

Great Wolf Lodge, Chesterton

Phase 1 Preliminary Site Risk Assessment

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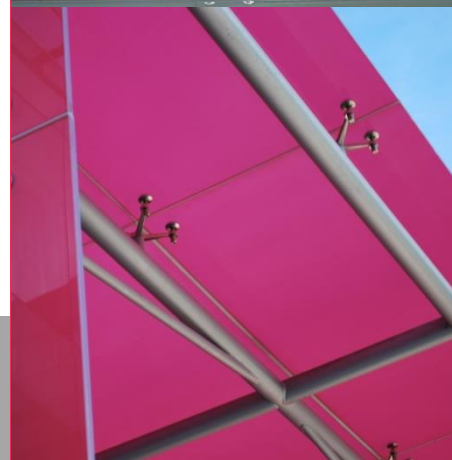
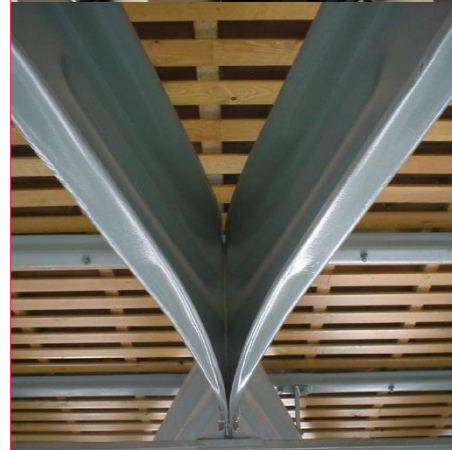
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Phase 1 Preliminary Site Risk Assessment




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Executive Summary

Appointment	In February 2019, Curtins were instructed by Great Wolf Lodge Inc. (the client) to undertake a Phase 1 Preliminary Risk Assessment for a site referred to as 'Great Wolf Lodge'.
Current Site Status & Proposed Development	<p>The site, which is irregularly shaped is approximately 19 Hectares in size and is located just south of the A4095 and east of the M40. It is centred at approximate national grid reference (NGR) 454930, 221680. The site location plans are shown in Figure 2-1 below. The site currently forms the northern half of the of the Bicester Golf Club and Spa with associated buildings, road access, parking and landscaped areas. A number of surface water features (ponds) are present on-site (generally located in the northern half of the site (specifically at the north-western corner and the north-eastern corner) with drains running from west to east. It is possible that Tanks may be located along the site's southern boundary which would signify a risk of hydrocarbon and vapour contamination.</p> <p>The northern and western site boundaries are marked by the A4095 and M40, respectively, while the southern and part of the eastern boundaries are delineated by associated golf and sports fields of the Bicester Golf Course and Spa.</p> <p>The site currently forms the northern section of the Bicester Golf Course and Spa with several artificial ponds, OS network lines and drainage network located on the site.</p> <p>The development proposal is understood to include a lodge which would constitute a central 'tower' with arms radiating and separate out buildings, a basement and swimming pools. It is our understanding that the depth of the basement will be approximately four metres, while the maximum height of the building would be four storeys.</p> <p>The facilities of the building will comprise:</p> <ul style="list-style-type: none"> • 500 guest bedrooms; • Conference and banqueting suite; • Family entertainment centre; • Water park and; • Car parking.
Site History	Earliest maps available for the site are from 1875; it shows the site and the immediate environs to be open fields/farmlands. By 1900, what appears to be a quarry is located approximately 20 m north of the A4095 and by 1923 the quarry has extended into the site's northern boundary. This quarry appeared to have been backfilled by 1970, and by 1991 the site became a golf course with several artificial ponds located on site.
Geology	Geological maps and British Geological Survey (BGS) borehole information from the wider areas indicates the site to be underlain by topsoil to depth of approximately 0.55 m, overlying oolite group cornbrash formation described as limestone, underlain by forest marble formation also described as limestone overlying white limestone and hampen marly beds at depth.
Hydrogeology	<p>The strata underlying the site have been identified as a multi-layered sequence of aquifers (water bearing rock) interbedded with lower permeability aquicludes which allow perching of groundwater upon them. It is anticipated that shallow groundwater will exist, at least seasonally, Cornbrash immediately underlying the site. There will be a permanent, deeper, groundwater body within the White Limestone.</p> <p>The Envirocheck report records that there is limited potential for groundwater flooding to occur on the site. However, the potential for groundwater flooding of property situated below ground level occurs approximately 10 m and 34 m north of the site.</p>
Hydrology	<p>A number of surface water features (ponds) are present on-site (generally located in the northern half of the site (specifically at the north-western corner and the north-eastern corner) with drains running from west to east (also in the northern half of the site). A total of 13 No. OS water network lines described as inland river both on the ground surface and underground recorded within the site, these water network lines will need to be culverted.</p> <p>There are no discharge consents registered within 250 m of the site's boundary.</p>
Preliminary UXO Risk Assessment	<p>A detailed unexploded ordnance (UXO) risk assessment was undertaken for the site which details that there is a Low Risk from both items of German aerial delivered UXO and Allied UXO across the site.</p> <p>It is recommended that all works on the site shall include the following:</p> <ul style="list-style-type: none"> • UXO Risk Management Plan; • Site Specific UXO Awareness Briefings to all personnel conducting intrusive works.
Radon Risk Assessment	<p>The eastern section of the site is in an intermediate probability radon area, where 1% - 3% of homes are estimated to be at or above the Action Level. The south-western and south-eastern section of the site are recorded as lower probability radon areas where less than 1% of homes are estimated to be at or above the Action Level.</p> <p>The Envirocheck report indicates that no radon protective measures are necessary in the construction of new dwellings or extensions on the site. However, it should be noted that in accordance with building regulations, until a building has been constructed and occupied, it is not possible to accurately assess the severity of a radon problem on a site. Thus, if the development was to include below ground workplaces, then, further assessments, consultation from a radon risk assessor and/or basic protection measures in accordance with BRE Report BR211 may be required.</p>

Phase 1 Preliminary Site Risk Assessment



Ground Engineering Considerations	<p>Made Ground on site is not considered suitable to support the proposed structure. Depending on the extent of the Made Ground but also given the nature of the proposed development, comprising of buildings up to 4-storeys in height, a piling foundation solution is likely to be required.</p> <p>The risk associated with collapsible ground, landslides, and ground dissolution stability hazards are described as low, while the risks from compressible ground, running sands and shrinking and swelling clay are classed as 'no hazard'.</p>
Conclusions & Recommendations	<p>Sources with the potential to impact on-site receptors exist due to potential Made Ground on the site, especially in the man-made mounds and the infilled quarry located at the north-western section of the site. Based on this, the risks posed to future site users of the development were generally assessed as Moderate.</p> <p>Also assessed as Moderate is the risk of site-users potential exposure to ground-gas and vapours, reflecting the likelihood of potential organic contaminants and organic/putrescible materials being present in the Made Ground.</p> <p>The risks to neighbouring residents and construction and maintenance workers are generally assessed as Moderate/low, reflecting the likely adoption of measures to suppress dust during the construction works and standard health and safety precaution that are likely being implemented by construction and maintenance workers.</p> <p>The risks to controlled water are also assessed as Moderate reflecting the presence secondary aquifers underlying the site, the presence of several ponds and OS Water Network lines on the site.</p> <p>On the basis of the findings of this Phase 1 Preliminary Risk Assessment, a site investigation (S.I) is recommended to further characterise the site and to assess the risks from the identified contaminant sources to the proposed development. The proposed S.I will be targeted to focus on specific salient features such as the infilled quarry at the north-eastern corner of the site and several man-made mounds observed on the site. Further exploratory holes will also be located on a non-targeted basis in order for the coverage to be sufficient to characterise the potential and extent of the Made Ground and underlying formations.</p> <p>The detailed UXO risk assessment states that there is a low risk from both items of German aerial delivered UXO and Allied UXO across the site.</p> <p>Thus, the following risk mitigation measures are recommended to support the proposed works at the Great Wolf Lodge site:</p> <ul style="list-style-type: none"> ▪ All Works: <ul style="list-style-type: none"> ○ UXO Risk Management Plan; ○ Site Specific UXO Awareness Briefing to all personnel conducting intrusive works.



Table of Contents

1.0	Introduction	6
1.1	Project Background	6
1.2	Scope of Services	6
2.0	Current Site and Surrounding Area Details	7
2.1	Development Proposal	7
2.2	Site Location and Current Setting	7
2.3	Site Walkover Assessment	8
3.0	Site History	10
4.0	Geology, Hydrogeology and Hydrology	12
4.1	Geology	12
4.2	Hydrogeology	14
4.3	Hydrology	14
5.0	Other Environment Considerations	15
5.1	Mining	15
5.2	Other Ground Stability Issues	15
5.3	Radon	15
5.4	Discharge Consent	15
5.5	Water Abstractions	16
5.6	Local Authority Landfill Coverage	16
5.7	Potentially Infilled Land (Non-Water)	16
5.8	Potentially Infilled Land (Water)	16
5.9	BGS Recorded Mineral Sites	16
5.10	Contemporary Trade Directory Entries	16
5.11	Nitrate Vulnerable Zones	16
5.12	Points of Interest – Manufacturing and Production	16
5.13	Points of Interest – Public Infrastructure	16



5.14	Points of Interest – Recreational and Environmental.....	16
5.15	BGS Estimated Soil Chemistry	17
6.0	Unexploded Ordnance (UXO) Risk Assessment	18
6.1	Pre-Desk Study UXO Assessment.....	18
6.2	Preliminary UXO Assessment.....	19
6.3	Detailed UXO Assessment.....	20
7.0	Conceptual Site Model & Qualitative Risk Assessment.....	21
7.1	Additional Risk Assessments	21
8.0	Conclusion and Recommendations.....	24
9.0	References	26

Appendices

Appendix A – Envirocheck Report

Appendix B – Site Walkover Photos

Appendix C – PDSA Unexploded Ordnance Risk Assessment

Appendix D – Preliminary Unexploded Ordnance (UXO) Risk Assessment

Appendix E – Detailed Unexploded Ordnance (UXO) Risk Assessment

Appendix F – Qualitative Risk Assessment Rationale

1.0 Introduction

1.1 Project Background

In February 2019, Curtins Consulting Limited were instructed by Wolf Lodge Inc. (the client) to undertake a Phase 1 preliminary site risk assessment on a site referred to as Great Wolf Lodge, which is situated just south of the A4095 and east of the M40 in Chesterton, Bicester, Oxfordshire.

1.2 Scope of Services

The Phase 1 assessment is intended to provide an overview of the geo-environmental and geotechnical setting of the site to provide an initial assessment of any potential constraints to future development of the site from contamination. The site is bound to the north and west by roads, the A4095 and M40, respectively, it is bound to the south and partially to the east by a golf course and development associated with the golf course.

It is our understanding that the proposed development would include a lodge which would constitute a central 'tower' with arms coming off and separate out buildings, a basement and swimming pools. It is our understanding that the depth of the basement will be approximately four metres, while the maximum height of the building would be four storeys.

The facilities of the building will comprise:

- 500 guest bedrooms;
- Conference and banqueting suite;
- Family entertainment centre;
- Water park and;
- Car parking.

Through this overview, this Phase 1 Preliminary Risk Assessment (PRA) aims to develop both, a working conceptual and ground model for the site, as well as present an initial assessment of any risks that could be associated with the development including its intended end users and the wider environment.

Specifically, the Phase 1 preliminary site risk assessment provides an initial assessment of the site regarding:

- a) Potential contamination of the site's strata by historical and/or current use;
- b) The potential impact on the wider environment by historical and/or current use of the site;
- c) The potential impact from surrounding land uses and other environmental factors;
- d) Potential problems associated with geological features such as faulting, mineral extraction, mining and land instability;
- e) The location of apparent sub-surface structures that may affect the proposed redevelopment; and;
- f) The location of above-surface features that may affect the proposed redevelopment.

2.0 Current Site and Surrounding Area Details

2.1 Development Proposal

The development proposal is understood to include a lodge which would constitute a central 'tower' with arms coming off and separate out buildings, a basement and swimming pools. It is our understanding that the depth of the basement will be approximately four metres, while the maximum height of the building would be four storeys.

The facilities of the building will comprise:

- 500 guest bedrooms;
- Conference and banqueting suite;
- Family entertainment centre;
- Water park and;
- Car parking.

2.2 Site Location and Current Setting

The site, which is irregularly shaped is approximately 19 Hectares in size and is located just south of the A4095 and east of the M40. It is centred around national grid reference (NGR) 454930, 221680. The site location plans are shown in Figure 2-1 below.

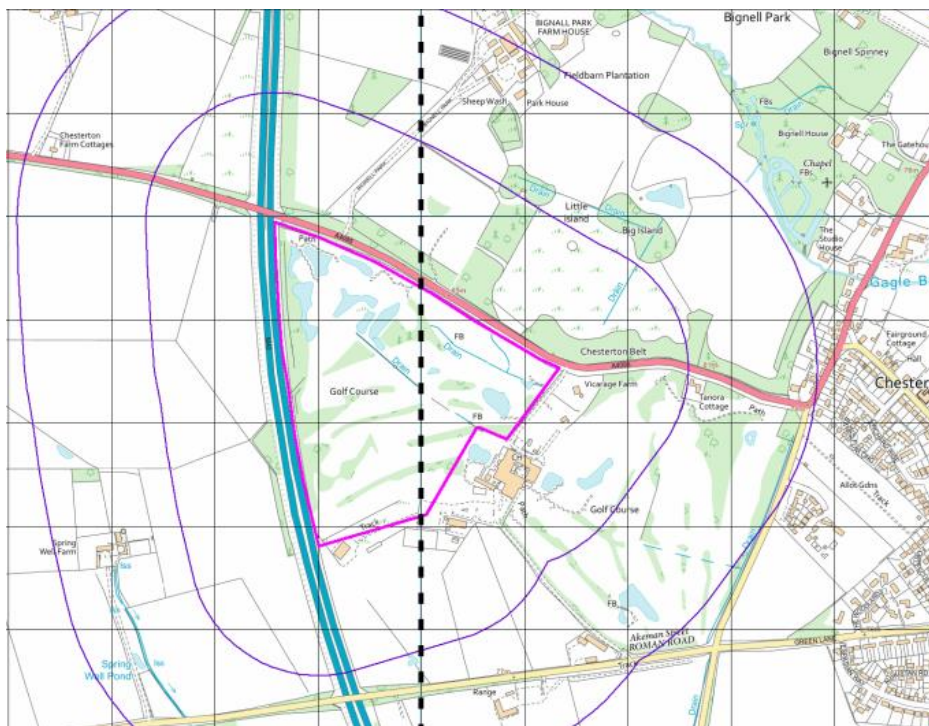


Figure 2-1: Site Location Plan. Crown Copyright License No. 100022432

The site currently forms the northern half of the of the Bicester Golf Club and Spa with associated buildings, road access, parking and landscaped areas. A number of surface water features (ponds) are present on-site (generally located in the northern half of the site (specifically at the north-western corner and the north-eastern corner) with drains running from west to east.

2.3 Site Walkover Assessment

A site reconnaissance visit was carried out by a Curtins Senior Engineer on 27th March 2019. Full details of the site walk visit have been included as Appendix B. The walking route utilised during the site walk over visit is included as Figure 2-2 below



Figure 2-2: Site Reconnaissance Walking Route.

The site walkover visit confirmed that the site is indeed currently utilised as a golf course. Furthermore, it noted the following geo-environmental constraints to the future development of the site.

- Several mounds which (approximately 1.2 m to 2.0 m height) were observed on site as part of the golf course. These mounds are understood to have been created with re-worked natural soils; however, one of the mounds located on the northern boundary was noted to have brick and concrete in material at surface. It should be noted that the historical mapping (Appendix A) and also detailed in Section 3.0 records a small backfilled quarry is located in the northern part of the site and the nature of the backfill will need to be determined. The current

material/environmental quality of the mounds is unknown, potential for re-use or risk to future site users etc. and will need to be investigated further;

- Several ponds on-site, created from excavating to groundwater, with groundwater level observed as shallow;
- A number of mature trees across the site with the potential for heave following removal.

3.0 Site History

A review of the available historical mapping and other information for the site as presented within the Envirocheck report included as Appendix A to this report has been undertaken and is presented in Table 3-1 below.

Table 3-1: Previous Site and Surrounding Area Uses and Potential Sources of Contamination

Date	Description	Potential contaminants or salient features
1875-1885	<p>On Site: The site is recorded as open fields. Several paths are recorded on the site. The site is bound to the north by a road identified as A4095.</p> <p>Off Site: The surrounding areas are recorded as open fields. Spring Well Farm and Spring Well Pond are located approximately 400 m south-west of the site boundary.</p>	<p>On Site:</p> <ul style="list-style-type: none"> No significant contaminant sources. <p>Off Site:</p> <ul style="list-style-type: none"> No significant contaminant sources.
1899-1923	<p>On Site: By 1923, the quarry recorded 20 m north of the site has extended into the northern boundary of the site.</p> <p>Off Site: What appears to be orchards have been planted in the open fields located north and north-east of the site. Several drains are recorded in this area. By 1900, what appears to be a quarry is located approximately 20 m north of the A4095 and extends in excess of 1 km from the site's boundary. Several Quarries are located in excess of 250 m from the site's boundaries. By 1922, an unidentified structure is located approximately 110 m east of the site. Gagle Brook is located in excess of 500 m north of the site.</p>	<p>On Site:</p> <ul style="list-style-type: none"> Quarry. <p>Off Site:</p> <ul style="list-style-type: none"> Quarry
1967-1968s	<p>On Site: No significant change to the site.</p> <p>Off Site: The area where orchards located north and north-east of the site are located has been named Bignell Park. An unidentified structure is located approximately 150 m north-west of the site boundary. Vicarage Farm which incorporates several buildings is located approximately 40 m east of the site.</p>	<p>On Site:</p> <ul style="list-style-type: none"> No significant contaminant sources. <p>Off Site:</p> <ul style="list-style-type: none"> No significant contaminant sources.
1970s-1996s	<p>On Site: By 1970s the Quarry located at the northern section of the site appears to have been backfilled (Made Ground). By 1974, a drain is located at the northern section of the site. By 1985, a pond is located at the south-eastern end of the site. By 1995, a second pond is located at the south-eastern corner of the site. By 1991, the north-western corner of the site appears to be utilised as farm land. A golf course (with potential Made Ground) is now situated on the rest of the site.</p> <p>Off Site: By 1981, the buildings located at the southern end of Vicarage Farm have been renamed Club house. Land situated just south-east of the site is now a golf course. By 1991, the western site boundary is delineated by the road designated as M40. Some earth works with potential Made Ground related to the M40</p>	<p>On Site:</p> <ul style="list-style-type: none"> Made Ground <p>Off Site:</p> <ul style="list-style-type: none"> Made Ground

Phase 1 Preliminary Site Risk Assessment



Date	Description	Potential contaminants or salient features
	<p>have taken place at the western site boundary and the north-western corner of the site. A pond is recorded 250 m south of the site.</p> <p>By 1994, the orchards located north and north-east of site appear to no longer be located on the plans. The surrounding environs appears to be used for farming.</p>	
1999	<p>On Site: No significant changes to the site.</p> <p>Off Site: No new significant development.</p>	<p>On Site:</p> <ul style="list-style-type: none"> • No new significant contaminant sources. <p>Off Site:</p> <ul style="list-style-type: none"> • No significant contaminant sources.
2006	<p>On Site: Several ponds are located at the north-western corner of the site.</p> <p>Off Site: No new significant development.</p>	<p>On Site:</p> <ul style="list-style-type: none"> • No new significant contaminant sources <p>Off Site:</p> <ul style="list-style-type: none"> • No new significant contaminant sources
2019	<p>On Site: No significant changes to the site.</p> <p>Off Site: Further development works have taken place at the club house located south-east of the site's boundary.</p>	<p>On Site:</p> <ul style="list-style-type: none"> • No new significant contaminant sources <p>Off Site:</p> <ul style="list-style-type: none"> • No new significant contaminant sources

4.0 Geology, Hydrogeology and Hydrology

4.1 Geology

A study of the Envirocheck report (Appendix B), borehole records from the British Geological Survey (BGS) interactive viewer 1:625,000 mapping records (ref 1), GeoIndex BGS maps 1:50,000 scale mapping records (ref 2), BGS borehole scans (ref 3) and BGS GeoRecords Plus (ref 4) indicates a geological and hydrogeological succession for the site as presented in Table 4-1 below.

Table 4-1: Geological/Hydrogeological Succession

Geology	Associated hydrogeological classification
<p>The historical mapping indicates that the site underwent some earthwork between 1923s and 1996s. Furthermore, the quarry located at the northern end of the was backfilled and infilled ground/artificial deposit is recorded just north of the A4095. Thus, the probability of Made Ground being present on site is considered likely.</p> <p>Furthermore, BGS borehole logs from historic on-site boreholes indicates the presence of Topsoil (likely imported) to depths of approximately 0.55 m.</p>	N/A
Cornbrash Formation described as Limestone	Secondary A ¹
Forest Marble Formation described as interbedded Mudstone and Limestone.	Secondary A ¹

Notes:

1. 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 aquifer formerly classified as minor aquifer:
2. The soils at the eastern quadrant are described as soils of high leaching potential (H3) – Coarse textured or moderately shallow soils which readily transmit non-absorbed pollutants and liquid discharges but, which have some ability to attenuate absorbed pollutants because of their large clay or organic matter contents.

No superficial deposits are recorded, however, given the history of the site (with the potential for major earth works and landscaping to form a golf course and artificial ponds) and the presence of a quarry located within the site's northern boundary, the bedrock is likely to be overlain by Made Ground and reworked natural material and topsoil.

The geological mapping indicates the site is mainly underlain by the Limestone of the Cornbrash Formation although an area in the north and western boundary of the site is indicated to be the interbedded Limestone and Mudstone of the Forest Marble Formation.

Available BGS logs from historical boreholes and trial pits located on the site (see Table 4-2) were accessed via the GeoIndex (**Error! Reference source not found.**) website. It suggests the made Topsoil extended to a depth of approximate 0.55 m below ground level (m bgl.). These logs also proved

Colluvium (described as silty CLAY with limestone gravel and clayey sandy SILT) to be present to depths of at least 1.55 m bgl. and this is underlain by weathered Forest Marble (described as silty CLAY, clayey sandy SILT, medium grained shelly LIMESTONE and moderately strong LIMESTONE) proven to depths of 4.5 m bgl. This is underlain by WHITE LIMESTONE proven to depths of approximately 10.0 m bgl.

Information of available logs of some of the historical boreholes and trial pits that used to be located in the south-east and north-east quadrants of the site (**Error! Reference source not found.**), is summarised in Table 4-2 below.

