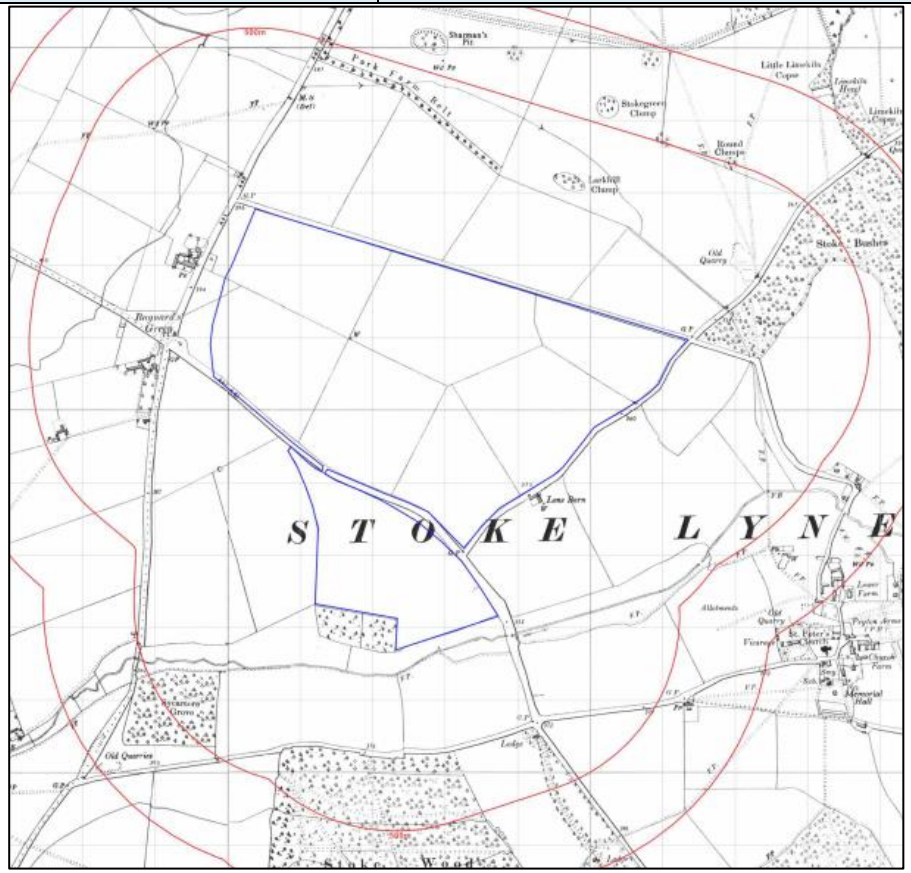
Extracts of Ordnance Survey (OS) plans dated from 1880 to 2021 were reviewed. These were obtained as part of the Groundsure report for the Site, which is presented in Appendix B.

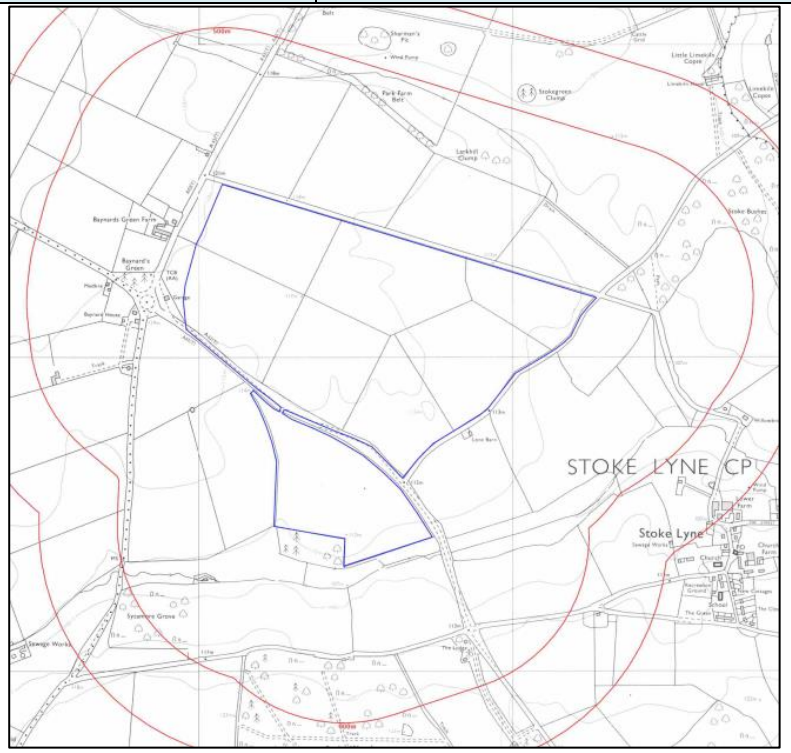
Table 3.1 below presents a summary of the main aspects of the Site relevant to the current and proposed future end uses. It is not the intention of this report to describe in detail all of the changes that have occurred on or adjacent to the Site, where these are not relevant to the land use.

Table 3.1 Site History.

Time Period	On-Site features	Off-Site features
Pre-1900	 1880 – 1:10,560	
	• Site largely undeveloped, potentially used for agricultural purposes; • 1881 and 1898/1900 mapping shows a small, localised, 'Quarry', (later an 'Old Quarry') in the far southeast of the Site.	• Baynard's Green shown approx. 10m west of the Site. • Well shown approx. 5m southeast and 580m southeast of the Site. • Sycamore Grove and Stoke Wood shown approx. 400m southwest and south of the Site. • Quarry shown approx. 250m northeast of the Site. • Ford shown running west-east approx. 10m south of the Site.

Time Period	On-Site features	Off-Site features
1900 to 1939 (Pre-war period)	 1919-1920 – 1:10,560	
	• 1 No. well shown in the centre / northwestern part of the Site. • No other significant change.	• Quarry shown approx. 250m northeast of the Site is now noted as 'Old Quarry'. • Well approx. 5m southeast of Site, is now associated with Lone Barn. • No other significant change.
1939 – 1945 (World War II period)	NO MAPS AVAILABLE FOR 1939 – 1945.	

Time Period	On-Site features	Off-Site features
1945-1980 (Post war period)	 1950-1954 – 1:10,560	
	• No significant change.	• 2 No. pumps shown approx. 100m west, 525m east, 740m east, 525m southeast and 480m west. • No other significant change.

<table>
<tr><th>Time Period</th><th>On-Site features</th><th>Off-Site features</th></tr>
<tr><td rowspan="2">1980 – 2000 (Late 20th century period)</td><td colspan="2"> 

1980-1981 – 1:10,000</td></tr>
<tr><td>• Well no longer shown on Site.
• No other significant change.</td><td>• Quarries no longer shown, potentially infilled.
• Pumps no longer shown.
• 1 No. drain shown approx. 250m northeast of the Site.
• 2 No. wind pump shown approx. 560m north and 750m southeast of the Site.
• Garage shown approx. 60m west of Site on new roundabout shown at Baynard’s Green.
• Sewage works shown approx. 710m southeast of the Site.
• No other significant change.</td></tr>
</table>

Time Period	On-Site features	Off-Site features
2000 to 2020 (Modern day period)	 2021 – 1:10,000	
	• No significant change.	• Sewage works no longer shown. • Wind pumps no longer shown. • Services now shown approx. 100m south of the Site. • Garage no longer shown.

3.2. Preliminary Unexploded Ordnance Risk Assessment

From the historical and anecdotal evidence, the site was not a target for bombing.

Table 3.2 Preliminary UXO Risk Assessment.

	Yes/no	Comments
Is the Site indicated to have been directly bombed?	No	There are no records of a direct bomb drop on site.
Is the site within an area recorded to have been bombed?	No	There are no records of direct bomb drops within the surrounding Site areas.
Could the site have been a high-risk target?	No	The area would have unlikely been a priority target for the Luftwaffe.
Any development cycles since 1945?	No	
Mitigating Factors	NA	
Preliminary assessment of UXO Risk	Low	

Publicly available online Zetica maps indicate that the Site lies within a low risk of UXO.

4. ENVIRONMENTAL SETTING

4.1. Geology

Table 4.1 Geological Summary.

Maps and publications referenced	Groundsure, GeoIndex and BGS
Made ground / artificial ground	There is a small, localised area of artificial ground in the northwestern part of the Site according to the Groundsure report. Given the history of development on the Site, the presence of extensive Made Ground is not anticipated; however localised Made Ground may be present due to agricultural land uses, the localised small area of artificial ground shown in the northwest of the Site and the former potentially infilled 'old quarry' in the far southeast of the Site.
Drift geology	The vast majority of the Site is not shown to be underlain by superficial deposits; however, there is a small section of the far southern part of the Site shown to be underlain by Head Deposits – comprising clay and silt. Alluvium – Clay, Silt and Gravel is shown to be present immediately the south of the Site.
Solid geology	3 No. rock types are shown to be present on Site: • White Limestone Formation – Limestone. • Forest Marble Formation – Interbedded Limestone and Mudstone. • Bladon Member – Interbedded Limestone and Mudstone. The 3 No rock types are shown in a concentric shape on Site, likely associated with a synformal syncline (most likely), a geologically infilled depression or a potentially geologically infilled dissolution feature (unlikely, but possible).
Dip of solid strata	Strata is shown to dip to the centre of the Site; towards the inside of the suspected synform.
Faults	1 No. normal fault (inferred) shown approx. 190m south of the Site.
Coal seams	None shown to outcrop or subcrop on or in the immediate vicinity of the Site.

4.2. Mining and Quarrying

Table 4.2 Coal Mining Activities.

	Yes/No	Comments
Is the Site in an area of potential shallow coal workings?	No	
Is the Site in a high risk development area?	No	
Are there any known shafts, adits, tips, lagoons, or opencast workings likely to affect the Site?	No	
Is exploratory work required to investigate the potential risk from shallow mining or quarrying?	No	

Table 4.3 Other Extractive Industries.

	Yes/No	Comments
Superficial drift deposits		
Evidence of extraction on or within 250 m of the Site?	No	
Action required?	No	
Solid Strata		
Any evidence of mineral extraction on or within 250 m of the Site?	Yes	• On Site Swift's House BritPit: Limestone surface mineral workings in the far southeast of the Site which appears to be associated with Ordnance Survey maps showing: ○ 1 No. unspecified quarry on Site (1880). ○ 1 No. unspecified old quarry on Site (1898/1990)
Action required?	Yes	Investigations to determine the nature and extent of any historical infilling of the former small, quarried area and any potentially associated ground gas risk.

Other, undocumented mineral workings on or close to the Site cannot be completely dismissed.

4.3. Hydrogeology

Table 4.4 Groundwater Occurrence and Abstraction.

	Presence/location	Comments
Environment Agency aquifer designation – Superficial Deposits	On Site	Head Deposits in the far southern extent of the Site: Secondary A Aquifer – Permeable layers capable of supporting water supplies at a local rather than strategic scale.
Environment Agency aquifer designation – Bedrock	On Site	White Limestone Formation: Principal Aquifer – Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage. Forest Marble Formation and Bladon Member: Secondary A Aquifer – Permeable layers capable of supporting water supplies at a local rather than strategic scale.
Groundwater vulnerability	On Site	Secondary Superficial Aquifer – High vulnerability. Principal Bedrock Aquifer – High vulnerability. Secondary Bedrock Aquifer – High vulnerability
Groundwater vulnerability – soluble rock risk	On Site	5 No. records on Site of significant soluble rocks likely present on Site detailed in GroundSure report. BGS records show that the White Limestone Formation and the Limestone beds within the Forest Marble Formation may be prone to dissolution along joints. White Limestone is shown as 'Low' hazard of ground dissolution: Soluble rocks are present within the ground. Some dissolution features may be present. Potential for difficult ground conditions are at a level where they may be considered."

	Presence/location	Comments
Anticipated groundwater depth(s)	Immediately west of Site	Historic borehole records immediately west of the Site show shallow groundwater was not encountered (to depths of Circa 2.40m bgl). One historic deeper BGS log to the west indicates groundwater was struck at 4.57m, 9.14m and 2134m bgl.
Direction of flow	On Site	Assumed southeast based on topography.
Current licensed abstractions – potable	505m north	Active potable abstraction. License No.: '6/33/02/*G/0131' – new borehole at Hardwick, with a maximum daily volume of 113.65m^3
Current licensed abstractions – non-potable	NR	None recorded within 500m of the Site.
Private wells	On Site and surrounding Site area	Historic pumps and wells have been noted. None are shown on the most up to date Ordnance Survey maps.
Source Protection Zones	NR	None recorded within 500m of the Site.
Springs	NR	None recorded within 500m of the Site.

NR - none recorded.

For definition of Source Protection Zones, see Appendix D.

4.4. Hydrology

Table 4.5 Surface Water Features.

	Presence/location	Comments
Nearest surface water feature	5m south	Inland river not influenced by normal tidal action.
Other surface water features	175m southeast	Inland river not influenced by normal tidal action.
Canals, ponds, lakes, etc.	NR	None recorded within 250m .
Water Framework Directive (WFD) Surface Water Bodies	45m south	Padbury Brook (GB105033038210): • Overall rating – moderate. • Chemical rating – good. • Ecological rating – moderate.
Licensed surface water abstractions	NR	None recorded within 250m.
Surface run-off and Site drainage	NR	The full nature and extent of underground drainage system is unknown at this stage.

NR - none recorded. Environment Agency GQA assessments: A = very good to E = poor

4.5. Flood Risk Summary

Table 4.6 below represents a summary of the flood risk data contained within the Groundsure report obtained for the Site.

Table 4.6 Flood Risk Summary

	Presence/location	Comments
Risk of Flooding from Rivers and Sea (RoFRaS)	NR on Site	N/A
	0-50m from Site	High flood risk category.
Historical Flood Events	NR	None recorded within 250m.

	Presence/location	Comments
Flood Defences	NR	None recorded within 250m.
Areas Benefiting from Flood Defences	NR	None recorded within 250m.
Flood Storage Areas	NR	None recorded within 250m.
Records of Flood Zone 2	1m south	Zone 2 (Fluvial/Tidal Models).
Records of Flood Zone 3	1m south	Zone 3 (Fluvial Models).
Surface water flooding	On Site	Highest risk on Site: 1 in 30 year, 0.30m to 1.0m .
	Within 50m	1 in 30 year, Greater than 1.0m
Groundwater flooding	On Site	Low risk.
	Within 50m	Low risk.

NR - none recorded

4.6. Environmental Designations

Table 4.7 Summary of Environmental Designations.

	Presence/location	Comments
Sites of Special Scientific Interest (SSSI)	NR	None recorded within 250m.
Conserved wetland sites (Ramsar sites)	NR	None recorded within 250m.
Special Areas of Conservation (SAC)	NR	None recorded within 250m.
Special Protection Areas (SPA)	NR	None recorded within 250m.
National Nature Reserves (NNR)	NR	None recorded within 250m.
Local Nature Reserves (LNR)	NR	None recorded within 250m.
Designated Ancient Woodland	140m northeast.	Stoke bushes – Ancient and Semi Natural Woodland.
Biosphere Reserves	NR	None recorded within 250m.
Forest Parks	NR	None recorded within 250m.
Marine Conservation Zones	NR	None recorded within 250m.
Green Belt	NR	None recorded within 250m.
Proposed Ramsar sites	NR	None recorded within 250m.
Possible Special Areas of Conservation (pSAC)	NR	None recorded within 250m.
Potential Special Protection Areas (pSPA)	NR	None recorded within 250m.
Nitrate Sensitive Areas	NR	None recorded within 250m.
Nitrate Vulnerable Zones	On Site.	• Anglian Great Oolite – groundwater. • Great Ouse NVZ – Surface water.
SSSI Units	NR	• None recorded within 250m.

NR - none recorded

4.7. Landfill and Waste Management Activity

Table 4.8 Waste Management Activities.

	Presence/location	Comments
Active or recent landfill	NR	None recorded within 250m.
Historical landfill (BGS records)	NR	None recorded within 250m.
Historical landfill (LA/mapping records)	NR	None recorded within 250m.
Historical landfill (EA/NRW records)	NR	None recorded within 250m.
Historical waste sites	NR	None recorded within 250m.
Licensed waste sites	NR	None recorded within 250m.
Waste exemptions	NR	None recorded within 250m.
Evidence of other landfilling or potential infilling on or within 250m of Site	On Site	Possible artificial ground (localised) shown on the Groundsure report in the northwest of the Site and a potentially infilled quarry in the southeast of the Site. Other potentially infilled former quarries located within 250m of the Site to the north, northeast and southeast.
Is a landfill/ground gas risk assessment required?	Yes	Potential for localised artificial ground in northwest of the Site and potentially infilled quarry in the southeast of the Site.

