

**Environmental  
Geotechnical  
Specialists**



## PHASE 1 ENVIRONMENTAL DESK STUDY

job number	date
site address	
written by	
checked by	
issued by	

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GEOTECHNICAL  
ENVIRONMENTAL



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## Report on a Phase One Desk Study

Location: Dr Challoners High School  
Cokes Lane, Little Chalfont HP7 9QB

For: Lindsay Baxter Design Ltd

Report No. C475/20/E/694

Report date: February 2020

For and on behalf of **Rogers Geotechnical Services Ltd**

**Rob Palmer** MSc FGS ACIEH  
Senior Geo-environmental Engineer

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### 1. Introduction

The site to be developed comprises an area of land associated with Dr Challoners High School. The site is approximately 0.03 hectares in size and its National Grid reference is centred around 498972 197428.

It is understood that the development proposals currently comprise the construction of an extension to the existing school. In order to assist with this decision making process, and any planning and construction aspects of the development, a phase one environmental desk study has been commissioned and is the subject of this report.

In accordance with issued guidance, a site walkover was conducted on the 18<sup>th</sup> February 2020 and the following observations were made:

#### **General site description/current site use**

The site comprises a landscaped area and shelter outside the existing school buildings.

#### **Site boundaries/access**

Access can be gained via the entry roads and footpaths on to site.

#### **Topography**

The site slopes gently to the east from the western gable end of the existing building.

#### **Surface cover of site**

The surface of the development area is predominantly covered by grass, although hard-standing of asphalt and concrete associated with the footpaths and shelter are present.

#### **Visible evidence of contamination/ contaminative sources**

Demolition material was observed around the footprint of the demolished building. However, there were no other visible signs of contamination present during the time of the walkover.

**Presence of vegetation and wildlife**

The site was generally grass-topped with some bushes. There were no obvious signs of invasive flora, fauna, nesting birds, burrowing animals or edible plants observed during the time of the site walkover.

**Services**

The status of underground services is unknown. There were no overhead services present within the site at the time of the walkover.

**Site neighbours**

The site is located within the school grounds.

In order to ensure that the site is fully characterised and to comply with the Environment Act 1995<sup>1</sup>, a Phase One Desk Study has been commissioned by Lindsay Baxter Design Ltd. The desk study is intended to assess the environmental impact of historical, current and future factors on the development. This report will present the data obtained and provide a conceptual ground model and preliminary risk assessment as well as discussing the scope of any intrusive investigation that may be required. This report does not consider ecological impacts (e.g. bats) or botanical risks (e.g. Japanese Knotweed).

## 2. Review and Summary of Published Data

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As a part of this desk study the following data has been considered.

- |                      |              |
|----------------------|--------------|
| • Groundsure Reports | - Appendix 1 |
| • Historical maps    | - Appendix 2 |
| • Site Plan          | - Appendix 3 |
| • Photographs        | - Appendix 4 |

The data obtained from the above mentioned sources has been summarised below<sup>2</sup>.

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<sup>1</sup>S57 of the Environment Act 1995 inserted the contaminated land regime into the Environmental Protection Act 1990 (Part 2A). The regime '**provides a risk based approach to the identification and remediation of land where contamination poses an unacceptable risk to human health or the environment**' See <http://www.environment-agency.gov.uk/research/planning/40405.aspx>. This places a duty on local authorities to inspect their areas for contaminated land and require its remediation using the 'suitable for use' approach. Much of this duty is discharged via the planning regime under the Town and Country Planning Act 1990 as historical land contamination is a 'material planning consideration.' The local authorities are required to secure the removal of unacceptable risks via remediation of the land, to therefore ensure the site is suitable for its new use. This is fulfilled via completion of a Phase One Environmental Desk Study, Phase Two Intrusive Investigation, Phase Three Remediation Strategy and Phase Four Validation Report. Therefore, as a minimum, once a site has been developed it should not be capable of being designated as 'contaminated land' under Part 2A of the Environmental Protection Act 1990, as inserted by the Environment Act 1995 (see also PPS 23 Planning and Pollution Control Section 8)

<sup>2</sup> This report is a summary only and reference must be made in full to the information provided in the Groundsure Report.





## 2.1 Historical Land Use

**Table 1: Historical Land Use<sup>3</sup>**

HISTORICAL MAPPING SUMMARY		
Map Dates	On site	Within 250m
1882 – 1938	The development area forms a part of field, either associated with a farm or a house.	Brick Works – 180m SE
1955 – 1959	The site itself remains unchanged.	Further residential development has taken place within the surrounding areas.
1961 – 1978	The development area remains unchanged, however some construction has taken place within the school grounds.	Nursery/Allotment – 100m SW
1985 - 2010	Extensive development has taken place on site, however the development area itself remains undeveloped.	Nursery/Allotment – 100m SW

NB. All distances given are approximate only.

## 2.2 Published Geology and Geological Hazards

**Table 2: Geological Data for the Site**

BGS MAPPING DATA			
Strata Type	Strata Name <sup>4</sup>	Description <sup>5</sup>	
Made Ground/Fill	N/A	Not indicated on site although previous construction may have resulted in the presence of made ground.	
Superficial Geology	Head	Head is poorly sorted and poorly stratified, angular rock debris and/or clayey hillwash and soil creep, mantling a hillslope and deposited by solifluction and gelifluction processes. Polymict deposit: comprises gravel, sand and clay depending on upslope source and distance from source. Locally with lenses of silt, clay or peat and organic material.	
Solid Geology	Seaford Chalk Formation and Newhaven Chalk Formation	Chalk with flints. With discrete marl seams, nodular chalk, sponge-rich and flint seams throughout. Typology of flints and incidence of marl seams is important for correlation.	
GEOLOGICAL FEATURES			
Type	Location	Features	Comments
Mining Activity	On site	Coal mining.	The study site is not located within the specified search distance of an identified mining area.
		Non-coal Mining.	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

<sup>3</sup> See Appendix 2

<sup>4</sup> Sources: British Geological Survey (NERC) Map Sheets 255; Beaconsfield; Solid and Drift Edition, and Geology of Britain Viewer [online resource from [www.bgs.ac.uk](http://www.bgs.ac.uk)]

<sup>5</sup> Sources: British Geological Survey (NERC) Lexicon of Named Rock Units [online resource from [www.bgs.ac.uk](http://www.bgs.ac.uk)]



BGS BOREHOLE DATA			
Reference <sup>6</sup>	Location	Strata Description	Depth
SU99NE163	350m E	MADE GROUND	1.2m
		Very clayey SAND	2.5m
		Sandy gravelly CLAY	7.8m
		Putty CHALK	>8m
NATURAL GROUND SUBSIDENCE & HAZARDS <sup>7</sup>			
Type		Risk Rating	
Potential for collapsible ground stability hazards		Very low.	
Potential for compressible ground stability		Negligible.	
Potential for ground dissolution stability		Very low.	
Potential for landslide ground stability		Very low.	
Potential for running sand ground stability		Negligible.	
Potential for shrinking or swelling clay ground stability		Negligible.	
Radon		The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level. No radon protective measures are necessary.	

## 2.3 Construction Issues

### 2.3.1 Foundation Construction

On the basis of the prevailing geology and assuming that there are no areas of significantly filled ground, it is anticipated that shallow strip or spread foundations could be utilised at this site. It should be appreciated that an intrusive investigation will be required to validate this opinion.

### 2.3.2 Site Won Materials

Where granular superficial deposits outcrop, it is possible that the resulting soil may provide a suitable bulk granular fill and may prove suitable for re-compaction.

### 2.3.3 Disposal of Site Materials

If made ground is present then contamination/WAC testing will be required to establish the nature of the underlying soil before disposal to a licensed landfill site. However, it is anticipated that the naturally occurring soils would not be significantly contaminated, thus would probably be accepted by a waste disposal site catering for inert material.

<sup>6</sup> <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html>

<sup>7</sup> See Groundsure report



## 2.4. Mining and Natural Cavities

Whilst no underground mining is anticipated, it should be noted that Ammersham Common Brick Works was historically present 253m south-east of the site. Records don't suggest that these surface workings extended on to the site. Indeed, the closest these works appeared to encroach was 176m to the south-east of the development area.

## 2.5 Waste Management and Gas Monitoring

**Table 3: Landfill Data and Artificial Ground, Recorded and Anticipated**

ENVIRONMENT AGENCY, LOCAL AUTHORITY, BGS & HISTORIC LANDFILLS			
Waste Type	Location	Comments	Monitoring Requirement
Landfills	Within 250m	None recorded within 250m	N
Other Waste Sites	Within 250m	None recorded within 250m	N
Environment Agency/Natural Resources Wales Licensed Waste Sites	Within 250m	None recorded within 250m	N
MADE GROUND & INFILLED GROUNDWORKINGS			
Description	Location	Comments	Monitoring Requirement
Records of Potentially Infilled Features	113m W	Unspecified Heap (1990)	N
	176m SE	Brick Works (1938)	N
	210m SE	Unspecified Pit (1882)	N
	233m SE	Unspecified Pit (1898)	N

Identified deposits of made ground and workings are over 30 years old and are not within close proximity to the site.

## 2.6 Hydrogeology, Hydrology

**Table 4: Ground/Controlled Water Sensitivity and Flooding**

ENVIRONMENT AGENCY AQUIFER DESIGNATION <sup>8</sup>		
Strata	Designation	Description
Superficial Geology On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.
Solid Geology On Site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

<sup>8</sup> See Appendix 1



GROUNDWATER SENSITIVITY <sup>9</sup>				
Description	Location	Details		
Source Protection Zone	On site	Outer catchment, rather than confined aquifer.		
Abstraction Licences	-	None recorded within 250m.		
CONTROLLED WATERS <sup>10</sup>				
Description	Location	Details		
River Network Entries	Within 250m	None recorded within 250m		
Surface Water Features	Within 250m	None recorded within 250m		
POLLUTION INCIDENTS <sup>11</sup>				
Pollutant		Receptor	Location	Date
None recorded		-	Within 250m	-
ENVIRONMENT AGENCY FLOOD RISK <sup>12</sup>				
Description	Location	Details		
Zone 2	-	The site is not situated within a zone 2 flood plain.		
Zone 3	-	The site is not situated within a zone 3 flood plain.		
Flood Defences	-	None recorded within 250m.		
Groundwater Flooding Area	On site	Moderate risk for groundwater flooding to occur.		