Table 4-2: Selected BGS borehole and trial pit records

Record number	Location (NGR)	Depth below ground level (thickness), soil description & lithology
SP52SW23	NE Quadrant 454840, 221380	<ul style="list-style-type: none"> - 0 – 0.25 m: TOPSOIL (Firm to stiff friable silty CLAY with roots). - 0.25 – 0.7 m: Firm silty CLAY (Colluvium) with loosely interlocking platy cobbles of moderately weak to moderately strong shelly limestone. - 0.7 – 1.55 m: Loose to medium dense silty clayey sandy calcareous SILT with some moderately weak limestone gravel and cobble with pockets of clayey silty sand (Colluvium). - 1.55 – 1.75 m: Firm silty calcareous (Weathered Forest Marble). - 1.75 – 2.2 m: Medium dense clayey sandy calcareous SILT with fine weak calcareous siltstone gravel (Weathered Forest Marble).
SP52SW29	SE Quadrant 454760, 221960	<ul style="list-style-type: none"> - 0 – 0.2 m: TOPSOIL - 0.25 – 1.5 m: Firm becoming stiff silty CLAY (Colluvium/ Weathered Forest Marble). - 1.5 – 2.2 m: moderately weak to moderately strong LIMESTONE (Weathered Forest Marble). - 2.2 – 2.9 m: Stiff very thinly bedded silty CLAY with very thin interbeds and laminae of silty clayey oolite sand and calcareous silt (Forest Marble). - 2.9 – 4.5 m: moderately weak to moderately strong medium bedded medium grained oolite and shell debris LIMESTONE (Forest Marble). - 4.5 – 8.5 m: White Limestone Bladon - 8.5 – 15.25 m: White Limestone Ardley - 15.25 – 21.50 m: White Limestone Shipion - 21.50 – 25.00 m: Hampen Marly Beds

The above record likely predates the construction of the golf course therefore the current shallow strata conditions may differ.

4.2 Hydrogeology

The site is not situated in a groundwater source protection zone, however the Envirocheck reports details that the site is underlain by a Secondary A aquifer.

Regional groundwater flow is anticipated to be in a south-easterly direction. A water well is located at Chesterton Field Farm for a private water supply. The site area is underlain at rockhead by various formations and members of the Great Oolite Group, of Mid-Jurassic age, which are dominated by limestones with sub-ordinate mudstone beds.

There are no geological faults shown on site from British Geological Survey Maps. The Cornbrash Formation (CB) which is the youngest bedrock unit represented and dominates the outcrop within the site area. It comprises approximately 4m of thick grey to brown, bioclastic, rubbly-bedded limestone with thin sub-ordinate beds of grey mudstone. Underlying the CB is the Forest Marble Formation and then below the White Limestone Formation. The strata underlying the site have been identified as a multi-layered sequence of aquifers (water bearing rock) interbedded with lower permeability aquicludes which allow perching of groundwater upon them. It is anticipated that shallow groundwater will exist, at least seasonally, Cornbrash immediately underlying the site. There will be a permanent, deeper, groundwater body within the White Limestone. During excavations necessary to create swimming pools and basements groundwater will be encountered in the Cornbrash. The deeper groundwater in the White Limestone presents potential opportunities for water supply and for geothermal schemes for heating and cooling.

The Envirocheck report records that there is limited potential for groundwater flooding to occur on the site. However, the potential for groundwater flooding of property situated below ground level occurs approximately 10 m and 34 m north of the site.

4.3 Hydrology

A number of surface water features (ponds) are present on-site (generally located in the northern half of the site (specifically at the north-western corner and the north-eastern corner) with drains running from west to east (also in the northern half of the site). A total of 13 No. OS water network lines described as inland river both on the ground surface and underground are recorded within the site. These will have to be assessed as part of the site drainage design.

5.0 Other Environment Considerations

Other environmental issues assessed as a part of this preliminary risk assessment are included in the Envirocheck report (see Appendix A) and detailed in Section 5.1 – 5.15 below.

5.1 Mining

A review of the Envirocheck Report (see Appendix A) and the Coal Authority's online interactive mapping (ref 5), indicates that the site is not situated in an area that is affected by mining (e.g. coal or non-coal mining). Based on the forgoing, the likelihood of encountering relic mining features on site is considered unlikely and therefore has not been considered further.

5.2 Other Ground Stability Issues

The Envirocheck report (see Appendix A) confirms that on the site, there is a very low risk of collapsible ground, landslides, and ground dissolution stability hazards, while the risks from compressible ground, running sands and shrinking and swelling clay are classed as 'no hazard'.

5.3 Radon

Radon information within the Envirocheck report (see Appendix A) and the Public Health England radon mapping (ref 6) confirms that the eastern section of the site is in an intermediate probability radon area, where 1% - 3% of homes are estimated to be at or above the action level. The south-western and south-eastern sections of the site are recorded as lower probability radon areas where less than 1% of homes are estimated to be at or above the action level.

The Envirocheck report indicates that no radon protective measures are necessary in the construction of new dwellings or extensions on the site. On this basis, radon protection risk assessments have not been considered further.

However, it should be noted that in accordance with building regulations, until a building has been constructed and occupied, it is not possible to accurately assess the severity of a radon problem on a site. Thus, if the development was to include below ground workplaces, then, further assessments, consultation from a radon risk assessor and/or basic protection measures in accordance with BRE Report BR211 (ref 7) may be required.

5.4 Discharge Consent

There are no registered discharge consents recorded within 250 m of the site.

5.5 Water Abstractions

There are no registered water abstractions registered within 500 m of the site.

5.6 Local Authority Landfill Coverage

The site is recorded as being under local authority landfill coverage; registered to Cherwell District Council and Oxfordshire County Council.

5.7 Potentially Infilled Land (Non-Water)

The north-eastern section of the site is registered as potentially infilled land (non-water) described as unknown filled ground (pit, quarry, etc).

5.8 Potentially Infilled Land (Water)

There are no potentially infilled land (water) within 800 m of the site boundary.

5.9 BGS Recorded Mineral Sites

The north-eastern section of the site is recorded as opencast mineral site for Limestone; with the status described as ceased.

5.10 Contemporary Trade Directory Entries

There are no contemporary trade directory entries within 400 m of the site.

5.11 Nitrate Vulnerable Zones

The site is recorded as a nitrate vulnerable zones described as Cherwell (Ray to Thames) and Woodeaton Brook nitrate vulnerable zone.

5.12 Points of Interest – Manufacturing and Production

There is no point of interest – manufacturing and production registered within 250 m of the site.

5.13 Points of Interest – Public Infrastructure

There is no point of interest – public infrastructure recorded within 400 m of the site.

5.14 Points of Interest – Recreational and Environmental

There is no point of interest – recreational and environmental registered within 950 m of the site; described as Playground or Play Area.

5.15 BGS Estimated Soil Chemistry

The BGS estimated soil chemistry concentration values (mg/kg) for the site are recorded in the Envirocheck report (Appendix A) and detailed in Table 5-1 below.

Table 5-1: BGS Estimated Soil Chemistry Measured Concentration Values (mg/kg) for the Site

Compound	Urban measured concentration value (mg/kg)
Arsenic	<15 – 25
Cadmium	<1.8 – 2.2
Chromium	60 – 90
Lead	<100
Nickel	15 – 45 ¹

1. The western half concentration for Nickel is 15 – 30 mg/kg; however, the rest of the site records a concentration of 30 – 45 mg/kg.

6.0 Unexploded Ordnance (UXO) Risk Assessment

Military activities including those conducted as part of both the First and Second World Wars have resulted in a legacy of unexploded ordnance (UXO) being present within the shallow soils of the UK.

The UXO result from various sources including both, allied (military training) and German (bombing raids) records a guide figure of approximately 10% of all munitions failing to function as designed.

The likelihood of UXO being encountered on a development site is influenced by several factors including; the proximity to strategic targets, the nature of the development works being undertaken and evidence of local damage in the post-war periods amongst others. To determine the likelihood of UXO being present on a site, a step-wise risk assessment process is followed. This process is outlined within CIRIA C681 - Unexploded Ordnance: A Guide for the Construction Industry (ref 8), which details the preliminary risk assessment intended to guide if and where there is a requirement for a UXO detailed risk assessment. A pre-desk study UXO assessment was conducted for the site and the results obtained are discussed in Section 6.1 below and included as Appendix C. A preliminary UXO risk assessment for the site were conducted by 1st Line Defence and the details are discussed in Section 6.2 below and included as Appendix D.

6.1 Pre-Desk Study UXO Assessment

A pre-desk study UXO assessment (PDSA) was conducted for the site and full details obtained are included with Appendix C. The PDSA details the following:

- No Pre-WWI Military Activity on or Affecting the Site were identified;
- The following WWI Strategic Targets within 5km of the site were identified;
 - Royal Flying Corps (RFC) Weston-on-the-Green;
 - RFC Bicester;
 - Military training areas;
 - Transport infrastructure and public utilities.
- No WWI Bombing or Interwar Military Activity on or Affecting the Site on the site was identified;
- No WWII Military Activity on or Affecting the Site were identified;
- The following strategic targets were located in the vicinity of the Site:
 - 3 No. Royal Air Force (RAF) airfields;
 - Military camps and training areas;
 - Transport infrastructure and public utilities;
 - Anti-invasion defences;
- No WWII Bombing Decoys (within 5km of Site) was identified;
- During WWII the Site was located in the Rural District (RD) of Ploughley, which officially recorded 278No. High Explosive (HE) bombs with a regional bombing density of 3.5 bombs per 405 hectares (ha). No readily available records have been found to indicate that the Site was bombed;
- No Post-WWII Military Activity on or Affecting the Site were identified;

- A detailed desk study, whilst always prudent, is not considered essential in this instance.

6.2 Preliminary UXO Assessment

A preliminary UXO assessment for the site was established utilising information from the following sources and included as Appendix D:

- 1st Line Defence Preliminary UXO Risk Assessment.

The preliminary UXO assessment indicates the site is located approximately 1km north-east of RAF Weston-on-the-Green. First acquired for military use in 1916, the No 28 Training Depot Station was subsequently established at the airfield, before its closure in 1921.

After a brief period of being returned to agricultural use, the airfield was again requisitioned at the outbreak of WWII. Despite only acting as a satellite airfield during this time (for RAF Brize Norton and RAF Bicester), Weston-on-the-Green was subject to bombing on several occasions during the Battle of Britain. Following the end of WWII, the site was transferred to the control of Upper Hayford, and subsequently was used as a dropping zone for training parachutists. The airfield remains active today and is currently in use as a military and civilian gliding centre. The site is also located approximately 2.8 km from the Bicester Garrison and the Central Ordnance Depot at Bicester. However, given the distance of this military feature from the site, this feature is not anticipated to elevate the risk of Allied UXO on site.

During WWII the site was situated within the Rural District (RD) of Ploughly. According to Home Office (HO) statistics, Ploughly sustained an overall very low density of bombing, with an average of 3.5 items of ordnance falling per 1,000 acres. This consisted of 275 HE bombs and three oil bombs falling across 79,910 acres of land. Despite the relatively very-low density of bombing with the RD of Ploughly, the site's localised density of bombing is anticipated to have been greater, given the proximity of RAF Weston-on-the-Green, which was a known Luftwaffe target. Several bombing incidents on surrounding the airfield are of note. On the 9th of August 1940 the Luftwaffe dropped 16 HE bombs across the area. While some of these hit the Weston-on-the-Green airfield, the remainder were dropped in the surrounding areas. Later in August, incendiary bombs were also dropped on the airfield, followed by more bombing in September. In 1941 the airfield was again bombed, this time six HE were dropped and an Allied plane was shot down, amongst other incidents. These incidents have led one anecdotal source to claim that Weston-on-the-Green was "the most heavily bombed location in Oxfordshire".

Prior to or in lieu of a Detailed Assessment, it is recommended that appropriate UXO Risk Mitigation Measures are provided for intrusive works proposed.

6.3 Detailed UXO Assessment

A detailed UXO assessment for the site was conducted by 1st Line Defence and is included as Appendix E. The detailed UXO risk assessment records:

1st Line Defence has assessed that there is a **Low Risk** from both items of German aerial delivered UXO and Allied UXO across the site. This assessment is based on the following factors:

- The site is situated to the west of the village of Chesterton. During WWII this area was located in the Rural District of Ploughley. According to Home Office (HO) statistics this area sustained a very-low density of bombing with 3.5 bombs dropped per 1,000 acres;
- Despite this density, available records indicate that Chesterton, was subject to three air-raids during the initial stages of the war, largely due to its proximity to RAF Weston-on-the-Green. ARP Logbooks for Oxfordshire record these incidents on the 9th August 1940; 25th/26th August 1940; and 26th/27th August 1940. After this point, there was bombing recorded in the wider area, on RAF Weston-on-the-Green, RAF Bicester, and the village of Little Chesterton, but no further incidents were recorded to have affected Chesterton;
- A precise location of the incidents affecting Chesterton is not given, but it is stated that the bombs dropped on the 26th/27th fell in 'fields'. The time and number of bombs was also recorded. The raids on the 9th August 1940; 25th/26th August 1940; and 26th/27th August 1940 resulted in 11 HE bombs, 8 HE plus 100 incendiary bombs and 3 HE bombs being dropped respectively. Therefore, it is likely that air-raid incidents within this area were well investigated due to their light and sporadic nature;
- A 1948 photograph of the site area, presented in Annex J, indicates that the majority of the site was comprised of well-maintained agricultural fields. Therefore, they were likely accessed on an intermittent basis during Harvest seasons. The northern section of the site, which was occupied by a quarry, would have experienced more consistent access. The lack of dense vegetation, within the agricultural fields, would have made UXO more apparent within the site;
- Based on these conditions and the lack of evidence within any of the available bomb records to suggest that any bomb strikes fell specifically on or next to the site, the risk from UXO is considered to be low and has not been elevated above the 'background' level of risk for the region.

The following risk mitigation measures are recommended to support the proposed works at the Great Wolf Lodge Site:

All Works

- UXO Risk Management Plan;
- Site Specific UXO Awareness Briefings to all personnel conducting intrusive works.

7.0 Conceptual Site Model & Qualitative Risk Assessment

The conceptual site model (CSM) and Qualitative Risk Assessment (QRA) are presented in the table overleaf.

The CSM details the source-pathway-receptor linkages or potential pollutant linkages (PPL) that have been identified for the site. The QRA details the associated level of risk relating to these potential pollutant linkages.

The CSM and QRA concern the risk to human health and the water environment with additional, more specific risk assessment protocols contained within the main body of this reporting, detailed in *Section 7.1* below.

The QRA follows the framework outlined within CIRIA C552 (ref 9), which is summarised within Appendix F.

The 'risk rating' within the QRA refers to the risk that the source, pathway, receptor linkage or PPL is complete. Unless specifically stated it does not necessarily refer to an immediate risk and is intended to be used as a tool to assess the necessity for further investigation.

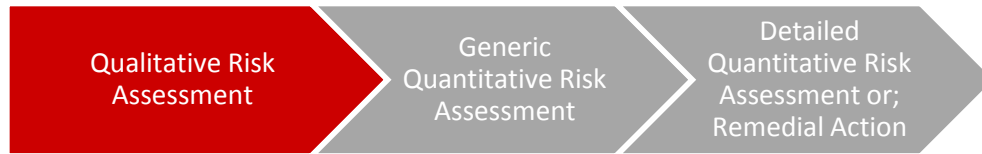
7.1 Additional Risk Assessments

The following risk assessments, listed below, are not included within the main CSM and QRA but nonetheless can be of critical importance to the onward development of the site.

- The risk presented by Mining is discussed and assessed in *Section 5.1*;
- The risk presented by Radon is discussed and assessed in *Section 5.3*;
- The risk presented by Unexploded Ordnance is discussed and assessed in *Section 6.0*.

Under current health and safety legislation, employers are required to carry out their own appropriate risk assessments and mitigation to protect themselves and their employees, other human receptors and the environment from potential contamination. Such risks must be adequately mitigated by law, specifically the Construction Design Management (CDM) Regulations (2015) (ref 10), which requires that potential risks to human health and the environment from construction activities are appropriately identified and all necessary steps taken to eliminate and/or manage that risk. When construction workers/human receptor in the conceptual site model are considered, it is assumed that future construction works on site will be undertaken in compliance with these requirements.

Phase 1 Preliminary Site Assessment



- Table 7.1 below represents the first stage in the land quality risk assessment process: **The Qualitative Risk Assessment.**
- In order for a development site to be deemed 'suitable for use', the level of risk needs to be brought down to acceptable levels, i.e. low to negligible risk. The purpose of each stage of risk assessment is ultimately to establish, if there is a requirement for additional levels of assessment to be made in order to have sufficient confidence to support a risk characterisation or management decision, e.g. remedial action.

Table 7.1: Conceptual Site Model (CSM) and Qualitative Risk Assessment (QRA)

Conceptual Site Model			Qualitative Risk Assessment			Recommended Actions
Potential on-site sources	Pathway(s)	Receptor(s)	Consequence (with explanations, if applicable)	Likelihood of Occurrence (with explanations if applicable)	Risk Rating	
On-site sources: contaminants [e.g. asbestos, polycyclic aromatic hydrocarbons (PAH), total petroleum hydrocarbon (TPH) and heavy metals (e.g. lead and arsenic)] in the MADE GROUND e.g. mounds (non-specific locations)	Direct contact and dermal uptake, soil and dust ingestion, dust & vapour inhalation/ingestion, migration & inhalation (indoor & outdoor air) in areas of soft landscaping of the proposed development.	Site end users / residential (without the consumption of home grown produce)	Medium	Likely Based on available development proposal, the majority of the site will be hard standing; however, some soft landscaping is likely to remain surrounding the proposed buildings.	Moderate	Ground investigation including sampling and analysis of Made Ground soil samples. GQRA based on ground investigation findings.
	Ingestion of drinking water impacted via the migration of contaminants into waters supply pipes			Low likely No significant evidence of PAHs or TPH contaminants on site have been established		
	Soil and dust ingestion, dust inhalation from migrating dust (indoor & outdoor air)	Neighbouring residents		Low likelihood Standard health and safety precautions adopted by construction workers (e.g. measures to suppress dust) are likely to reduce the generation of soil dust.	Moderate/Low	
	Direct contact and dermal uptake, soil and dust ingestion, dust inhalation (outdoor air)	Construction and maintenance workers		Low likelihood Standard health and safety precautions likely adopted to mitigate/reduce risk.		
	Downward migration into underlying secondary A aquifer Migration into watercourses (OS water network on the site) and several ponds located on the site	Water Environment Several water network run underneath the site and several ponds are located on the site. Furthermore, the site is underlain by a Secondary A Aquifer.		Likely The site is underlain by a Secondary A Aquifer as well as several water network.	Moderate	
On-site sources: Infilled Quarry (north-east section of site)	Direct/dermal (soil & dust) contact & inhalation (indoor & outdoor air)	Site end users / residential (without the consumption of home grown produce)	Medium	Likely Based on available development proposal, the majority of the site will be hard standing; however, some soft landscaping is likely to remain surrounding the proposed buildings.	Moderate	Ground investigation including sampling and chemical analysis of soil samples. GQRA based on ground investigation findings
	Ingestion of drinking water impacted via the migration of contaminants into waters supply pipes			Unlikely No significant evidence of PAHs or TPH contaminants on site have been established		
	Inhalation (indoor & outdoor air)	Neighbouring residents		Low likelihood Due to outdoor dilution and dispersion effects	Low	No further action required.
	Direct/dermal (soil & dust) contact & inhalation (outdoor air)	Construction and maintenance workers		Low likelihood Standard health and safety precautions likely adopted to mitigate/reduce risk.		Adoption of standard health and safety precautions
	Downward migration into underlying secondary aquifer Migration into watercourses (OS water network on the site) and several ponds located on the site	Water Environment Several water network run underneath the site and several ponds are located on the site. Furthermore, the site is underlain by a Secondary A Aquifer		Likely The site is underlain by a Secondary A Aquifer as well as several water network.	Moderate	Groundwater should be taken from perched water, if encountered, in the Made Ground. If possible, samples should also be taken from the water courses at locations, where these watercourses enter and leave the site.

Phase 1 Preliminary Site Assessment

Conceptual Site Model			Qualitative Risk Assessment			Recommended Actions
Potential on-site sources	Pathway(s)	Receptor(s)	Consequence (with explanations, if applicable)	Likelihood of Occurrence (with explanations if applicable)	Risk Rating	
Ground gas and vapour from organic and hydrocarbon contaminants generated from contaminants in the Made Ground and organic / putrescible materials in the Made Ground e.g. mound (non-specific & specific locations)	Migration through ground floor slabs of the proposed buildings and build-up	Site users	Medium [to be increased to 'severe', if ground gas concentrations are high (e.g. methane at explosive limit)]	Likely (observations during site walk over record several mounds (with un-natural material like bricks observed in one of the mounds). The site historical mapping indicates the presence of a quarry (now infilled) at the north-eastern corner of the site.	Moderate	Ground investigation including ground gas monitoring. GQRA based on ground investigation findings.
	Build-up in confined spaces	Construction and maintenance workers	Medium	Low (as above; in addition, Standard Health & Safety precautions likely to be used by workers)	Moderate/low	
	Inhalation (indoor & outdoor air)	Adjacent residents		Unlikely (due to outdoor dilution and dispersion effects)	Low	No further action required
Off-site sources: Contaminants [e.g. asbestos, polycyclic aromatic hydrocarbons (PAH), total petroleum hydrocarbon (TPH) and heavy metals (e.g. lead and arsenic)] in the MADE GROUND e.g. from the Quarry which encroaches within 20 m north of the A4095	Migration of soil / dusts followed by direct/dermal (soil & dust) contact & inhalation (indoor & outdoor air)	Site users	Medium	Low (the potential for soil / dusts migration is assessed as low)	Moderate/low	Ground investigation including ground gas monitoring. GQRA based on ground investigation findings.
	Migration of dusts followed by direct/dermal (soil & dust) contact & inhalation (outdoor air)	Construction and maintenance workers		Unlikely (as above; however, Standard Health & Safety precautions likely to be used by workers, reducing the risk further)	Low	Adoption of standard health and safety precautions. No further action required
	Soil and dust ingestion, dust inhalation from migrating dust (indoor & outdoor air)	Neighbouring residents		Low Likelihood Due to outdoor dilution and dispersion effects		No further action required

8.0 Conclusion and Recommendations

The qualitative risk assessment (QRA) determined a varied level of risks associated with the proposed development.