NR - none recorded

4.8. Local Industrial Land Uses

Other potentially contaminative activities are shown in Table 4.9 below with those features considered pertinent to the conceptual site model highlighted in **bold**. The entries relate to activities within *circa* 250 m of the Site, with the exception of COMAH facilities where the assessment is extended to a distance of *circa* 500m from the Site.

Table 4.9 Other Potentially Contaminative Processes in the Locality

	Location	Comments
Recent industrial land uses	**69m west.**	**Esso petrol and fuel stations.**
	74m west.	Electricity substation (given the low mobility of PCBs in the environment, this is unlikely to present a risk to the Site)
	151m west.	Telecommunication mast.
	164m northwest.	Vehicle recovery and breakdown services.
	165m northwest.	Cleaning equipment and supplies.
	185 and 190m south.	Tanks
	225m south.	Motorway service station.
	229m south.	Petrol and fuel station.
Current or recent petrol stations	95m west.	Esso Baynard's Green.
Electricity cables	NR	None recorded within 250m.
High Pressure Gas pipelines	NR	None recorded within 250m.
Sites determined as Contaminated Land	NR	None recorded within 250m.

	Location	Comments
Control of Major Accident Hazards (COMAH)	NR	None recorded within 250m.
Regulated explosive sites	NR	None recorded within 250m.
Hazardous substance storage/usage	NR	None recorded within 250m.
Historical licensed industrial activities (IPC)	NR	None recorded within 250m.
Licensed industrial activities (Part A(1))	NR	None recorded within 250m.
Licensed pollutant release (Part A(2)/B)	80m west.	Baynard's Green service station – unloading petrol into storage.
Radioactive Substance Authorisations	NR	None recorded within 250m.
Licensed Discharges to controlled waters	• 43m west. • 43m west. • 84m southwest. • 159m west. • 188m west. • 195m west. • 195m west. • 202m southwest.	• Sewage and Trade combined – revoked 13/12/2011. • Sewage and Trade combines – active. • Trade discharges; site drainage – active. • Sewage discharges; final/treated effluent – revoked 18/02/1992. • Miscellaneous discharges; surface water – active. • Sewage discharges; final/treated effluent – revoked 13/12/2011. • Sewage discharges; final/treated effluent – active. • Trade discharges; site drainage – active.
Pollutant release to surface waters (Red List)	NR	None recorded within 250m.
Pollutant release to public sewer	NR	None recorded within 250m.
List 1 Dangerous Substances	NR	None recorded within 250m.
List 2 Dangerous Substances	NR	None recorded within 250m.
Pollution Incidents (EA/NRW)	• 119m west. • 131m west. • 206m southwest.	06/04/2003 – Diesel. • Water impact – minor. • Land impact – minor. • Air impact – none. 02/12/2002 – Diesel. • Water impact – minor. • Land impact – none. • Air impact – none. 04/07/2002 – Diesel. • Water impact – none. • Land impact – minor. • Air impact – none.
Pollution inventory substances	NR	None recorded within 250m.
Pollution inventory waste transfers	NR	None recorded within 250m.

	Location	Comments
Pollution inventory radioactive waste	NR	None recorded within 250m.

NR - none recorded

COMAH – Control of Major Accident Hazards (regulations); NIHHS – Notification of Installations Handling Hazardous Substances (regulations)

4.9. Radon Risk

Table 4.10 Radon Risk Status.

	Comments
Estimated properties affected	Between 1% and 3% of properties above the Action Level
Radon Protection Measures required?	None according to Groundsure; however, it is recommended that confirmation should be sought from local Building Control whether precautionary basic radon protection measures are required.

4.10. Waste Classification and Materials Re-Use

If the Site is to be redeveloped and materials are disposed off-Site, the material exported from the Site to Landfill should be hauled by a register waste character in accordance with Duty of Care Regulations 1991 and the Hazardous Waste Regulations 2005. :

Based on the history of the Site and the anticipated potential contaminants of concern, it is considered unlikely that significant volumes of hazardous waste soil materials are present beneath the Site; however, this will be subject to confirmatory investigation, sampling, laboratory analysis and waste classification in accordance with the Guidance on the Classification and Assessment of Waste (WM3).

It will be necessary to register the Site in advance of the intended reclamation works with the Environment Agency before disposal to landfill can take place. There will be requirement for the waste producer to provide appropriate Waste Acceptance Criteria (WAC) testing of the Soils for disposal to ensure that the soils are appropriately classified and that the landfill is licensed to receive such soils. A consignment note shall be completed, signed and retained by all parties involved. The consignment note shall state the volume of waste, a physical description of the material and statement of its chemical composition. The waste consignment notes shall be kept by the contractor for a period of at least two years.

Subject to volumetric fill requirements and a future assessment of suitability of re-use (both chemically and geotechnically), some materials *may* be considered for potential re-use in line with an appropriate end-of-waste protocol such as WRAP Quality Protocol for Aggregates from Inert Waste, U1 Exemption or a Materials Management Plan in accordance with the CL:AIRE Definition of Waste Code of Practice (DoWCoP).

5. PREVIOUS INVESTIGATION FINDINGS

No previous desk study or site investigation reports pertaining to this Site have been made available.

6. PRELIMINARY CONCEPTUAL SITE MODEL

Based on the information provided in the previous sections of this report a combined preliminary conceptual site model and conceptual exposure model has been developed for the proposed future land use. This summarises the understanding of surface and sub-surface features, the potential contaminant sources, transport pathways and receptors. In assessing the likely contaminants of concern present at the Site, reference has also been made to Defra and Environment Agency supporting documentation. A preliminary qualitative risk assessment has also been made of the likelihood of the linkage operating and its potential significance in accordance with CIRIA C552.

The potential pollutant linkages identified and the qualitative risk assessment for these are presented in Table 6.1 below. The terms used in the preliminary qualitative risk assessment are defined in Appendix C.

6.1. Uncertainties

The following uncertainties exist in the preliminary conceptual model:

- The presence of any features unrecorded by the historic maps.
- Any unrecorded geological features.
- Any unrecorded pollution events during the Site's history.

Table 6.1 Preliminary Assessment of Potential Pollutant Linkages.

Source	Potential Contaminants of Concern	Pathway	Receptor	Consequence	Probability	Qualitative Risk Assessment
Potential Made Ground on Site, possibly associated with former well, localised artificial ground and potentially infilled former quarry in the southeast.	Metals, PAHs, Phenols, pH, TPH and asbestos	Direct contact, ingestion and inhalation of dust	Future Site Users (Commercial)	Medium	Likely	Moderate risk
		Vapour inhalation	Adjacent site users (commercial)	Medium	Low Likelihood	Moderate / low risk
		Lateral / vertical migration via preferential pathway	Construction, site investigation, demolition and future maintenance workers	Medium	Likely	Moderate risk
		Leaching and migration via groundwater	Secondary A and Principal Aquifers	Medium	Low Likelihood	Moderate / low risk
			Nearest surface water feature (drain) 5m south	Mild	Low Likelihood	Low risk
Potential contamination associated with petrol station and former garage to the west of the Site.	TPH / BTEX / MTBE	Leaching and migration via groundwater	Future Site Users (Commercial)	Medium	Low Likelihood	Moderate / low risk
			Adjacent site users (commercial)	Medium	Low Likelihood	Moderate / low risk
			Construction, site investigation, demolition and future maintenance workers	Medium	Low Likelihood	Moderate / low risk
Potential Made Ground on Site, possibly associated with former well, localised artificial ground and potentially infilled former quarry in the southeas and historic off-Site infilled quarries.	Hazardous ground gasses (methane, carbon dioxide, hydrogen sulphide and depleted oxygen)	Inhalation (indoor and outdoor	Future Site Users (Commercial)	Severe	Low Likelihood	Moderate risk
			Adjacent site users (commercial)	Severe	Low Likelihood	Moderate risk
			Construction, site investigation, demolition and future maintenance workers	Severe	Low Likelihood	Moderate risk
		Migration of ground gas / explosion	Buildings and services	Severe	Low Likelihood	Moderate risk

For definition of the terms used in the qualitative risk assessment, please see Appendix C.

7. REGULATORY APPROVALS

The conclusions and recommendations presented above are considered reasonable based on the findings of the site investigation. However, these cannot be guaranteed to gain regulatory approval and, therefore, the report should be passed to the appropriate regulatory authorities and/or other organisations for their comment and approval prior to undertaking any works on site.

It is recommended that conditions placed on any planning permission are discharged prior to commencement of site works.

8. REFERENCES

BRE BR211 (2015). Radon: Guidance on Protective Measures for New Dwellings. IHS BRE Press, Bracknell.

BRE SD1 (2005). Concrete in Aggressive Ground. Special Digest 1 (revised edition). IHS BRE Press, Bracknell.

BRE 414 (2001) Protective measures for housing on gas-contaminated land. BRE.

BS 10175:2011+A2:2017 Investigation of Potentially Contaminated Sites - Code of Practice. British Standards Institution, London.

BS EN 1997-1:2004 Eurocode 7. Geotechnical Design. General Rules. British Standards Institution, London.

BS EN 1997-2:2007 Eurocode 7. Geotechnical Design. Ground Investigation and Testing. British Standards Institution, London.

BS5930:2015+A12020 Code of practice for ground investigations BSI

BS EN ISO 17892-1-12:2018 Geotechnical investigation and testing BSI

BS EN ISO 14688-1:2018 Geotechnical Investigation and Testing. Identification and Classification of Soil. Identification and Description. British Standards Institution, London.

BS EN ISO 14688-2:2018 Geotechnical Investigation and Testing. Identification and Classification of Soil. Principles for a Classification. British Standards Institution, London.

BS EN ISO 14689-1:2018 Geotechnical Investigation and Testing. Identification and Classification of Rock. Identification and Description. British Standards Institution, London.

BS8485 2015 Code of Practice for the design of protective measures for methane and carbon dioxide ground gases in new buildings. British Standards

BS85762013 Guidance on investigations for ground gas – permanent gases and volatile organic compounds (VOCs). BSI,

CIRIA Rep R 97 (2001) Trenching Practice. Report 097, 2nd edition, CIRIA, London.

CIRIA Rep R 149 (1995a) Protecting Development from Methane. Report 149, CIRIA, London.

CIRIA Rep R 150 (1995b) Methane Investigation Strategies. Report 150, CIRIA, London.

CIRIA Rep R 151 (1995c) Interpreting Measurement of Gas in the Ground Report 151, CIRIA, London.

CIRIA Rep R 152 (1995d) Risk Assessment for Methane and Other Gases from the Ground. Report 152, CIRIA, London.

CIRIA Rep R 132 (1996) A Guide for Safe Working on Contaminated Sites. Report 132, CIRIA, London.

CIRIA C552 (2001) Contaminated land risk assessment. A guide to good practice (report no. C552).

CIRIA C665 (2007) Assessing the risks posed by hazardous gases to buildings CIRIA, London

CIRIA C748 (2014) Guidance on the use of plastic membranes as VOC barriers, CIRIA, London

CIRIA C735 (2014) Good practice on the testing and verification of protection systems for buildings against hazardous ground gases. CIRIA.

CIRIA C681 (2009) Unexploded ordnance (UXO) A guide for the construction industry (C681)

CIRIA C785 (2019) Unexploded ordnance (UXO) risk management guide for land-based projects (C785)

CIRIA C758D (2019) Abandoned mine workings manual (C758D)

Contaminated Land: Applications in Real Environments (CL:AIRE) (2011) Definition of Waste Code of Practice (version 2).

Department of Environment Food and Rural Affairs (DEFRA) (2012) Environmental Protection Act 1990:Part 2A Contaminated Land Statutory Guidance (report no. PB13735).

Environment Agency (2000) Technical Aspects of Site Investigation. Report P5-065/TR, Environment Agency, Bristol.

Environment Agency (2002) Guidance on Monitoring Landfill Leachate, Groundwater and Surface Water. Report LFTGN02, Environment Agency, Bristol.

Environment Agency (2007) Evaluation of Models for Predicting Plant Uptake of Chemicals from Soil. Report SC050021/SR, Environment Agency, Bristol.

Environment Agency (2006) Remedial Targets Methodology - Hydrogeological Risk Assessment for Land Contamination (report no.ea/br/e/std/vr10thanni).

Environment Agency (2008) Science Report SC050021/SR7 Compilation of Data for Priority Organic Pollutants for Derivation of Soil Guideline Values.

Environment agency, 2007. Inter-laboratory comparison of in vitro bioaccessibility measurements for arsenic lead and nickel in soil, Science Report SC040060/SR2.

Environment Agency, 2009 Human health toxicological assessment of contaminants in soil (Science Report Final SC050021/SR2)

Environment Agency (2015) Guidance on the Classification and Assessment of Waste Technical Guidance WM3 (1st edition).European Union (1998) Drinking Water Directive (Council Directive 98/83/EC).

Gibbons, R. (1994) Statistical Methods for Groundwater Monitoring. Wiley, New York.

Groundsure Report 2021 GSIP-2021-10752-4061

Highways Agency (2006) Design of Pavement Foundations. Document HD 25/IAN 73/06.

HSE (1991) Protection of Workers and the General Public During the Development of Contaminated Land. HMSO, London.

HSE (2005) Occupational Exposure Limits. HSE report EH40/2005, HMSO, London.

ICRCL (1986) Notes on the Fire Hazards of Contaminated Land. Guidance Note 61/84, 2nd Edition, Interdepartmental Committee on the Redevelopment of Contaminated Land, London.

Jeffries, J.(2009). A review of body weight and height data used within the Contaminated Land Exposure Assessment model (CLEA). Project SC050021/ Technical Review 1. Bristol: Environment Agency

Land Contamination Risk Management (LCRM) Environment Agency October 2020 https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm .

LQM/CIEH Ltd (2015) S4ULs for Human Health Risk Assessment. Land Quality Press, Nottingham.

NHBC (2007) Guidance on Evaluation of Development Proposals on Sites where Methane and Carbon Dioxide are Present (report no .04).

NRA (1994) Protocol for a Leaching Test to Assess the Leaching Potential for Soils from Contaminated Sites. R&D Note 181.

SoBRA (2017) Development of Generic Assessment Criteria for Assessing Vapour Risks to Human Health from Volatile Contaminants in Groundwater – Version 1.0.

The Water Framework Directive, (Standards and Classification) Directions (England and Wales).

UK Water Industry Research (2010) Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites (report no. 10/WM/03/21)

WHO (2000) Air Quality Guidelines for Europe. 2nd edition, WHO Regional Office for Europe, Copenhagen.

World Health Organisation (2017) Guidelines for Drinking Water Quality (4th edition).

Britain From Above - https://britainfromabove.org.uk/en/image/WPW060399

http://www.warstateandsociety.com/Bombing-Britain

https://www.epa.gov/pfas/basic-information-pfas

UK Maps of Radon, http://www.ukradon.org/information/ukmaps

Health and Safety Executive (2015) Construction (Design and Management) Regulations.