## 2.7 Sensitive Land Use

**Table 5: Sensitive Land Uses within 250m**

REGISTERED SENSITIVE LAND USES <sup>13</sup>			
Description	Location	Details	
Green Belt Land	On site	London Area Greenbelt.	

## 2.8 Industrial Land Use and Potential Sources of Contamination

In order for a conceptual site model and preliminary risk assessment to be completed the historical maps and Groundsure data requires analysis to identify any past or present activities on the site and in the area that may have the potential to cause contamination on the site. Guidance has been issued by the Environment Agency, NHBC and Chartered Institute of Environmental Health.<sup>14</sup> Within this document, annex 3 provides examples of important contaminants that are associated with individual uses of land. This data assists in the formulation of any chemical testing regime.

<sup>9</sup> See Appendix 1

<sup>10</sup> See Appendix 1

<sup>11</sup> See Appendix 1

<sup>12</sup> See Appendix 1

<sup>13</sup> See Appendix 1

<sup>14</sup> Guidance for the Safe Development of Housing on Land Affected by Contamination, R&D Publication 66: 2008 Volume 1 and 2.



Those that we consider potentially contaminative according to the guidance are given below:

**Table 6: Potentially Contaminative Sources**

HISTORICAL		
Land Use	Location	Classification
Brick Works	180m SE	Unspecified works/factories/features.
Nursery/Allotment	100m SW	
CURRENT		
Land Use	Location	Classification
Electricity Sub-station	118m NE	Unspecified works/factories/features.
TANKS (Buried and Above Ground)		
Land Use	Location	Classification
-	Within 250m	None identified.

### 3. Preliminary Qualitative Risk Assessment

A limited number of potential contamination hazards on the land has been identified and the risks associated with them are assessed in the following preliminary risk assessment in accordance with industry practice and the 'suitable for use' approach. This has been conducted using the source-pathway-receptor approach. This method dictates that there must be a risk contaminant produced at a 'source' in sufficient concentration to cause harm and there must be a 'pathway' for the contaminant to reach an identifiable 'receptor' for the linkage to be proved and a contamination hazard to be considered present. Not all substances are contaminants and not all contaminants are considered to be a risk. Indeed DEFRA and The Environment Agency state that **'a contaminant is a substance which has the potential to cause harm, while a risk itself is considered to exist if such a substance is present in sufficient concentration to cause harm and a pathway exists for a receptor to be exposed to the substance.'**

R&D Publication 66: 2008 states that the groups at risk of harm (receptors) can be identified by the following categorisation:

1. Humans: site personnel, end users, visitors and adjacent land users.
2. The water environment – receptors: groundwater, surface water, coastal waters and artificial drainage.
3. Ecosystems: plants and animals.
4. Construction/building materials/services

In order to complete a conceptual site model and therefore a preliminary risk assessment, an appraisal of the sources of contamination, potential and actual, on and in the area of the site has therefore been completed with reference to this pollution linkage.<sup>15</sup>

<sup>15</sup> This assessment has been based on the information as to the proposed development that has been provided by the client. If the plans should change, the assessment should be re-evaluated.



### 3.1 Conceptual Ground Model & Preliminary Qualitative Risk Assessment

It is understood that the development proposals currently comprise the construction of an extension to the existing school building. In view of the sensitivity of the end users it is considered that the soil screening values (SSVs) for a residential without plant uptake end use should be employed.

The preliminary risk assessment has been evaluated with reference to the following ratings and definitions:

<b>N/A -</b>	A source-pathway-receptor linkage is not considered to exist and therefore a risk assessment is not required.
<b>Low -</b>	A pollution linkage is unlikely and/or the likelihood of harm occurring is low and of minor consequence.
<b>Moderate -</b>	The linkage exists but further field or laboratory data is required to confirm that the contaminant has reached the receptor and the levels of contaminant are harmful.
<b>High -</b>	The linkage exists and the available data indicates that significant harm may be caused and remedial action could be necessary.

**Table 7: Conceptual Site Model and Preliminary Qualitative Risk Assessment**

CONCEPTUAL SITE MODEL			PRELIMINARY RISK ASSESSMENT	
Pathways	Receptor	Linkage Present?	Risk Rating	Notes
Direct contact/dermal absorption/soil ingestion	Operative	Yes – off-site source identified and operatives are likely to come in contact with the soil.	Moderate	There are potential off site sources of contamination that may have caused contamination of the site.
	End User	Yes – off-site source identified and end users could come in contact with soil.	Moderate	Further testing required to reach a firm conclusion.
	Neighbours	No – no onsite source identified	N/A	This may need to be re-assessed during any intrusive works should this be proven to the contrary.
Inhalation of Dust/Vapours	Operative	Yes – contact with soil likely during works and vapours may accumulate in enclosed spaces.	Moderate	There are potential off site sources of contamination that may have caused contamination of the site.
	End User	Yes – vapours may accumulate in enclosed spaces.	Moderate	Construction activities may create dust on and off site, which, if contaminated, could adversely affect operatives, end users and neighbours.
	Neighbours	Yes – neighbouring properties present and possible inhalation of dust during the works.	Moderate	In the event that harmful vapours are present they may accumulate in enclosed spaces, affecting operatives, end users and neighbours Further testing required to reach a firm conclusion.
Ingestion of fruit/vegetables and/or waters	Operative	No – no edible plants or contained water sources in the area of the proposed new works.	N/A	
	End User	Yes – some soft landscaping proposed as part of the new development.	Low to Moderate	There are potential off site sources of contamination that may have caused contamination of the site. Further testing required to reach a firm conclusion.
	Neighbours	No – no onsite source identified	N/A	This may need to be re-assessed during any intrusive works should this be proven to the contrary.
Migration of hazardous gases via permeable strata	Operative	Yes – limited off site sources. No potential on-site source identified.	Low	If significant made ground considered capable of producing harmful gases is revealed during the investigation works, the monitoring regime may require reconsideration to take into account a higher potential risk.
	End User		Low	
	Neighbours		Low	





Spillage/loss/run off direct to receiving water	Controlled Waters	No – no controlled waters within 250m.	N/A	
Migration via permeable unsaturated strata	Controlled Waters	No – no onsite source identified.	N/A	This may need to be re-assessed during any intrusive works should this be proven to the contrary.
Run off via drainage/sewers etc	Controlled Waters	No – no onsite source identified.	N/A	
Direct contact with contaminated soils	Building Materials	Yes – possible source off site source, such that foundation and service installation materials may be affected by the site soil.	Moderate	There are potential off site sources of contamination that may have caused contamination of the site. Further testing required to reach a firm conclusion.
Direct contact with contaminated groundwater				
Exposure to Radon	Operative End User	No – not in a radon affected area.	N/A	The publication BR211 states that no protection measures are necessary.
Unexploded Ordnance (UXO) Risk	Operative	Yes – the online data reviewed <sup>16</sup> indicates a Low indicative UXO risk.	Low	Such a risk is at a level where it need not be considered.

## Notes:

1. The above data and table is a qualitative assessment of the probable risks identified at this site, based on the information made available to us from the client, third party professional data and walkover survey.
2. Should any additional or new data come to light, the risk assessment should be revisited and any necessary changes made to any recommendations resulting from this study.
3. Where further testing is recommended as part of the risk assessment, this is in order to provide a quantitative assessment of any contamination issues. It should at all times be considered that uncertainties may remain, and therefore any testing regime and ground investigation philosophy should be ready to accommodate any necessary alterations should any data come to light or it become evident that it has not been previously considered.

<sup>16</sup> Zetica UXO Risk Maps: <https://zeticauxo.com/downloads-and-resources/risk-maps/> accessed on 05.02.20



## 4. Intrusive Investigation

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### 4.1 Site Investigation Philosophy

The information from the Phase 1 Desk Study shows there are a limited number of potential sources of contamination in the surrounding area. In view of the above, any intrusive investigation should be undertaken in accordance with the sampling strategies given in BS10175: 2011 +A2:2017 and CLR4:1994. These two sampling strategies may be classified as:

- Non Targeted – using a defined sampling pattern (BS10175)
- Targeted – based on prior knowledge and professional judgement (CLR4)

These sampling strategies are considered in more detail below. However, it is emphasised that they can be used individually or in combination depending on the depth of site knowledge.

#### **Non Targeted Sampling**

If no obvious 'hot spots' of contamination have been identified on a site, it would be recommended that a stratified random pattern of sampling points be considered. This work should be undertaken with reference to BS10175: 2011 +A2: 2017 *Investigation of potentially contaminated sites – Code of practice: 7.6*, and BS5930 2015, *Code of practice for ground investigations*.

#### **Targeted Sampling**

If a possible 'hot spot' of contamination has been identified on a site, it is recommended that a herringbone pattern of sampling points be considered in the immediate vicinity. If strong evidence of contamination has then been identified, it is recommended that sampling be highly focused to reflect that evidence and the investigator's experience. This work should be undertaken with reference to CLR4, *Sampling Strategies for Contaminated Land, 1994*.

The density of sampling required is defined in BS10175: 2011: +A2: 2017: 7.7.2.2.3, which indicates that an *exploratory* investigation usually requires a lower density sample spacing than does a *main* investigation. The BS goes on to state that *the actual density should depend upon the confidence and robustness required of decisions that will be based on the information obtained. Thus the area and depth of interest will be related to the contaminants present, the pathways and the receptors. Typical densities of sampling grids can vary from 25m to 50m centres for exploratory investigations, and 10m to 25m centres for main investigations.*

### 4.2 Site Specific Investigation

In view of the information provided above it is considered that an investigation of the site should include the following main elements.



#### 4.2.1 Contamination Assessment

It may be appreciated that BS 10175 clause 7.7.2.2.3 suggests that the number of sampling points at the site should be based on a minimum of three testing locations or the size of the site with respect to the appropriate grid spacing, whichever the greater. On the basis of the site area being 0.03ha, the number of sampling points at the site should be considered with respect to the table below.