The potential risks to receptors such as future site users of the development are generally assessed as **moderate**, reflecting the fact that most of the site will be covered by hardstanding. However, it also reflects the likely presence of contaminants such as polycyclic aromatic hydrocarbons (PAHs), mono-aromatic hydrocarbons, total petroleum hydrocarbon (TPH), heavy metals (e.g. lead and arsenic)] and asbestos in the Made Ground. Also assessed as **moderate** is the risk of site users to be exposed to ground-gas and vapours, reflecting the likelihood of the aforementioned organic contaminants and organic / putrescible materials being present in the Made Ground, in particular.

Risks to neighbouring residents, construction and maintenance workers are generally assessed as **moderate/low**. This is reflecting the likely adoption of measures to suppress dust during the construction works and standard health and safety precaution that are likely being implemented by construction and maintenance workers.

Risk to controlled water are also assessed as **moderate** reflecting the presence secondary A aquifers underlying the site, the presence of several ponds and several OS Water Network on the site.

On the basis of the findings of this Phase 1 Preliminary Risk Assessment, a site investigation is recommended to refine the characterise further and to assess the risks from the identified contaminant sources as described within Table 7-1.

This investigation will be targeted to focus on specific salient features such as the infilled quarry at the north-eastern corner of the site and the quarry which encroaches within 20 m north of the A4095 and the several man-made mounds observed on the site.

The location of the exploratory holes, targeting salient features, should be decided to be carried out prior to the site investigation commencing.

Further exploratory holes will have to be located on a non-targeted basis and to be sufficient to characterise contaminants in the Made Ground. The coverage, also has to be sufficient to characterise the potential and extent of the Made Ground and underlying formations, containing organic / putrescible materials to generate ground-gas.

In the vicinity of the infilled quarry and man-made mounds but also for the non-targeted site investigation location, the investigation is to focus on the following elements as a minimum:

- Sampling and testing for suite of contaminants, including asbestos, cyanide, heavy metals, polycyclic-aromatic- and total petroleum hydrocarbon, locally also chlorinated hydrocarbons and polychlorinated biphenyls and in soil;
- Monitoring for vapours from contaminants (e.g. petroleum hydrocarbons) prone to vaporisation in standpipes, using in-situ (e.g. PID) monitoring and depending on the PID result also sampling and laboratory chemical analysis of vapours;

- Ground gas, in particular methane and carbon dioxide monitoring in standpipes.

Where encountered, for example in lenses of perched water within the Made Ground, samples from groundwater should also be taken and analysed for a wide suite of contaminants. For the purpose of chemical analysis, if possible, samples should also be taken from locations, where the water courses are entering and leaving the site.

In addition, in accordance to the information provided in Section 5.3, the eastern section of the site is in an intermediate probability radon area, where 1% - 3% of homes are estimated to be at or above the action level. The south-western and south-eastern section of the site is recorded as a lower probability radon area where less than 1% of homes are estimated to be at or above the action level.

However, it should be noted that in accordance with building regulations, until a building has been constructed and occupied, it is not possible to accurately assess the severity of a radon problem on a site. Thus, if the development was to include below ground workplaces, then, further assessments, consultation from a radon risk assessor and/or basic protection measures in accordance with BRE Report BR211 (ref 7) may be required.

In accordance with the information provided in Section 6.3 above, the detailed UXO risk assessment states that there is a **low risk** from both items of German aerial delivered UXO and Allied UXO across the site.

Thus, the following risk mitigation measures are recommended to support the proposed works at the Great Wolf Lodge site:

- All Works:
 - UXO Risk Management Plan;
 - Site Specific UXO Awareness Briefing to all personnel conducting intrusive works.

9.0 References

- ref 1. British Geological Survey. Geology of Britain Viewer. British Geological Survey. [Online]
<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>
- ref 2. British Geological Survey. 2017. Geindex Onshore [Online]
<http://mapapps2.bgs.ac.uk/geindex/home.html>.
- ref 3. British Geological Survey
http://scans.bgs.ac.uk/sobi_scans/boreholes/1063613/images/12528627.html
- ref 4. BGS GeoRecords Plus+ <http://mapapps.bgs.ac.uk/GeoRecords/GeoRecords.html>
- ref 5. The Coal Authority. Interactive Coal Mining Risk Map. [Online]
<http://mapapps2.bgs.ac.uk/coalauthority/home.html>.
- ref 6. Public Health England and BGS. UK Radon Map. [Online]
<http://www.ukradon.org/information/ukmaps>.
- ref 7. BRE. Radon: guidance on protective measures for new buildings, originally introduced in 1991 and amended in 1992, 1999 and 2007 covering England and Wales. 2015.
- ref 8. CIRIA. C681 Unexploded Ordnance (UXO); A guide for the construction industry. London: s.n., 2009
- ref 9. CIRIA. C552 Contaminated Land Risk Assessment. A Guide to Good Practice. 2001.
- ref 10. Health and Safety Executive. Construction (Design and Management) Regulations. 2015.



Appendix A – Envirocheck Report

Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice

Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment

A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant

A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:



Envirocheck reports are compiled from 136 different sources of data.

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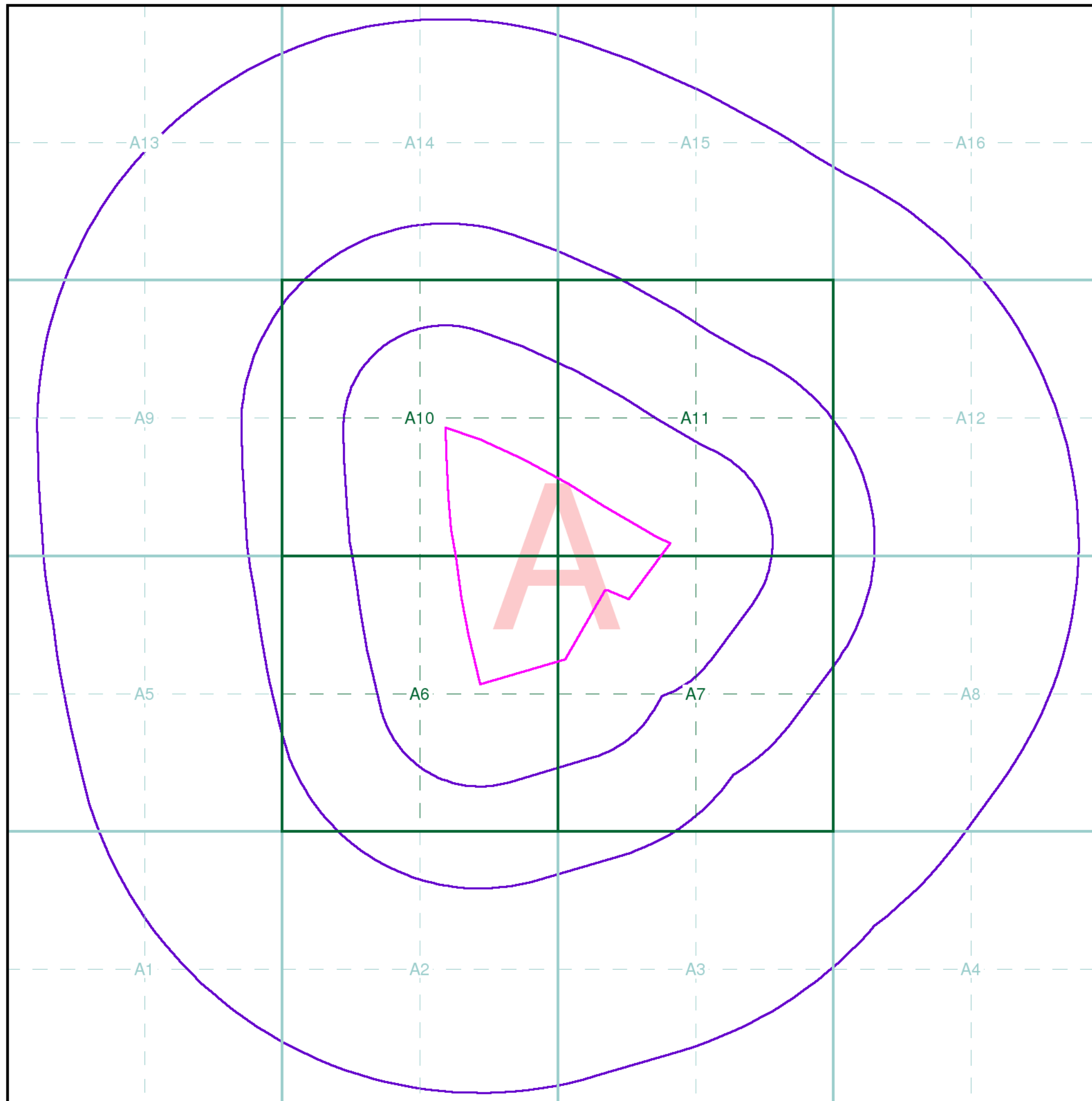
Order Details

Order Number: 195713619_1_1
Customer Ref: B071596.001
National Grid Reference: 454930, 221670
Site Area (Ha): 19.39
Search Buffer (m): 1000

Site Details

Great Wolf Lodge, Chesterton, Bicester, Bicester, Oxfordshire,
OX26 1TE

Full Terms and Conditions can be found on the following link:
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Envirocheck[®] Report:

Datasheet

Order Details:

Order Number:

195713619_1_1

Customer Reference:

B071596.001

National Grid Reference:

454930, 221680

Slice:

A

Site Area (Ha):

19.39

Search Buffer (m):

1000

Site Details:

Great Wolf Lodge

Chesterton

Bicester

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Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	13
Hazardous Substances	-
Geological	14
Industrial Land Use	18
Sensitive Land Use	20
Data Currency	21
Data Suppliers	26
Useful Contacts	27

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client. In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Report Version v53.0

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 2			1	2
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 2	Yes			
Pollution Incidents to Controlled Waters					
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 2				2 (*3)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 3	Yes	n/a	n/a	n/a
Drift Deposits			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 4	Yes	n/a	n/a	n/a
Superficial Aquifer Designations			n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 4	13	1	19	40

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 13	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 13	1			2
Potentially Infilled Land (Water)	pg 13				2
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 14	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 14	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 15	1	1		1
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 15	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 15		Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 16	Yes		n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 16	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 16		Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards				n/a	n/a
Radon Potential - Radon Affected Areas	pg 17	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 18			2	4
Fuel Station Entries					
Points of Interest - Commercial Services					
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 18			1	3
Points of Interest - Public Infrastructure	pg 18			1	
Points of Interest - Recreational and Environmental	pg 18				2
Gas Pipelines					
Underground Electrical Cables					

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 20	1			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10SE (E)	0	1	454928 221682
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SW (E)	0	1	455000 221682
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A6NE (SE)	0	1	454950 221650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NW (SE)	0	1	455000 221650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A10SE (N)	10	1	454950 221900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SW (N)	34	1	455000 221900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A6SE (S)	111	1	454850 221250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NW (SE)	146	1	455250 221450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A6SE (S)	266	1	454900 221100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A6SE (S)	279	1	454928 221100
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (SE)	289	1	455400 221400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (SE)	300	1	455450 221450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A6SE (S)	327	1	454928 221050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A7NE (E)	350	1	455600 221600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11SE (NE)	408	1	455550 222000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A2NE (S)	423	1	454928 220950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SW (E)	433	1	455700 221700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SW (E)	456	1	455700 221850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12SW (E)	474	1	455700 221900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10NW (NW)	480	1	454400 222350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11SE (NE)	482	1	455650 222000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (NE)	485	1	455550 222100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	<p>Discharge Consents</p> <p>Operator: W I G Engineering Ltd Property Type: REAL ESTATE ACTIVITIES/BUYING/SELLING/RENTING Location: Barnfield Farm Akeman Street, Chesterton, Nr Bicester, Oxon Authority: Environment Agency, Thames Region Catchment Area: Not Supplied Reference: Cawm.0442 Permit Version: 1 Effective Date: 6th March 2002 Issued Date: 4th September 2002 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary Of Gagle Brook Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 10m</p>	A7SE (SE)	446	2	455370 221160
2	<p>Discharge Consents</p> <p>Operator: Thames Water Utilities Ltd Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Bignell View Authority: Environment Agency, Thames Region Catchment Area: Not Supplied Reference: Temp.0447 Permit Version: 1 Effective Date: 2nd November 1989 Issued Date: 2nd November 1989 Revocation Date: 26th November 2002 Discharge Type: Sewage Discharges - Pumping Station - Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Gagle Brook Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m</p>	A12SW (E)	567	2	455800 221900
3	<p>Discharge Consents</p> <p>Operator: Mr. E.J. Lane Fox Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: Bignell Park Farm, Chesterton, Bicester, Oxfordshire Authority: Environment Agency, Thames Region Catchment Area: Not Given Reference: CNTW.1110 Permit Version: 1 Effective Date: 10th June 1991 Issued Date: 10th June 1991 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Gagle Brook Status: Transferred from Water Act 1989 Positional Accuracy: Located by supplier to within 100m</p>	A15SE (NE)	724	2	455340 222500
	<p>Nearest Surface Water Feature</p>	A7NW (SE)	0	-	455067 221618
4	<p>Water Abstractions</p> <p>Operator: Mr T R Abernethy Licence Number: 28/39/14/0336 Permit Version: 100 Location: Chesterton Fiels Farm, (A) Authority: Environment Agency, Thames Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 4 Yearly Rate (m3): 1464 Details: Agricultural; Inferior Oolite Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 14th March 1997 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m</p>	A13SE (NW)	585	2	454300 222400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	<p>Water Abstractions</p> <p>Operator: H J Bonner Licence Number: 28/39/14/0119 Permit Version: Not Supplied Location: Chesterton Fields Fm, BICESTER, Oxfordshire Authority: Environment Agency, Thames Region Abstraction: Agriculture (General) Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): 4 Yearly Rate (m3): 1413 Details: Great & Inferior Oolite Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	A13SE (NW)	585	2	454300 222400
	<p>Water Abstractions</p> <p>Operator: A D Woodley Ltd Licence Number: 28/39/14/0123 Permit Version: 100 Location: Whitelands, Bicester (A) Authority: Environment Agency, Thames Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 20 Yearly Rate (m3): 1818 Details: Great & Inferior Oolite Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 9th January 1967 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	(E)	1486	2	456700 222100
	<p>Water Abstractions</p> <p>Operator: I Pain Licence Number: 28/39/14/0326 Permit Version: 100 Location: Bowlers Copse, Wendlebury (A) Authority: Environment Agency, Thames Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 1 Yearly Rate (m3): 366 Details: Corallian Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 29th December 1993 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	(SE)	1771	2	456400 220300
	<p>Water Abstractions</p> <p>Operator: Mr M R Miller Licence Number: 28/39/14/0064 Permit Version: 100 Location: Home Farm, Wendlebury (A) Authority: Environment Agency, Thames Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 6 Yearly Rate (m3): 2077 Details: Home Farm, Wendlebury Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 1985 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m</p>	(SE)	1940	2	455900 219700
	<p>Groundwater Vulnerability</p> <p>Soil Classification: Soils of High Leaching Potential (H3)- Coarse textured or moderately shallow soils which readily transmit non-absorbed pollutants and liquid discharges but which have some ability to attenuate absorbed pollutants because of their large clay or organic matter contents Map Sheet: Sheet 30 Northern Cotswolds Scale: 1:100,000</p>	A10SE (E)	0	2	454928 221682
	<p>Drift Deposits</p> <p>None</p>				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A10SE (E)	0	3	454928 221682
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A11SW (E)	0	3	455000 221682
	Superficial Aquifer Designations No Data Available				
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
5	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 133.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11SW (NE)	0	4	455018 221788
6	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 42.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A7NW (SE)	0	4	455067 221618
7	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11SW (E)	0	4	455128 221717
8	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 39.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11SW (E)	0	4	455131 221715
9	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 72.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11SW (E)	0	4	455136 221765
10	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11SW (E)	0	4	455166 221697

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 10.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11SW (E)	0	4	455166 221697
12	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11SW (E)	0	4	455170 221706
13	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11SW (E)	0	4	455171 221694
14	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 26.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11SW (E)	0	4	455173 221695
15	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 27.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11SW (E)	0	4	455197 221684
16	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 21.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A7NW (E)	0	4	455217 221674
17	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 157.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A10SE (NE)	0	4	454951 221708
18	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 133.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11SE (E)	120	4	455353 221789
19	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 10.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11SE (NE)	251	4	455419 221906

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 61.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11SE (NE)	262	4	455424 221916
21	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 77.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11NW (NE)	281	4	455189 222075
22	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 66.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11NW (NE)	293	4	455261 222045
23	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 141.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11NW (NE)	304	4	455323 222021
24	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 29.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11SE (NE)	322	4	455454 221969
25	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 20.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A7NE (SE)	337	4	455431 221363
26	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 175.1 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11SE (NE)	352	4	455469 221995
27	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 67.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A7NE (SE)	355	4	455451 221358
28	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 204.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A6SW (SW)	386	4	454410 221318

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 205.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A6SW (SW)	389	4	454406 221316
30	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 124.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A6SW (SW)	402	4	454474 221128
31	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 123.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A6SW (SW)	405	4	454473 221124
32	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 51.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A7NE (SE)	418	4	455516 221340
33	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 549.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A6SW (SW)	421	4	454547 221026
34	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 25.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A7SE (SE)	465	4	455566 221329
35	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 265.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A7NE (SE)	474	4	455652 221381
36	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 12.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A8NW (E)	475	4	455720 221563
37	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 33.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A7SE (SE)	488	4	455591 221323

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
38	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1478.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Gagle Brook Catchment Name: Thames Primacy: 1	A12NW (NE)	509	4	455678 222025
39	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 44.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11NE (NE)	510	4	455630 222065
40	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 241.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A7SE (SE)	519	4	455623 221316
41	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 23.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Gagle Brook Catchment Name: Thames Primacy: 1	A11NE (NE)	552	4	455658 222097
42	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 17.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 2	A12NW (NE)	569	4	455673 222105
43	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 29.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Gagle Brook Catchment Name: Thames Primacy: 1	A11NE (NE)	572	4	455662 222120
44	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 7.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 2	A11NE (NE)	572	4	455662 222120
45	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 16.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11NE (NE)	589	4	455651 222154
46	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 33.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Gagle Brook Catchment Name: Thames Primacy: 1	A11NE (NE)	590	4	455657 222149

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
47	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 7.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11NE (NE)	605	4	455645 222178
48	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 529.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Gagle Brook Catchment Name: Thames Primacy: 1	A11NE (NE)	608	4	455634 222192
49	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 19.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Gagle Brook Catchment Name: Thames Primacy: 1	A11NE (NE)	609	4	455652 222179
50	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 145.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A7SE (SE)	612	4	455549 221092
51	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 9.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11NE (NE)	623	4	455651 222197
52	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 26.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11NE (NE)	630	4	455650 222206
53	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 161.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A11NE (NE)	630	4	455650 222206
54	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 179.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A15SW (N)	645	4	455105 222530
55	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 153.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A2NE (S)	656	4	454982 220731

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
56	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 246.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A3NE (SE)	691	4	455515 220951
57	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 4.3 Watercourse Level: Underground Permanent: True Watercourse Name: Gagle Brook Catchment Name: Thames Primacy: 1	A15SE (NE)	697	4	455356 222461
58	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 29.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Gagle Brook Catchment Name: Thames Primacy: 1	A15SE (NE)	699	4	455353 222465
59	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 109.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Gagle Brook Catchment Name: Thames Primacy: 1	A15SE (NE)	707	4	455337 222483
60	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 10.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Gagle Brook Catchment Name: Thames Primacy: 2	A15SE (NE)	722	4	455351 222492
61	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 40.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Gagle Brook Catchment Name: Thames Primacy: 1	A15SW (NE)	725	4	455283 222533
62	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 55.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Gagle Brook Catchment Name: Thames Primacy: 2	A15SE (NE)	728	4	455346 222502
63	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 73.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Gagle Brook Catchment Name: Thames Primacy: 2	A15SE (NE)	729	4	455348 222502
64	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 5.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A12SW (E)	747	4	455985 221913

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
65	OS Water Network Lines Watercourse Form: Lake Watercourse Length: 27.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Gagle Brook Catchment Name: Thames Primacy: 2	A15SW (NE)	749	4	455319 222540
66	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 372.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A12SW (E)	752	4	455990 221914
67	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1115.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Gagle Brook Catchment Name: Thames Primacy: 1	A15SW (NE)	759	4	455301 222562
68	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 32.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A3SW (S)	796	4	455081 220614
69	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 1127.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A3SW (S)	825	4	455103 220590
70	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 316.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A1NE (SW)	892	4	454122 220782
71	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 397.2 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A1SE (SW)	910	4	454287 220610
72	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 67.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A3NE (SE)	914	4	455590 220716
73	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 5.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A1NE (SW)	948	4	454048 220786

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
74	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 3.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A1NE (SW)	948	4	454048 220786
75	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 46.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A3NE (SE)	967	4	455626 220678
76	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 174.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A3SE (SE)	978	4	455614 220655
77	OS Water Network Lines Watercourse Form: Inland river Watercourse Length: 338.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Thames Primacy: 1	A12SE (E)	1000	4	456267 221709

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: Cherwell District Council - Has supplied landfill data		0	5	454928 221682
	Local Authority Landfill Coverage Name: Oxfordshire County Council - Has supplied landfill data		0	6	454928 221682
78	Potentially Infilled Land (Non-Water) Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A11SW (NE)	0	-	455040 221835
79	Potentially Infilled Land (Non-Water) Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1996	A8SW (SE)	591	-	455691 221286
80	Potentially Infilled Land (Non-Water) Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1993	A9SW (W)	888	-	453842 221715
81	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A8NE (E)	829	-	456047 221425
82	Potentially Infilled Land (Water) Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A8NE (E)	961	-	456183 221418

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Great Oolite Group	A10SE (E)	0	1	454928 221682
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A6NE (W)	0	1	454747 221649
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A10SE (NE)	0	1	454963 221719
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10SE (E)	0	1	454928 221682
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SW (N)	109	1	455000 221986
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11NE (NE)	472	1	455610 222031
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A4NW (SE)	929	1	455814 220904

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A3SE (SE)	998	1	455486 220546
83	BGS Recorded Mineral Sites Site Name: Chesterton Belt Location: Chesterton, Oxford, Oxfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 57367 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Jurassic Geology: Cornbrash Formation Commodity: Limestone Positional Accuracy: Located by supplier to within 10m	A11SW (NE)	0	1	455041 221824
84	BGS Recorded Mineral Sites Site Name: Chesterton Quarry Location: Chesterton, Bicester, Oxfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 10917 Type: Opencast Status: Ceased Operator: Arc - Southern Operator Location: Not Supplied Periodic Type: Jurassic Geology: Cornbrash Formation Commodity: Limestone Positional Accuracy: Approximate location provided by supplier	A11SW (N)	122	1	455000 222000
85	BGS Recorded Mineral Sites Site Name: Simm'S Farm Location: Chesterton, Oxford, Oxfordshire Source: British Geological Survey, National Geoscience Information Service Reference: 57391 Type: Opencast Status: Ceased Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Jurassic Geology: Cornbrash Formation Commodity: Limestone Positional Accuracy: Located by supplier to within 10m	A9SW (W)	935	1	453795 221707
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (E)	0	1	454928 221682
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (E)	0	1	455000 221682
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SW (E)	0	1	455000 221682
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (E)	0	1	454928 221682