Coal Authority Interactive Map Viewer, http://mapapps2.bgs.ac.uk/coalauthority/home.html

BGS Geology of Britain Viewer http://mapapps.bgs.ac.uk/geologyofbritain/home.html

9. GLOSSARY OF TERMS

ACEC	Aggressive Chemical Environment for Concrete (classification)
aOD	Above Ordnance Datum
bgl	Below ground level
BGS	British Geological Survey
BRE	Building Research Establishment
CBR	California Bearing Ratio (test)
COMAH	Control of Major Accident Hazards (regulations)
Designated location	Site (and the ecosystem on that site) protected under national of international legislation. A potential ecological receptor to be considered as part of the assessment of land contamination. Example designated locations include SSSIs (q.v.), SACs (q.v.), national nature reserves, Ramsar sites and bird special protection areas.
DQA	Data Quality Assessment
DQO	Data Quality Objective
DQRA	Detailed Quantitative Risk Assessment
DWS	Drinking Water Standard
EQS	Environmental Quality Standard
GAC	Generic Assessment Criterion
GQA	General Quality Assessment (Environment Agency)
GSV	Gas Screening Value
HCV	Health Criteria Value
IPPC	Integrated Pollution Prevention and Control (regulations)
K_{ow}	Octanol-water partition coefficient
LEL	Lower Explosive Limit
LL	Liquid Limit
LoD	Limit of Detection (analytical)
LoQ	Limit of Quantification (analytical)
Mean Value Test	Statistical test (described in the CIEH Guidance) to estimate the mean value of a normally distributed population of data at a given level of confidence. Normally for contaminated land assessment, the 95th percentile (referred to as the 95%UCL or US95) is applied as a reasonable but conservative estimate of the mean concentration for comparison with the relevant assessment criteria.
Maximum Value Test	Statistical test (described in the CIEH Guidance) to identify whether an elevated concentration within a normally distributed data set forms part of the underlying population from which it has been sampled or whether it is an outlier (such as a localised area of contamination) that merits further consideration.
MC	Moisture Content
NGR	National Grid Reference
NIHHS	Notification of Installations Handling Hazardous Substances (regulations)
OS	Ordnance Survey
PI	Plasticity Index
PID	Photoionisation Detector
PL	Plastic Limit
ppm	Parts per million
ppmv	Parts per million by volume
QA	Quality Assurance
QC	Quality Control
SAC	Special Area of Conservation
SOM	Soil Organic Matter

SPT	Standard Penetration Test
SPZ	Source Protection Zone (see Appendix D)
SSAC	Site-Specific Assessment Criterion
SSSI	Site of Special Scientific Interest
SVOC	Semi-Volatile Organic Compound
TEF	Toxicity Equivalent Factor
TPH	Total Petroleum Hydrocarbons
TWA	Time Weighted Average
US95	95th percentile estimate of the true mean value of a data population (also known as 95%UCL).
VOC	Volatile Organic Compound

APPENDIX A - DRAWINGS

Rev	Date	By	Description

AREA SUMMARY

Redline Area:
83.279Ha/205.786Ac
Total Developable Area:
66.04Ha/163.18Ac
Proposed Use:
B8 with ancillary E(g)(i) and Energy Centre

Maximum Floorspace
300,000sq.m (3,229,173sq.ft) GEA
(Excluding Energy Centre/s)

Proposed Maximum finished Unit Height
Zone A - Max. Building Height up to 139.3m AOD
(refer to legend below)
Zone B - Max. Building Height up to 135.85m AOD

Zone A Plot Parameters

Developable Area:
57.62Ha/142.38Ac
Proposed Use:
B8 with ancillary E(g)(i)

Maximum Floorspace
255,000sq.m GEA
(excluding Energy Centre)

Proposed Maximum finished Unit Height
See legend

Zone B Plot Parameters

Developable Area:
8.42Ha/20.80Ac
Proposed Use:
B8 with ancillary E(g)(i)

Maximum Floorspace
45,000sq.m GEA

Proposed Maximum finished Unit Height
Max. Building Height up to 135.85mAOD

- Planning Boundary
- Developable Area
- Zone A1 - Building Height: Max Building Height up to 139.300m AOD
- Zone A2 - Building Height: Max Building Height up to 137.500m AOD
- Indicative location for potential lorry park

A43
B4100
M40 (J10)
M40
Bayard's Green
The Green
Min. 20m
Min. 20m
80235
45375
50979
206100
138900
strategic landscaping bund and planting
strategic landscaping bund and planting
New Access Roundabout
Single carriageway north and south to Symmetry Park
(Limit of detail design)

0 50 100 200 250
Metres at scale 1:2500

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Leicester LE19 1SX

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www.stephengeorge.co.uk

Symmetry Park, Ardley
M40 Junction 10

Drawing Name:
PARAMETERS PLAN

Drawing Stage:	PLANNING
Suitability:	S4 - Stage Approval
SGP File Ref:	14-019-SGP-XX-XX-DR-A-131003 P1.dwg

SGP Project No:	Date:	Drawn:	Team:	Scale:	Rev:
14-019	11/2021	MMS	MMS	1:2500 @ A1	P1

Drawing Number:
14-019 - SGP - XX - XX - DR - A - 131003
Project Code | Originator | Volume | Level | Type | Role | Number

APPENDIX B - GROUNDSURE REPORT

Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

ARDLEY, SYMMETRY PARK.JUNCTION 10, M40, OX27 7RD

Order Details

Date: 10/11/2021

Your ref: TE1628_1813

Our Ref: GS-8324597

Client: Tier Environmental

Site Details

Location: 455480 229089

Area: 80.87 ha

Authority: Cherwell District Council

Contact us with any questions at:
info@groundsure.com
08444 159 000

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
13	1.1	Historical industrial land uses	2	1	8	1	-
14	1.2	Historical tanks	0	0	0	0	-
14	1.3	Historical energy features	0	0	0	0	-
15	1.4	Historical petrol stations	0	0	0	0	-
15	1.5	Historical garages	0	2	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	2	2	9	1	-
17	2.2	Historical tanks	0	0	0	0	-
17	2.3	Historical energy features	0	0	0	0	-
18	2.4	Historical petrol stations	0	0	0	0	-
18	2.5	Historical garages	0	3	0	0	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
19	3.1	Active or recent landfill	0	0	0	0	-
19	3.2	Historical landfill (BGS records)	0	0	0	0	-
20	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
20	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
20	3.5	Historical waste sites	0	0	0	0	-
20	3.6	Licensed waste sites	0	0	0	0	-
20	3.7	Waste exemptions	0	0	0	1	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
22	4.1	Recent industrial land uses	0	0	10	-	-
23	4.2	Current or recent petrol stations	0	0	1	1	-
24	4.3	Electricity cables	0	0	0	0	-
24	4.4	Gas pipelines	0	0	0	0	-
24	4.5	Sites determined as Contaminated Land	0	0	0	0	-

24	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
24	4.7	Regulated explosive sites	0	0	0	0	-
25	4.8	Hazardous substance storage/usage	0	0	0	0	-
25	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
25	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
25	**4.11**	**Licensed pollutant release (Part A(2)/B)**	0	0	1	1	-
26	4.12	Radioactive Substance Authorisations	0	0	0	0	-
26	**4.13**	**Licensed Discharges to controlled waters**	0	2	6	2	-
28	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
28	4.15	Pollutant release to public sewer	0	0	0	0	-
28	4.16	List 1 Dangerous Substances	0	0	0	0	-
28	4.17	List 2 Dangerous Substances	0	0	0	0	-
28	**4.18**	**Pollution Incidents (EA/NRW)**	0	0	3	2	-
29	4.19	Pollution inventory substances	0	0	0	0	-
29	4.20	Pollution inventory waste transfers	0	0	0	0	-
30	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
31	**5.1**	**Superficial aquifer**	Identified (within 500m)				
33	**5.2**	**Bedrock aquifer**	Identified (within 500m)				
35	**5.3**	**Groundwater vulnerability**	Identified (within 50m)				
37	**5.4**	**Groundwater vulnerability- soluble rock risk**	Identified (within 0m)				
38	5.5	Groundwater vulnerability- local information	None (within 0m)				
39	**5.6**	**Groundwater abstractions**	0	0	3	1	14
44	5.7	Surface water abstractions	0	0	0	0	0
44	**5.8**	**Potable abstractions**	0	0	1	0	2
45	5.9	Source Protection Zones	0	0	0	0	-
45	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
46	**6.1**	**Water Network (OS MasterMap)**	0	6	16	-	-

48	6.2	Surface water features	0	4	7	-	-
49	6.3	WFD Surface water body catchments	1	-	-	-	-
49	6.4	WFD Surface water bodies	0	1	0	-	-
49	6.5	WFD Groundwater bodies	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
51	7.1	Risk of flooding from rivers and the sea	High (within 50m)				
52	7.2	Historical Flood Events	0	0	0	-	-
52	7.3	Flood Defences	0	0	0	-	-
52	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
52	7.5	Flood Storage Areas	0	0	0	-	-
53	7.6	Flood Zone 2	Identified (within 50m)				
54	7.7	Flood Zone 3	Identified (within 50m)				
Page	Section	Surface water flooding					
55	8.1	Surface water flooding	1 in 30 year, Greater than 1.0m (within 50m)				
Page	Section	Groundwater flooding					
57	9.1	Groundwater flooding	Low (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
58	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	2
59	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
59	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
59	10.4	Special Protection Areas (SPA)	0	0	0	0	0
59	10.5	National Nature Reserves (NNR)	0	0	0	0	0
60	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
60	10.7	Designated Ancient Woodland	0	0	1	4	12
61	10.8	Biosphere Reserves	0	0	0	0	0
61	10.9	Forest Parks	0	0	0	0	0
61	10.10	Marine Conservation Zones	0	0	0	0	0
61	10.11	Green Belt	0	0	0	0	0
62	10.12	Proposed Ramsar sites	0	0	0	0	0

62	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
62	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
62	10.15	Nitrate Sensitive Areas	0	0	0	0	0
63	**10.16**	**Nitrate Vulnerable Zones**	2	0	0	0	5
64	**10.17**	**SSSI Impact Risk Zones**	2	-	-	-	-
65	**10.18**	**SSSI Units**	0	0	0	0	3
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
67	11.1	World Heritage Sites	0	0	0	-	-
68	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
68	11.3	National Parks	0	0	0	-	-
68	**11.4**	**Listed Buildings**	0	0	1	-	-
69	11.5	Conservation Areas	0	0	0	-	-
69	11.6	Scheduled Ancient Monuments	0	0	0	-	-
69	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
70	**12.1**	**Agricultural Land Classification**	Non Agricultural (within 250m)				
71	12.2	Open Access Land	0	0	0	-	-
71	**12.3**	**Tree Felling Licences**	0	3	0	-	-
71	**12.4**	**Environmental Stewardship Schemes**	2	2	1	-	-
72	**12.5**	**Countryside Stewardship Schemes**	0	0	1	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
73	**13.1**	**Priority Habitat Inventory**	0	5	2	-	-
74	13.2	Habitat Networks	0	0	0	-	-
74	13.3	Open Mosaic Habitat	0	0	0	-	-
74	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
75	**14.1**	**10k Availability**	Identified (within 500m)				
77	**14.2**	**Artificial and made ground (10k)**	1	1	2	3	-
79	**14.3**	**Superficial geology (10k)**	1	1	0	2	-

80	14.4	Landslip (10k)	0	0	0	0	-
81	14.5	Bedrock geology (10k)	4	0	1	9	-
82	14.6	Bedrock faults and other linear features (10k)	0	0	1	3	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
83	15.1	50k Availability	Identified (within 500m)				
84	15.2	Artificial and made ground (50k)	0	0	1	0	-
85	15.3	Artificial ground permeability (50k)	0	0	-	-	-
86	15.4	Superficial geology (50k)	1	0	0	1	-
87	15.5	Superficial permeability (50k)	Identified (within 50m)				
87	15.6	Landslip (50k)	0	0	0	0	-
87	15.7	Landslip permeability (50k)	None (within 50m)				
88	15.8	Bedrock geology (50k)	3	0	1	7	-
89	15.9	Bedrock permeability (50k)	Identified (within 50m)				
89	15.10	Bedrock faults and other linear features (50k)	0	0	1	1	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
91	16.1	BGS Boreholes	0	2	6	-	-
Page	Section	Natural ground subsidence					
93	17.1	Shrink swell clays	Very low (within 50m)				
94	17.2	Running sands	Low (within 50m)				
96	17.3	Compressible deposits	Moderate (within 50m)				
98	17.4	Collapsible deposits	Very low (within 50m)				
99	17.5	Landslides	Very low (within 50m)				
100	17.6	Ground dissolution of soluble rocks	Low (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
102	18.1	Natural cavities	0	0	0	0	-
103	18.2	BritPits	1	0	0	1	-
103	18.3	Surface ground workings	2	0	6	-	-
104	18.4	Underground workings	0	0	0	0	0
104	18.5	Historical Mineral Planning Areas	0	0	0	0	-

104	18.6	Non-coal mining	0	0	0	0	0
104	18.7	Mining cavities	0	0	0	0	0
105	18.8	JPB mining areas	None (within 0m)				
105	18.9	Coal mining	None (within 0m)				
105	18.10	Brine areas	None (within 0m)				
105	18.11	Gypsum areas	None (within 0m)				
105	18.12	Tin mining	None (within 0m)				
106	18.13	Clay mining	None (within 0m)				

Page	Section	Radon	
107	**19.1**	**Radon**	Between 1% and 3% (within 0m)

Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
109	**20.1**	**BGS Estimated Background Soil Chemistry**	31	4	-	-	-
111	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
111	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-

Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
112	21.1	Underground railways (London)	0	0	0	-	-
112	21.2	Underground railways (Non-London)	0	0	0	-	-
112	21.3	Railway tunnels	0	0	0	-	-
112	21.4	Historical railway and tunnel features	0	0	0	-	-
112	21.5	Royal Mail tunnels	0	0	0	-	-
113	21.6	Historical railways	0	0	0	-	-
113	21.7	Railways	0	0	0	-	-
113	21.8	Crossrail 1	0	0	0	0	-
113	21.9	Crossrail 2	0	0	0	0	-
113	21.10	HS2	0	0	0	0	-

Recent aerial photograph

Capture Date: 05/07/2019

Site Area: 80.87ha

Recent site history - 2016 aerial photograph

Capture Date: 20/04/2016

Site Area: 80.87ha

Recent site history - 2009 aerial photograph

Capture Date: 19/08/2009

Site Area: 80.87ha

Recent site history - 2006 aerial photograph

Capture Date: 07/10/2006

Site Area: 80.87ha

Recent site history - 1999 aerial photograph

Capture Date: 05/10/1999

Site Area: 80.87ha

1 Past land use

Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical garages

1.1 Historical industrial land uses

Records within 500m	12

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 13**

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Unspecified Quarry**	**1880**	**1762572**

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Unspecified Old Quarry**	**1898**	**1773015**
B	45m W	Garage	1980 - 1992	1842411
1	78m N	Unspecified Quarry	1880	1762579
C	104m NW	Unspecified Tank	1880	1769038
C	110m W	Unspecified Tank	1880	1769041
2	158m W	Unspecified Tank	1880	1769040
D	219m NE	Unspecified Old Quarry	1923 - 1950	1782128
D	222m NE	Unspecified Quarry	1880	1762576
D	245m NE	Unspecified Old Quarry	1923	1837824
3	246m SE	Unspecified Quarry	1880	1762574
D	253m NE	Unspecified Quarry	1900	1762577

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	0

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'.

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	0

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'.

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	2

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'.

Features are displayed on the Past land use map on **page 13**

ID	Location	Land use	Dates present	Group ID
B	32m W	Garage	1996	56740
B	38m W	Garage	1974 - 1994	58927

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 garages

2.1 Historical industrial land uses

Records within 500m	14

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	**On site**	**Unspecified Quarry**	**1880**	**1762572**
A	**On site**	**Unspecified Old Quarry**	**1898**	**1773015**
B	45m W	Garage	1980	1842411

ID	Location	Land Use	Date	Group ID
B	45m W	Garage	1992	1842411
1	78m N	Unspecified Quarry	1880	1762579
C	104m NW	Unspecified Tank	1880	1769038
C	110m W	Unspecified Tank	1880	1769041
2	158m W	Unspecified Tank	1880	1769040
D	219m NE	Unspecified Old Quarry	1950	1782128
D	222m NE	Unspecified Quarry	1880	1762576
D	227m NE	Unspecified Old Quarry	1923	1782128
D	245m NE	Unspecified Old Quarry	1923	1837824
3	246m SE	Unspecified Quarry	1880	1762574
D	253m NE	Unspecified Quarry	1900	1762577

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	0

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'.

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	0

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'.

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	3

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'.