<b>Table 8: Summary of Sampling Strategy</b>					
<b>NUMBER OF SAMPLING POINTS</b>					
	<b>Soil</b>	<b>Water</b>	<b>Asbestos</b>	<b>Standpipes</b>	<b>Standpipe Readings</b>
Exploratory Investigation 50m x 50m grid	3	-	3	*	*
Target Areas	Should be assessed during any investigation.				

\*Should a significant thickness of made ground be revealed, standpipes should be installed and a subsequent regime of gas monitoring be undertaken.

Chemical testing should be undertaken on the above grid spacing and the following standard testing regime should be undertaken:

- **Metals** – Cd, Cr, Cu, Hg, Ni, Pb, Zn, V.
- **Semi Metals and Non Metals** – As, Se
- **Hydrocarbons** – Polycyclic aromatic hydrocarbons (PAH EPA16),
- **Others** – pH, Organic Content.
- **Asbestos**

#### Sampling Method

Investigation should include obtaining suitable soil samples to be subjected to chemical sampling. The sampling strategy should employ the non-targeted strategy given above in the first instance, i.e. at least three sampling points, if it is anticipated that made ground is significant across the site. However, if the made ground at the site is thought to be localised to specific areas, then the targeted strategy should be used. It should be possible to carry out the above work with a windowless sampling drilling rig, however, it may be more pragmatic to employ hand-held digging tools for a targeted strategy. Furthermore, should significant thicknesses of made ground be revealed, then the investigation should include the installation of three gas monitoring standpipes for subsequent monitoring.

#### Gas Monitoring

If required, the final gas monitoring regime should be undertaken in accordance with Table 4.2 of CIRIA C665: 2007: *Assessing risks posed by hazardous ground gasses to buildings*. In that document guidance for the frequency of monitoring is provided on tables 5.5a and 5.5b *Typical/idealised frequency and period of monitoring* on page 60. For convenience, these tables have been combined and reproduced below.

**Table 9: Typical/idealised Frequency and Period of Monitoring.**

Sensitivity of development	Generation potential of source				
	Very low	Low	Moderate	High	Very High
Low (commercial)	4/1	6/2	6/3	12/6	12/12
<b>Moderate (flats)</b>	<b>6/2</b>	<b>6/3</b>	<b>9/6</b>	<b>12/12</b>	<b>24/24</b>
High (residential + gardens)	6/3	9/6	12/6	24/12	24/24

**Notes:**

- a) The first number is the minimum number of readings and the second number is the minimum period in months, for example 4/1 – Four sets of readings over 1 month.
- b) At least two sets of readings must be at low and falling atmospheric pressure (but not restricted to periods below 1000mb) known as worst case conditions.
- c) The frequency and period stated are considered to represent typical minimum requirements. Depending on specific circumstances fewer or additional readings may be required (e.g. any such variation subject to site specific justification). The NHBC guidance is also recommending these periods/frequencies of monitoring.
- d) Historical data can be used as part of the data set.
- e) Not all sites will require gas monitoring. However this would need to be confirmed with demonstrable evidence.
- f) Placing high sensitivity end use on a high hazard site is not normally acceptable unless the source is removed or treated to reduce its gassing potential. Under such circumstances long-term monitoring may not be appropriate or required.
- g) This guidance should be read in conjunction with BS 8576:2013 figure 6 which may justify fewer readings in the first instance, where the generation potential is considered to be very low to low. However, this should be undertaken pragmatically, and further readings obtained according to the above table, where a potentially significant source is identified and initial readings suggest that remedial measures are not necessary.

**4.2.2 Geotechnical Assessment**

In addition to the above contamination assessment which is likely to be required by planning authorities and insurance providers, the following investigation strategy could be considered:

**Sampling Method**

It is anticipated that a windowless sampling drilling rig will be able to gain sufficient data in regard to the near surface soils. Moreover, such equipment should be able to undertake Standard Penetration Testing (SPT) and/or Dynamic Probing.



## **Soakaway Design**

Should soakaway data be required for drainage design, trial pits could be excavated and infiltration tests conducted. Alternatively these tests could be undertaken within boreholes.

## **Geotechnical Testing**

An allowance for geotechnical testing of the soils should be included in any ground investigation.

### **4.2.3 Reporting**

The above data will need to be formulated into a formal assessment that should include the following:

- Geotechnical recommendations, particularly if existing loads are to increase.
- Contamination assessment.
- Contamination remediation strategy.
- Any recommendations for further work, if required and including validation reports where site remediation is necessary.

As soon as is practicable, and prior to the above, this Phase 1 report should be forwarded to the relevant authorities, in order to ensure they have sufficient time to review and discuss any issues.



## 5. References

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- British Standards Institution (2015), BS5930: *Code of practice for site investigations*, B.S.I., London.
- British Standards Institution (2007), Amendment No 1 to BS5930: *Code of practice for site investigations*, B.S.I., London.
- British Standards Institution (2011) +A2:2017, BS 10175: *Investigation of potentially contaminated sites – Code of Practice*, British Standards Institute.
- British Standards Institution (2013), BS 8576 *Guidance on Investigations for Ground Gas – Permanent Gases and Volatile Organic Compounds*.
- Department for Environment, Food and Rural Affairs and the Environment Agency, DEFRA R&D Publications, Environment Agency, Bristol.
- CLR 2, 1994, *Guidance on preliminary site inspection of contaminated land*, Volume 1.
- CLR 4, 1994, *Sampling Strategies for contaminated land*.
- R&D Publication 66: 2008 *Guidance for the Safe Development of Housing on Land Affected by Contamination*.
- CIRIA Report C665 (2007), *Assessing risks posed by ground gasses in buildings*.
- The Environment Agency: *Groundwater source protection*.



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## Appendix 1

### Groundsure Reports

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DR CHALLONERS HIGH SCHOOL, COKES LANE, LITTLE CHALFONT, HP7 9QB

**Order Details**

**Date:** 10/02/2020  
**Your ref:** C475\_20\_E\_695\_PO-0596  
**Our Ref:** GS-6608040  
**Client:** Rogers Geotechnical Services

**Site Details**

**Location:** 498972 197428  
**Area:** 0.03 ha



**Summary of findings**

p. 2 **Aerial image**

p. 8

**OS MasterMap site plan**

p.11 [groundsure.com/insightuserguide](https://groundsure.com/insightuserguide)

## Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
<a href="#">12</a>	<a href="#">1.1</a>	<a href="#"><u>Historical industrial land uses</u></a>	0	0	15	15	-
<a href="#">14</a>	<a href="#">1.2</a>	<a href="#"><u>Historical tanks</u></a>	0	0	0	1	-
<a href="#">14</a>	<a href="#">1.3</a>	<a href="#"><u>Historical energy features</u></a>	0	0	3	9	-
15	1.4	Historical petrol stations	0	0	0	0	-
<a href="#">15</a>	<a href="#">1.5</a>	<a href="#"><u>Historical garages</u></a>	0	0	0	5	-
16	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped	On site	0-50m	50-250m	250-500m	500-2000m
<a href="#">17</a>	<a href="#">2.1</a>	<a href="#"><u>Historical industrial land uses</u></a>	0	0	17	15	-
<a href="#">19</a>	<a href="#">2.2</a>	<a href="#"><u>Historical tanks</u></a>	0	0	0	1	-
<a href="#">19</a>	<a href="#">2.3</a>	<a href="#"><u>Historical energy features</u></a>	0	0	11	27	-
21	2.4	Historical petrol stations	0	0	0	0	-
<a href="#">21</a>	<a href="#">2.5</a>	<a href="#"><u>Historical garages</u></a>	0	0	0	7	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
22	3.1	Active or recent landfill	0	0	0	0	-
22	3.2	Historical landfill (BGS records)	0	0	0	0	-
23	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
23	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
23	3.5	Historical waste sites	0	0	0	0	-
23	3.6	Licensed waste sites	0	0	0	0	-
<a href="#">23</a>	<a href="#">3.7</a>	<a href="#"><u>Waste exemptions</u></a>	0	0	0	2	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
<a href="#">25</a>	<a href="#">4.1</a>	<a href="#"><u>Recent industrial land uses</u></a>	0	0	5	-	-
26	4.2	Current or recent petrol stations	0	0	0	0	-
26	4.3	Electricity cables	0	0	0	0	-
26	4.4	Gas pipelines	0	0	0	0	-
26	4.5	Sites determined as Contaminated Land	0	0	0	0	-



27	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
27	4.7	Regulated explosive sites	0	0	0	0	-
27	4.8	Hazardous substance storage/usage	0	0	0	0	-
27	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
27	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
<b>28</b>	<b>4.11</b>	<b><u>Licensed pollutant release (Part A(2)/B)</u></b>	0	0	0	3	-
<b>28</b>	<b>4.12</b>	<b><u>Radioactive Substance Authorisations</u></b>	0	0	0	1	-
<b>29</b>	<b>4.13</b>	<b><u>Licensed Discharges to controlled waters</u></b>	0	0	0	4	-
29	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
<b>30</b>	<b>4.15</b>	<b><u>Pollutant release to public sewer</u></b>	0	0	0	1	-
30	4.16	List 1 Dangerous Substances	0	0	0	0	-
30	4.17	List 2 Dangerous Substances	0	0	0	0	-
30	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
31	4.19	Pollution inventory substances	0	0	0	0	-
31	4.20	Pollution inventory waste transfers	0	0	0	0	-
31	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
<b>32</b>	<b>5.1</b>	<b><u>Superficial aquifer</u></b>	Identified (within 500m)				
<b>33</b>	<b>5.2</b>	<b><u>Bedrock aquifer</u></b>	Identified (within 500m)				
<b>34</b>	<b>5.3</b>	<b><u>Groundwater vulnerability</u></b>	Identified (within 50m)				
<b>35</b>	<b>5.4</b>	<b><u>Groundwater vulnerability- soluble rock risk</u></b>	Identified (within 0m)				
35	5.5	Groundwater vulnerability- local information	None (within 0m)				
<b>36</b>	<b>5.6</b>	<b><u>Groundwater abstractions</u></b>	0	0	0	0	1
<b>37</b>	<b>5.7</b>	<b><u>Surface water abstractions</u></b>	0	0	0	0	4
<b>38</b>	<b>5.8</b>	<b><u>Potable abstractions</u></b>	0	0	0	0	1
<b>39</b>	<b>5.9</b>	<b><u>Source Protection Zones</u></b>	1	0	0	0	-
39	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
40	6.1	Water Network (OS MasterMap)	0	0	0	-	-