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A11SW (N)	30	1	455000 221895
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A11SW (NE)	30	1	455028 221881
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (E)	0	1	454928 221682
	Potential for Ground Dissolution Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (E)	0	1	455000 221682
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (NE)	0	1	454963 221719
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SW (E)	0	1	455000 221696
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A6NE (W)	0	1	454798 221650
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SW (N)	38	1	455000 221904
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SW (NE)	38	1	455027 221891
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (E)	0	1	454928 221682
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (E)	0	1	455000 221682
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (E)	0	1	454928 221682
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SW (E)	0	1	455000 221682
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (N)	30	1	455000 221895
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (NE)	30	1	455028 221881
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (E)	0	1	454928 221682
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SW (E)	0	1	455000 221682
	Radon Potential - Radon Affected Areas Affected Area: The property is in an Intermediate probability radon area (1 to 3% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A10SE (E)	0	1	454928 221682
	Radon Potential - Radon Affected Areas Affected Area: The property is in an Intermediate probability radon area (1 to 3% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A11SW (E)	0	1	455000 221682
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	0	1	454925 221675

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<p>Radon Potential - Radon Affected Areas</p> <p>Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level).</p> <p>Source: British Geological Survey, National Geoscience Information Service</p>	A7NW (SE)	0	1	455000 221625
	<p>Radon Potential - Radon Protection Measures</p> <p>Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions</p> <p>Source: British Geological Survey, National Geoscience Information Service</p>	A10SE (E)	0	1	454928 221682
	<p>Radon Potential - Radon Protection Measures</p> <p>Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions</p> <p>Source: British Geological Survey, National Geoscience Information Service</p>	A11SW (E)	0	1	455000 221682
	<p>Radon Potential - Radon Protection Measures</p> <p>Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions</p> <p>Source: British Geological Survey, National Geoscience Information Service</p>	A10SE (SW)	0	1	454925 221675
	<p>Radon Potential - Radon Protection Measures</p> <p>Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions</p> <p>Source: British Geological Survey, National Geoscience Information Service</p>	A7NW (SE)	0	1	455000 221625

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
86	Contemporary Trade Directory Entries Name: Dutton Forshaw Motor Co Ltd Location: 5, Bignell Park Barns, Chesterton, Bicester, Oxfordshire, OX26 1TD Classification: Car Dealers Status: Inactive Positional Accuracy: Automatically positioned to the address	A11NW (N)	416	-	455142 222258
86	Contemporary Trade Directory Entries Name: Colsur Materials Ltd Location: 8, Bignell Barns, Chesterton, Bicester, Oxfordshire, OX26 1TD Classification: Non-Ferrous Metals Status: Inactive Positional Accuracy: Automatically positioned to the address	A11NW (N)	416	-	455142 222258
87	Contemporary Trade Directory Entries Name: Pfi Systems Ltd Location: Parkside, Chesterton, Bicester, Oxfordshire, OX26 1UF Classification: Medical Equipment Manufacturers Status: Inactive Positional Accuracy: Automatically positioned to the address	A12SW (E)	582	-	455830 221852
88	Contemporary Trade Directory Entries Name: M Marchetti Domestic Appliance Repairs Location: Yr Haford, Alchester Road, Chesterton, Bicester, Oxfordshire, OX26 1UN Classification: Domestic Appliances - Servicing, Repairs & Parts Status: Active Positional Accuracy: Automatically positioned to the address	A8NW (E)	697	-	455959 221621
89	Contemporary Trade Directory Entries Name: Building Blox Location: Bignell Stud Farmhouse, Chesterton, Bicester, Oxfordshire, OX26 1UE Classification: Printers Status: Inactive Positional Accuracy: Automatically positioned to the address	A16SW (NE)	882	-	455820 222394
90	Contemporary Trade Directory Entries Name: M T C Location: Unit 2, Simms Farm, Chesterton, Bicester, Oxfordshire, OX26 1TA Classification: Catering Equipment Status: Inactive Positional Accuracy: Automatically positioned to the address	A9SW (W)	999	-	453723 221833
91	Points of Interest - Manufacturing and Production Name: Sheep Wash Location: OX26 Category: Farming Class Code: Sheep Dips and Washes Positional Accuracy: Positioned to address or location	A11NW (NE)	375	7	455158 222202
92	Points of Interest - Manufacturing and Production Name: T Abernethy & Sons Location: Chesterton Fields Farm, Chesterton, Bicester, Oxfordshire, OX26 1TB Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	A13SE (NW)	583	7	454293 222389
93	Points of Interest - Manufacturing and Production Name: J D Farms Location: Simms Farm, Chesterton, Bicester, OX26 1TA Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	A9SW (W)	968	7	453756 221812
93	Points of Interest - Manufacturing and Production Name: J D Farms Location: Simms Farm Cottage, Chesterton, Bicester, OX26 1TA Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A9SW (W)	986	7	453738 221808
94	Points of Interest - Public Infrastructure Name: Thames Valley Police Location: 1 Bignell Park Barns, Chesterton, Bicester, OX26 1TD Category: Central and Local Government Class Code: Police Stations Positional Accuracy: Positioned to address or location	A11NW (N)	416	7	455142 222258
95	Points of Interest - Recreational and Environmental Name: Playground Location: Green Lane, OX26 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8SE (SE)	954	7	456034 221140

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
95	<p>Points of Interest - Recreational and Environmental</p> <p>Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location</p>	A8SE (SE)	967	7	456051 221141

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
96	<p>Nitrate Vulnerable Zones</p> <p>Name: Cherwell (Ray To Thames) And Woodeaton Brook Nvz</p> <p>Description: Surface Water</p> <p>Source: Environment Agency, Head Office</p>	A10SE (E)	0	3	454928 221682

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices Cherwell District Council - Environmental Health Department West Oxfordshire District Council - Environmental Health Department	October 2014 October 2014	Annual Rolling Update Annual Rolling Update
Discharge Consents Environment Agency - Anglian Region Environment Agency - Thames Region	January 2019 January 2019	Quarterly Quarterly
Enforcement and Prohibition Notices Environment Agency - Thames Region	March 2013	Annual Rolling Update
Integrated Pollution Controls Environment Agency - Thames Region	October 2008	Variable
Integrated Pollution Prevention And Control Environment Agency - South East Region - West Thames Area Environment Agency - Thames Region	January 2019 January 2019	Quarterly Quarterly
Local Authority Integrated Pollution Prevention And Control West Oxfordshire District Council - Environmental Health Department Cherwell District Council - Environmental Health Department	June 2014 October 2014	Variable Variable
Local Authority Pollution Prevention and Controls West Oxfordshire District Council - Environmental Health Department Cherwell District Council - Environmental Health Department	June 2014 October 2014	Annual Rolling Update Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements West Oxfordshire District Council - Environmental Health Department Cherwell District Council - Environmental Health Department	June 2014 October 2014	Variable Variable
Nearest Surface Water Feature Ordnance Survey	September 2017	
Pollution Incidents to Controlled Waters Environment Agency - Anglian Region Environment Agency - Thames Region	September 1999 September 1999	Not Applicable Not Applicable
Prosecutions Relating to Authorised Processes Environment Agency - Thames Region	March 2013	Annual Rolling Update
Prosecutions Relating to Controlled Waters Environment Agency - Thames Region	March 2013	Annual Rolling Update
Registered Radioactive Substances Environment Agency - Thames Region	June 2016	
River Quality Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register Environment Agency - South East Region - West Thames Area Environment Agency - Thames Region - West Area	January 2019 January 2019	Quarterly Quarterly
Water Abstractions Environment Agency - Anglian Region Environment Agency - Thames Region	January 2019 January 2019	Quarterly Quarterly
Water Industry Act Referrals Environment Agency - Thames Region	October 2017	Quarterly
Groundwater Vulnerability Environment Agency - Head Office	April 2015	Not Applicable
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable

Agency & Hydrological	Version	Update Cycle
Bedrock Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Superficial Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Source Protection Zones Environment Agency - Head Office	January 2019	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2018	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	August 2018	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	August 2018	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	August 2018	Quarterly
Flood Defences Environment Agency - Head Office	August 2018	Quarterly
OS Water Network Lines Ordnance Survey	October 2018	Quarterly
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water Suitability Environment Agency - Head Office	October 2013	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites Environment Agency - Head Office	July 2018	Quarterly
Integrated Pollution Control Registered Waste Sites Environment Agency - Thames Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries) Environment Agency - South East Region - West Thames Area Environment Agency - Thames Region - West Area	July 2018 July 2018	Quarterly Quarterly
Licensed Waste Management Facilities (Locations) Environment Agency - South East Region - West Thames Area Environment Agency - Thames Region - West Area	January 2019 January 2019	Quarterly Quarterly
Local Authority Landfill Coverage Cherwell District Council - Environmental Health Department Oxfordshire County Council West Oxfordshire District Council - Technical Services Department	May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable
Local Authority Recorded Landfill Sites Cherwell District Council - Environmental Health Department Oxfordshire County Council West Oxfordshire District Council - Technical Services Department	May 2000 May 2000 May 2000	Not Applicable Not Applicable Not Applicable
Potentially Infilled Land (Non-Water) Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water) Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites Environment Agency - Thames Region - West Area	March 2003	Not Applicable
Registered Waste Transfer Sites Environment Agency - Thames Region - West Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites Environment Agency - Thames Region - West Area	March 2003	Not Applicable
Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH) Health and Safety Executive	April 2018	Bi-Annually
Explosive Sites Health and Safety Executive	March 2017	Variable
Notification of Installations Handling Hazardous Substances (NIHHS) Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements Cherwell District Council Oxfordshire County Council West Oxfordshire District Council	February 2016 February 2016 February 2016	Variable Variable Variable
Planning Hazardous Substance Consents Cherwell District Council Oxfordshire County Council West Oxfordshire District Council	February 2016 February 2016 February 2016	Variable Variable Variable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	Annually
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	November 2018	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	Annually
Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	January 2019	Quarterly
Fuel Station Entries Catalist Ltd - Experian	November 2018	Quarterly
Gas Pipelines National Grid	July 2014	
Points of Interest - Commercial Services PointX	November 2018	Quarterly
Points of Interest - Education and Health PointX	November 2018	Quarterly
Points of Interest - Manufacturing and Production PointX	November 2018	Quarterly
Points of Interest - Public Infrastructure PointX	November 2018	Quarterly
Points of Interest - Recreational and Environmental PointX	November 2018	Quarterly
Underground Electrical Cables National Grid	December 2015	

Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural England	August 2018	Bi-Annually
Areas of Adopted Green Belt Cherwell District Council West Oxfordshire District Council	August 2018 August 2018	As notified As notified
Areas of Unadopted Green Belt Cherwell District Council West Oxfordshire District Council	August 2018 August 2018	As notified As notified
Areas of Outstanding Natural Beauty Natural England	August 2018	Bi-Annually
Environmentally Sensitive Areas Natural England	January 2017	
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	August 2018	Bi-Annually
Marine Nature Reserves Natural England	January 2018	Bi-Annually
National Nature Reserves Natural England	August 2018	Bi-Annually
National Parks Natural England	April 2017	Bi-Annually
Nitrate Vulnerable Zones Environment Agency - Head Office Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	December 2017 October 2015	Bi-Annually
Ramsar Sites Natural England	August 2018	Bi-Annually
Sites of Special Scientific Interest Natural England	October 2018	Bi-Annually
Special Areas of Conservation Natural England	August 2018	Bi-Annually
Special Protection Areas Natural England	August 2018	Bi-Annually

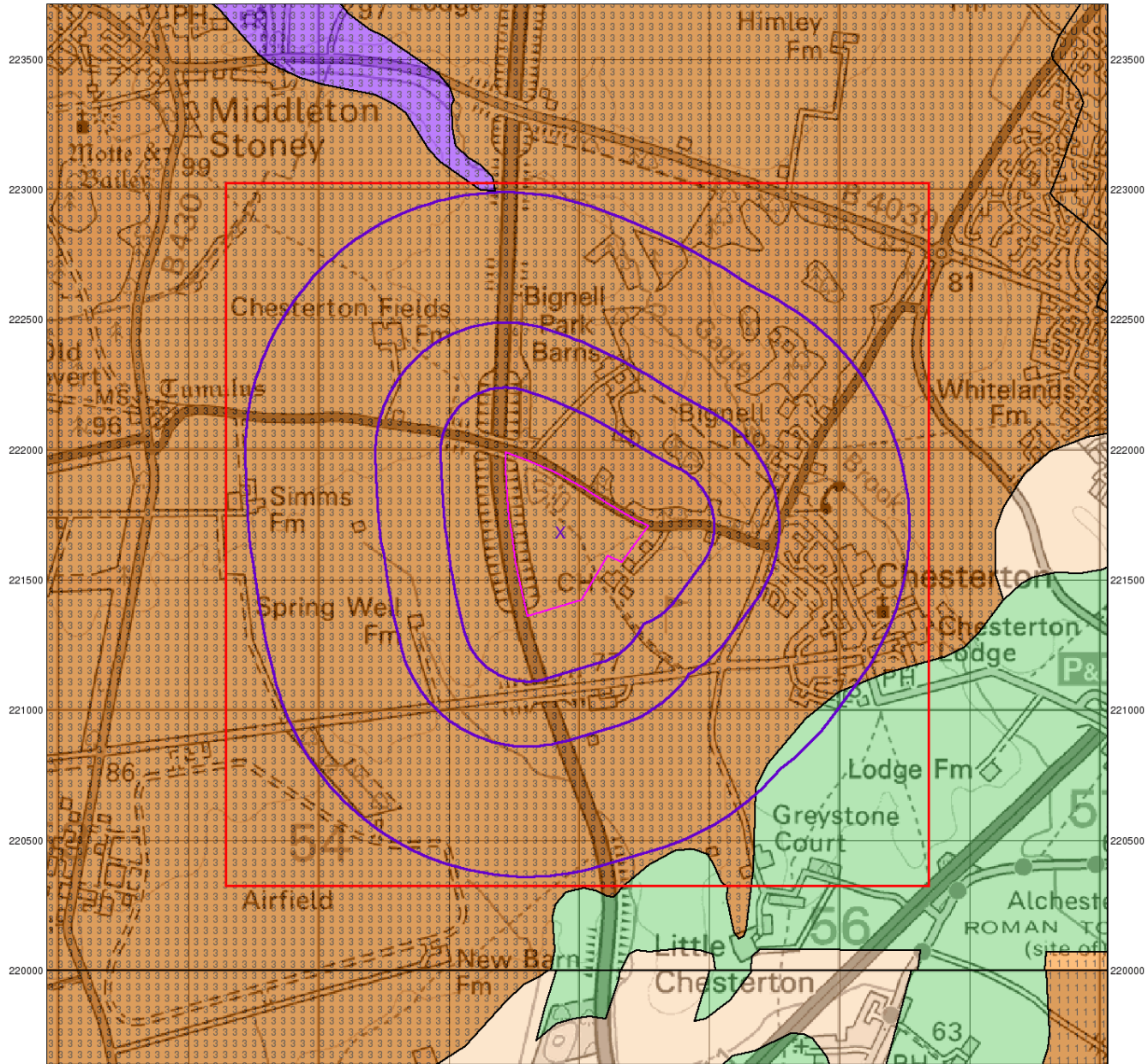
A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 British Geological Survey <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small>
Centre for Ecology and Hydrology	 Centre for Ecology & Hydrology <small>NATURAL ENVIRONMENT RESEARCH COUNCIL</small>
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
1	British Geological Survey - Enquiry Service British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	Environment Agency - National Customer Contact Centre (NCCC) PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	Environment Agency - Head Office Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
4	Ordnance Survey Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
5	Cherwell District Council - Environmental Health Department Bodicote House, Bodicote, Banbury, Oxfordshire, OX15 4AA	Telephone: 01295 252535 extn 4511 Fax: 01295 270028 Website: www.cherwell-dc.gov.uk
6	Oxfordshire County Council County Hall, New Road, Oxford, Oxfordshire, OX1 1ND	Telephone: 01865 792422 Fax: 01865 810106 Email: environmental.services@oxfordshire.gov.uk Website: www.oxfordshire.gov.uk
7	PointX 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
8	Natural England County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
-	Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	Landmark Information Group Limited Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.

453000 453500 454000 454500 455000 455500 456000 456500 457000



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Groundwater Vulnerability

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

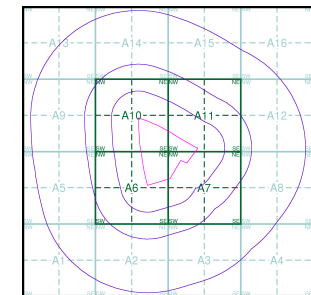
Agency and Hydrological

Geological Classes

- Major Aquifer (Highly Permeable)**
 - High (H) 1, 2, 3, U
 - Intermediate (I) 1, 2
 - Low
- Minor Aquifer (Variably Permeable)**
 - High (H) 1, 2, 3, U
 - Intermediate (I) 1, 2
 - Low
- Non Aquifer (Negligibly Permeable)**
 -
- Water or Sea**
 -
- Drift Deposit**
 -

Soil Classes

Site Sensitivity Context Map - Slice A



Order Details

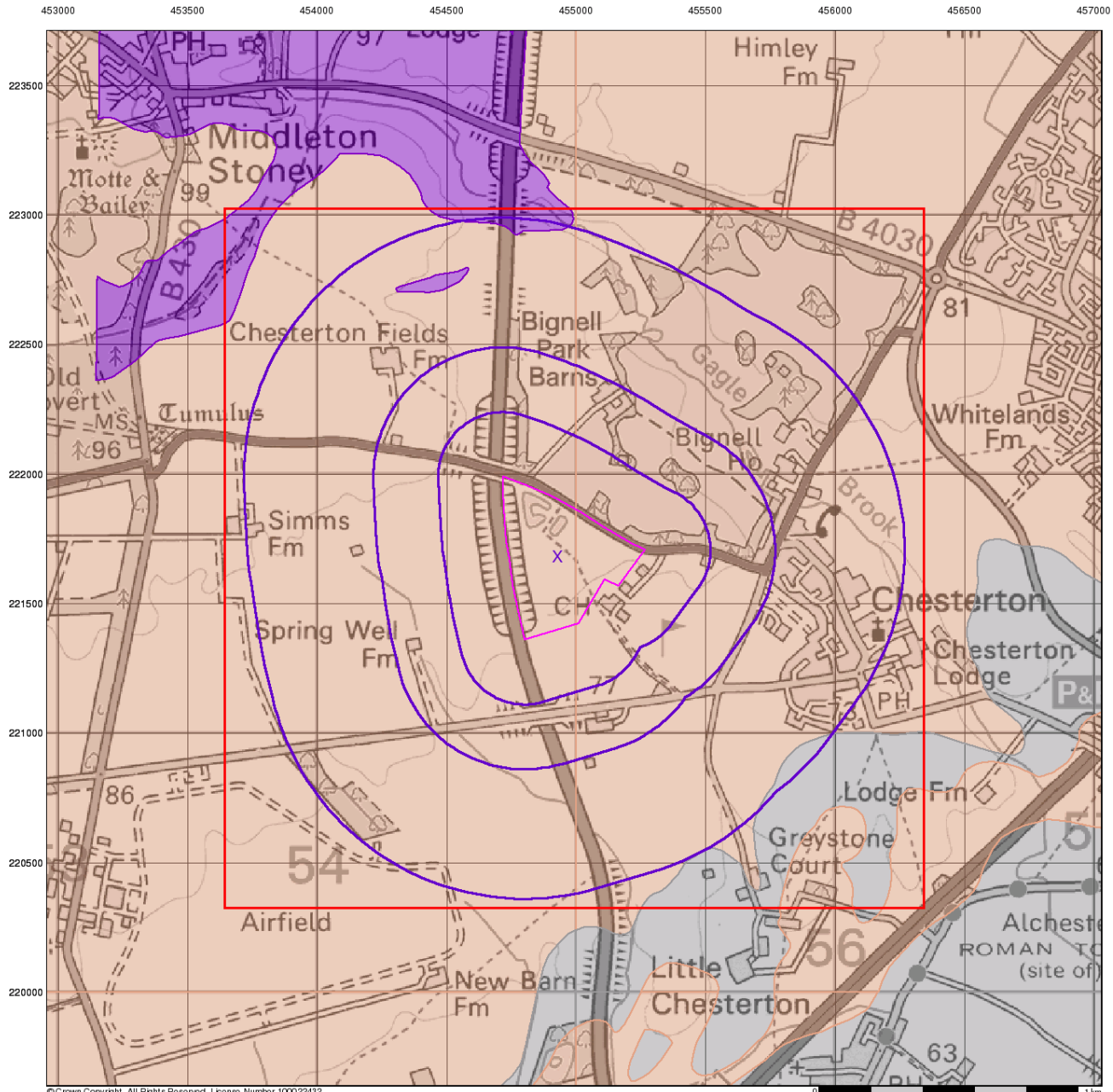
Order Number: 195713619_1_1
 Customer Ref: B071596.001
 National Grid Reference: 454930, 221680
 Slice: A
 Site Area (Ha): 19.39
 Search Buffer (m): 1000

Site Details

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0 1 km



Bedrock Aquifer Designation

General

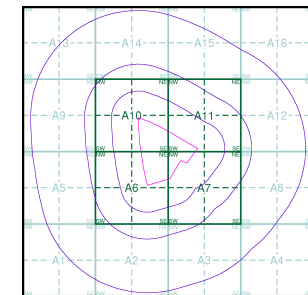
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