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

ID	Location	Land Use	Date	Group ID
B	32m W	Garage	1996	56740
B	38m W	Garage	1974	58927
B	39m W	Garage	1994	58927

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	1

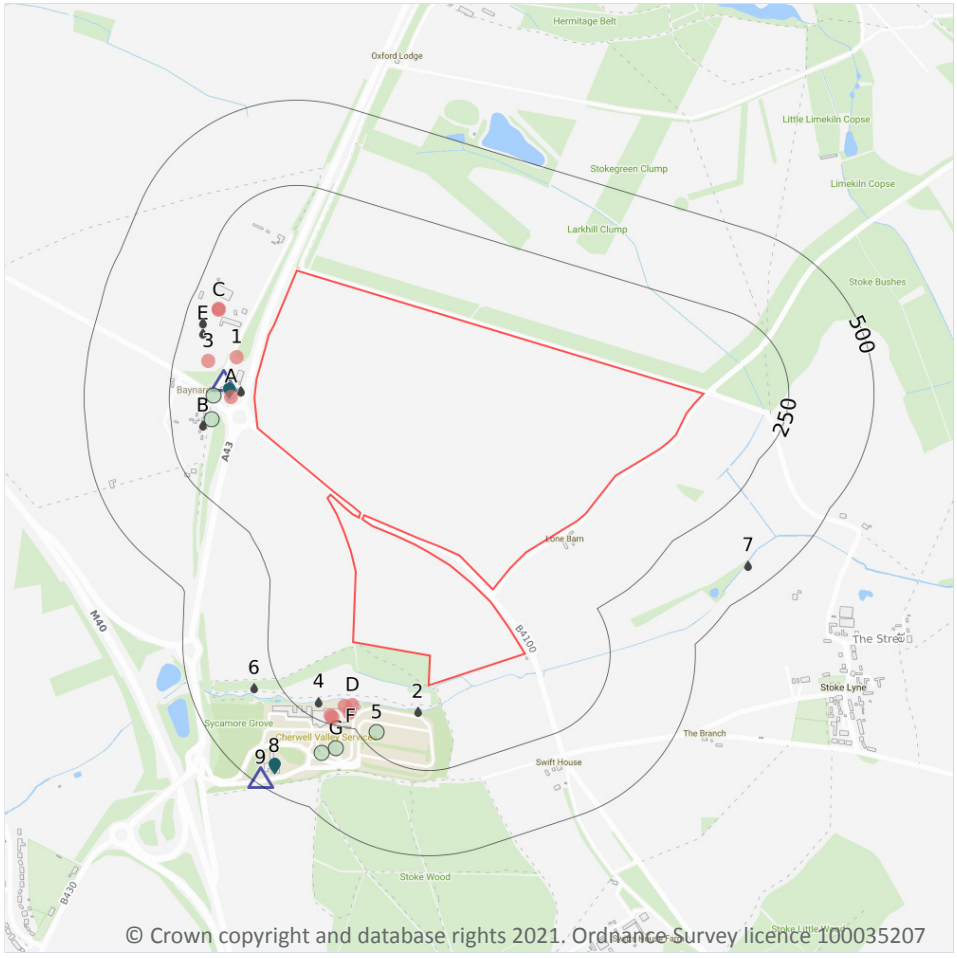
Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on **page 19**

ID	Location	Site	Reference	Category	Sub-Category	Description
1	284m N	Whittle Estate Cambridge Road LEICESTER LE8 6LH	EPR/UF0103HW/A001	Disposing of waste exemption	Non-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)

Recent industrial land uses

Current or recent petrol stations

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

Licensed Discharges to controlled waters

Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m	10

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 22**

ID	Location	Company	Address	Activity	Category
A	69m W	Esso	A43, Baynards Green, Bicester, Oxfordshire, OX27 7SG	Petrol and Fuel Stations	Road and Rail
1	74m W	Electricity Sub Station	Oxfordshire, OX27	Electrical Features	Infrastructure and Facilities

ID	Location	Company	Address	Activity	Category
3	151m W	Mast (Telecommunication)	Oxfordshire, OX27	Telecommunications Features	Infrastructure and Facilities
C	164m NW	Egerton Recovery Ltd	Baynards Green Farm, Baynards Green, Bicester, Oxfordshire, OX27 7SG	Vehicle Breakdown and Recovery Services	Personal, Consumer and Other Services
C	165m NW	Aquajet Cleaning Equipment Ltd	Baynards Green Farm, Baynards Green, Bicester, Oxfordshire, OX27 7SG	Cleaning Equipment and Supplies	Industrial Products
D	183m S	Tank	Oxfordshire, OX27	Tanks (Generic)	Industrial Features
D	188m S	Tank	Oxfordshire, OX27	Tanks (Generic)	Industrial Features
D	205m S	Electricity Sub Station	Oxfordshire, OX27	Electrical Features	Infrastructure and Facilities
F	225m S	Cherwell Valley Motorway Service Area	Cherwell Valley Motorway Services Area, Northampton Road, Ardley, Bicester, Oxfordshire, OX27 7RD	Motorway Service Stations	Road and Rail
F	229m S	M40 Cherwell Valley Motorway Service Area	M40 J10, A43, Ardley, Bicester, Oxfordshire, OX27 7RD	Petrol and Fuel Stations	Road and Rail

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m **2**

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on **page 22**

ID	Location	Company	Address	LPG	Status
A	96m W	ESSO	Baynards Green, Bicester, Oxfordshire, OX27 7SG	No	Open
9	482m SW	ESSO	M40 J10, A43, Ardley, Bicester, Oxfordshire, OX6 9RD	No	Open

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 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.

4.6 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.

4.7 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.

4.8 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.

4.9 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.

4.10 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.

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

Records within 500m	2

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.

Features are displayed on the Current industrial land use map on **page 22**

ID	Location	Address	Details	
A	78m W	Baynards Green Service Station, (ROC UK Ltd), A43 Baynards Green, Bicester, Oxon, OX6 9SG	Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

ID	Location	Address	Details	
8	431m SW	Moto Hospitality Ltd, Cherwell Valley Service Area, J10 M40 Motorway, Northampton Road, Ardley, Bicester, Oxfordshire, OX27 7RD	Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

This data is sourced from Local Authority records.

4.12 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.

4.13 Licensed Discharges to controlled waters

Records within 500m	**10**

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 22**

ID	Location	Address	Details	
A	43m W	BAYNARDS GREEN SERVICE STATION, FORMER A43, BICESTER, OXON, ., OX6 9SG	Effluent Type: SEWAGE & TRADE COMBINED - UNSPECIFIED Permit Number: PRCLF17132 Permit Version: 1 Receiving Water: TO LAND	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 16/02/2004 Effective Date: 06/02/2004 Revocation Date: 13/12/2011
A	43m W	BAYNARDS GREEN SERVICE STATION, FORMER A43, BICESTER, OXON, ., OX6 9SG	Effluent Type: SEWAGE & TRADE COMBINED - UNSPECIFIED Permit Number: PRCLF17132 Permit Version: 2 Receiving Water: TO LAND	Status: VARIED UNDER EPR 2010 Issue date: 14/12/2011 Effective Date: 14/12/2011 Revocation Date: -
2	84m SW	CHERWELL VALE (E) SERVICES, M40 JUNC 10, SYCAMORE GR, ARDLEY, OXON, OX27 7RD	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE (CONTAM SURFACE WATER, NOT WASTE SIT Permit Number: PRCNF05172 Permit Version: 1 Receiving Water: Padbury Brook	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 29/04/1993 Effective Date: 29/04/1993 Revocation Date: -

ID	Location	Address	Details	
B	159m W	LITTLE CHEF RESTAURANT, BANYARDS GREEN, STOKE LYNE, BUCKINGHAMSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: PR1NF1391 Permit Version: 1 Receiving Water: Padbury Brook	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 31/03/1983 Effective Date: 31/03/1983 Revocation Date: 18/02/1992
E	188m W	BAYNARDS GREEN FARM, BAYNARDS GREEN, NR BICESTER, OXON, OX6 9SG	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: PR1NF2199 Permit Version: 1 Receiving Water: Trib Claydon Brook	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 06/12/1985 Effective Date: 06/12/1985 Revocation Date: -
E	195m W	BAYNARDS GREEN FARM, BAYNARDS GREEN, NR BICESTER, OXON, OX6 9SG	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: PR1LF2200 Permit Version: 1 Receiving Water: Into Land	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 06/12/1985 Effective Date: 06/12/1985 Revocation Date: 13/12/2011
E	195m W	BAYNARDS GREEN FARM, BAYNARDS GREEN, NR BICESTER, OXON, OX6 9SG	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: PR1LF2200 Permit Version: 2 Receiving Water: Into Land	Status: VARIED UNDER EPR 2010 Issue date: 14/12/2011 Effective Date: 14/12/2011 Revocation Date: -
4	202m SW	CHERWELL VALE (W) SERVICES, M40 JUNCT 10, SYCAMORE GR, ARDLEY, OXON, OX27 7RD	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE (CONTAM SURFACE WATER, NOT WASTE SIT Permit Number: PRCNF05173 Permit Version: 1 Receiving Water: Padbury Brook	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 29/04/1993 Effective Date: 29/04/1993 Revocation Date: -
6	320m SW	CHERWELL VALLEY SERVICE (E), M40 JUNCTION 10, ARDLEY, BICESTER, OXON, OX17 7RD	Effluent Type: MISCELLANEOUS DISCHARGES - EMERGENCY DISCHARGES Permit Number: PRCNF05229 Permit Version: 1 Receiving Water: Padbury Brook	Status: SURRENDERED UNDER EPR 2010 Issue date: 20/01/1994 Effective Date: 20/01/1994 Revocation Date: 06/10/2015
7	428m SE	STOKE LYNE STW, STOKE LYNE, BICESTER	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: AWCNF46 Permit Version: 1 Receiving Water: Padbury Brook NT	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 17/08/1989 Effective Date: 17/08/1989 Revocation Date: -

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

4.14 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.

4.15 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.

4.16 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.

4.17 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.

4.18 Pollution Incidents (EA/NRW)

Records within 500m	5

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

Features are displayed on the Current industrial land use map on **page 22**

ID	Location	Details	
A	119m W	Incident Date: 06/04/2003 Incident Identification: 148949 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
B	131m W	Incident Date: 02/12/2002 Incident Identification: 124289 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
5	206m SW	Incident Date: 04/07/2002 Incident Identification: 89265 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
G	316m S	Incident Date: 10/10/2001 Incident Identification: 35660 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
G	337m S	Incident Date: 09/05/2003 Incident Identification: 157204 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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

4.19 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.

4.20 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.

4.21 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 Hydrogeology - Superficial aquifer

Site Outline

Search buffers in metres (m)

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

5.1 Superficial aquifer

Records within 500m	3

Aquifer status of groundwater held within superficial geology.

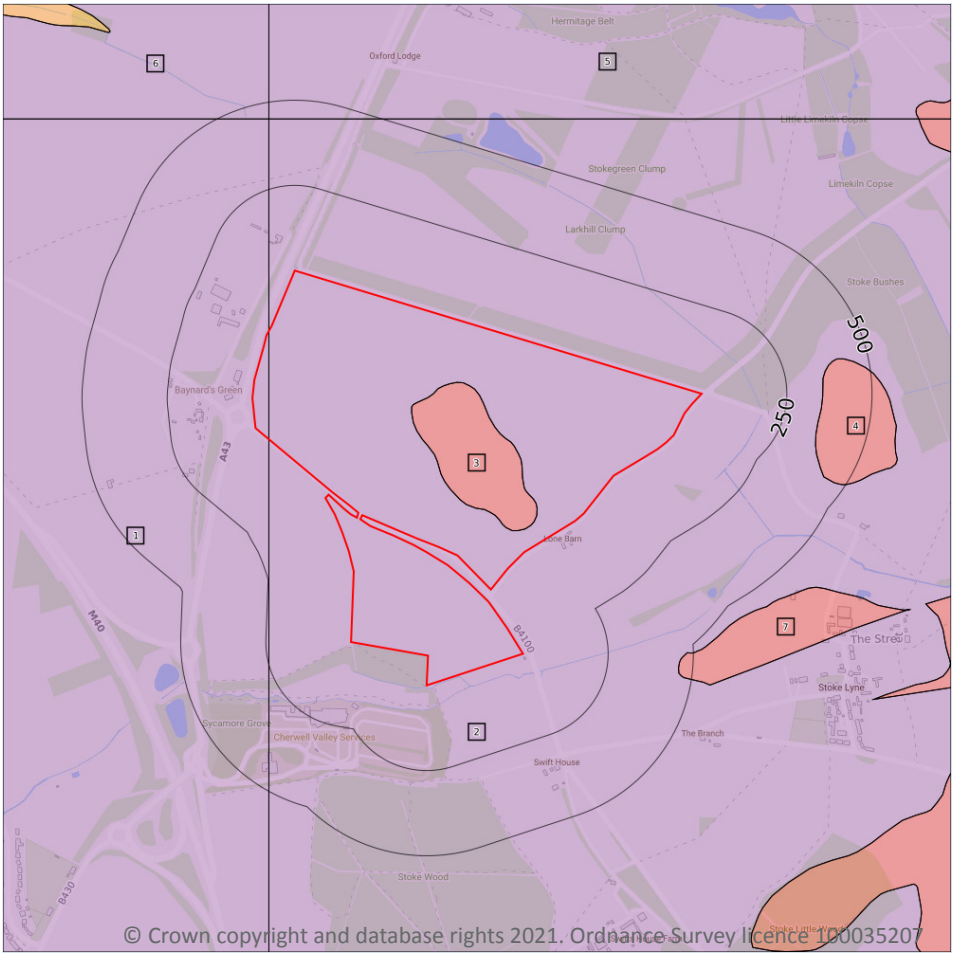
Features are displayed on the Hydrogeology map on **page 31**

ID	Location	Designation	Description
1	**On site**	**Secondary A**	**Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers**
2	267m SW	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	432m SW	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

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

5.2 Bedrock aquifer

Records within 500m	7

Aquifer status of groundwater held within bedrock geology.

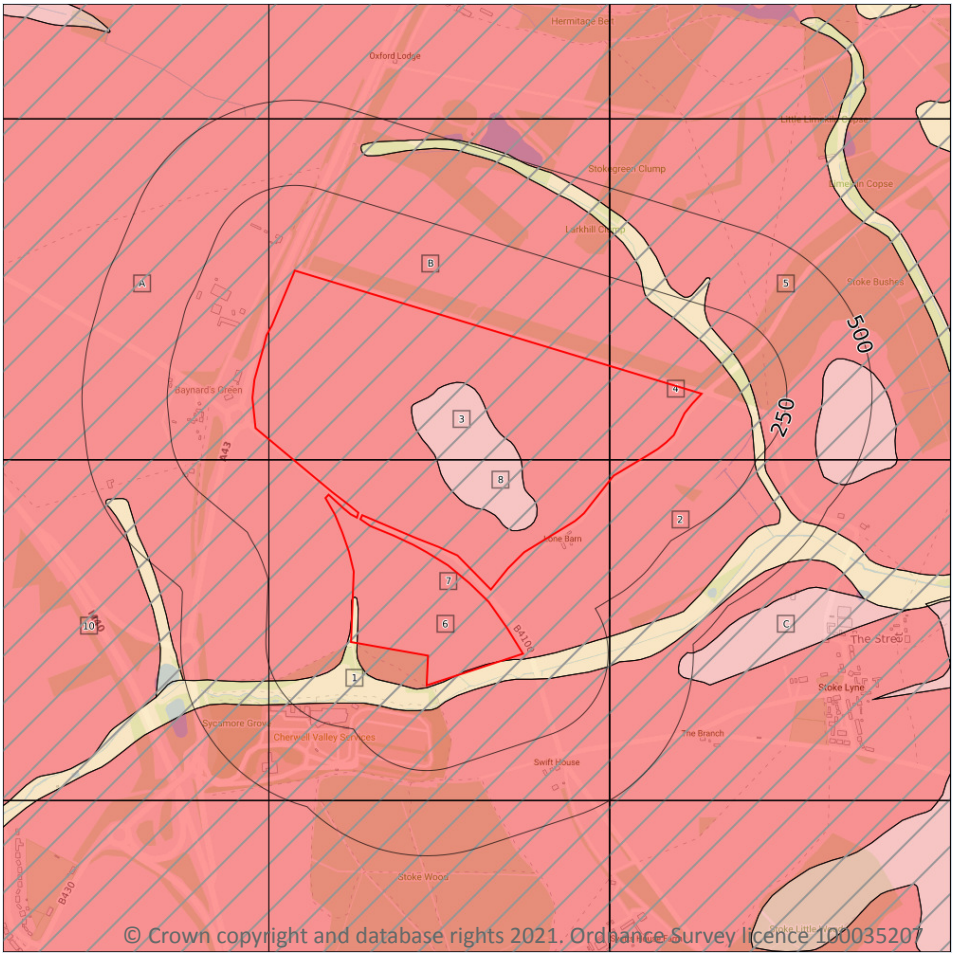
Features are displayed on the Bedrock aquifer map on **page 33**

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	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

ID	Location	Designation	Description
3	**On site**	**Secondary A**	**Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers**
4	352m E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
5	445m N	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
6	451m N	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
7	458m E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability

- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	9

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 35**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: High Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures
2	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
3	On site	Summary Classification: Secondary 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: Secondary Flow mechanism: Well connected fractures
4	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
7	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
8	On site	Summary Classification: Secondary 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: Secondary Flow mechanism: Well connected fractures
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

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
B	**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**
10	46m SW	Summary Classification: Principal bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: 300-550mm/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.