40	6.2	Surface water features	0	0	0	-	-
<b>41</b>	<b>6.3</b>	<b><u>WFD Surface water body catchments</u></b>	1	-	-	-	-
<b>41</b>	<b>6.4</b>	<b><u>WFD Surface water bodies</u></b>	0	0	0	-	-
<b>42</b>	<b>6.5</b>	<b><u>WFD Groundwater bodies</u></b>	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
43	7.1	Risk of Flooding from Rivers and Sea (RoFRaS)	None (within 50m)				
43	7.2	Historical Flood Events	0	0	0	-	-
43	7.3	Flood Defences	0	0	0	-	-
43	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
44	7.5	Flood Storage Areas	0	0	0	-	-
45	7.6	Flood Zone 2	None (within 50m)				
45	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
46	8.1	Surface water flooding	Negligible (within 50m)				
Page	Section	Groundwater flooding					
<b>47</b>	<b>9.1</b>	<b><u>Groundwater flooding</u></b>	Moderate (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
48	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
49	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
49	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
49	10.4	Special Protection Areas (SPA)	0	0	0	0	0
49	10.5	National Nature Reserves (NNR)	0	0	0	0	0
50	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
<b>50</b>	<b>10.7</b>	<b><u>Designated Ancient Woodland</u></b>	0	1	1	0	24
51	10.8	Biosphere Reserves	0	0	0	0	0
51	10.9	Forest Parks	0	0	0	0	0
52	10.10	Marine Conservation Zones	0	0	0	0	0
<b>52</b>	<b>10.11</b>	<b><u>Green Belt</u></b>	1	0	0	0	0
52	10.12	Proposed Ramsar sites	0	0	0	0	0



52	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
53	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
53	10.15	Nitrate Sensitive Areas	0	0	0	0	0
53	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
<b>54</b>	<b>10.17</b>	<b><u>SSSI Impact Risk Zones</u></b>	<b>1</b>	-	-	-	-
55	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
56	11.1	World Heritage Sites	0	0	0	-	-
57	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
57	11.3	National Parks	0	0	0	-	-
<b>57</b>	<b>11.4</b>	<b><u>Listed Buildings</u></b>	<b>0</b>	<b>0</b>	<b>4</b>	-	-
58	11.5	Conservation Areas	0	0	0	-	-
58	11.6	Scheduled Ancient Monuments	0	0	0	-	-
58	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
<b>59</b>	<b>12.1</b>	<b><u>Agricultural Land Classification</u></b>	Urban (within 250m)				
60	12.2	Open Access Land	0	0	0	-	-
<b>60</b>	<b>12.3</b>	<b><u>Tree Felling Licences</u></b>	<b>0</b>	<b>0</b>	<b>2</b>	-	-
60	12.4	Environmental Stewardship Schemes	0	0	0	-	-
60	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
<b>61</b>	<b>13.1</b>	<b><u>Priority Habitat Inventory</u></b>	<b>0</b>	<b>2</b>	<b>13</b>	-	-
62	13.2	Habitat Networks	0	0	0	-	-
62	13.3	Open Mosaic Habitat	0	0	0	-	-
63	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
<b>64</b>	<b>14.1</b>	<b><u>10k Availability</u></b>	Identified (within 500m)				
<b>65</b>	<b>14.2</b>	<b><u>Artificial and made ground (10k)</u></b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3</b>	-
<b>67</b>	<b>14.3</b>	<b><u>Superficial geology (10k)</u></b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	-

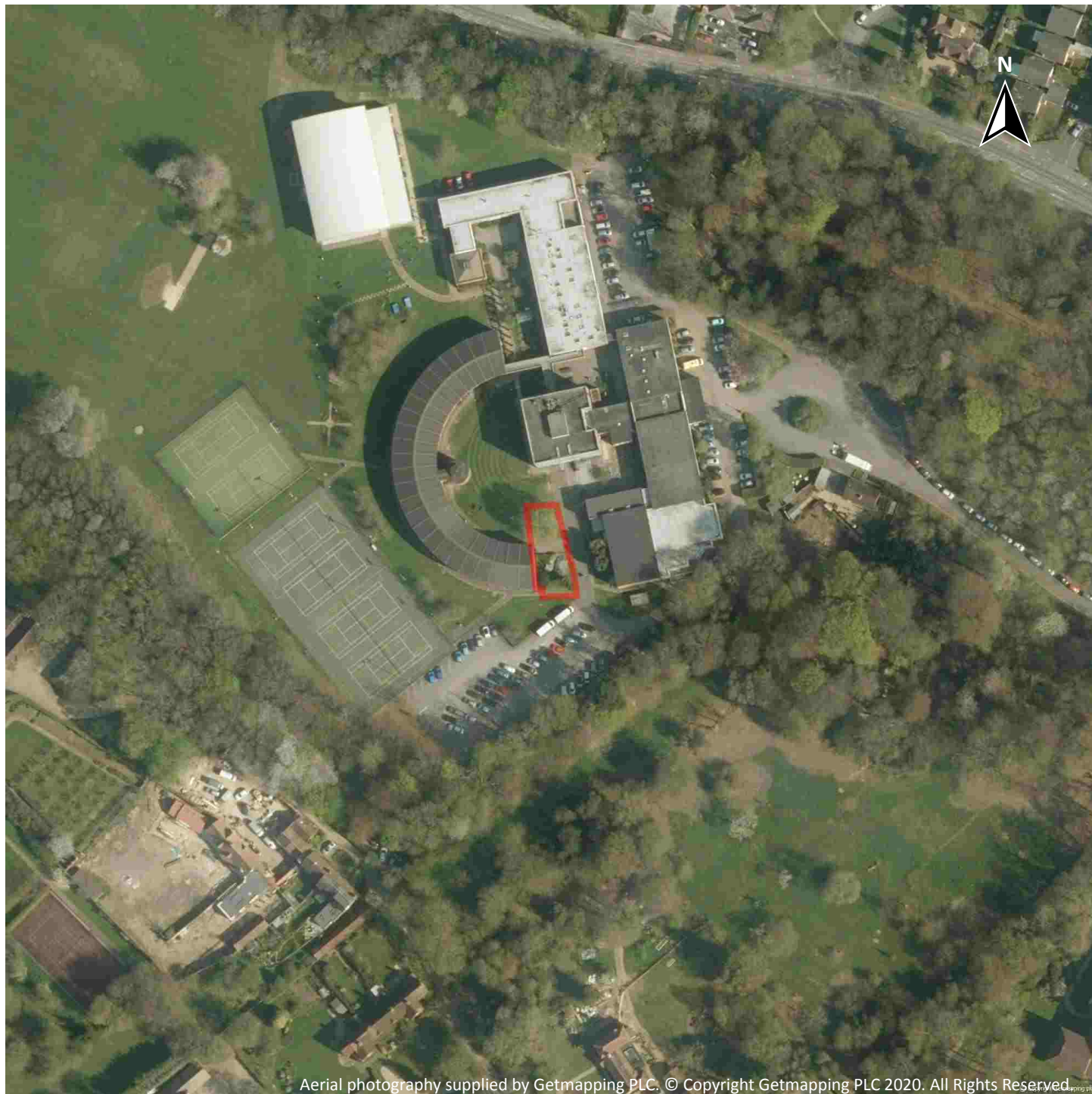
68	14.4	Landslip (10k)	0	0	0	0	-
<b>69</b>	<b>14.5</b>	<b><u>Bedrock geology (10k)</u></b>	1	0	0	0	-
70	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
<b>71</b>	<b>15.1</b>	<b><u>50k Availability</u></b>	Identified (within 500m)				
72	15.2	Artificial and made ground (50k)	0	0	0	0	-
72	15.3	Artificial ground permeability (50k)	0	0	-	-	-
<b>73</b>	<b>15.4</b>	<b><u>Superficial geology (50k)</u></b>	1	0	0	0	-
<b>74</b>	<b>15.5</b>	<b><u>Superficial permeability (50k)</u></b>	Identified (within 50m)				
74	15.6	Landslip (50k)	0	0	0	0	-
74	15.7	Landslip permeability (50k)	None (within 50m)				
<b>75</b>	<b>15.8</b>	<b><u>Bedrock geology (50k)</u></b>	1	0	0	0	-
<b>76</b>	<b>15.9</b>	<b><u>Bedrock permeability (50k)</u></b>	Identified (within 50m)				
76	15.10	Bedrock faults and other linear features (50k)	0	0	0	0	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
77	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence					
<b>78</b>	<b>17.1</b>	<b><u>Shrink swell clays</u></b>	Negligible (within 50m)				
<b>79</b>	<b>17.2</b>	<b><u>Running sands</u></b>	Negligible (within 50m)				
<b>80</b>	<b>17.3</b>	<b><u>Compressible deposits</u></b>	Negligible (within 50m)				
<b>81</b>	<b>17.4</b>	<b><u>Collapsible deposits</u></b>	Very low (within 50m)				
<b>82</b>	<b>17.5</b>	<b><u>Landslides</u></b>	Very low (within 50m)				
<b>83</b>	<b>17.6</b>	<b><u>Ground dissolution of soluble rocks</u></b>	Very low (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
85	18.1	Natural cavities	0	0	0	0	-
<b>86</b>	<b>18.2</b>	<b><u>BritPits</u></b>	0	0	0	1	-
<b>86</b>	<b>18.3</b>	<b><u>Surface ground workings</u></b>	0	0	15	-	-
87	18.4	Underground workings	0	0	0	0	0
87	18.5	Historical Mineral Planning Areas	0	0	0	0	-