Order Details

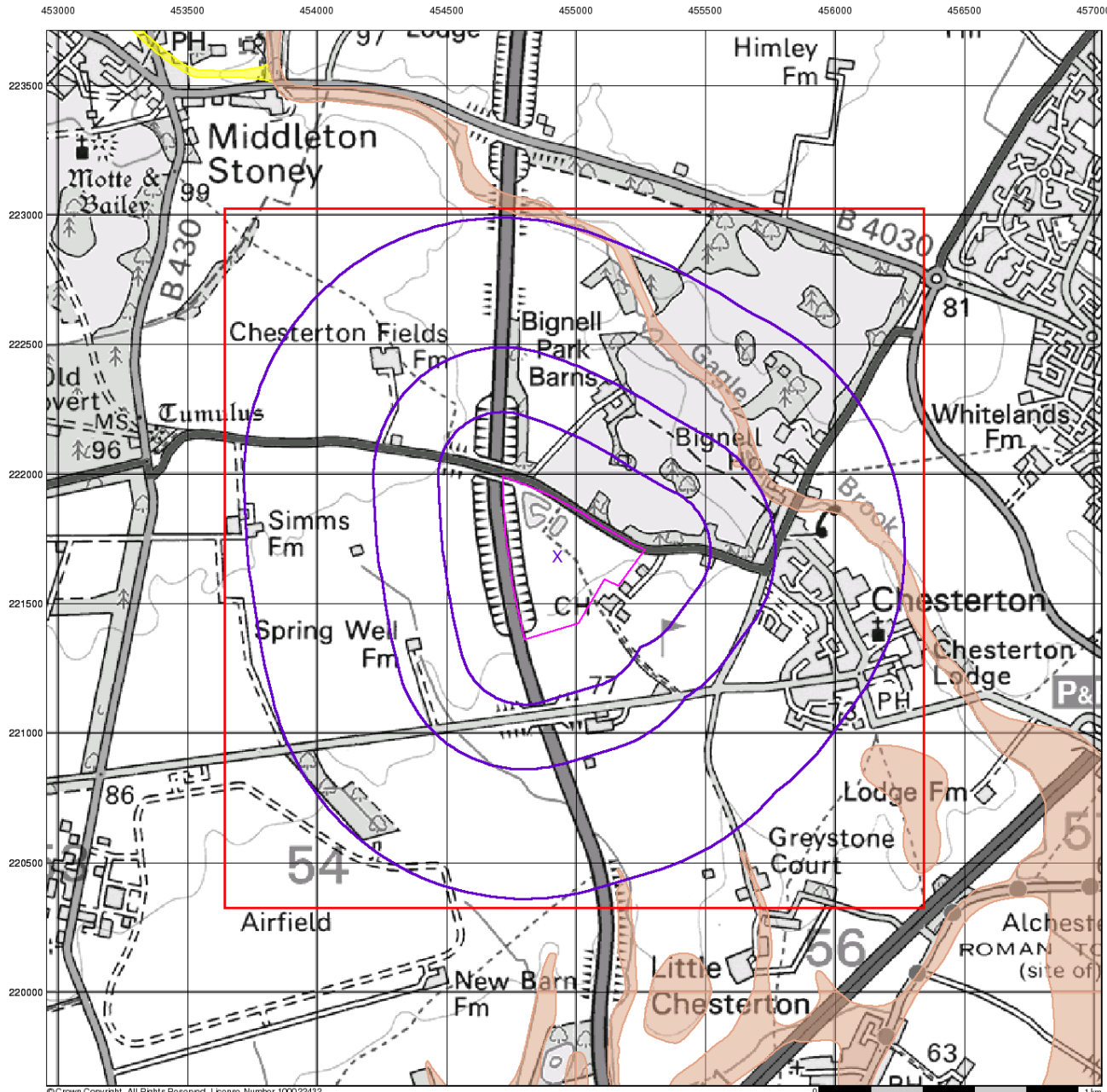
Order Number: 195713619_1_1
 Customer Ref: B071596.001
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 Slice: A
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Superficial Aquifer Designation

General

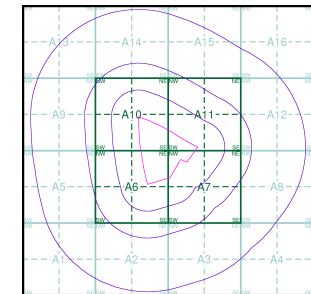
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



Order Details

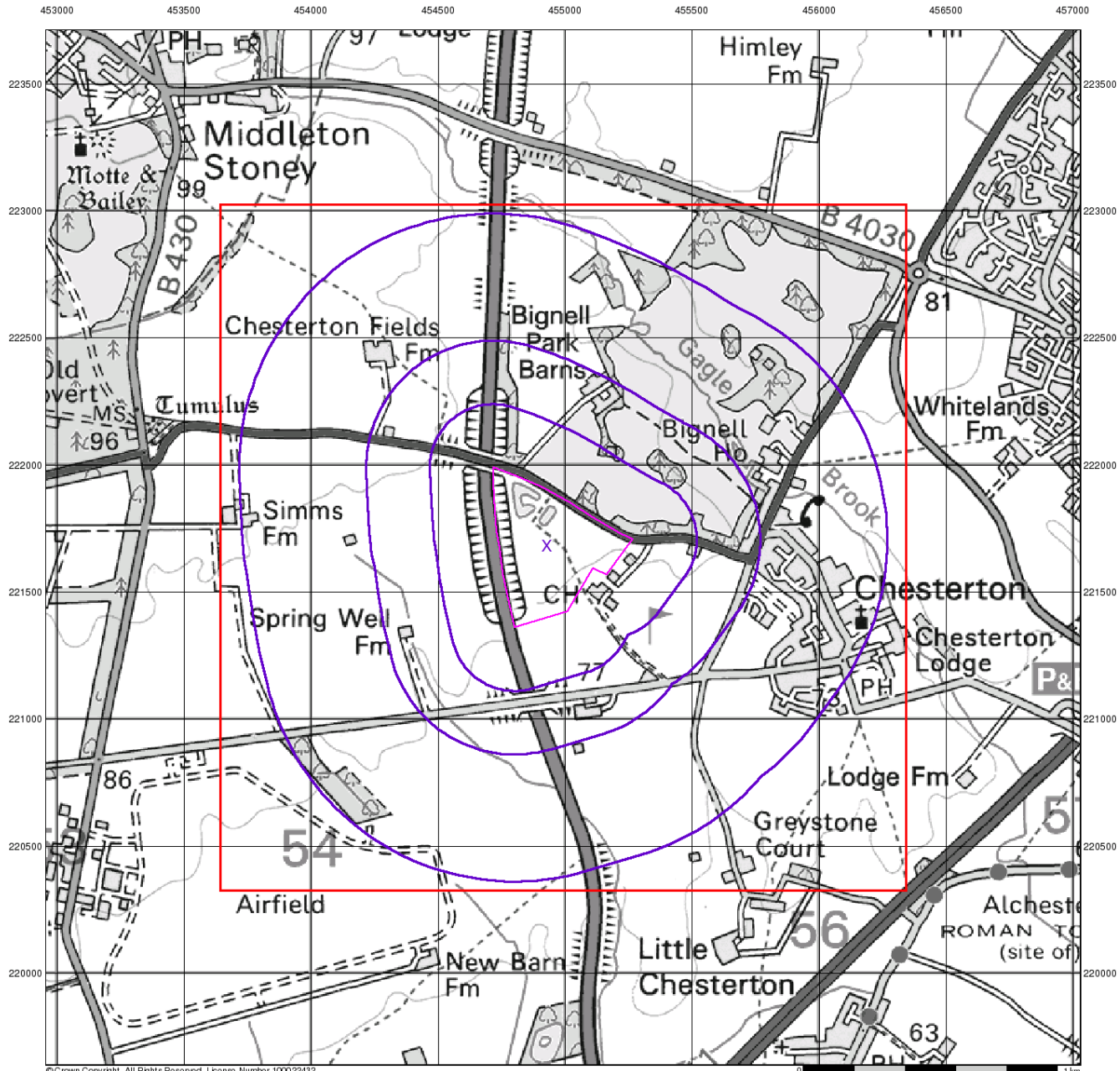
Order Number: 195713619_1_1
 Customer Ref: B071596.001
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 Site Area (Ha): 19.39
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Source Protection Zones

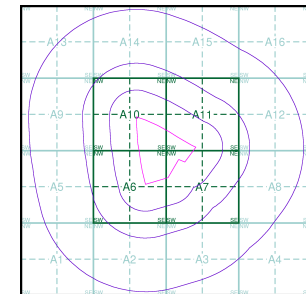
General

- ◊ Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

Site Sensitivity Context Map - Slice A



Order Details

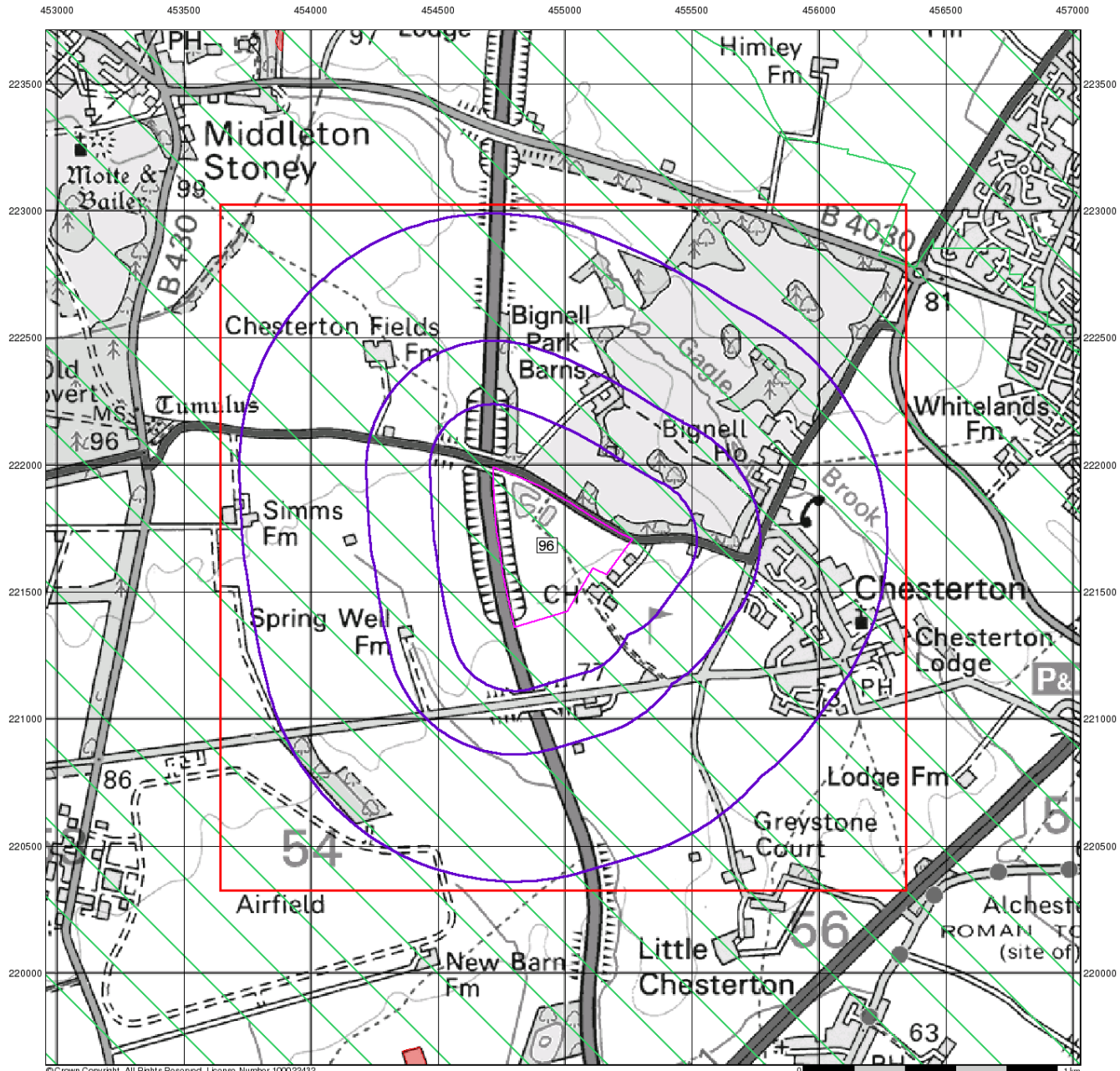
Order Number: 195713619_1_1
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Sensitive Land Uses

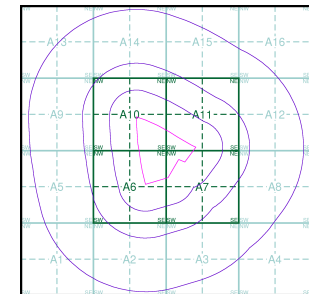
General

-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point
-  Slice
-  Map ID

Sensitive Land Uses

- | | |
|--|---|
|  Ancient Woodland |  National Park |
|  Area of Adopted Green Belt |  Nitrate Sensitive Area |
|  Area of Unadopted Green Belt |  Nitrate Vulnerable Zone |
|  Area of Outstanding Natural Beauty |  Ramsar Site |
|  Environmentally Sensitive Area |  Site of Special Scientific Interest |
|  Forest Park |  Special Area of Conservation |
|  Local Nature Reserve |  Special Protection Area |
|  Marine Nature Reserve |  World Heritage Sites |
|  National Nature Reserve | |

Site Sensitivity Context Map - Slice A



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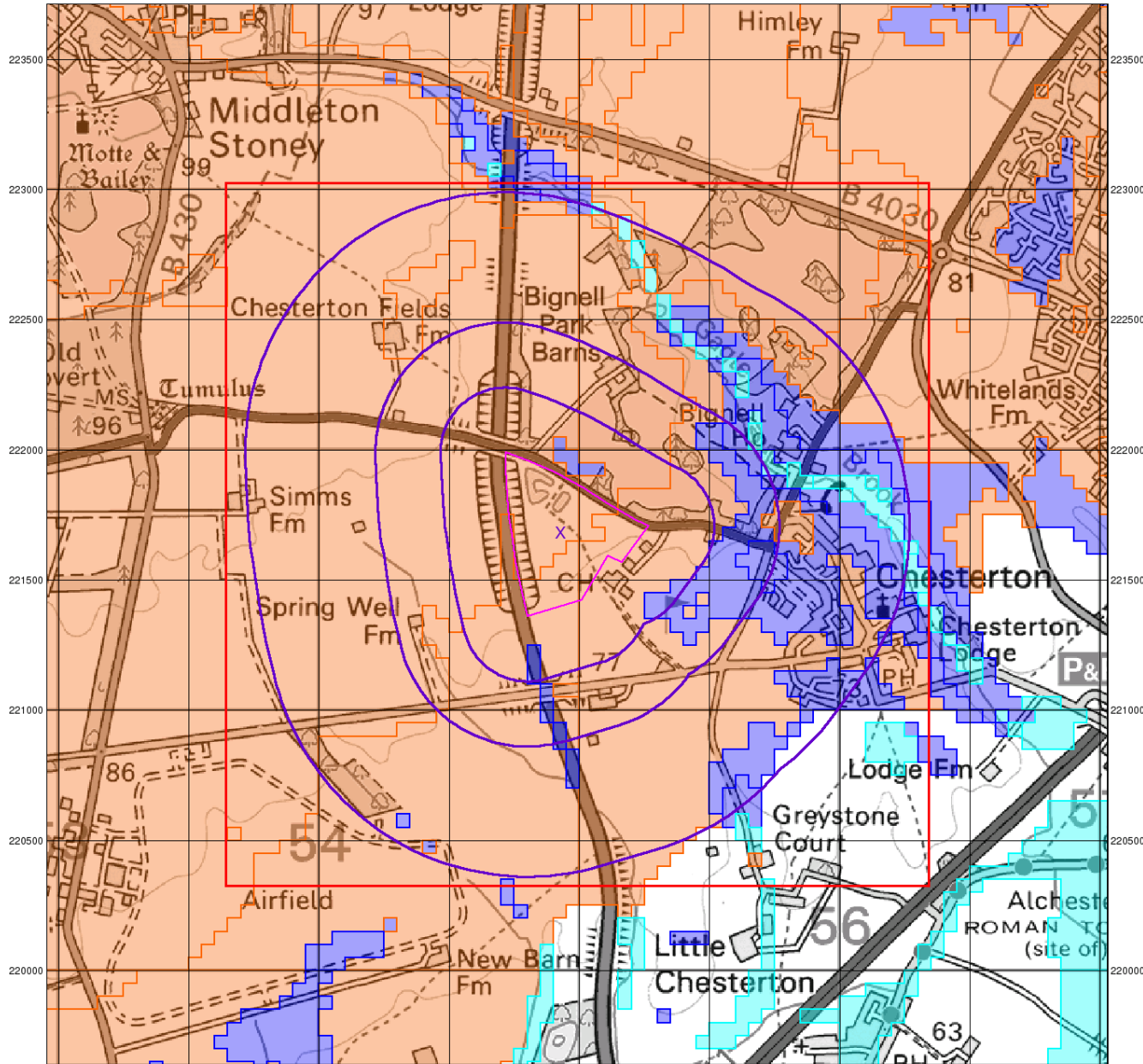
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BGS Flood GFS Data

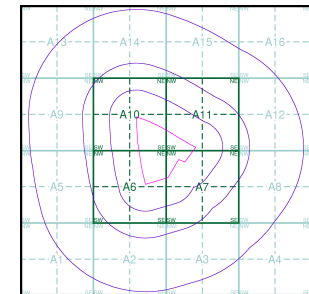
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A



Order Details

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Geology 1:50,000 Maps Legends









Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	WMGR	Infilled Ground	Artificial Deposit	Not Supplied - Holocene
	WGR	Worked Ground (Undivided)	Void	Not Supplied - Holocene

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene
	RTD2	River Terrace Deposits, 2	Sand and Gravel	Not Supplied - Quaternary
	HEAD	Head	Clay, Silt, Sand and Gravel	Not Supplied - Quaternary
	RTD1	River Terrace Deposits, 1	Sand and Gravel	Not Supplied - Quaternary

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	KLC	Kellaways Clay Member	Mudstone	Not Supplied - Callovian
	KLS	Kellaways Sand Member	Sandstone and Siltstone, Interbedded	Not Supplied - Callovian
	PET	Peterborough Member	Mudstone	Not Supplied - Callovian
	FMB	Forest Marble Formation	Limestone and Mudstone, Interbedded	Not Supplied - Bathonian
	CB	Cornbrash Formation	Limestone	Not Supplied - Bathonian
	FMB	Forest Marble Formation	Limestone	Not Supplied - Bathonian
	WHL	White Limestone Formation	Limestone	Not Supplied - Bathonian
		Faults		



Geology 1:50,000 Maps

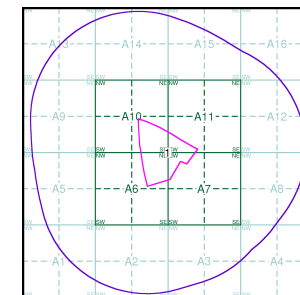
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.

The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID:	1
Map Sheet No:	219
Map Name:	Buckingham
Map Date:	2002
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Not Supplied
Landslip:	Available
Rock Segments:	Not Supplied

Geology 1:50,000 Maps - Slice A

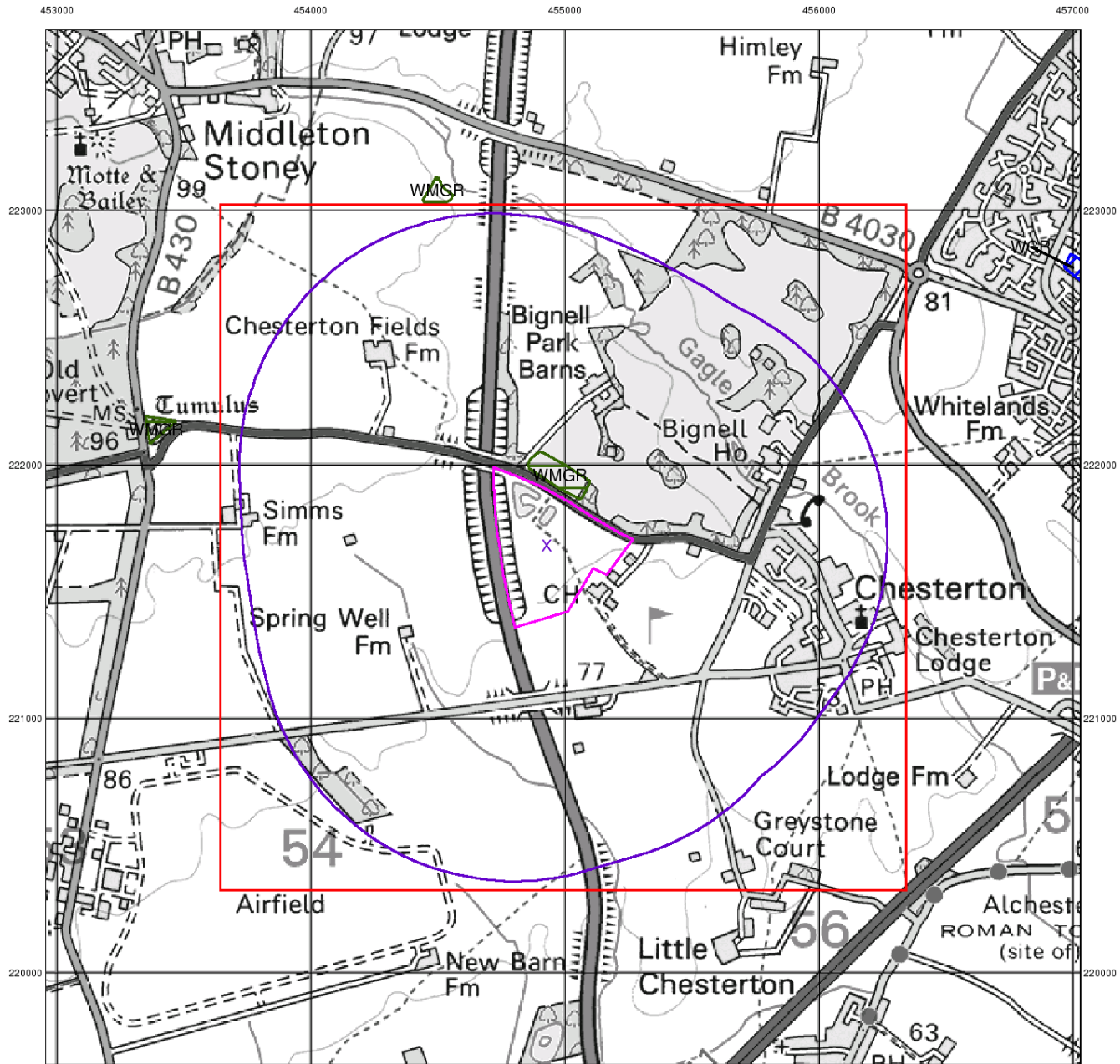


Order Details:

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Artificial Ground and Landslip

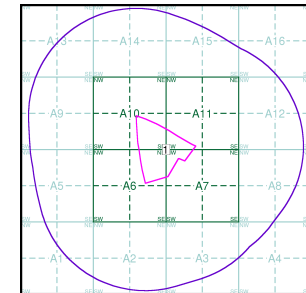
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A



Order Details:

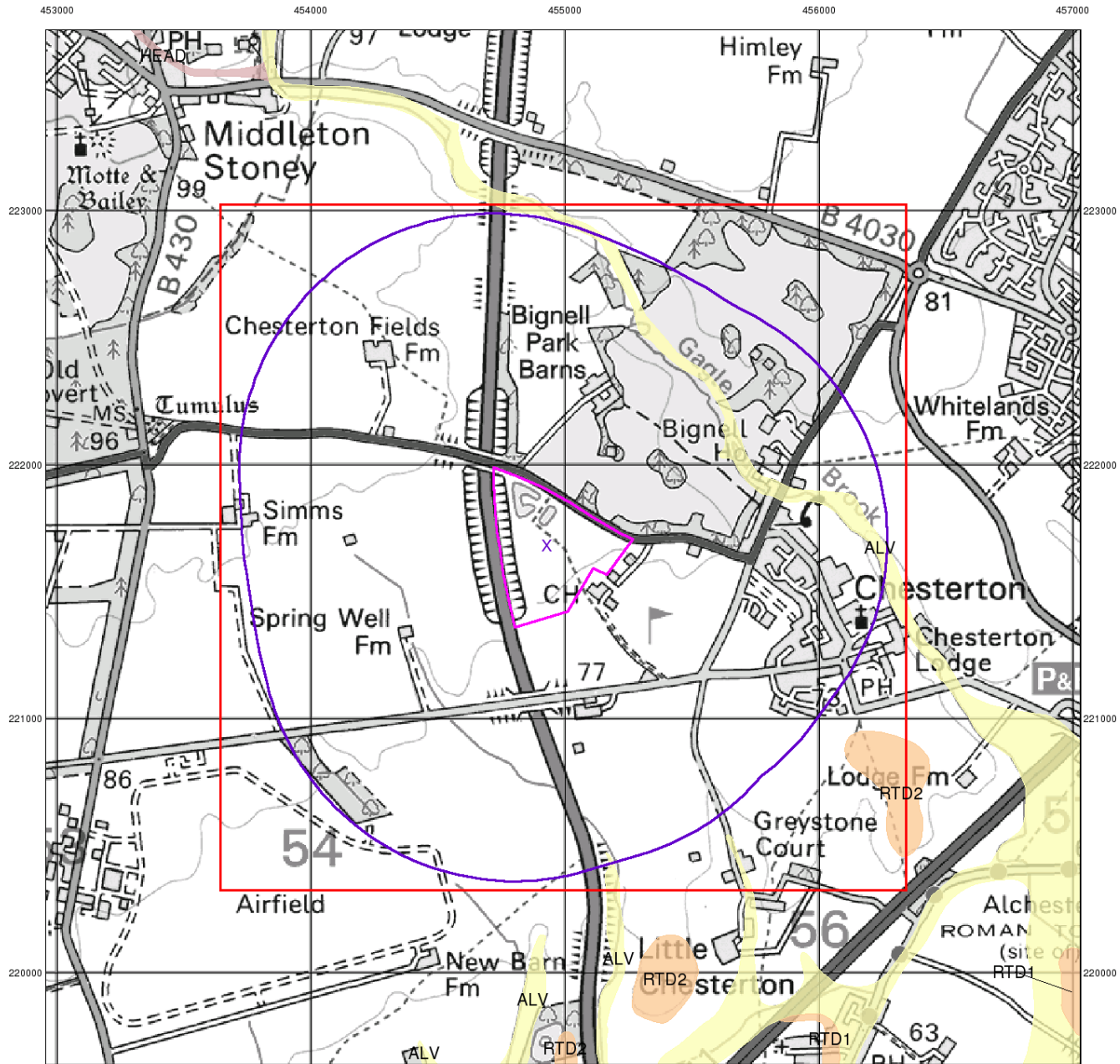
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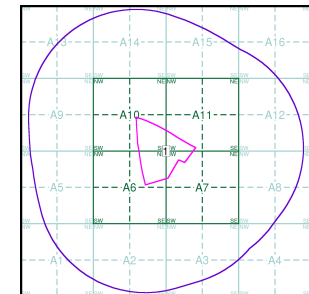
Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



Order Details:

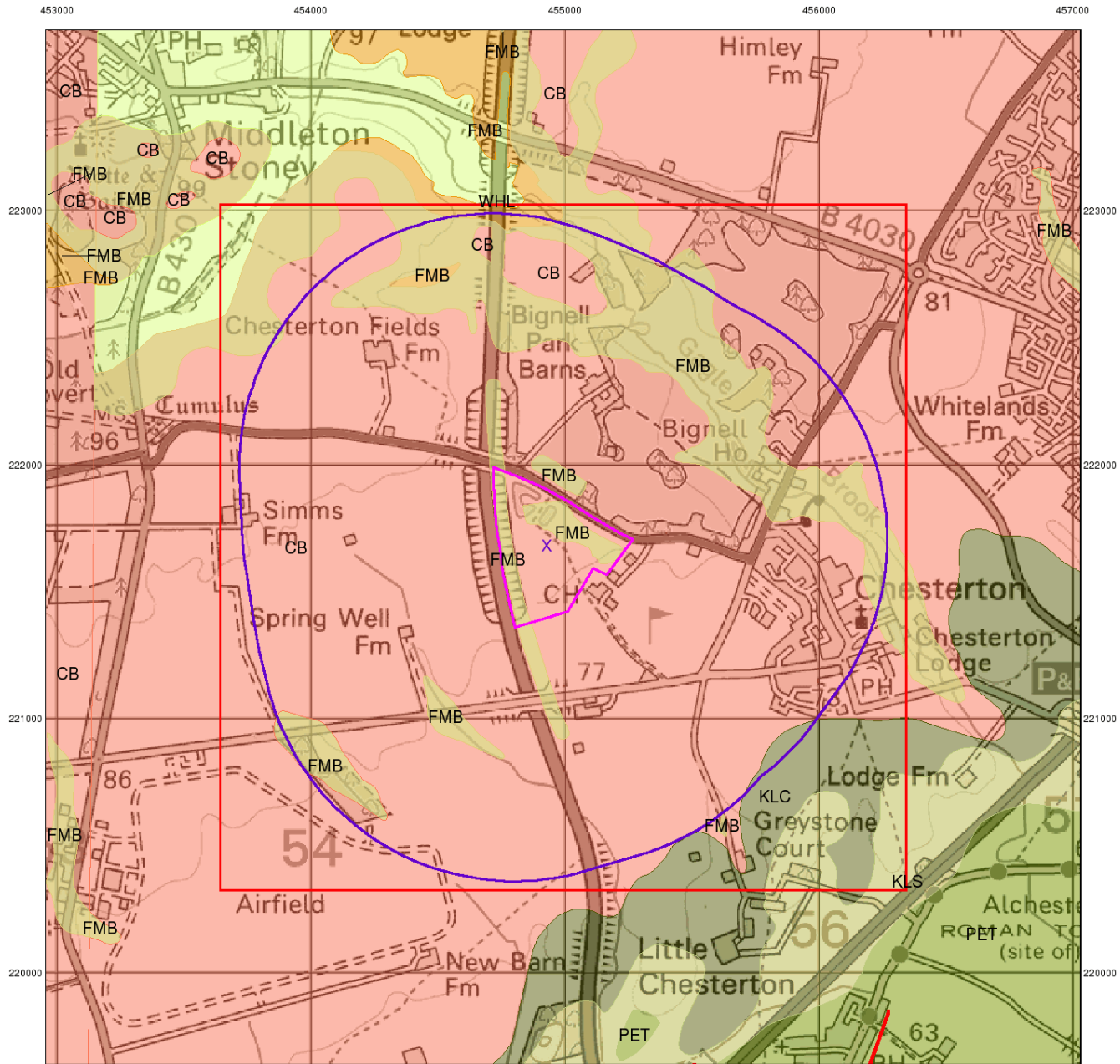
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 Customer Reference: B071596.001
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Bedrock and Faults

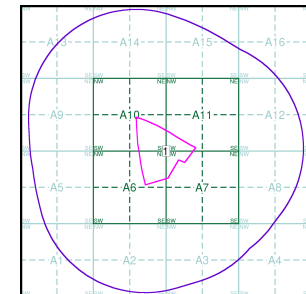
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice A



Order Details:

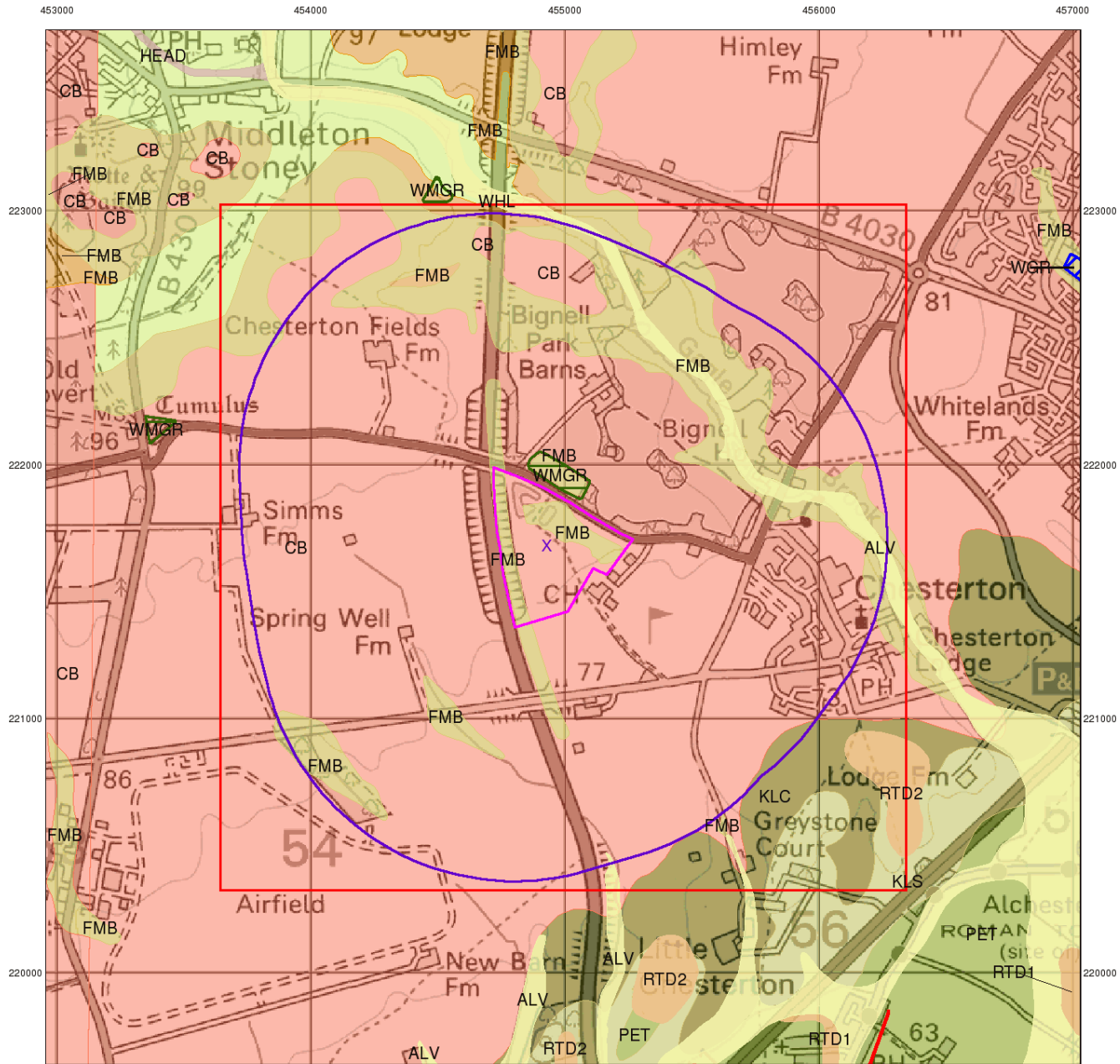
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 Customer Reference: B071596.001
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 Site Area (Ha): 19.39
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Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

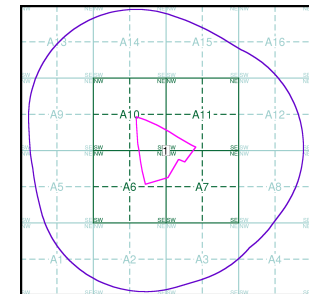
Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
 Kingsley Dunham Centre
 Keyworth
 Nottingham
 NG12 5GG
 Telephone: 0115 936 3143
 Fax: 0115 936 3276
 email: enquiries@bgs.ac.uk
 website: www.bgs.ac.uk

Combined Geology Map - Slice A



Order Details:

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Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Gravel Pit, **Sand Pit**, **Other Pits**
Quarry, **Shingle**, **Orchard**
Osiers, **Reeds**, **Marsh**
Mixed Wood, **Deciduous**, **Brushwood**
Fir, **Furze**, **Rough Pasture**
 Arrow denotes flow of water, Trigonometrical Station
 Site of Antiquities, Bench Mark
 Pump, Guide Post, Signal Post, Well, Spring, Boundary Post
-285 Surface Level
Sketched Contour, **Instrumental Contour**
Main Roads (Fenced, Un-Fenced), **Minor Roads** (Fenced, Un-Fenced)
Sunken Road, **Raised Road**
Road over Railway, **Railway over River**
Railway over Road, **Level Crossing**
Road over River or Canal, **Road over Stream**
Road over Stream
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
County Borough Boundary (England)
County Burgh Boundary (Scotland)
Rural District Boundary
Civil Parish Boundary

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry, **Gravel Pit**
Sand Pit, **Disused Pit or Quarry**
Refuse or Slag Heap, **Lake, Loch or Pond**
Dunes, **Boulders**
Coniferous Trees, **Non-Coniferous Trees**
Orchard, **Scrub**, **Coppice**
Bracken, **Heath**, **Rough Grassland**
Marsh, **Reeds**, **Saltings**
Building, **Glasshouse**
Sloping Masonry, **Pylon**, **Electricity Transmission Line**, **Pole**
Cutting, **Embankment**, **Standard Gauge Multiple Track**, **Standard Gauge Single Track**, **Siding, Tramway or Mineral Line**, **Narrow Gauge**
Geographical County
Administrative County, County Borough or County of City
Municipal Borough, Urban or Rural District, Burgh or District Council
Borough, Burgh or County Constituency (Shown only when not coincident with other boundaries)
Civil Parish (Shown alternately when coincidence of boundaries occurs)
BP, BS Boundary Post or Stone, **Pol Sta** Police Station
Ch Church, **PO** Post Office
CH Club House, **PC** Public Convenience
F E Sta Fire Engine Station, **PH** Public House
FB Foot Bridge, **SB** Signal Box
Fn Fountain, **Spr** Spring
GP Guide Post, **TCB** Telephone Call Box
MP Mile Post, **TCP** Telephone Call Post
MS Mile Stone, **W** Well

1:10,000 Raster Mapping

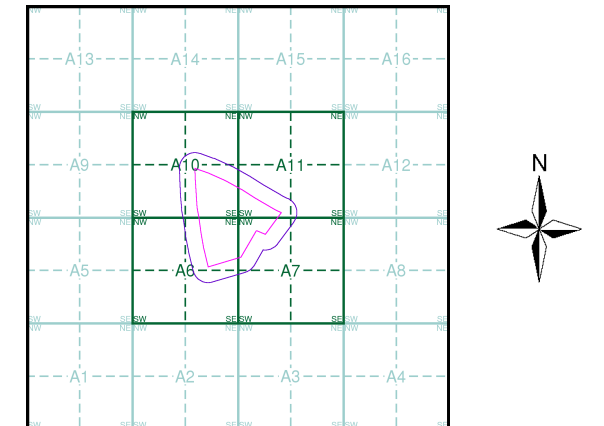
Gravel Pit, **Refuse tip or slag heap**
Rock, **Rock (scattered)**
Boulders, **Boulders (scattered)**
Shingle, **Mud**, **Mud**
Sand, **Sand Pit**
Slopes, **Top of cliff**
General detail, **Underground detail**
Overhead detail, **Narrow gauge railway**
Multi-track railway, **Single track railway**
County boundary (England only), **Civil, parish or community boundary**
District, Unitary, Metropolitan, London Borough boundary, **Constituency boundary**
Area of wooded vegetation, **Non-coniferous trees**
Non-coniferous trees (scattered), **Coniferous trees**
Coniferous trees (scattered), **Positioned tree**
Orchard, **Coppice or Osiers**
Rough Grassland, **Heath**
Scrub, **Marsh, Salt Marsh or Reeds**
Water feature, **Flow arrows**
MHW(S) Mean high water (springs), **MLW(S)** Mean low water (springs)
Telephone line (where shown), **Electricity transmission line (with poles)**
Bench mark (where shown), **Triangulation station**
Point feature (e.g. Guide Post or Mile Stone), **Pylon, flare stack or lighting tower**
Site of (antiquity), **Glasshouse**
General Building, **Important Building**



Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Oxfordshire	1:10,560	1884 - 1885	2
Oxfordshire	1:10,560	1900	3
Oxfordshire	1:10,560	1923	4
Oxfordshire	1:10,560	1938 - 1952	5
Historical Aerial Photography	1:10,560	1947	6
Oxfordshire	1:10,560	1952	7
Ordnance Survey Plan	1:10,000	1955	8
Ordnance Survey Plan	1:10,000	1966	9
Ordnance Survey Plan	1:10,000	1970	10
Ordnance Survey Plan	1:10,000	1982 - 1988	11
Ordnance Survey Plan	1:10,000	1996	12
10K Raster Mapping	1:10,000	1999	13
10K Raster Mapping	1:10,000	2006	14
VectorMap Local	1:10,000	2019	15

Historical Map - Slice A



Order Details

Order Number: 195713619_1_1
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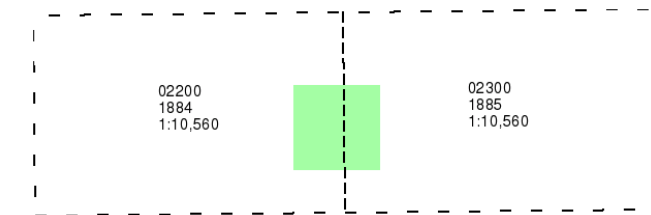
Oxfordshire

Published 1884 - 1885

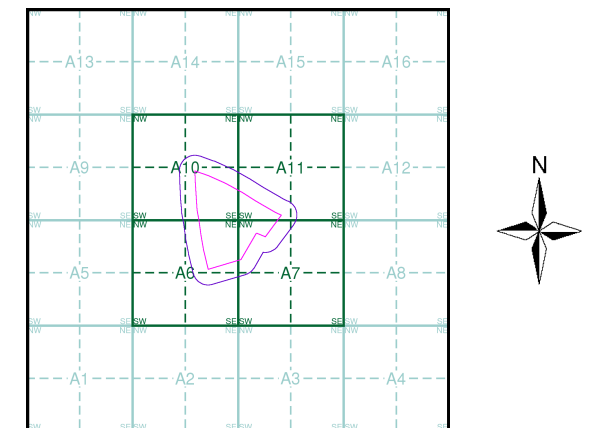
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

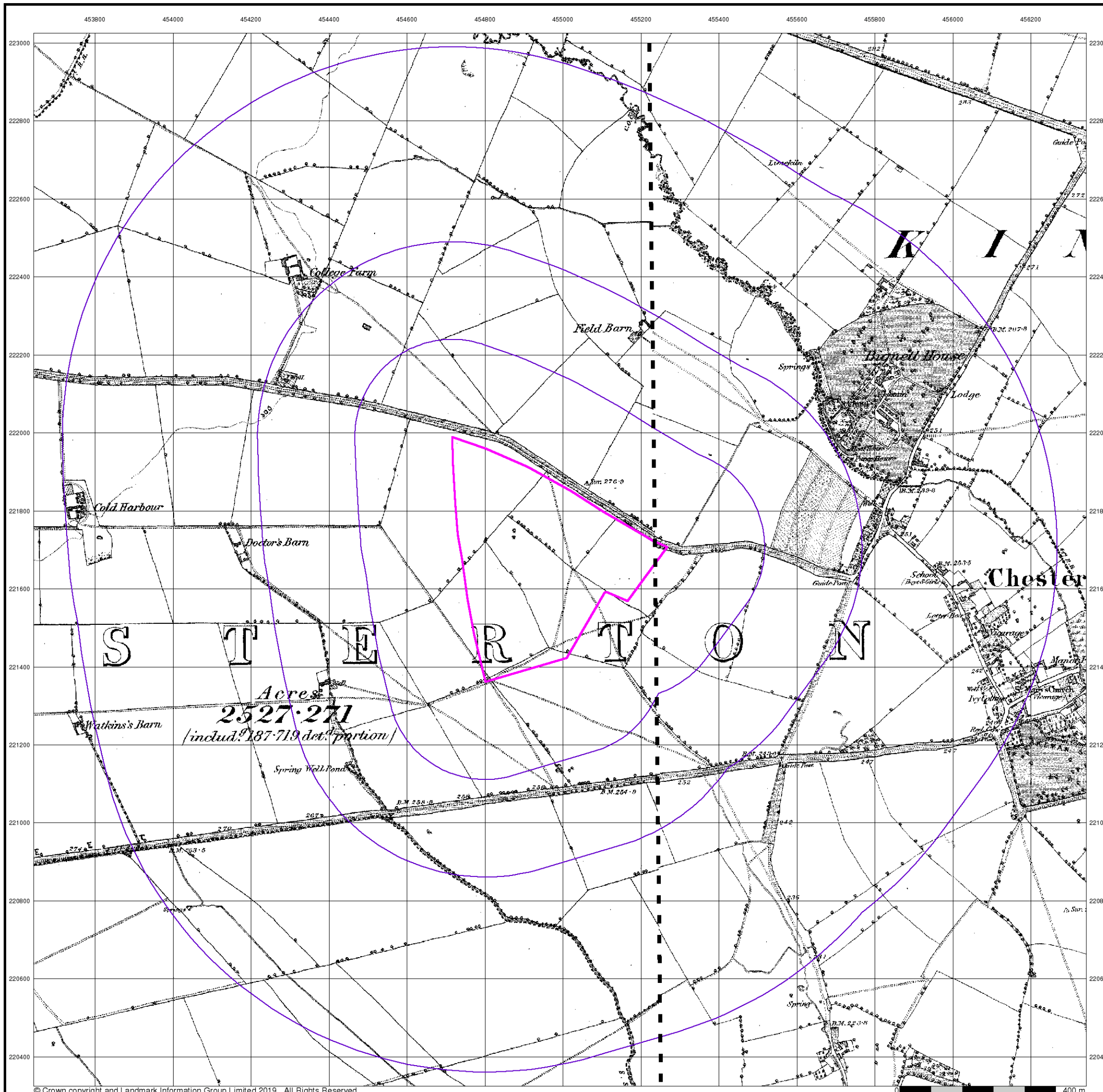
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Oxfordshire