5.4 Groundwater vulnerability- soluble rock risk

Records on site	**5**

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
5	**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.**	**8.0%**
6	**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.**	**8.0%**
A	**Significant soluble rocks are likely to be present. Problems unlikely except with considerable surface or subsurface water flow.**	**100.0%**
B	**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.**	**3.0%**
C	**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.**	**4.0%**

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

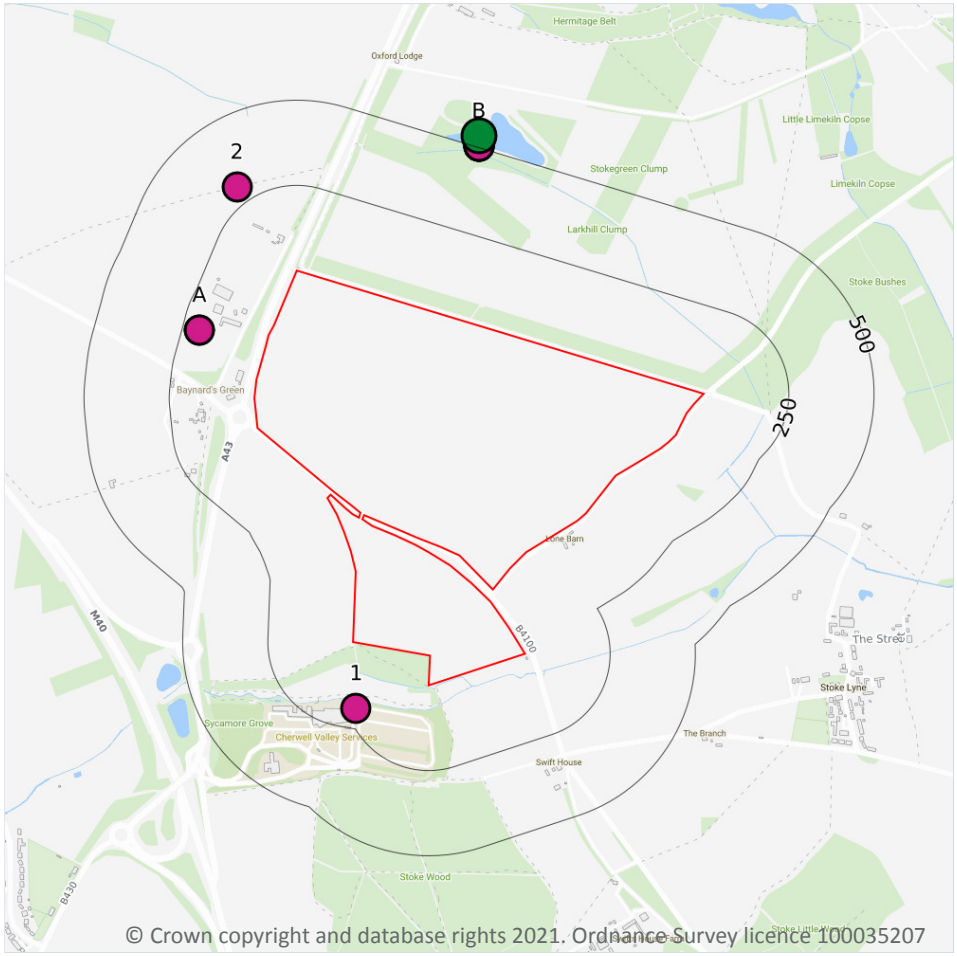
5.5 Groundwater vulnerability- local information

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)

5.6 Groundwater abstractions

Records within 2000m	18

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 39**

ID	Location	Details	
1	190m S	Status: Historical Licence No: 6/33/02/*G/0130 Details: Spray Irrigation - Direct Direct Source: GROUND WATER SOURCE OF SUPPLY Point: BOREHOLE AT STOKE LYNE Data Type: Point Name: MOTO HOSPITALITY LTD Easting: 455250 Northing: 228270	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/08/1994 Expiry Date: 30/09/2004 Issue No: 101 Version Start Date: 11/11/2003 Version End Date: -
A	200m W	Status: Historical Licence No: 6/33/02/*G/0131 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: GROUND WATER SOURCE OF SUPPLY Point: BOREHOLE AT STOKE LYNE Data Type: Point Name: CURTIS Easting: 454790 Northing: 229380	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/06/1997 Expiry Date: - Issue No: 100 Version Start Date: 01/06/1997 Version End Date: -
A	200m W	Status: Historical Licence No: 6/33/02/*G/0131 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: BOREHOLE AT STOKE LYNE Data Type: Point Name: CURTIS Easting: 454790 Northing: 229380	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/06/1997 Expiry Date: - Issue No: 100 Version Start Date: 01/06/1997 Version End Date: -
2	301m NW	Status: Historical Licence No: 6/33/02/*G/0007 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: WELL AT BAYNARD GREEN Data Type: Point Name: CURTIS Easting: 454900 Northing: 229800	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/04/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/09/1966 Version End Date: -
B	503m N	Status: Active Licence No: 6/33/02/*G/0071 Details: Make-Up Or Top Up Water Direct Source: GROUND WATER SOURCE OF SUPPLY Point: NEW BOREHOLE AT HARDWICK Data Type: Point Name: Trans Properties Limited and Trans Securities Limited Easting: 455610 Northing: 229920	Annual Volume (m^3): 22,730 Max Daily Volume (m^3): 113.65 Original Application No: - Original Start Date: 01/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 07/06/2017 Version End Date: -

ID	Location	Details	
B	503m N	Status: Active Licence No: 6/33/02/*G/0071 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: GROUND WATER SOURCE OF SUPPLY Point: NEW BOREHOLE AT HARDWICK Data Type: Point Name: Trans Properties Limited and Trans Securities Limited Easting: 455610 Northing: 229920	Annual Volume (m^3): 22,730 Max Daily Volume (m^3): 113.65 Original Application No: - Original Start Date: 01/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 07/06/2017 Version End Date: -
B	503m N	Status: Active Licence No: 6/33/02/*G/0071 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: NEW BOREHOLE AT HARDWICK Data Type: Point Name: Trans Properties Limited and Trans Securities Limited Easting: 455610 Northing: 229920	Annual Volume (m^3): 22,730 Max Daily Volume (m^3): 113.65 Original Application No: - Original Start Date: 01/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 07/06/2017 Version End Date: -
B	503m N	Status: Active Licence No: 6/33/02/*G/0071 Details: Spray Irrigation - Direct Direct Source: GROUND WATER SOURCE OF SUPPLY Point: NEW BOREHOLE AT HARDWICK Data Type: Point Name: Trans Properties Limited and Trans Securities Limited Easting: 455610 Northing: 229920	Annual Volume (m^3): 22,730 Max Daily Volume (m^3): 113.65 Original Application No: - Original Start Date: 01/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 07/06/2017 Version End Date: -
B	503m N	Status: Active Licence No: 6/33/02/*G/0071 Details: Spray Irrigation - Storage Direct Source: GROUND WATER SOURCE OF SUPPLY Point: NEW BOREHOLE AT HARDWICK Data Type: Point Name: Trans Properties Limited and Trans Securities Limited Easting: 455610 Northing: 229920	Annual Volume (m^3): 22,730 Max Daily Volume (m^3): 113.65 Original Application No: - Original Start Date: 01/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 07/06/2017 Version End Date: -

ID	Location	Details	
B	532m N	Status: Active Licence No: 6/33/02/*G/0064 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: EXISTING BOREHOLE AT HARDWICK Data Type: Point Name: Trans Properties Limited and Trans Securities Limited Easting: 455610 Northing: 229950	Annual Volume (m^3): 22,730 Max Daily Volume (m^3): 113.65 Original Application No: - Original Start Date: 28/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 07/06/2017 Version End Date: -
B	532m N	Status: Active Licence No: 6/33/02/*G/0064 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: GROUND WATER SOURCE OF SUPPLY Point: EXISTING BOREHOLE AT HARDWICK Data Type: Point Name: Trans Properties Limited and Trans Securities Limited Easting: 455610 Northing: 229950	Annual Volume (m^3): 22,730 Max Daily Volume (m^3): 113.65 Original Application No: - Original Start Date: 28/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 07/06/2017 Version End Date: -
B	532m N	Status: Active Licence No: 6/33/02/*G/0064 Details: Make-Up Or Top Up Water Direct Source: GROUND WATER SOURCE OF SUPPLY Point: EXISTING BOREHOLE AT HARDWICK Data Type: Point Name: Trans Properties Limited and Trans Securities Limited Easting: 455610 Northing: 229950	Annual Volume (m^3): 22,730 Max Daily Volume (m^3): 113.65 Original Application No: - Original Start Date: 28/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 07/06/2017 Version End Date: -
B	532m N	Status: Active Licence No: 6/33/02/*G/0064 Details: Spray Irrigation - Direct Direct Source: GROUND WATER SOURCE OF SUPPLY Point: EXISTING BOREHOLE AT HARDWICK Data Type: Point Name: Trans Properties Limited and Trans Securities Limited Easting: 455610 Northing: 229950	Annual Volume (m^3): 22,730 Max Daily Volume (m^3): 113.65 Original Application No: - Original Start Date: 28/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 07/06/2017 Version End Date: -

ID	Location	Details	
B	532m N	Status: Active Licence No: 6/33/02/*G/0064 Details: Spray Irrigation - Storage Direct Source: GROUND WATER SOURCE OF SUPPLY Point: EXISTING BOREHOLE AT HARDWICK Data Type: Point Name: Trans Properties Limited and Trans Securities Limited Easting: 455610 Northing: 229950	Annual Volume (m^3): 22,730 Max Daily Volume (m^3): 113.65 Original Application No: - Original Start Date: 28/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 07/06/2017 Version End Date: -
-	1308m NW	Status: Historical Licence No: 6/33/02/*G/0093 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: BOREHOLE AT HORWELL FARM Data Type: Point Name: RANSOM Easting: 454000 Northing: 230300	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/01/1968 Expiry Date: - Issue No: 100 Version Start Date: 01/01/1968 Version End Date: -
-	1432m W	Status: Historical Licence No: 6/33/02/*G/0056 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: WELL AT GREEN FARM FRITWELL Data Type: Point Name: EVANS Easting: 453600 Northing: 229700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/06/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/06/1966 Version End Date: -
-	1435m E	Status: Historical Licence No: 6/33/02/*G/0101 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: WELL AT HARDWICK Data Type: Point Name: CURTIS Easting: 457640 Northing: 229620	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/09/1967 Expiry Date: - Issue No: 100 Version Start Date: 01/09/1967 Version End Date: -
-	1547m W	Status: Historical Licence No: 6/33/02/*G/0091 Details: General Farming & Domestic Direct Source: GROUND WATER SOURCE OF SUPPLY Point: WELL AT FEWCOTT Data Type: Point Name: GODWIN Easting: 453800 Northing: 227900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 15/01/1968 Expiry Date: - Issue No: 102 Version Start Date: 21/11/2003 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	0

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.

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

5.8 Potable abstractions

Records within 2000m	3

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 39**

ID	Location	Details	
A	200m W	Status: Historical Licence No: 6/33/02/*G/0131 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: GROUND WATER SOURCE OF SUPPLY Point: BOREHOLE AT STOKE LYNE Data Type: Point Name: CURTIS Easting: 454790 Northing: 229380	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/06/1997 Expiry Date: - Issue No: 100 Version Start Date: 01/06/1997 Version End Date: -
B	503m N	Status: Active Licence No: 6/33/02/*G/0071 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: GROUND WATER SOURCE OF SUPPLY Point: NEW BOREHOLE AT HARDWICK Data Type: Point Name: Trans Properties Limited and Trans Securities Limited Easting: 455610 Northing: 229920	Annual Volume (m^3): 22,730 Max Daily Volume (m^3): 113.65 Original Application No: - Original Start Date: 01/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 07/06/2017 Version End Date: -

ID	Location	Details	
B	532m N	Status: Active Licence No: 6/33/02/*G/0064 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: GROUND WATER SOURCE OF SUPPLY Point: EXISTING BOREHOLE AT HARDWICK Data Type: Point Name: Trans Properties Limited and Trans Securities Limited Easting: 455610 Northing: 229950	Annual Volume (m^3): 22,730 Max Daily Volume (m^3): 113.65 Original Application No: - Original Start Date: 28/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 07/06/2017 Version End Date: -

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

5.9 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.

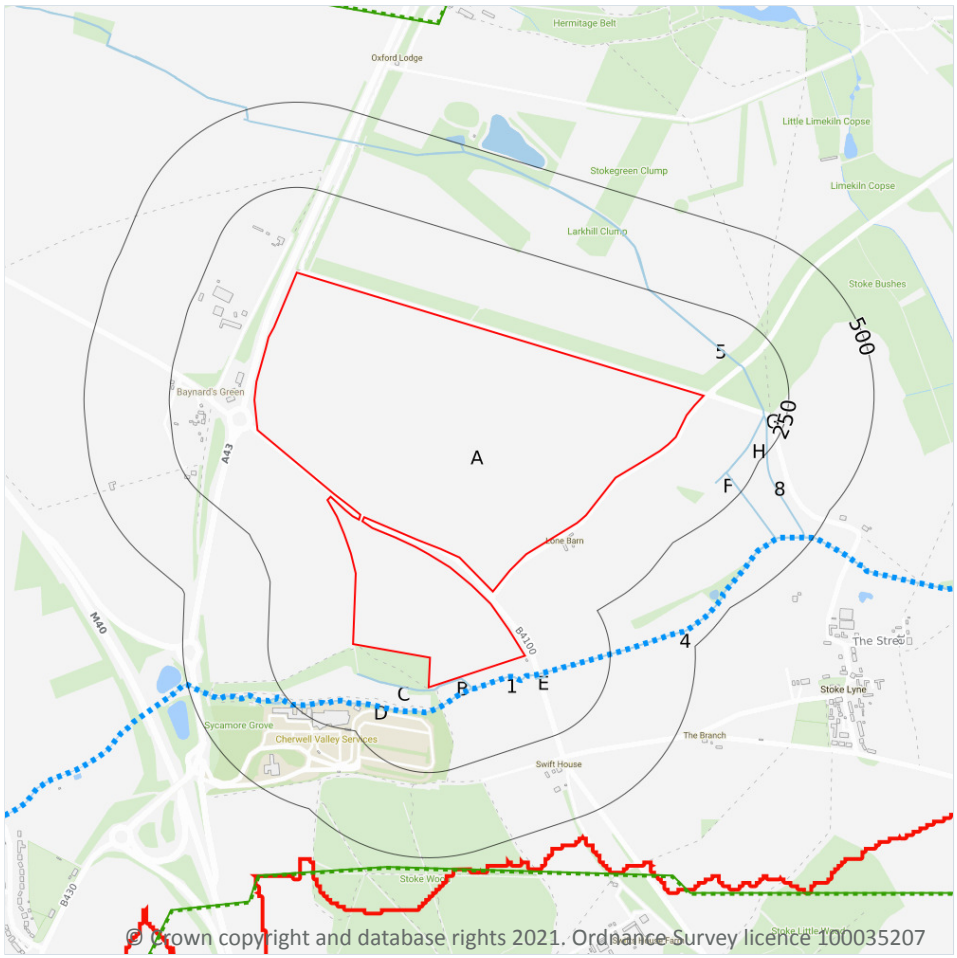
5.10 Source Protection Zones (confined aquifer)

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.

6 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

6.1 Water Network (OS MasterMap)

Records within 250m	22

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

Features are displayed on the Hydrology map on **page 46**

ID	Location	Type of water feature	Ground level	Permanence	Name
B	5m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
C	8m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	11m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
B	39m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
1	41m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	42m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	64m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	64m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	65m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
E	65m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	72m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
4	75m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	75m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
5	136m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
F	177m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	181m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
F	181m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	181m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	183m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
H	184m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	185m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
8	186m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	**11**

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.

Features are displayed on the Hydrology map on **page 46**

This data is sourced from the Ordnance Survey.

6.3 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 46**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	**On site**	**River WB catchment**	**Padbury Brook**	**GB105033038210**	**Upper Great Ouse**	**Upper and Bedford Ouse**

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

6.4 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 46**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
2	42m S	River	Padbury Brook	GB105033038210	Moderate	Good	Moderate	2016

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

6.5 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 46**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	**On site**	**Upper Bedford Ouse Oolite Principal 1**	**GB40501G402300**	**Good**	**Good**	**Good**	**2015**

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

7 River and coastal flooding

Site Outline

Search buffers in metres (m)

River and coastal flooding:

- High
- Medium
- Low
- Very Low
- Historical Flood Events
- Areas Used for Flood Storage
- Areas Benefiting from Flood Defences
- Flood Defences

7.1 Risk of flooding from rivers and the sea

Records within 50m	5

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).

Features are displayed on the River and coastal flooding map on **page 51**

Distance	Flood risk category
On site	**N/A**
0 - 50m	High

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

7.2 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.

7.3 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.

7.4 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.

7.5 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

Site Outline

Search buffers in metres (m)

Flood zone 2

Flood zone 3

7.6 Flood Zone 2

Records within 50m	1

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.