<b>87</b>	<b>18.6</b>	<b><u>Non-coal mining</u></b>	1	1	0	0	0
<b>88</b>	<b>18.7</b>	<b><u>Mining cavities</u></b>	0	0	0	1	0
88	18.8	JPB mining areas	None (within 0m)				
88	18.9	Coal mining	None (within 0m)				
89	18.10	Brine areas	None (within 0m)				
89	18.11	Gypsum areas	None (within 0m)				
89	18.12	Tin mining	None (within 0m)				
89	18.13	Clay mining	None (within 0m)				
Page	Section	Radon					
<b>90</b>	<b>19.1</b>	<b><u>Radon</u></b>	Less than 1% (within 0m)				
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
<b>91</b>	<b>20.1</b>	<b><u>BGS Estimated Background Soil Chemistry</u></b>	1	1	-	-	-
91	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
91	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
92	21.1	Underground railways (London)	0	0	0	-	-
92	21.2	Underground railways (Non-London)	0	0	0	-	-
92	21.3	Railway tunnels	0	0	0	-	-
92	21.4	Historical railway and tunnel features	0	0	0	-	-
92	21.5	Royal Mail tunnels	0	0	0	-	-
93	21.6	Historical railways	0	0	0	-	-
93	21.7	Railways	0	0	0	-	-
93	21.8	Crossrail 1	0	0	0	0	-
93	21.9	Crossrail 2	0	0	0	0	-
93	21.10	HS2	0	0	0	0	-



## Recent aerial photograph



Capture Date: 20/04/2015

Site Area: 0.03ha



## Recent site history - 2010 aerial photograph



Capture Date: 01/09/2010

Site Area: 0.03ha





## Recent site history - 1999 aerial photograph

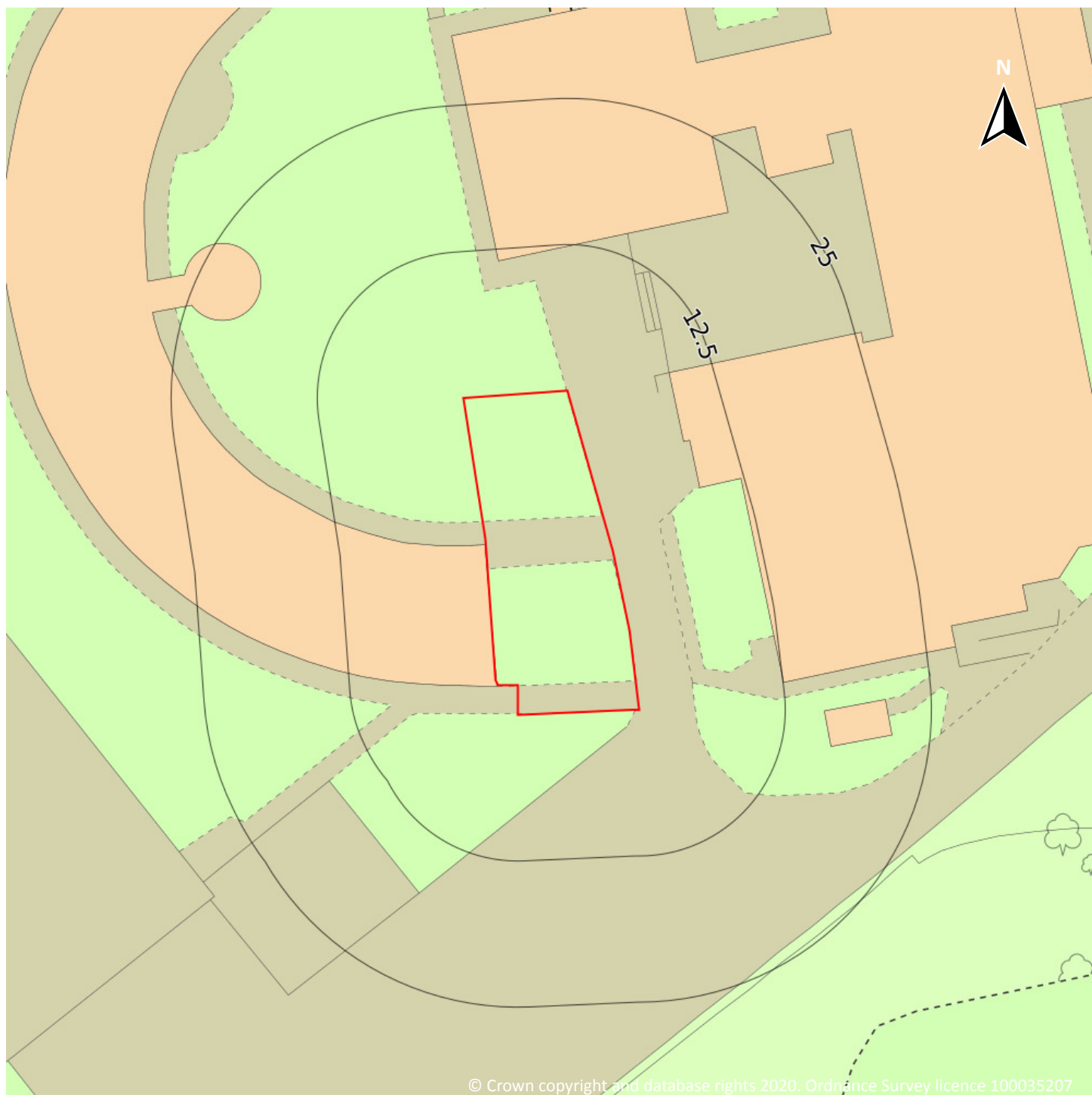


Capture Date: 12/10/1999

Site Area: 0.03ha



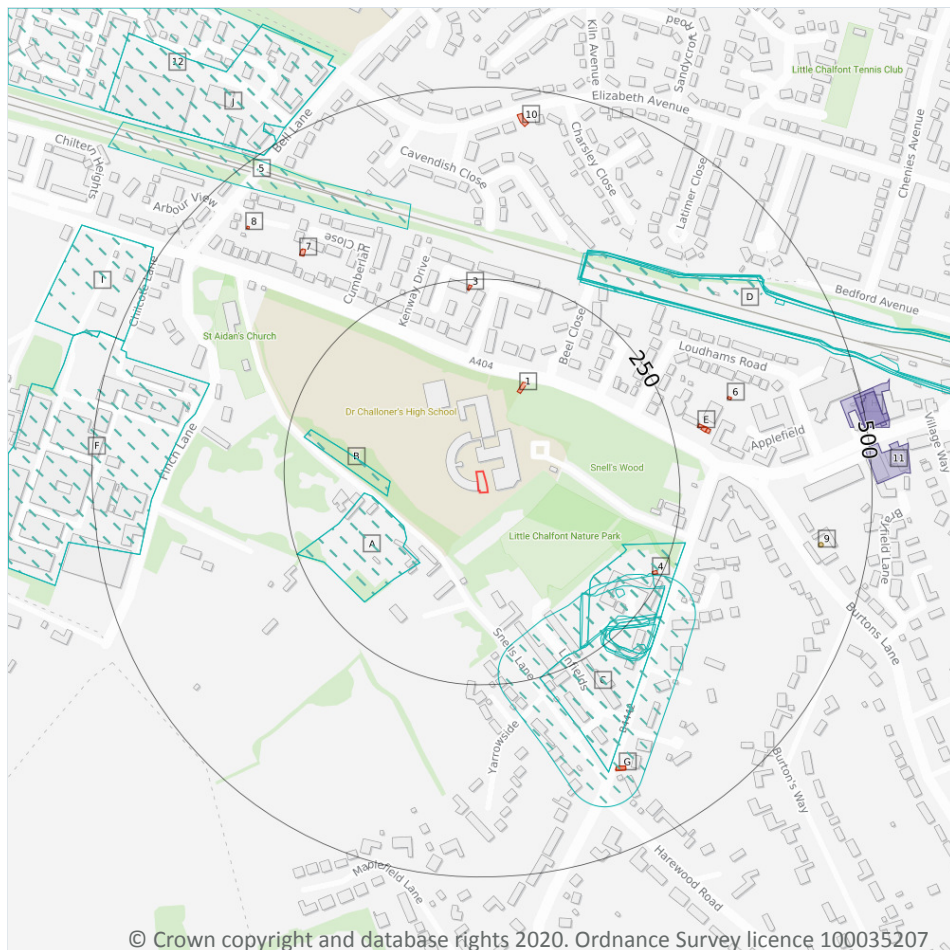
## OS MasterMap site plan



Site Area: 0.03ha



## 1 Past land use



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features
- Historical garages

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### 1.1 Historical industrial land uses

Records within 500m

30

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

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

ID	Location	Land use	Dates present	Group ID
A	108m SW	Nurseries	1976	1918658





ID	Location	Land use	Dates present	Group ID
A	108m SW	Nurseries	1990	1951912
B	113m W	Unspecified Heap	1990	1900145
B	113m W	Unspecified Heap	1976	1910712
C	176m SE	Brick Works	1913 - 1938	1896510
C	176m SE	Brick Works	1897	1955121
2	179m SE	Brick Works	1897	1954569
C	180m SE	Brick Works	1898	1892737
C	180m SE	Brick Works	1882	1903577
C	210m SE	Unspecified Pit	1882	1879644
C	231m SE	Unspecified Pit	1897 - 1898	1910246
C	233m SE	Unspecified Ground Workings	1882	1852733
C	237m SE	Unspecified Pit	1897	1932319
C	241m SE	Unspecified Pit	1913	1943894
C	241m SE	Unspecified Pit	1938	1958169
D	277m NE	Railway Sidings	1926	1899449
D	277m NE	Railway Sidings	1897	1940818
D	279m NE	Railway Sidings	1959	1901469
D	280m NE	Railway Sidings	1938	1940730
D	282m NE	Railway Sidings	1897	1889992
D	282m NE	Railway Sidings	1923	1958013
5	328m N	Cuttings	1959	1882551
F	366m W	Unspecified Works	1976	1931247
F	366m W	Unspecified Works	1990	1949113
D	439m NE	Railway Building	1897	1866848
I	488m W	Unspecified Works	1976	1899929
I	488m W	Unspecified Works	1990	1947073
12	496m NW	Timber Yard	1990	1874349
J	496m NW	Unspecified Works	1990	1942509



ID	Location	Land use	Dates present	Group ID
J	496m NW	Unspecified Works	1976	1964354

*This data is sourced from Ordnance Survey / Groundsure.*

## 1.2 Historical tanks

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

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

ID	Location	Land use	Dates present	Group ID
9	436m E	Unspecified Tank	1925	306604

*This data is sourced from Ordnance Survey / Groundsure.*

## 1.3 Historical energy features

<b>Records within 500m</b>	<b>12</b>
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Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