Published 1900

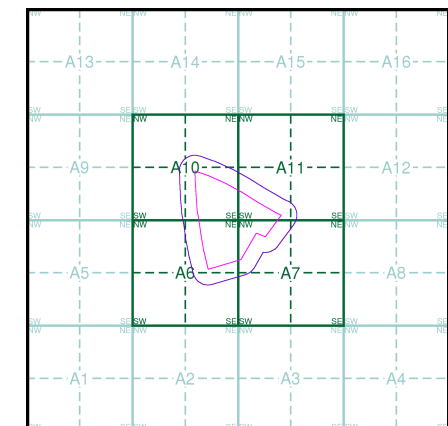
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

022NE 1900 1:10,560	023NW 1900 1:10,560
022SE 1900 1:10,560	023SW 1900 1:10,560

Historical Map - Slice A



Order Details

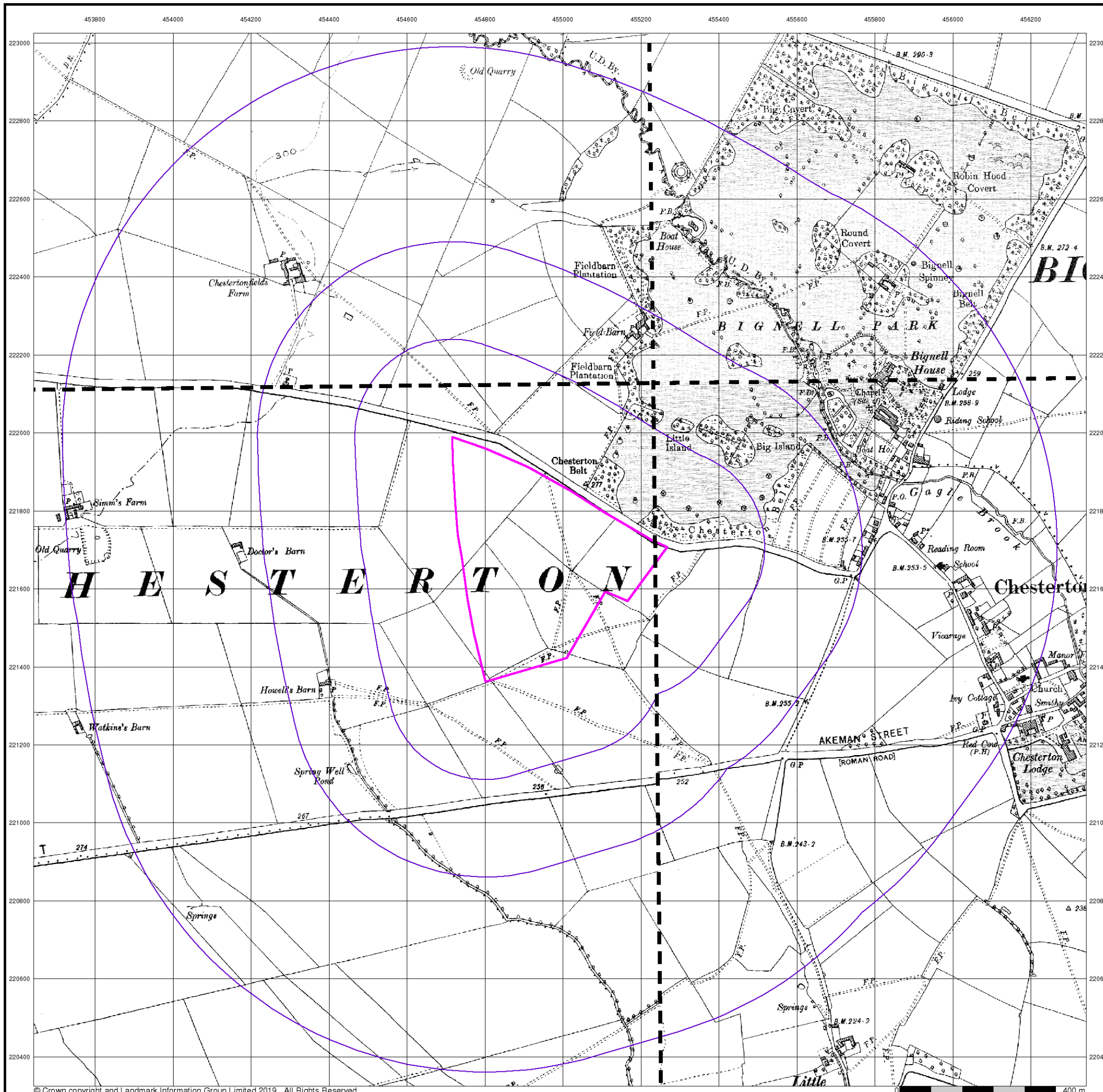
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 Customer Ref: B071596.001
 National Grid Reference: 454930, 221680
 Slice: A
 Site Area (Ha): 19.39
 Search Buffer (m): 1000

Site Details

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Oxfordshire

Published 1923

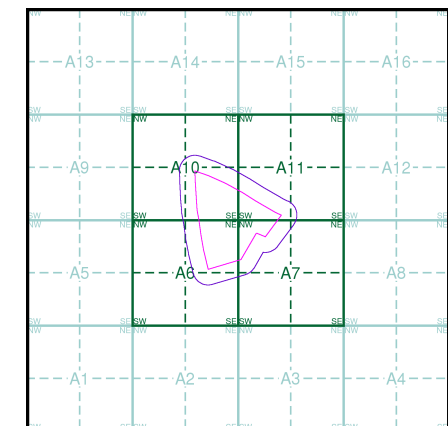
Source map scale - 1:10,560

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Map Name(s) and Date(s)

022NE 1923 1:10,560	023NW 1923 1:10,560
022SE 1923 1:10,560	023SW 1923 1:10,560

Historical Map - Slice A



Order Details

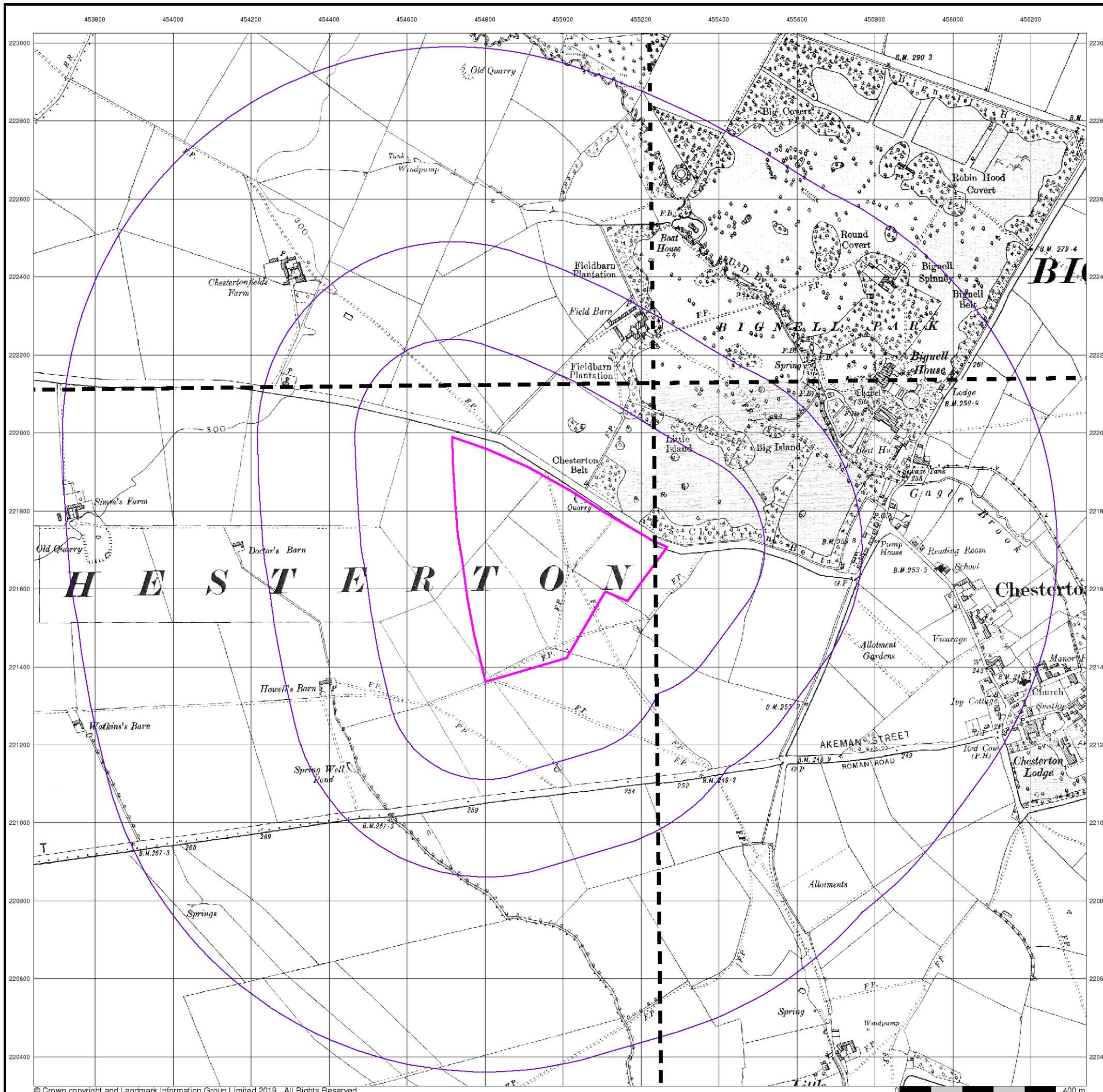
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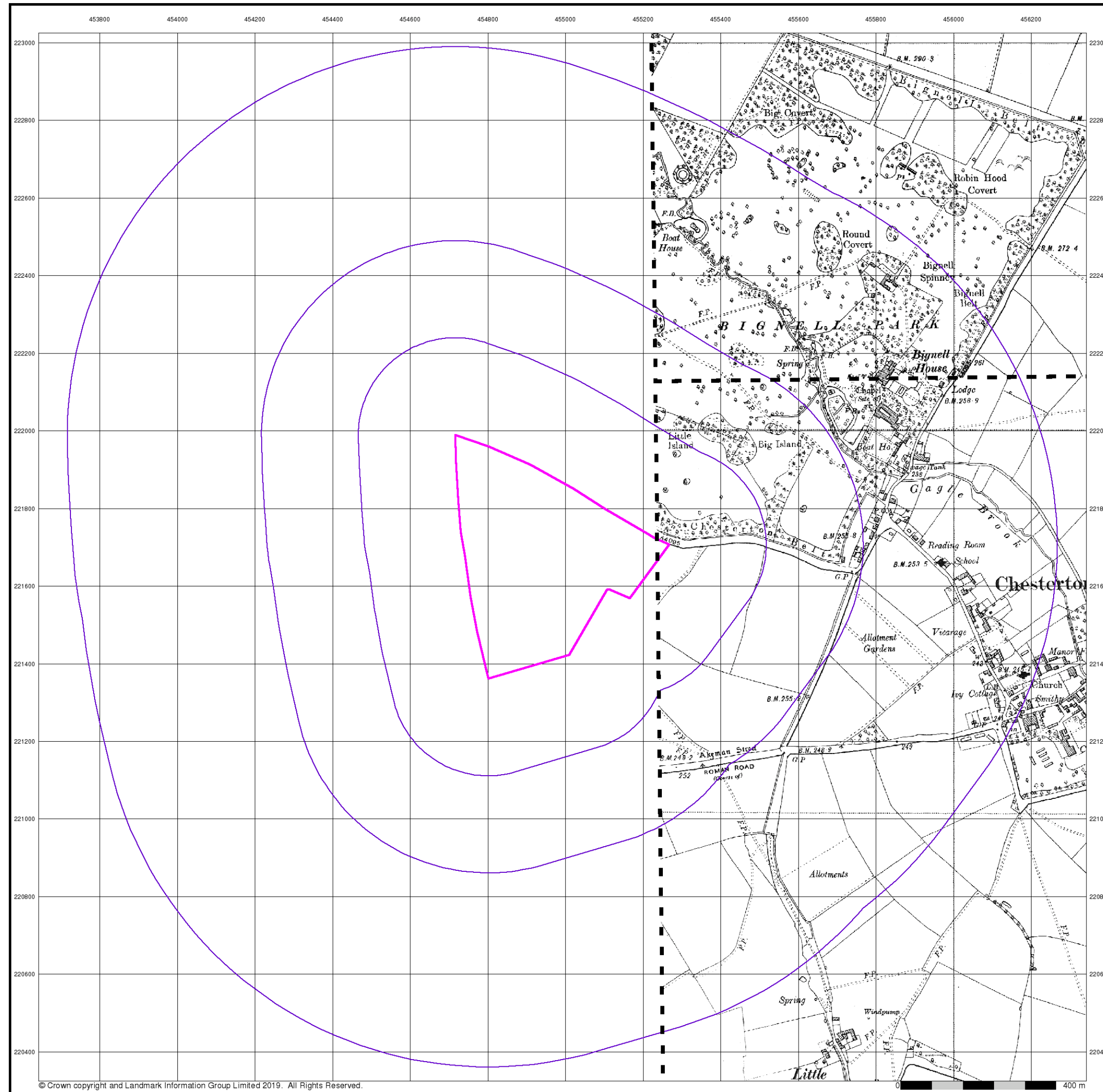
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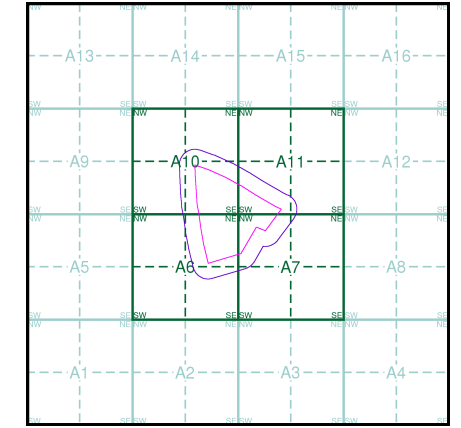
Oxfordshire
Published 1938 - 1952
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

023NW	1938	1:10,560
023SW	1952	1:10,560

Historical Map - Slice A



Order Details
 Order Number: 195713619_1_1
 Customer Ref: B071596.001
 National Grid Reference: 454930, 221680
 Slice: A
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Landmark
 INFORMATION GROUP
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Historical Aerial Photography

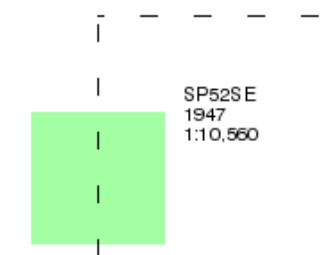
Published 1947

Source map scale - 1:10,560

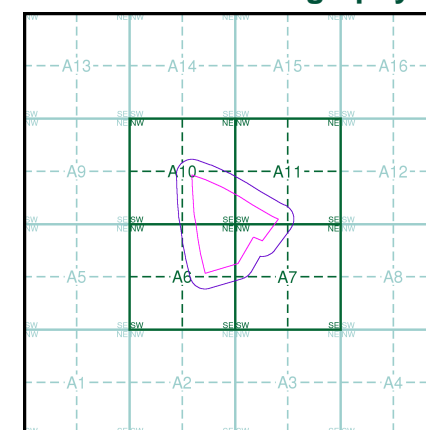
The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the 1950's meant that every photograph was re-checked for potentially unsafe information with security sites replaced by fake fields or clouds. The original editions were withdrawn and only later made available after a period of fifty years although due to the accuracy of the editing, without viewing both revisions it is not easy to spot the edits. Where available Landmark have included both revisions.

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Map Name(s) and Date(s)



Historical Aerial Photography - Slice A



Order Details

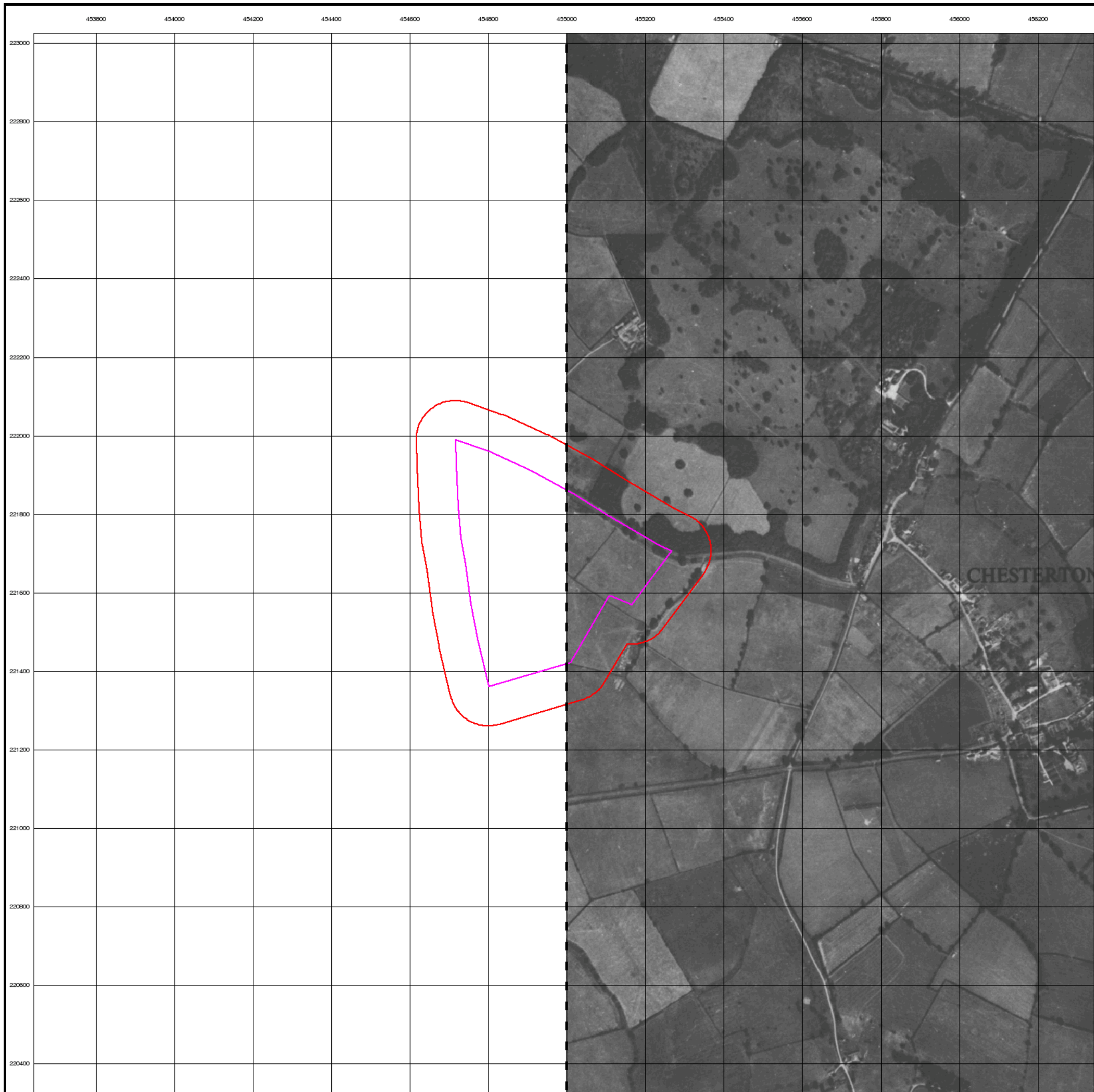
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Customer Ref: B071596.001
National Grid Reference: 454930, 221680
Slice: A
Site Area (Ha): 19.39
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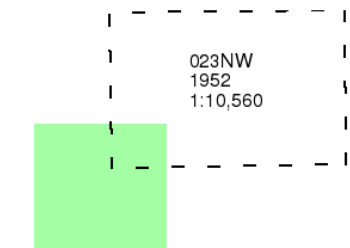


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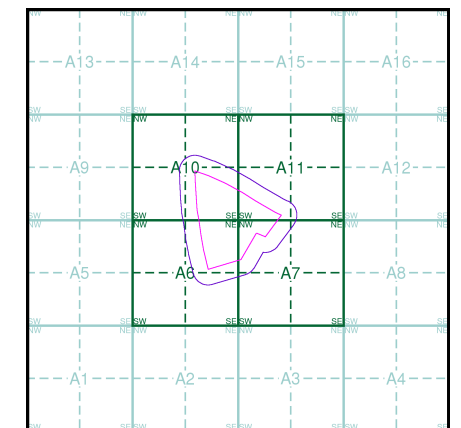
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Map Name(s) and Date(s)