Features are displayed on the River and coastal flooding map on **page 51**

Location	Type
1m S	Zone 2 - (Fluvial /Tidal Models)

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

7.7 Flood Zone 3

Records within 50m	1

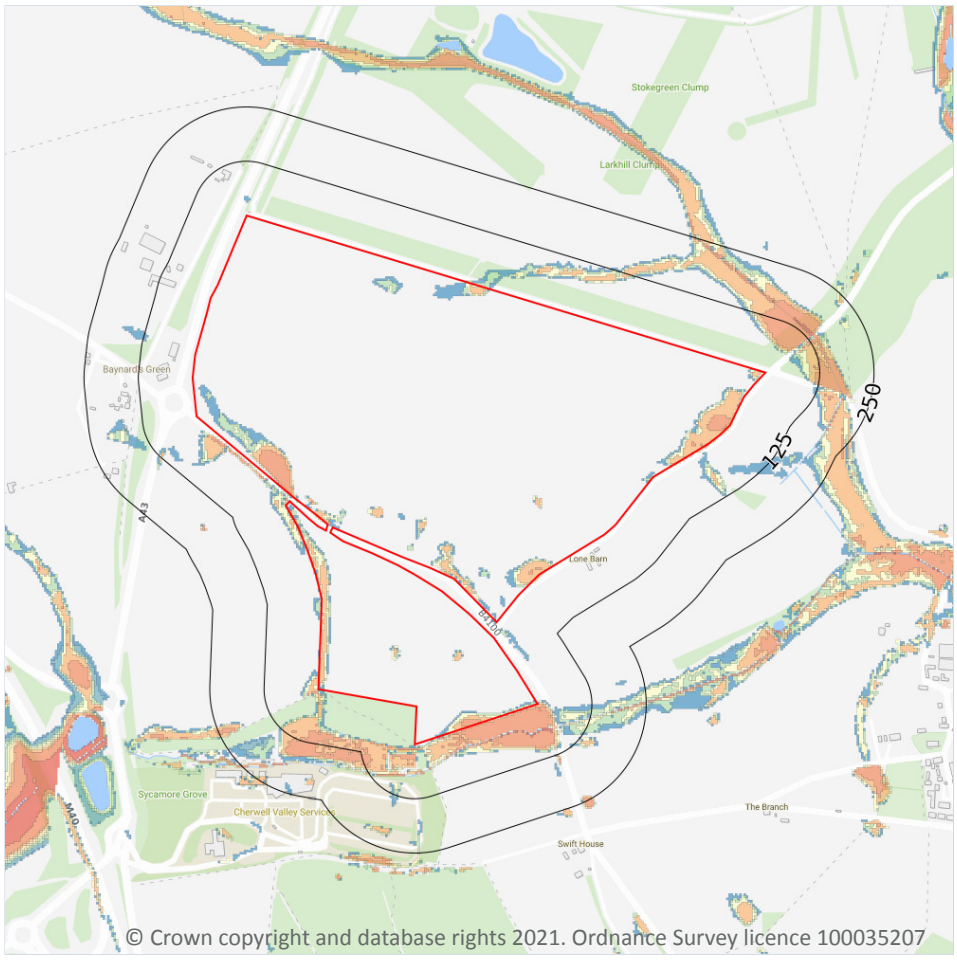
Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

Features are displayed on the River and coastal flooding map on **page 51**

Location	Type
1m S	Zone 3 - (Fluvial Models)

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

8 Surface water flooding



Site Outline
Search buffers in metres (m)

1 in 1000 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site	**1 in 30 year, 0.3m - 1.0m**
Highest risk within 50m	**1 in 30 year, Greater than 1.0m**

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.

Features are displayed on the Surface water flooding map on **page 55**

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	Greater than 1.0m
1 in 250 year	Between 0.3m and 1.0m
1 in 100 year	Between 0.3m and 1.0m
1 in 30 year	Between 0.3m and 1.0m

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding

Site Outline

Search buffers in metres (m)

High

Moderate - High

Moderate

Low

Negligible

9.1 Groundwater flooding

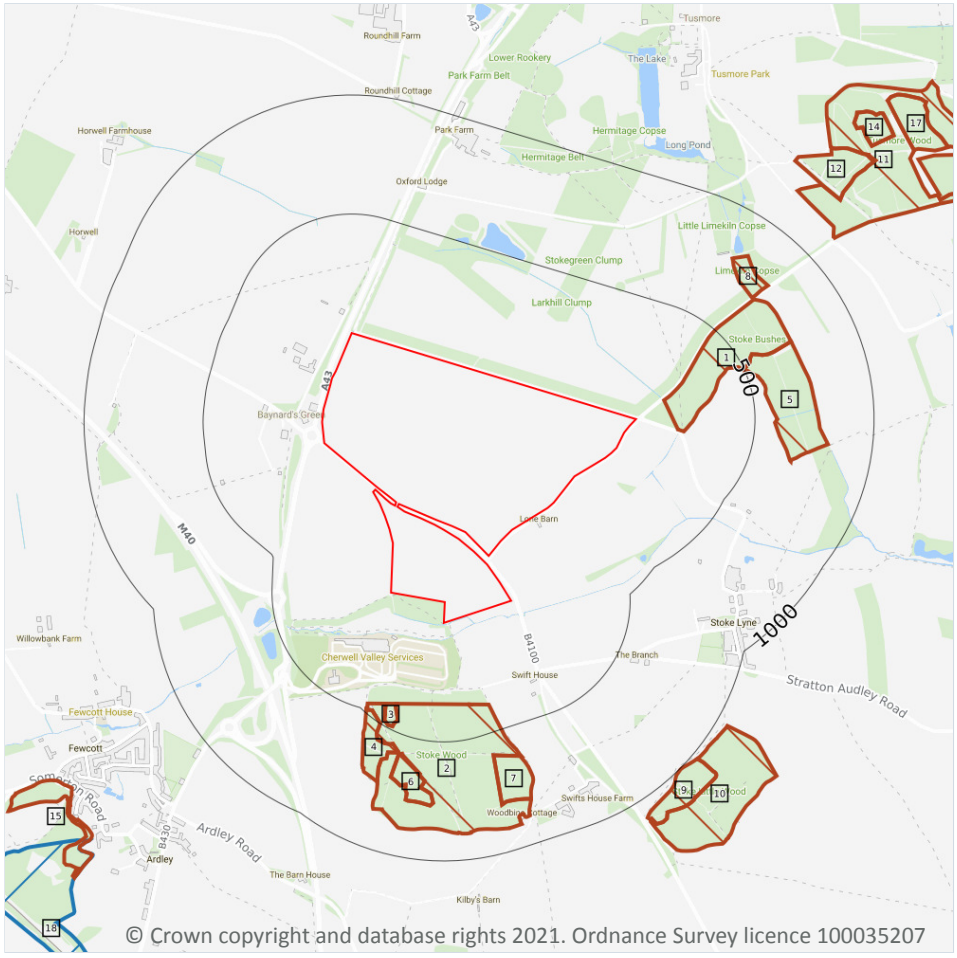
Highest risk on site	**Low**
Highest risk within 50m	**Low**

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 57**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



Site Outline

Search buffers in metres (m)

Sites of Special Scientific Interest (SSSI)

Designated Ancient Woodland

10.1 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 58**

ID	Location	Name	Data source
18	1641m SW	Ardley Cutting and Quarry	Natural England

ID	Location	Name	Data source
-	1925m SW	Ardley Trackways	Natural England

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

10.2 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.

10.3 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.

10.4 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.

10.5 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.

10.6 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.

10.7 Designated Ancient Woodland

Records within 2000m	17

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.

Features are displayed on the Environmental designations map on **page 58**

ID	Location	Name	Woodland Type
1	141m NE	Stoke Bushes	Ancient & Semi-Natural Woodland
2	341m S	Stoke Wood	Ancient & Semi-Natural Woodland
3	392m SW	Stoke Wood	Ancient Replanted Woodland
4	474m SW	Stoke Wood	Ancient Replanted Woodland
5	495m NE	Stoke Bushes	Ancient Replanted Woodland
6	578m S	Stoke Wood	Ancient Replanted Woodland
7	593m S	Stoke Wood	Ancient Replanted Woodland
8	706m NE	Limekiln Copse	Ancient & Semi-Natural Woodland
9	1004m SE	Stoke Little Wood	Ancient Replanted Woodland
10	1025m SE	Stoke Little Wood	Ancient & Semi-Natural Woodland
11	1129m NE	Tusmore Wood	Ancient & Semi-Natural Woodland
12	1256m NE	Tusmore Wood	Ancient Replanted Woodland
-	1418m S	Unknown	Ancient & Semi-Natural Woodland
14	1516m NE	Tusmore Wood	Ancient Replanted Woodland
15	1571m SW	Ardley Wood	Ancient & Semi-Natural Woodland
16	1576m NE	Tusmore Wood	Ancient Replanted Woodland

ID	Location	Name	Woodland Type
17	1624m NE	Tusmore Wood	Ancient Replanted Woodland

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

10.8 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.

10.9 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.

10.10 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.

10.11 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.

10.12 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.

10.13 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.

10.14 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.

10.15 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.

10.16 Nitrate Vulnerable Zones

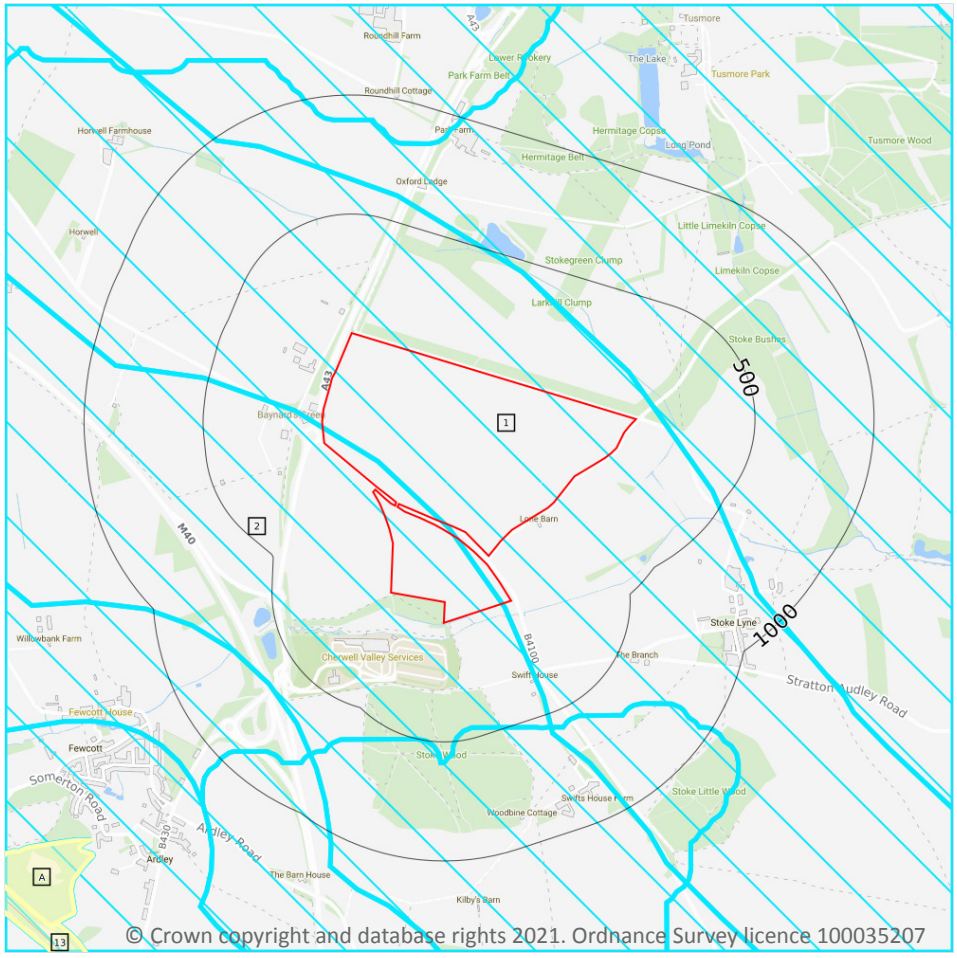
Records within 2000m	7

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	**Anglian Great Oolite**	**Groundwater**	**G73**	**Existing**
On site	**Great Ouse NVZ**	**Surface Water**	**S391**	**Existing**
532m NE	Cherwell (Ray to Thames) and Woodeaton Brook NVZ	Surface Water	S472	Existing
860m W	Anglian Great Oolite	Groundwater	G73	Existing
860m W	Great Ouse NVZ	Surface Water	S391	Existing
1526m SE	Bicester North	Groundwater	G162	Existing
1580m W	Cherwell (Ray to Thames) and Woodeaton Brook NVZ	Surface Water	S472	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

10.17 SSSI Impact Risk Zones

Records on site	2

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.

Features are displayed on the SSSI Impact Zones and Units map on **page 64**

ID	Location	Type of developments requiring consultation
1	**On site**	**Infrastructure - Airports, helipads and other aviation proposals.** **Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.** **Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500t.**

ID	Location	Type of developments requiring consultation
2	**On site**	**Infrastructure - Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction. Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons > 200m² & manure stores > 250t). Combustion - General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.**

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	**3**

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 64**

ID: A
Location: 1641m SW
SSSI name: Ardley Cutting and Quarry
Unit name: Ardley Wood
Broad habitat: Calcareous Grassland - Lowland
Condition: Unfavourable - Recovering
Reportable features:

Feature name	Feature condition	Date of assessment
ED - Bathonian	Unfavourable - Recovering	27/09/2012
Invert. assemblage F112 open short sward	-	-
Lowland calcareous grassland (CG3-5)	Unfavourable - Recovering	27/09/2012
Populations of nationally scarce butterfly species - Hamearis lucina, Duke of Burgundy	-	-

ID: -
Location: 1925m SW
SSSI name: Ardley Trackways
Unit name: Ardley North
Broad habitat: Inland Rock
Condition: Favourable
Reportable features:

Feature name	Feature condition	Date of assessment
EA - Jurassic - Cretaceous Reptilia	Favourable	15/10/2009

ID: 13
Location: 1967m SW
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	-	-
Lowland calcareous grassland (CG3-5)	Unfavourable - Recovering	22/08/2012
Populations of nationally scarce butterfly species - Hamearis lucina, Duke of Burgundy	-	-

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

11 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

11.1 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.

11.2 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.

11.3 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.

11.4 Listed Buildings

Records within 250m	1

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.

Features are displayed on the Visual and cultural designations map on **page 67**

ID	Location	Name	Grade	Reference Number	Listed date
1	142m W	Barn At Sp 5487 2940, Stoke Lyne, Cherwell, Oxfordshire, OX27	II	1046400	03/10/1988

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

11.5 Conservation Areas

Records within 250m	0

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.

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

11.6 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.

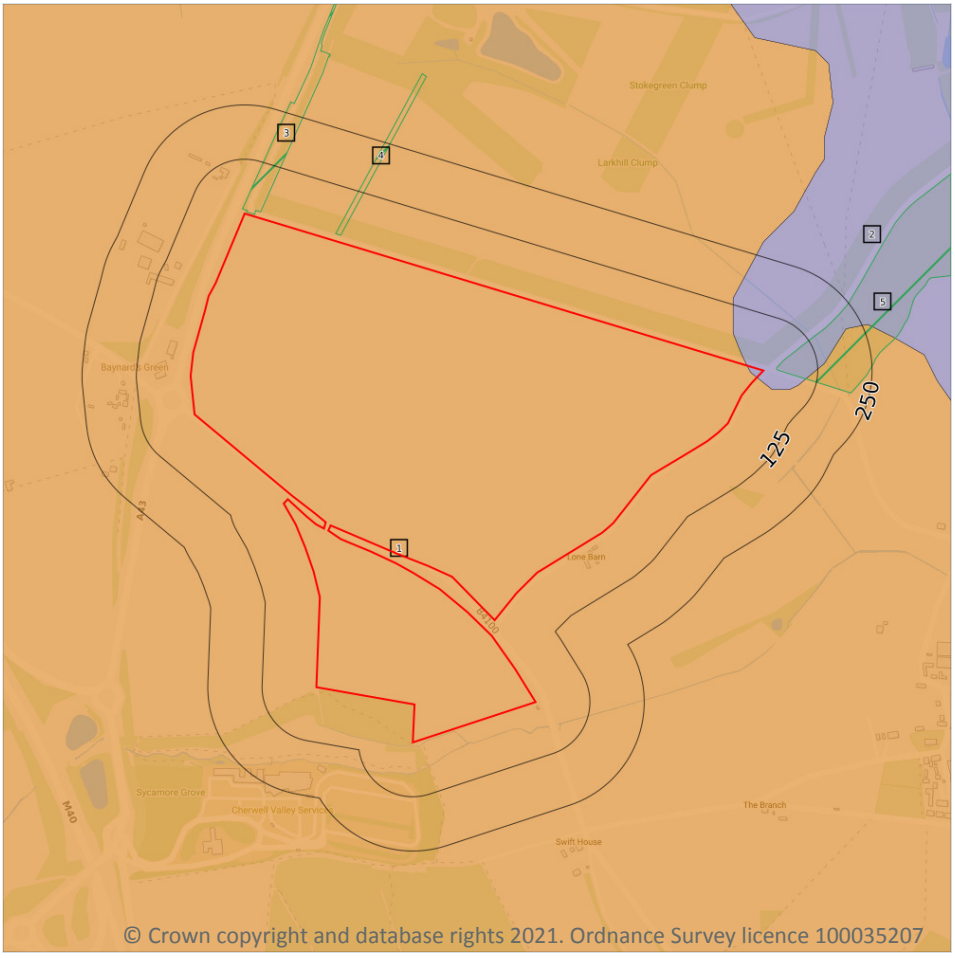
11.7 Registered Parks and Gardens

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.

12 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

12.1 Agricultural Land Classification

Records within 250m	2

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 70**

ID	Location	Classification	Description
1	On site	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.**

ID	Location	Classification	Description
2	**On site**	**Non Agricultural**	**-**

This data is sourced from Natural England.