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

ID	Location	Land use	Dates present	Group ID
1	112m NE	Electricity Substation	1978 - 1995	200596
3	236m N	Electricity Substation	1972 - 1993	196994
4	237m SE	Electricity Substation	1989 - 1997	201160
E	284m E	Electricity Substation	1978 - 1995	202907
E	288m E	Electricity Substation	1985 - 1997	203528
E	292m E	Electricity Substation	1971	201102



ID	Location	Land use	Dates present	Group ID
6	332m E	Electricity Substation	1978 - 1995	196211
7	359m NW	Electricity Substation	1972 - 1993	210679
G	394m SE	Electricity Substation	1971	204028
G	394m SE	Electricity Substation	1985 - 1997	212251
8	433m NW	Electricity Substation	1991 - 1993	198322
10	452m N	Electricity Substation	1978 - 1995	208847

*This data is sourced from Ordnance Survey / Groundsure.*

## 1.4 Historical petrol stations

<b>Records within 500m</b>	<b>0</b>
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Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

*This data is sourced from Ordnance Survey / Groundsure.*

## 1.5 Historical garages

<b>Records within 500m</b>	<b>5</b>
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Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

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

ID	Location	Land use	Dates present	Group ID
H	473m E	Garage	1978	63198
H	491m E	Garage	1962 - 1989	65289
H	492m E	Garage	1961	65238
11	494m E	Garage	1961	61245
H	494m E	Garage	1993 - 1995	63611

*This data is sourced from Ordnance Survey / Groundsure.*

## 1.6 Historical military land

**Records within 500m**

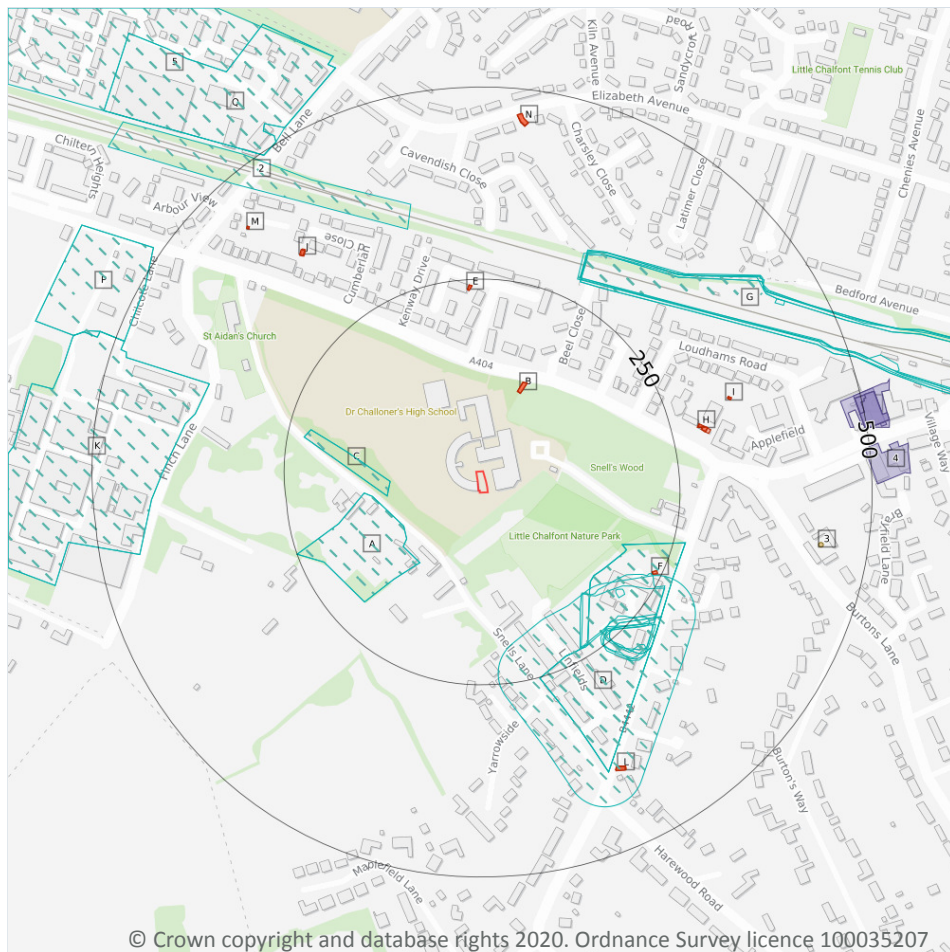
**0**

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

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



## 2 Past land use - un-grouped



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features
- Historical garages

### 2.1 Historical industrial land uses

Records within 500m

32

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

Features are displayed on the Past land use - un-grouped map on **page 17**

ID	Location	Land Use	Date	Group ID
A	108m SW	Nurseries	1990	1951912
A	108m SW	Nurseries	1976	1918658
C	113m W	Unspecified Heap	1990	1900145



ID	Location	Land Use	Date	Group ID
C	113m W	Unspecified Heap	1976	1910712
D	176m SE	Brick Works	1938	1896510
D	176m SE	Brick Works	1913	1896510
D	176m SE	Brick Works	1897	1955121
1	179m SE	Brick Works	1897	1954569
D	180m SE	Brick Works	1898	1892737
D	180m SE	Brick Works	1882	1903577
D	210m SE	Unspecified Pit	1882	1879644
D	231m SE	Unspecified Pit	1897	1910246
D	233m SE	Unspecified Ground Workings	1882	1852733
D	237m SE	Unspecified Pit	1897	1932319
D	239m SE	Unspecified Pit	1898	1910246
D	241m SE	Unspecified Pit	1938	1958169
D	241m SE	Unspecified Pit	1913	1943894
G	277m NE	Railway Sidings	1926	1899449
G	277m NE	Railway Sidings	1897	1940818
G	279m NE	Railway Sidings	1959	1901469
G	280m NE	Railway Sidings	1938	1940730
G	282m NE	Railway Sidings	1897	1889992
G	282m NE	Railway Sidings	1923	1958013
2	328m N	Cuttings	1959	1882551
K	366m W	Unspecified Works	1990	1949113
K	366m W	Unspecified Works	1976	1931247
G	439m NE	Railway Building	1897	1866848
P	488m W	Unspecified Works	1990	1947073
P	488m W	Unspecified Works	1976	1899929
5	496m NW	Timber Yard	1990	1874349
Q	496m NW	Unspecified Works	1990	1942509



ID	Location	Land Use	Date	Group ID
Q	496m NW	Unspecified Works	1976	1964354

*This data is sourced from Ordnance Survey / Groundsure.*

## 2.2 Historical tanks

<b>Records within 500m</b>	<b>1</b>
----------------------------	----------

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

Features are displayed on the Past land use - un-grouped map on **page 17**

ID	Location	Land Use	Date	Group ID
3	436m E	Unspecified Tank	1925	306604

*This data is sourced from Ordnance Survey / Groundsure.*

## 2.3 Historical energy features

<b>Records within 500m</b>	<b>38</b>
----------------------------	-----------

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

Features are displayed on the Past land use - un-grouped map on **page 17**

ID	Location	Land Use	Date	Group ID
B	112m NE	Electricity Substation	1993	200596
B	112m NE	Electricity Substation	1995	200596
B	113m NE	Electricity Substation	1978	200596
B	113m NE	Electricity Substation	1989	200596
E	236m N	Electricity Substation	1972	196994
E	236m N	Electricity Substation	1993	196994
E	236m N	Electricity Substation	1985	196994
E	236m N	Electricity Substation	1991	196994
E	236m N	Electricity Substation	1991	196994

ID	Location	Land Use	Date	Group ID
F	237m SE	Electricity Substation	1989	201160
F	238m SE	Electricity Substation	1997	201160
H	284m E	Electricity Substation	1978	202907
H	284m E	Electricity Substation	1995	202907
H	284m E	Electricity Substation	1993	202907
H	285m E	Electricity Substation	1989	202907
H	288m E	Electricity Substation	1997	203528
H	289m E	Electricity Substation	1985	203528
H	289m E	Electricity Substation	1989	203528
H	292m E	Electricity Substation	1971	201102
I	332m E	Electricity Substation	1978	196211
I	332m E	Electricity Substation	1995	196211
I	332m E	Electricity Substation	1993	196211
I	333m E	Electricity Substation	1989	196211
J	359m NW	Electricity Substation	1985	210679
J	360m NW	Electricity Substation	1993	210679
J	360m NW	Electricity Substation	1991	210679
J	360m NW	Electricity Substation	1972	210679
L	394m SE	Electricity Substation	1971	204028
L	394m SE	Electricity Substation	1985	212251
L	394m SE	Electricity Substation	1989	212251
L	395m SE	Electricity Substation	1997	212251
M	433m NW	Electricity Substation	1991	198322
M	433m NW	Electricity Substation	1991	198322
M	433m NW	Electricity Substation	1993	198322
N	452m N	Electricity Substation	1978	208847
N	452m N	Electricity Substation	1989	208847
N	453m N	Electricity Substation	1995	208847