Historical Map - Slice A

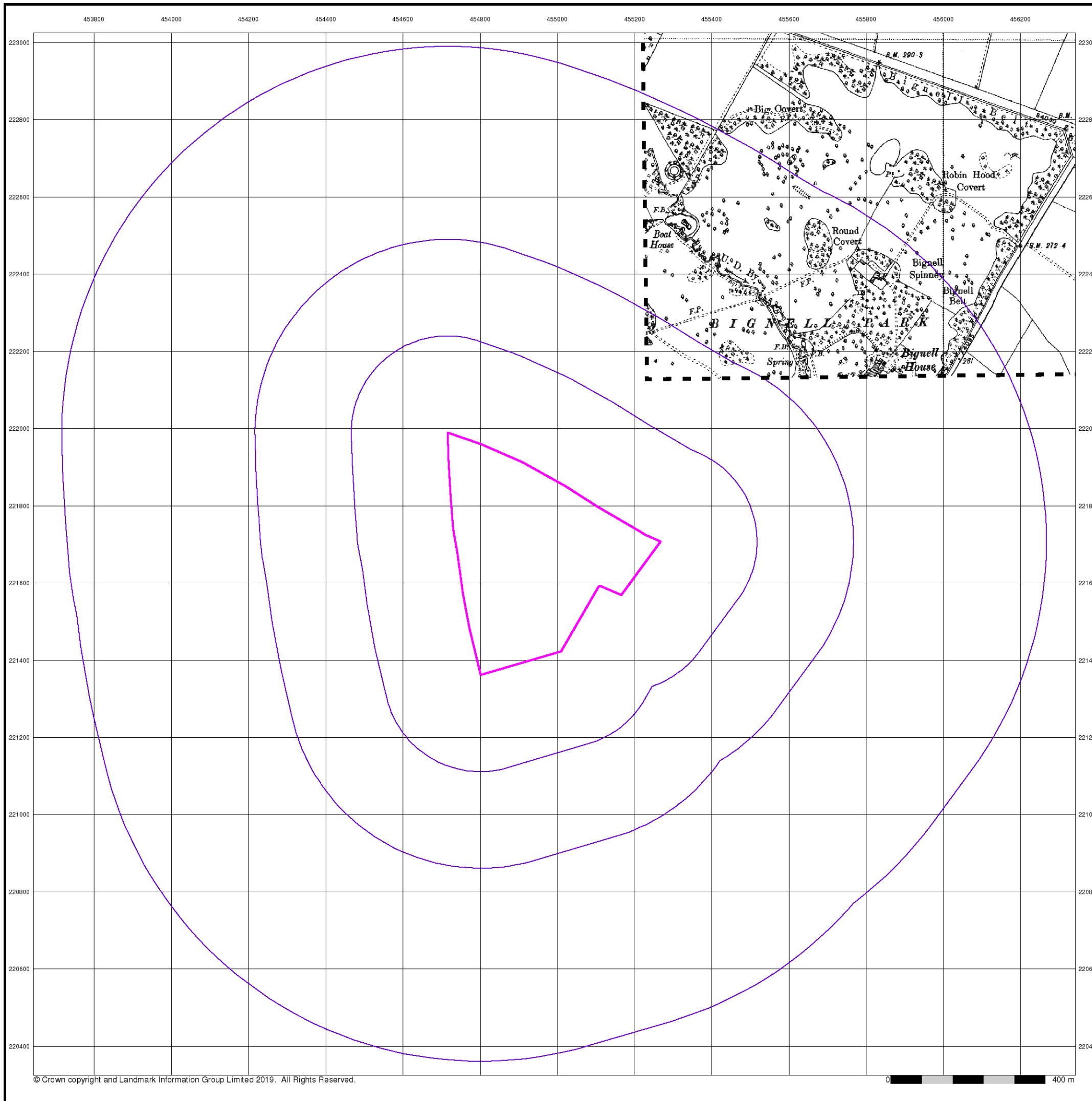


Order Details

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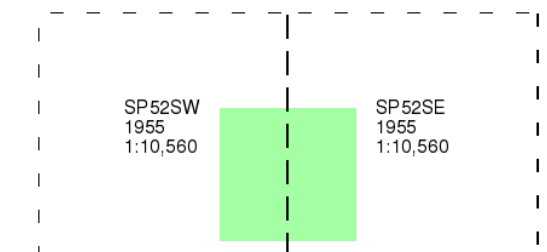
Ordnance Survey Plan

Published 1955

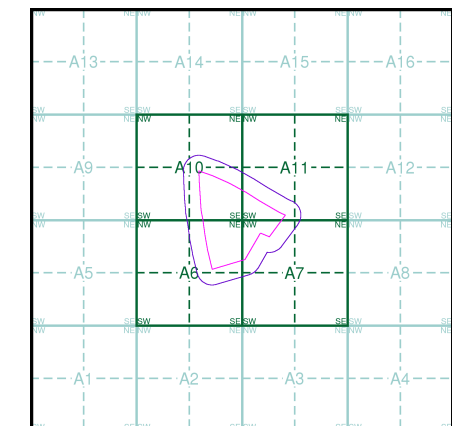
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

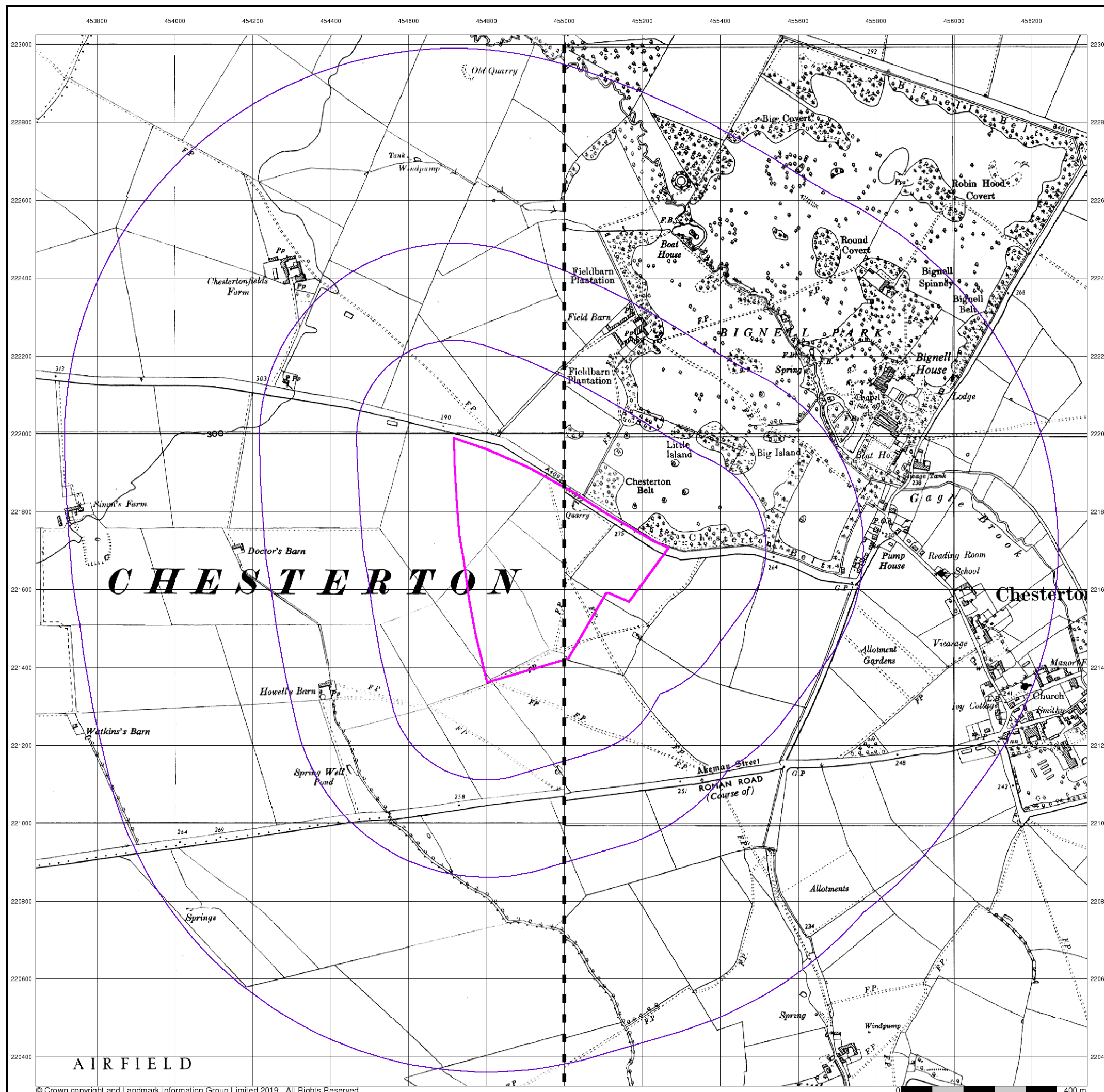
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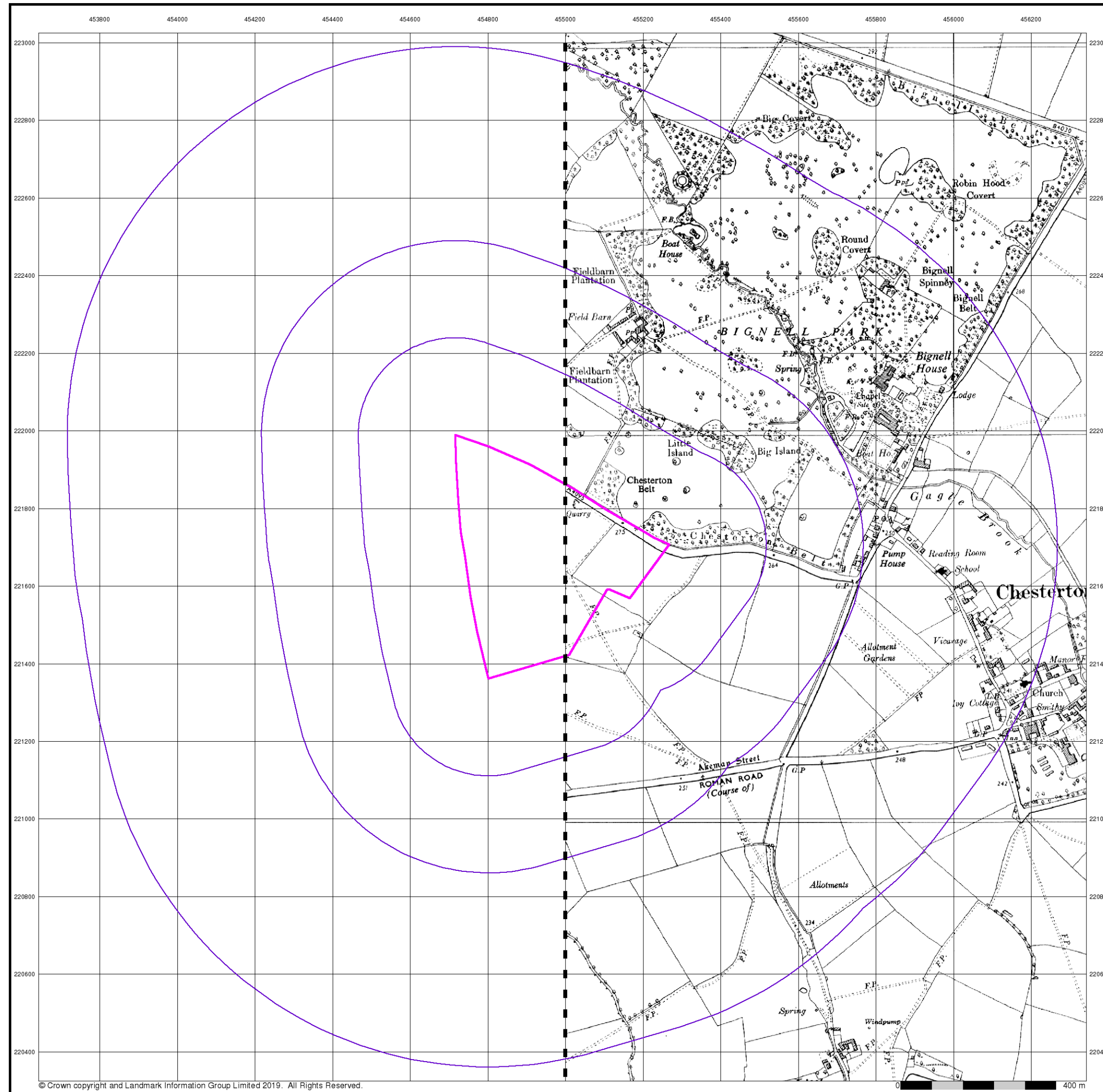
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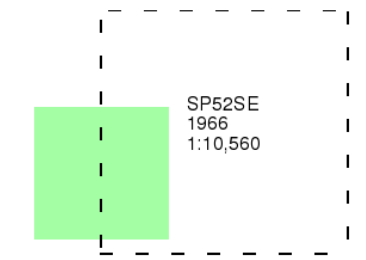




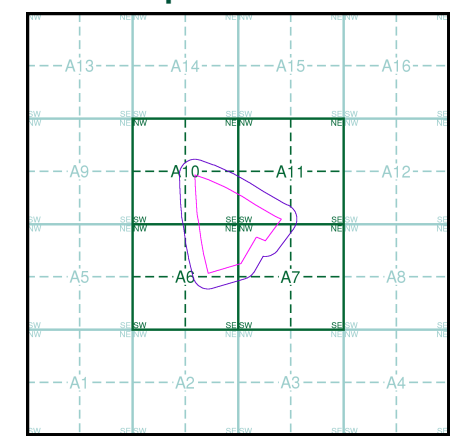
Ordnance Survey Plan
Published 1966
Source map scale - 1:10,000

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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

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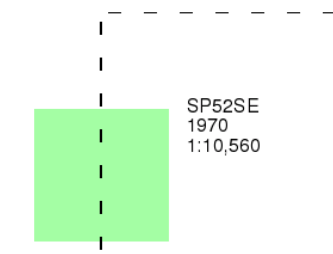
Ordnance Survey Plan

Published 1970

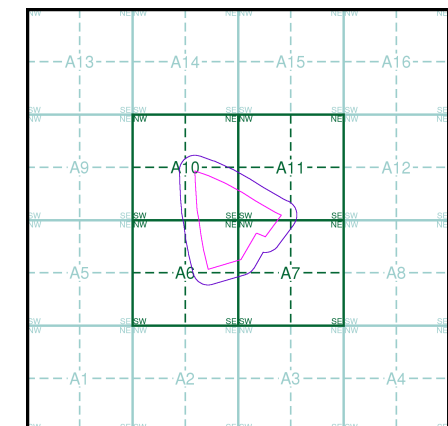
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

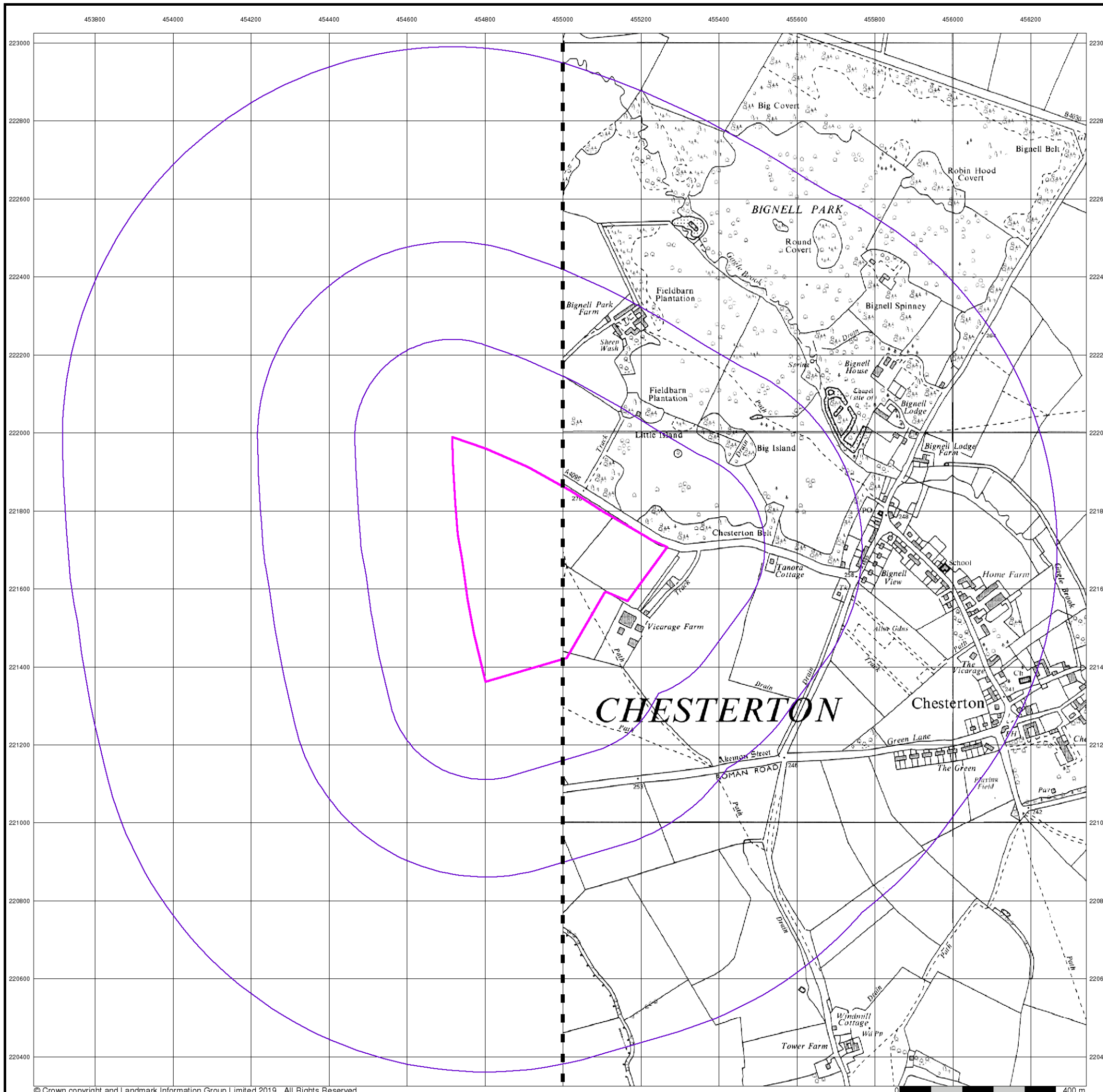
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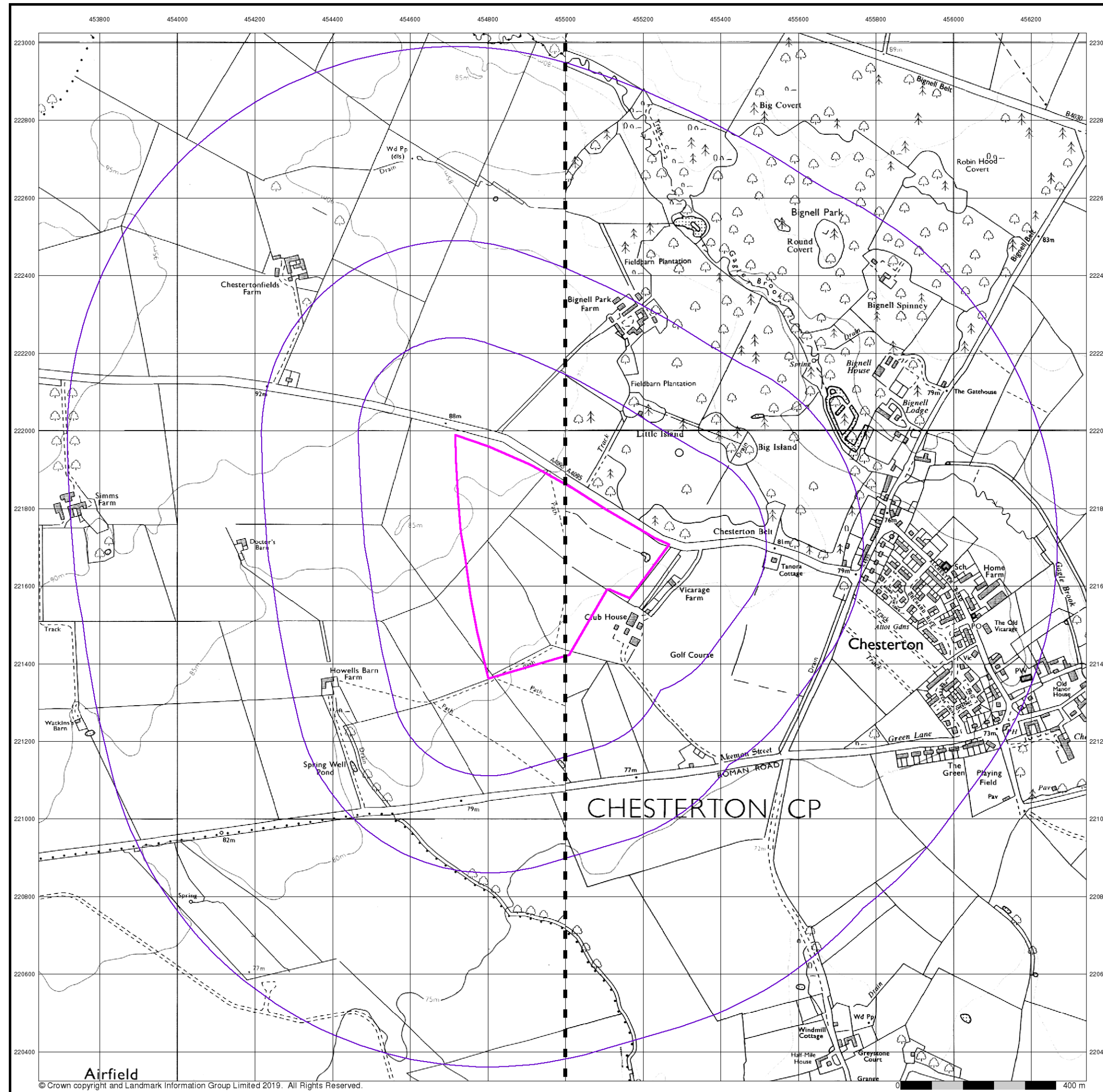
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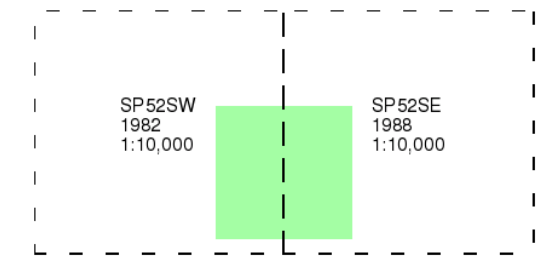




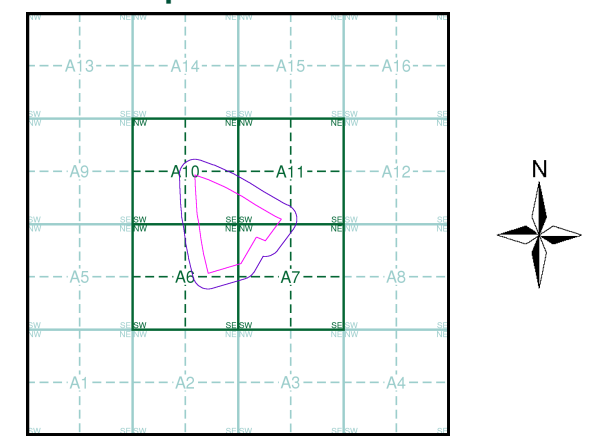
Ordnance Survey Plan
Published 1982 - 1988
Source map scale - 1:10,000

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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

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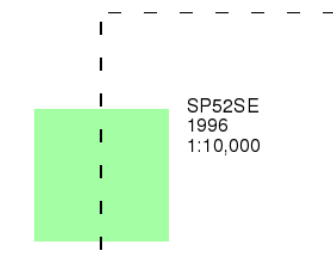
Ordnance Survey Plan

Published 1996

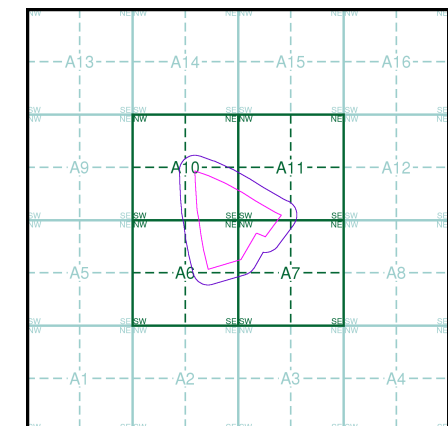
Source map scale - 1:10,000

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Historical Map - Slice A



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