12.2 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.

12.3 Tree Felling Licences

Records within 250m	**3**

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.

Features are displayed on the Agricultural designations map on **page 70**

ID	Location	Description	Reference	Application date
3	5m N	Selective Fell/Thin (Unconditional)	019/503/12-13	19/04/2013
4	16m N	Clear Fell (Unconditional)	019/346/07-08	30/01/2008
5	31m E	Selective Fell/Thin (Unconditional)	019/503/12-13	19/04/2013

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	**5**

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.

Location	Reference	Scheme	Start Date	End date
On site	**AG00476091**	**Entry Level Stewardship**	**01/09/2013**	**31/08/2018**
On site	**AG00476091**	**Entry Level Stewardship**	**01/09/2013**	**31/08/2018**
11m SE	AG00476091	Entry Level Stewardship	01/09/2013	31/08/2018
42m S	AG00476091	Entry Level Stewardship	01/09/2013	31/08/2018
208m E	AG00476091	Entry Level Stewardship	01/09/2013	31/08/2018

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m	**1**

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
139m NE	318689	Countryside Stewardship (Middle Tier)	01/01/2017	31/12/2021

This data is sourced from Natural England.

13 Habitat designations

Site Outline

Search buffers in metres (m)

Priority Habitat Inventory
Open Mosaic Habitat
Limestone Pavement Orders

Habitat Networks

Primary Habitat
Restorable Habitat
Associated Habitats
Habitat Restoration-Creation
Network Enhancement Zone 1
Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m	7

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

Features are displayed on the Habitat designations map on **page 73**

ID	Location	Main Habitat	Other habitats
1	3m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	10m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	15m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
4	29m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

ID	Location	Main Habitat	Other habitats
5	31m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
6	65m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
7	244m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 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.

13.3 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.

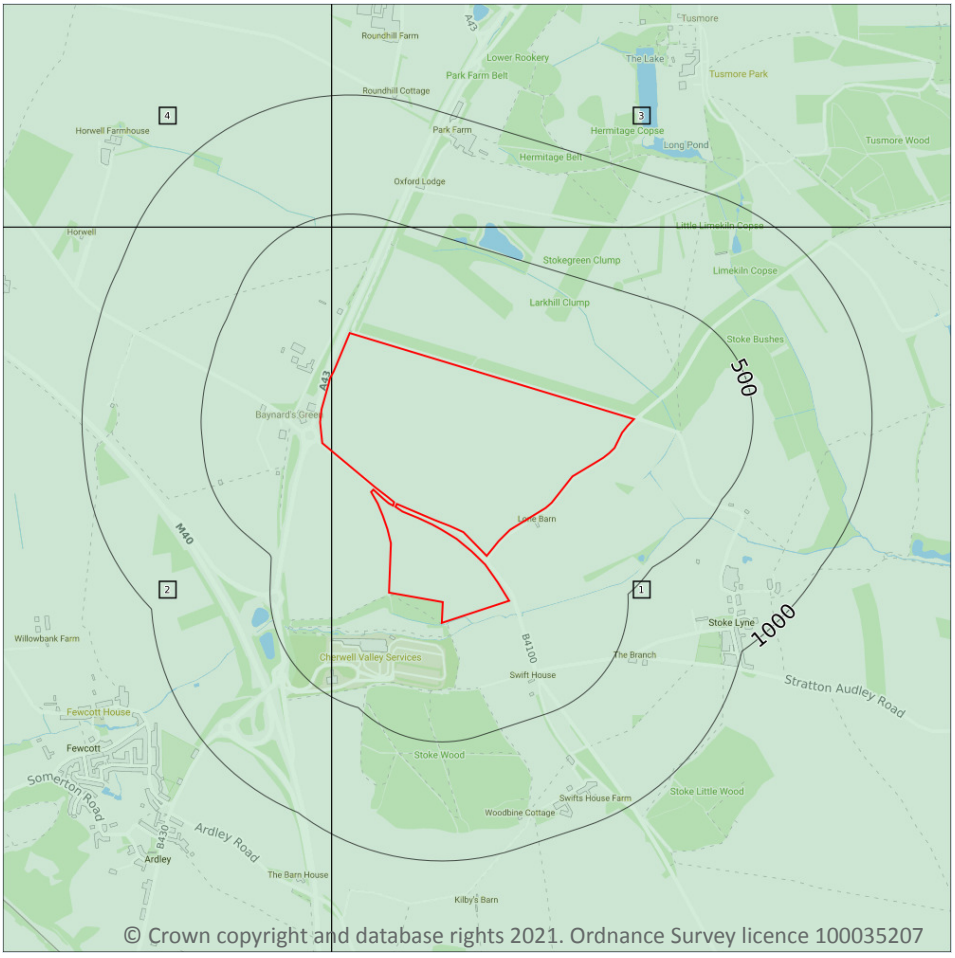
13.4 Limestone Pavement Orders

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.

14 Geology 1:10,000 scale - Availability



14.1 10k Availability

Records within 500m **4**

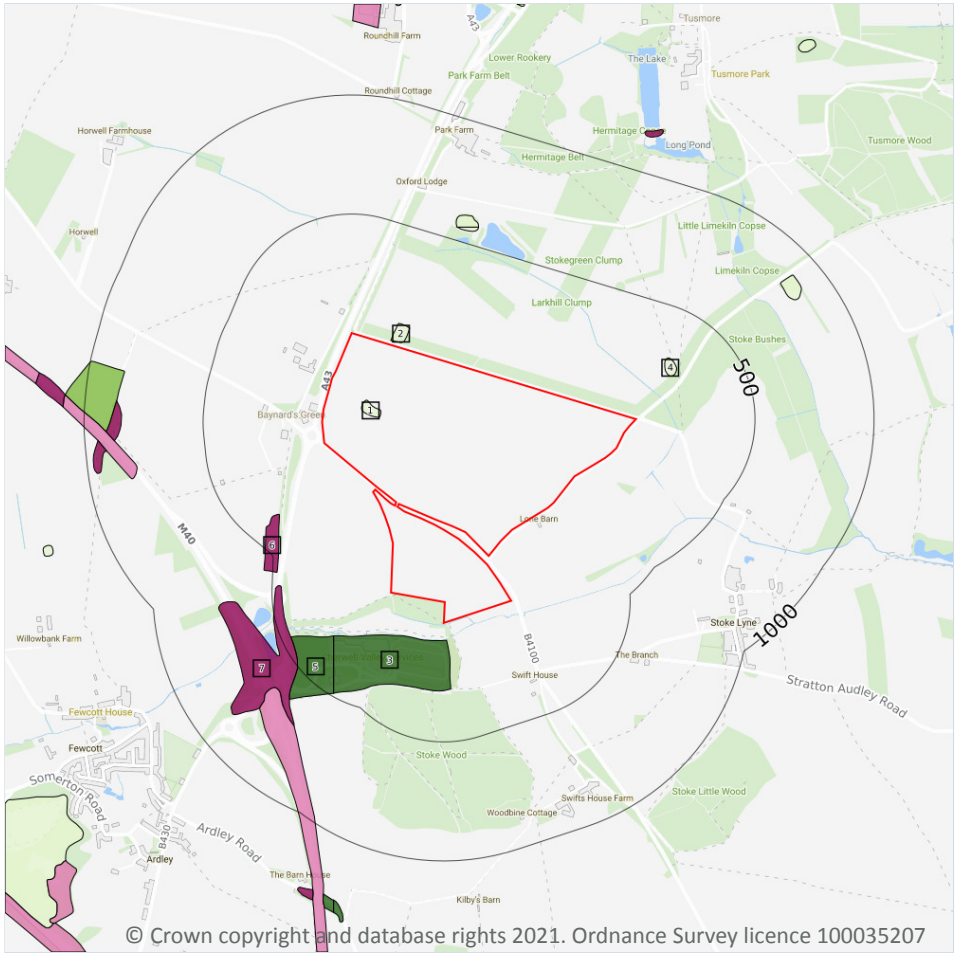
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 75**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**No coverage**	**SP52NE**
2	**On site**	**Full**	**Full**	**Full**	**No coverage**	**SP52NW**
3	445m N	Full	Full	Full	No coverage	SP53SE
4	451m N	Full	Full	Full	No coverage	SP53SW

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Artificial and made ground



Site Outline

Search buffers in metres (m)

- Reclaimed ground
- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

14.2 Artificial and made ground (10k)

Records within 500m **7**

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

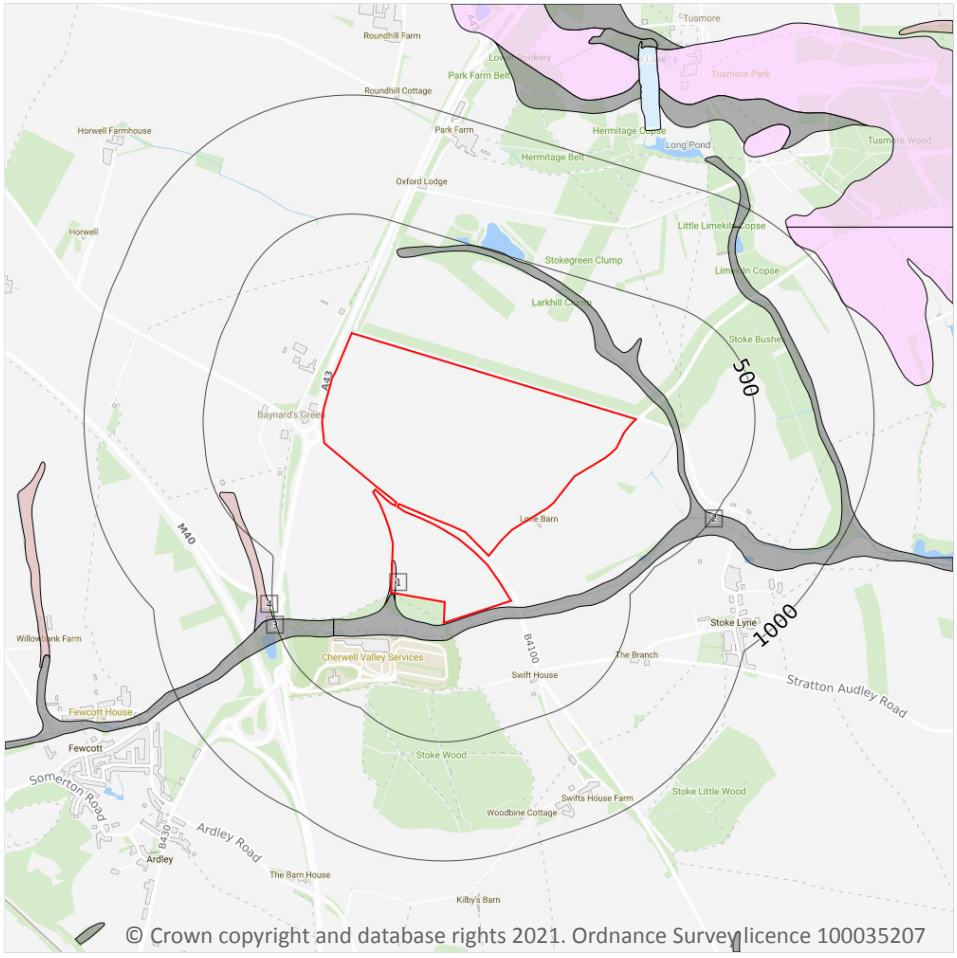
Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 77**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**WMGR-ARTDP**	**Infilled Ground**	**Artificial Deposit**
2	18m N	WMGR-ARTDP	Infilled Ground	Artificial Deposit
3	74m S	LSGR-UKNOWN	Landscaped Ground (Undivided)	Unknown/unclassified Entry
4	230m NE	WMGR-ARTDP	Infilled Ground	Artificial Deposit

ID	Location	LEX Code	Description	Rock description
5	302m SW	LSGR-UKNOWN	Landscaped Ground (Undivided)	Unknown/unclassified Entry
6	351m SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
7	458m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

Superficial geology (10k)
Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m **4**

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 79**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**HEAD-XCZ**	**Head - Clay And Silt**	**Clay And Silt**
2	3m S	ALV-CSV	Alluvium - Sandy Gravelly Clay	Clay, Sandy, Gravelly
3	266m SW	ALV-CSV	Alluvium - Sandy Gravelly Clay	Clay, Sandy, Gravelly
4	433m SW	HEAD-XCZ	Head - Clay And Silt	Clay And Silt

This data is sourced from the British Geological Survey.

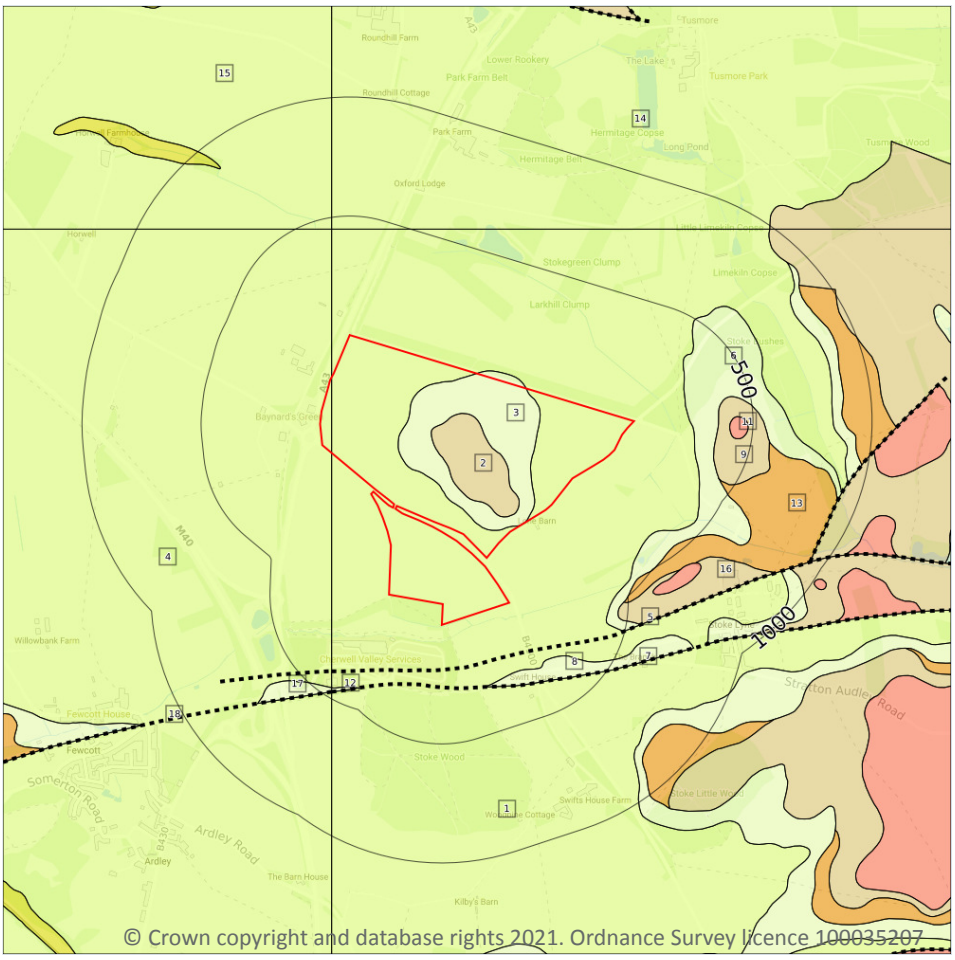
14.4 Landslip (10k)

Records within 500m	0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m **14**

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 81**

ID	Location	LEX Code	Description	Rock age
1	On site	WHL-LMST	White Limestone Formation - Limestone	Bathonian Age
2	On site	FMB-LSMD	Forest Marble Formation - Interbedded Limestone And Mudstone	Bathonian Age
3	On site	BLAD-MDLM	Bladon Member - Mudstone And Limestone, Interbedded	Bathonian Age

ID	Location	LEX Code	Description	Rock age
4	**On site**	**WHL-LMST**	**White Limestone Formation - Limestone**	**Bathonian Age**
6	226m E	BLAD-MDLM	Bladon Member - Mudstone And Limestone, Interbedded	Bathonian Age
8	285m S	BLAD-MDLM	Bladon Member - Mudstone And Limestone, Interbedded	Bathonian Age
9	352m E	FMB-LSMD	Forest Marble Formation - Interbedded Limestone And Mudstone	Bathonian Age
11	403m E	CB-LMST	Cornbrash Formation - Limestone	Callovian Age - Bathonian Age
12	413m S	BLAD-MDLM	Bladon Member - Mudstone And Limestone, Interbedded	Bathonian Age
13	432m SE	FMB-LMST	Forest Marble Formation - Limestone	Bathonian Age
14	445m N	WHL-LMST	White Limestone Formation - Limestone	Bathonian Age
15	451m N	WHL-LMST	White Limestone Formation - Limestone	Bathonian Age
16	459m E	FMB-LSMD	Forest Marble Formation - Interbedded Limestone And Mudstone	Bathonian Age
17	460m SW	BLAD-MDLM	Bladon Member - Mudstone And Limestone, Interbedded	Bathonian Age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m **4**