ID	Location	Land Use	Date	Group ID
N	453m N	Electricity Substation	1993	208847

*This data is sourced from Ordnance Survey / Groundsure.*

## 2.4 Historical petrol stations

<b>Records within 500m</b>	<b>0</b>
----------------------------	----------

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

*This data is sourced from Ordnance Survey / Groundsure.*

## 2.5 Historical garages

<b>Records within 500m</b>	<b>7</b>
----------------------------	----------

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

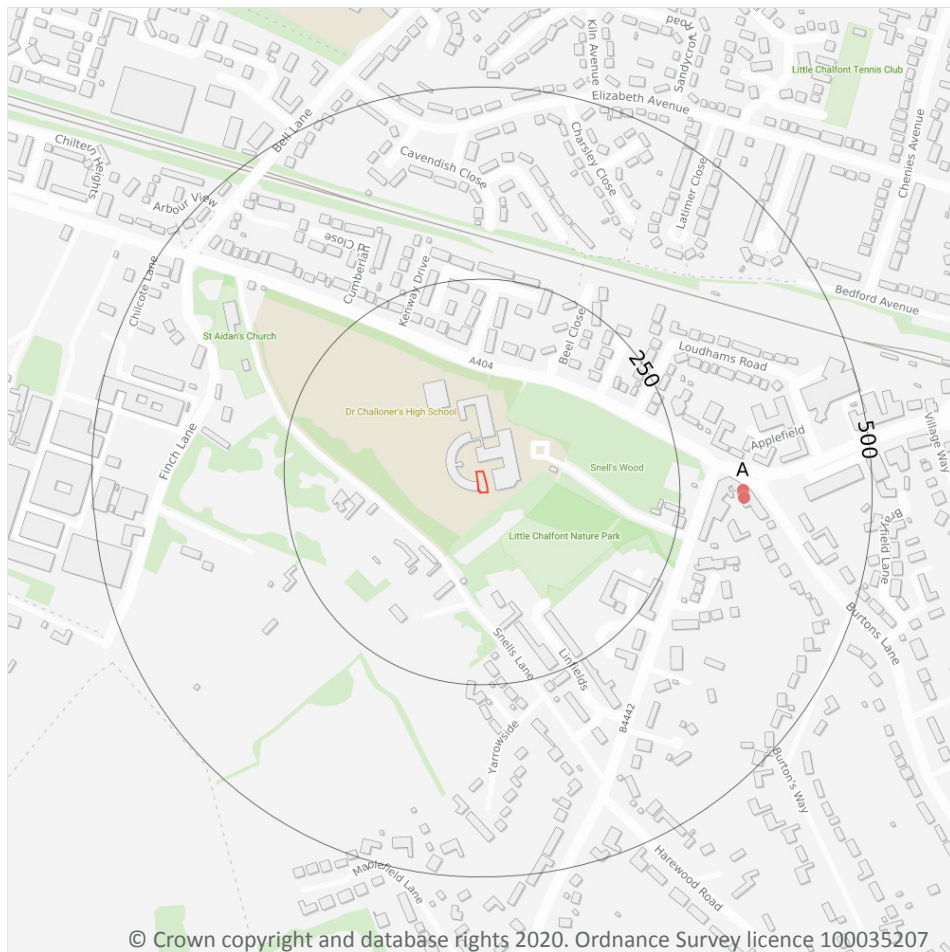
Features are displayed on the Past land use - un-grouped map on **page 17**

ID	Location	Land Use	Date	Group ID
O	473m E	Garage	1978	63198
O	491m E	Garage	1989	65289
O	492m E	Garage	1962	65289
O	492m E	Garage	1961	65238
4	494m E	Garage	1961	61245
O	494m E	Garage	1993	63611
O	494m E	Garage	1995	63611

*This data is sourced from Ordnance Survey / Groundsure.*



## 3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Waste exemptions

### 3.1 Active or recent landfill

Records within 500m

0

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

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

### 3.2 Historical landfill (BGS records)

Records within 500m

0

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

*This data is sourced from the British Geological Survey.*





### 3.3 Historical landfill (LA/mapping records)

**Records within 500m****0**

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

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

### 3.4 Historical landfill (EA/NRW records)

**Records within 500m****0**

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

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

### 3.5 Historical waste sites

**Records within 500m****0**

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

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

### 3.6 Licensed waste sites

**Records within 500m****0**

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

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

### 3.7 Waste exemptions

**Records within 500m****2**

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

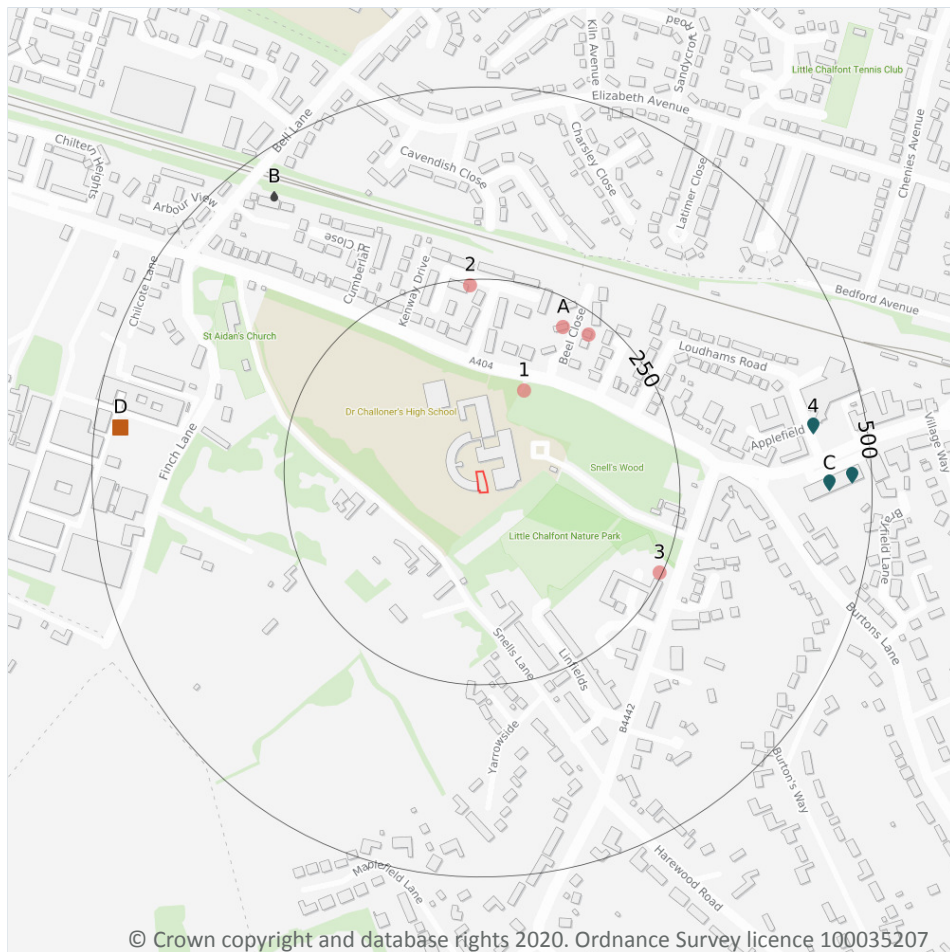
Features are displayed on the Waste and landfill map on **page 22**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	331m E	3 Little Chalfont Pharmacy Nightingales Corner Amersham Buckinghamshire HP7 9PY	EPR/GE5080TA/ A001	Treating waste exemption	Non- Agricultural Waste Only	Sorting and de- naturing of controlled drugs for disposal
A	333m E	Little Chalfont Pharmacy, 3 Nightingales Corner, Little Chalfont, HP7 9PY	WEX075119	Treating waste exemption	Not on a farm	Sorting and de- naturing of controlled drugs for disposal

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



## 4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- Licensed pollutant release (Part A(2)/B)
- Radioactive Substance Authorisations
- Licensed Discharges to controlled waters
- Pollutant release to public sewer

### 4.1 Recent industrial land uses

Records within 250m

5

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 25**

ID	Location	Company	Address	Activity	Category
1	118m NE	Electricity Sub Station	Buckinghamshire, HP7	Electrical Features	Infrastructure and Facilities
A	215m NE	R A C's Airport Cabs	8, Beel Close, Amersham, Buckinghamshire, HP7 9NS	Airlines and Airline Services	Transport, Storage and Delivery



ID	Location	Company	Address	Activity	Category
A	225m NE	Finishing Touches Curtain Services	36, Beel Close, Amersham, Buckinghamshire, HP7 9NS	Curtains and Blinds	Consumer Products
2	243m N	Electricity Sub Station	Buckinghamshire, HP7	Electrical Features	Infrastructure and Facilities
3	247m SE	Electricity Sub Station	Buckinghamshire, HP7	Electrical Features	Infrastructure and Facilities

*This data is sourced from Ordnance Survey.*

## 4.2 Current or recent petrol stations

<b>Records within 500m</b>	<b>0</b>
----------------------------	----------

Open, closed, under development and obsolete petrol stations.

*This data is sourced from Experian.*

## 4.3 Electricity cables

<b>Records within 500m</b>	<b>0</b>
----------------------------	----------

High voltage underground electricity transmission cables.

*This data is sourced from National Grid.*

## 4.4 Gas pipelines

<b>Records within 500m</b>	<b>0</b>
----------------------------	----------

High pressure underground gas transmission pipelines.

*This data is sourced from National Grid.*

## 4.5 Sites determined as Contaminated Land

<b>Records within 500m</b>	<b>0</b>
----------------------------	----------

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

*This data is sourced from Local Authority records.*



## 4.6 Control of Major Accident Hazards (COMAH)

**Records within 500m****0**

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

*This data is sourced from the Health and Safety Executive.*

## 4.7 Regulated explosive sites

**Records within 500m****0**

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

*This data is sourced from the Health and Safety Executive.*

## 4.8 Hazardous substance storage/usage

**Records within 500m****0**

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

*This data is sourced from Local Authority records.*

## 4.9 Historical licensed industrial activities (IPC)

**Records within 500m****0**

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

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

## 4.10 Licensed industrial activities (Part A(1))

**Records within 500m****0**

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

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



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

### Records within 500m

**3**

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

Features are displayed on the Current industrial land use map on **page 25**

ID	Location	Address	Details	
4	431m E	Munn & Chapman, Station Road, Little Chalfont, Buckinghamshire, HP7 9PN	Process: Process Unknown Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
C	444m E	Village Dry Cleaners, 2 Chenies Parade, Little Chalfont, Buckinghamshire, HP7 9PH	Process: Dry Cleaning Status: Current Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
C	473m E	Chalfont Dry Cleaners, 2 Chenies Parade, Little Chalfont, Buckinghamshire, HP7 9PH	Process: Dry Cleaning Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified

*This data is sourced from Local Authority records.*

## 4.12 Radioactive Substance Authorisations

### Records within 500m

**1**

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

Features are displayed on the Current industrial land use map on **page 25**

ID	Location	Address	Details	
D	466m W	Ge Healthcare Ltd, The Grove Centre, White Lion Road, Amersham, Buckinghamshire, HP7 9LL	Operator: Ge Healthcare Ltd Type: Disposal Of Radioactive Waste (was Rsa60 Section 6). Permission number: BE9241 Date of approval: 11/11/2003	Effective from: 09/12/2003 Last date of update: 01/01/2015 Status: Superseded By Variation