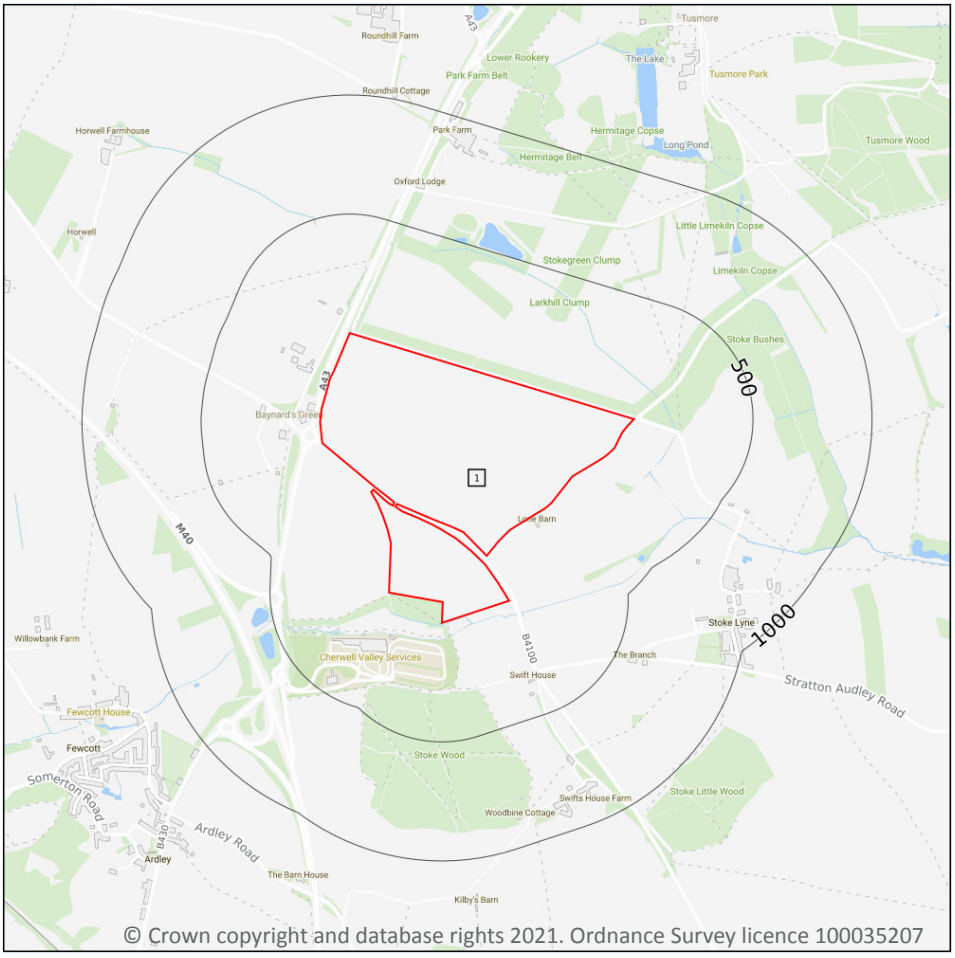
Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 81**

ID	Location	Category	Description
5	188m S	FAULT	Normal fault, inferred; crossmarks on downthrow side
7	262m S	FAULT	Normal fault, inferred; crossmarks on downthrow side
10	402m SW	FAULT	Normal fault, inferred; crossmarks on downthrow side
18	474m SW	FAULT	Normal fault, inferred; crossmarks on downthrow side

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



Site Outline

Search buffers in metres (m)

Geological map tile

15.1 50k Availability

Records within 500m	1

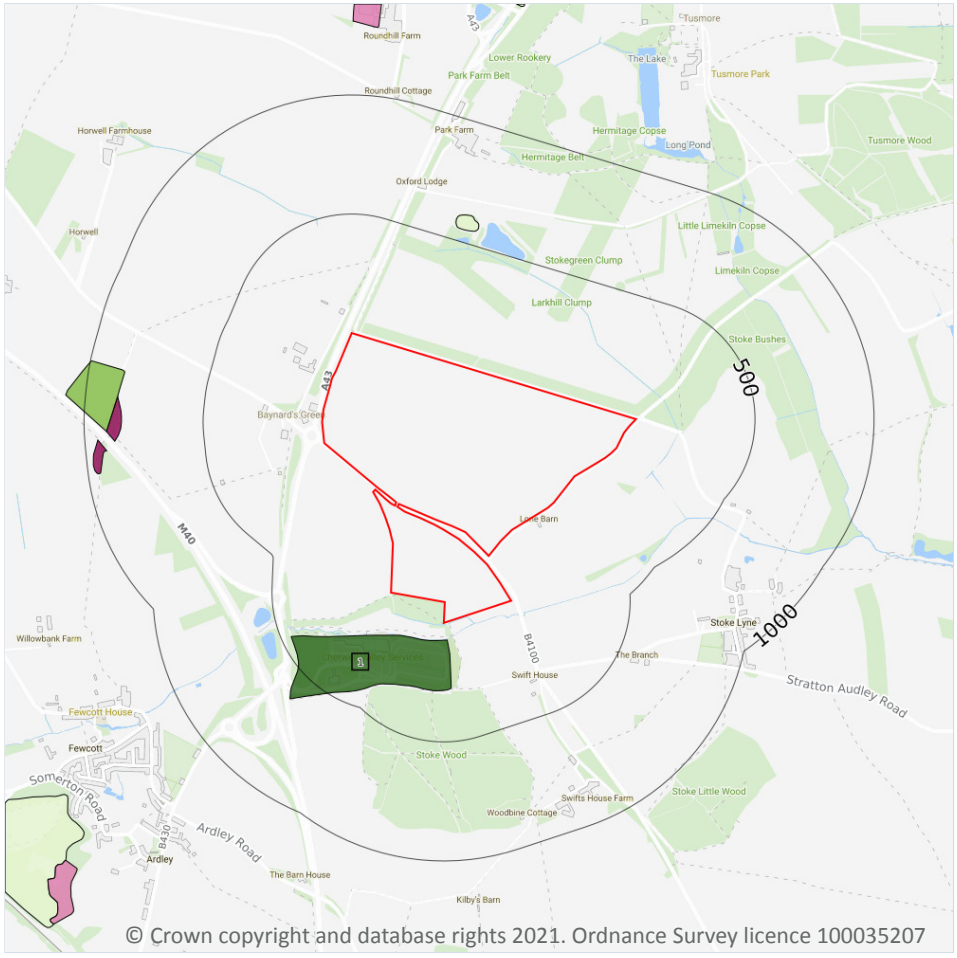
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 83**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**Full**	**EW219_buckingham_v4**

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Artificial and made ground



Site Outline

Search buffers in metres (m)

- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

15.2 Artificial and made ground (50k)

Records within 500m	1

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on **page 84**

ID	Location	LEX Code	Description	Rock description
1	73m S	LSGR-ARTGR	LANDSCAPED GROUND (UNDIVIDED)	ARTIFICIALLY MODIFIED GROUND

This data is sourced from the British Geological Survey.

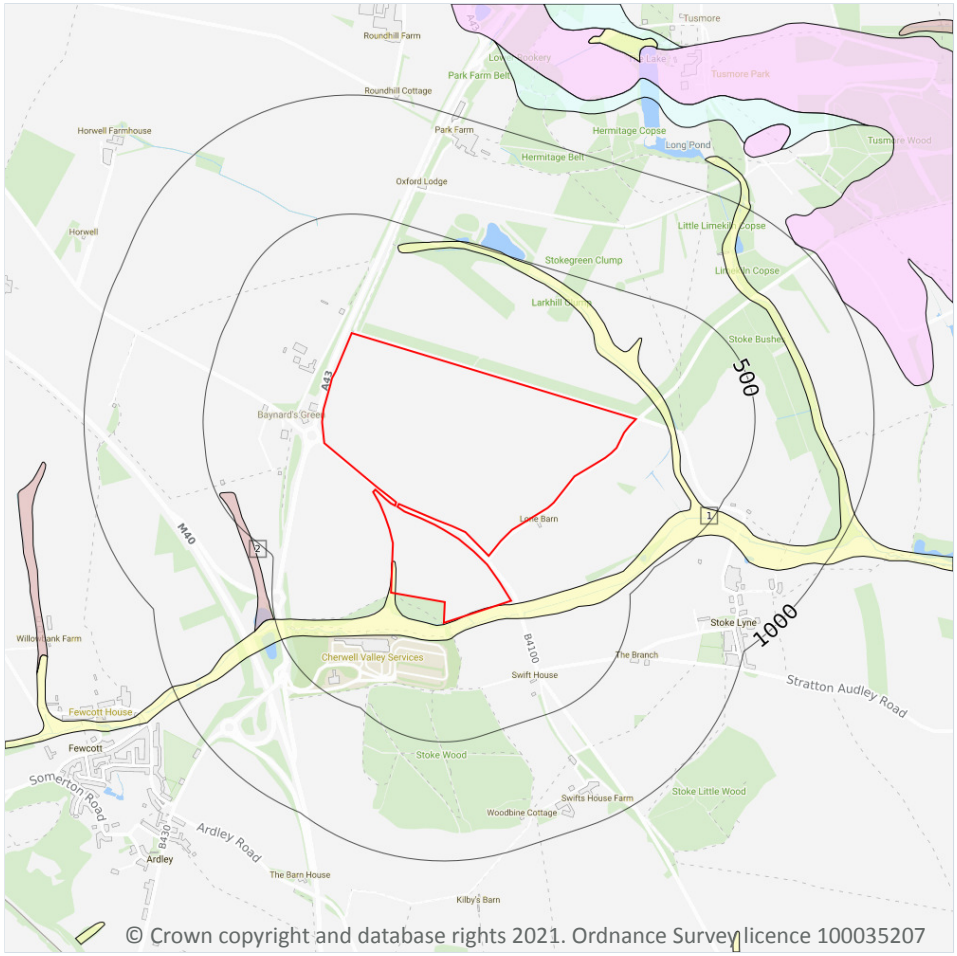
15.3 Artificial ground permeability (50k)

Records within 50m	0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m	2

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 86**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**ALV-XCZSV**	**ALLUVIUM**	**CLAY, SILT, SAND AND GRAVEL**
2	432m SW	HEAD-XCZSV	HEAD	CLAY, SILT, SAND AND GRAVEL

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	1

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Intergranular**	**High**	**Very Low**

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

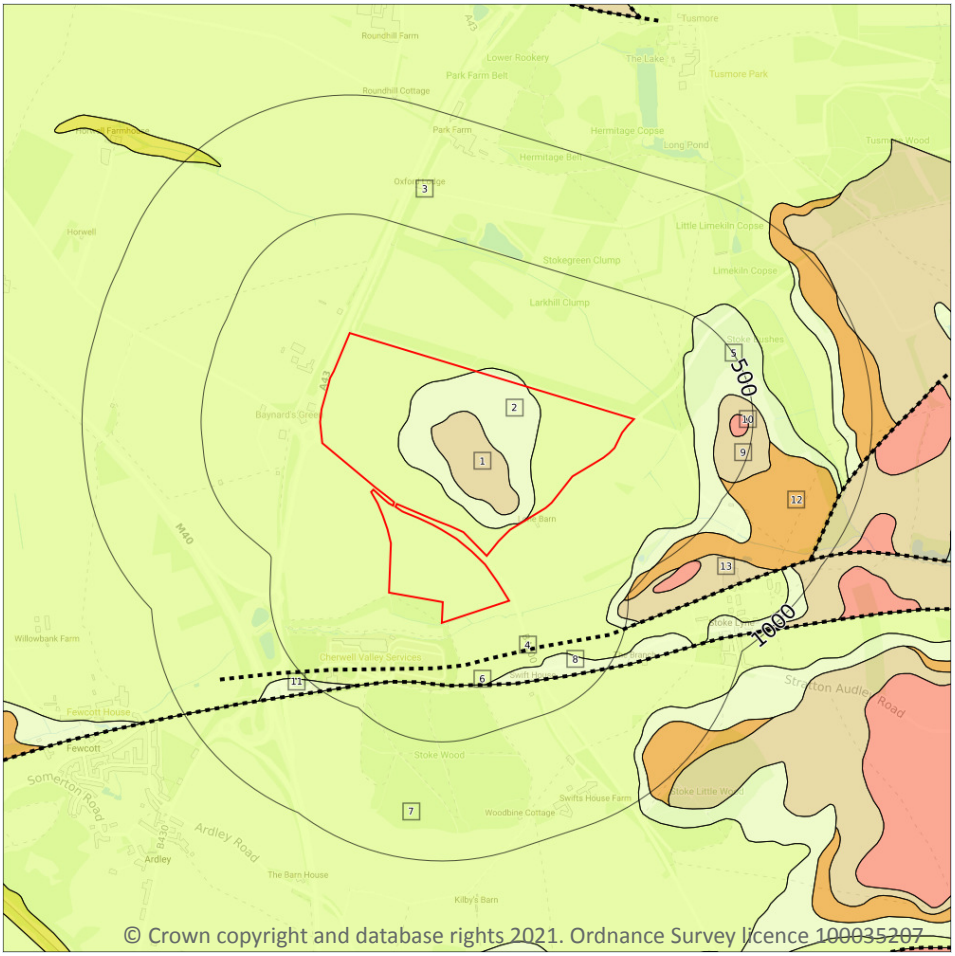
15.7 Landslip permeability (50k)

Records within 50m	0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m	11

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 88**

ID	Location	LEX Code	Description	Rock age
1	On site	FMB-LSMD	FOREST MARBLE FORMATION - LIMESTONE AND MUDSTONE, INTERBEDDED	BATHONIAN
2	On site	BLAD-MDLM	BLADON MEMBER - MUDSTONE AND LIMESTONE, INTERBEDDED	BATHONIAN
3	On site	WHL-LMST	WHITE LIMESTONE FORMATION - LIMESTONE	BATHONIAN

ID	Location	LEX Code	Description	Rock age
5	225m E	BLAD-MDLM	BLADON MEMBER - MUDSTONE AND LIMESTONE, INTERBEDDED	BATHONIAN
7	259m S	WHL-LMST	WHITE LIMESTONE FORMATION - LIMESTONE	BATHONIAN
8	285m S	BLAD-MDLM	BLADON MEMBER - MUDSTONE AND LIMESTONE, INTERBEDDED	BATHONIAN
9	352m E	FMB-LSMD	FOREST MARBLE FORMATION - LIMESTONE AND MUDSTONE, INTERBEDDED	BATHONIAN
10	403m E	CB-LMST	CORNBRASH FORMATION - LIMESTONE	BATHONIAN
11	411m S	BLAD-MDLM	BLADON MEMBER - MUDSTONE AND LIMESTONE, INTERBEDDED	BATHONIAN
12	433m SE	FMB-LMST	FOREST MARBLE FORMATION - LIMESTONE	BATHONIAN
13	458m E	FMB-LSMD	FOREST MARBLE FORMATION - LIMESTONE AND MUDSTONE, INTERBEDDED	BATHONIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m **4**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Fracture**	**Very High**	**Low**
On site	**Fracture**	**High**	**Very Low**
On site	**Fracture**	**Very High**	**Very High**
On site	**Fracture**	**Very High**	**Very High**

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m **2**

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 88**

ID	Location	Category	Description
4	187m S	FAULT	Fault, inferred
6	259m S	FAULT	Fault, inferred

This data is sourced from the British Geological Survey.

16 Boreholes

Site Outline

Search buffers in metres (m)

Confidential

0 - 10m

10 - 30m

30m+

Unknown

16.1 BGS Boreholes

Records within 250m	8

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on **page 91**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	39m W	454913 229173	A43/M40 - B4031 IMPROVEMENT TP6	2.4	N	336673
2	49m NW	455042 229591	A43: M40 TO B4031 IMPROVEMENT TP T8	2.3	N	336417
3	60m W	454936 229383	A43/M40 - B4031 IMPROVEMENT TP7	2.45	N	336674

ID	Location	Grid reference	Name	Length	Confidential	Web link
4	62m W	454896 229116	A43/M40 - B4031 IMPROVEMENT 4	10.0	N	336667
5	67m W	454890 229230	BAYWARDS GR SERVICE STN	30.48	N	336644
6	152m S	455300 228300	CHERWELL VALLEY M40 STOKE LYNE	13.0	N	336416
7	173m SW	454818 228995	A43/M40 - B4031 IMPROVEMENT TP4	0.9	N	336672
8	196m W	454800 229400	BAYNARDS GREEN SERVICE STATION	30.48	N	336458

This data is sourced from the British Geological Survey.