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



## 4.13 Licensed Discharges to controlled waters

Records within 500m

4

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

Features are displayed on the Current industrial land use map on **page 25**

ID	Location	Address	Details	
B	444m NW	FACTORY PREMISES, BELL LANE, AMERSH, FACTORY PREMISES, BELL LANE, AME, RSHAM, BUCKS	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: CTCU.0073 Permit Version: 1 Receiving Water: -	Status: REVOKED - UNSPECIFIED Issue date: 10/11/1965 Effective Date: 10/11/1965 Revocation Date: 05/03/1991
B	444m NW	FACTORY PREMISES, BELL LANE, AMERSH, FACTORY PREMISES, BELL LANE, AME, RSHAM, BUCKS	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: CTCU.0075 Permit Version: 1 Receiving Water: -	Status: REVOKED - UNSPECIFIED Issue date: 10/11/1965 Effective Date: 10/11/1965 Revocation Date: 26/07/1991
B	444m NW	FACTORY PREMISES, BELL LANE, AMERSH, FACTORY PREMISES, BELL LANE, AME, RSHAM, BUCKS	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: CTCU.0076 Permit Version: 1 Receiving Water: -	Status: REVOKED - UNSPECIFIED Issue date: 10/11/1965 Effective Date: 10/11/1965 Revocation Date: 16/04/1991
B	444m NW	FACTORY PREMISES, BELL LANE, AMERSH, FACTORY PREMISES, BELL LANE, AME, RSHAM, BUCKS	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: CTCU.0074 Permit Version: 1 Receiving Water: -	Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 10/11/1965 Effective Date: 09/02/1970 Revocation Date: -

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

## 4.14 Pollutant release to surface waters (Red List)

Records within 500m

0

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

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



## 4.15 Pollutant release to public sewer

Records within 500m

1

Discharges of Special Category Effluents to the public sewer.

Features are displayed on the Current industrial land use map on **page 25**

ID	Location	Address	Details	
D	466m W	GE HEALTHCARE LTD, THE GROVE CENTRE, WHITE LION ROAD, AMERSHAM, BUCKINGHAMSHIRE, HP7 9LL	Permission reference: CD7027 Local Authority: CHILTERN DISTRICT COUNCIL First received date: 01/07/2010	Last received date: 01/01/2018 Status: DEAD (NEW REFERRAL)

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

## 4.16 List 1 Dangerous Substances

Records within 500m

0

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

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

## 4.17 List 2 Dangerous Substances

Records within 500m

0

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

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

## 4.18 Pollution Incidents (EA/NRW)

Records within 500m

0

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

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



#### 4.19 Pollution inventory substances

**Records within 500m****0**

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

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

#### 4.20 Pollution inventory waste transfers

**Records within 500m****0**

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

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

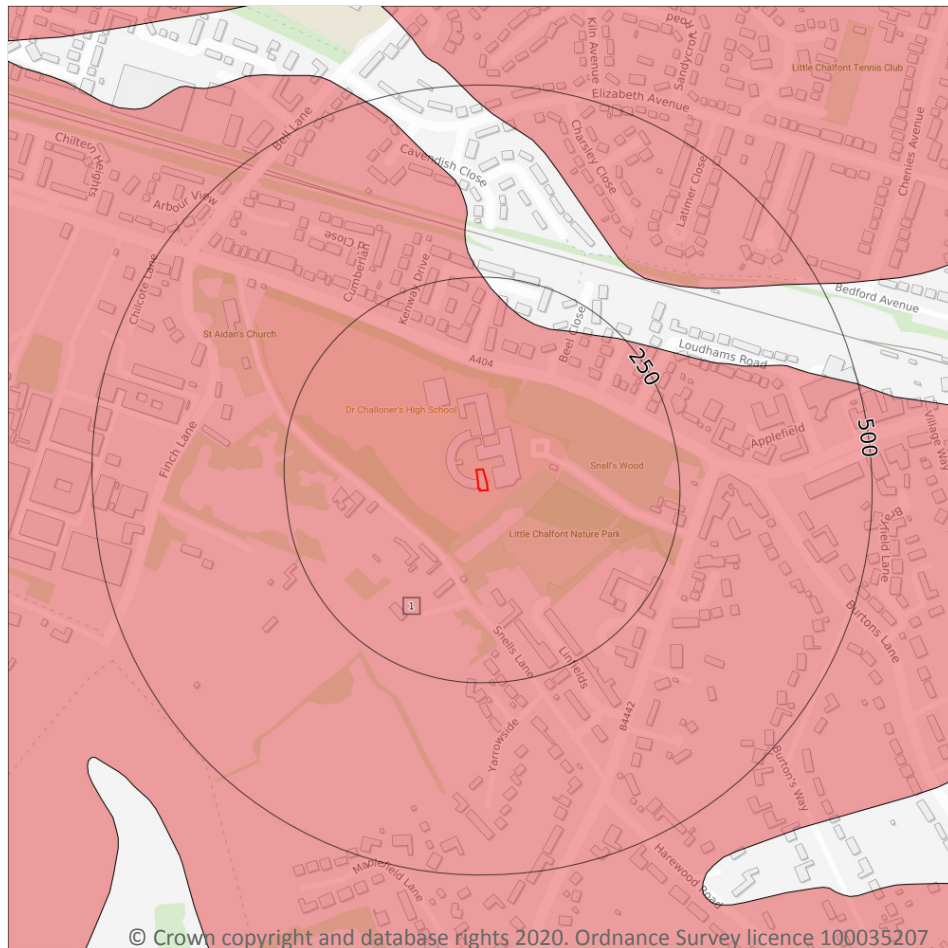
#### 4.21 Pollution inventory radioactive waste

**Records within 500m****0**

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

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

## 5 Hydrogeology - Superficial aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
  - Secondary A
  - Secondary B
  - Secondary Undifferentiated
  - Unproductive
  - Unknown

### 5.1 Superficial aquifer

Records within 500m

1

Aquifer status of groundwater held within superficial geology.

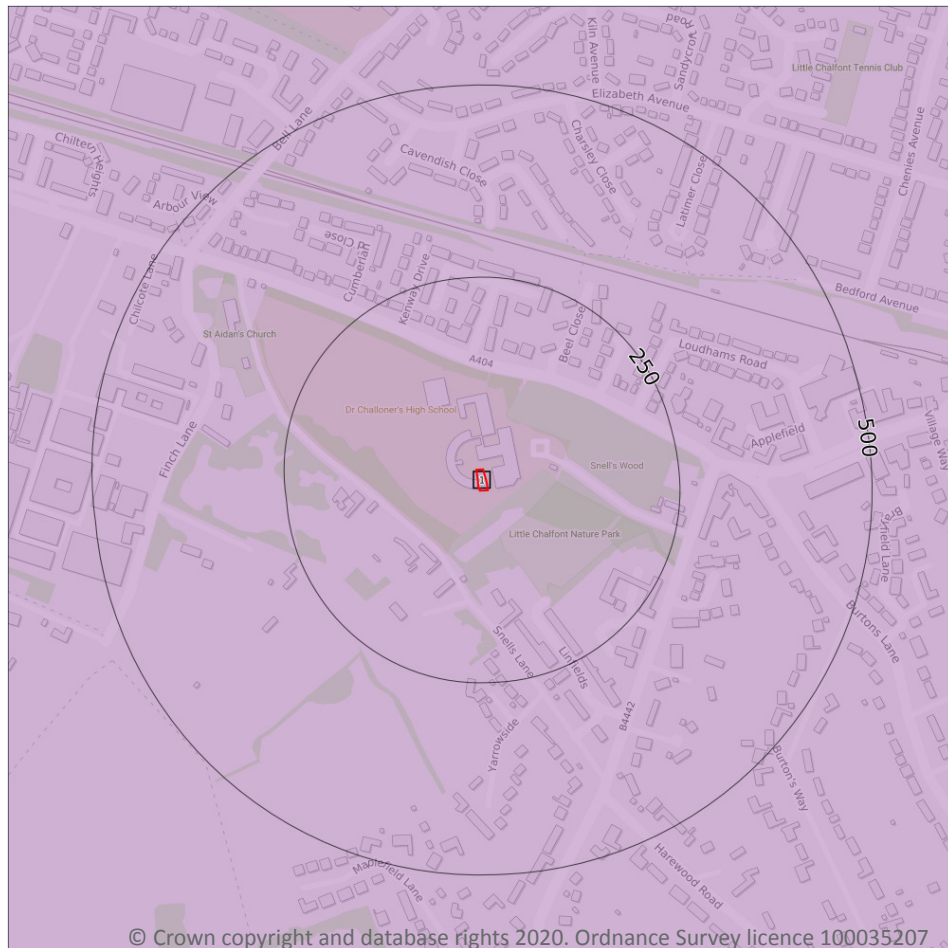
Features are displayed on the Hydrogeology map on **page 32**

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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



## Bedrock aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
  - Secondary A
  - Secondary B
  - Secondary Undifferentiated
  - Unproductive

### 5.2 Bedrock aquifer

Records within 500m

1

Aquifer status of groundwater held within bedrock geology.

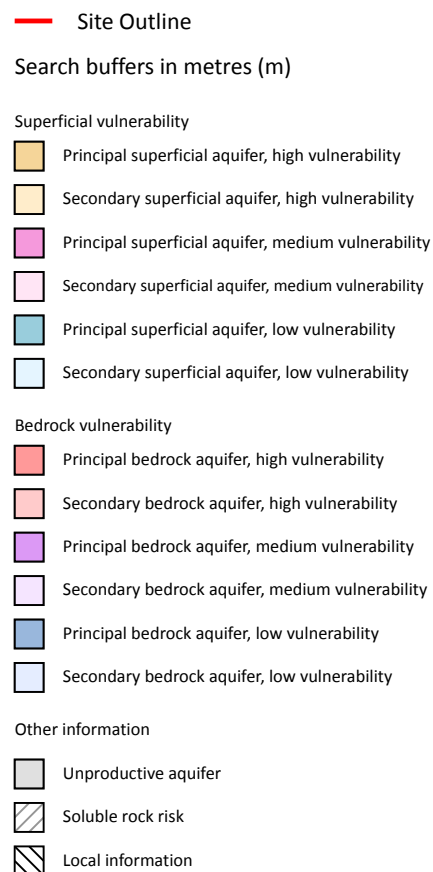
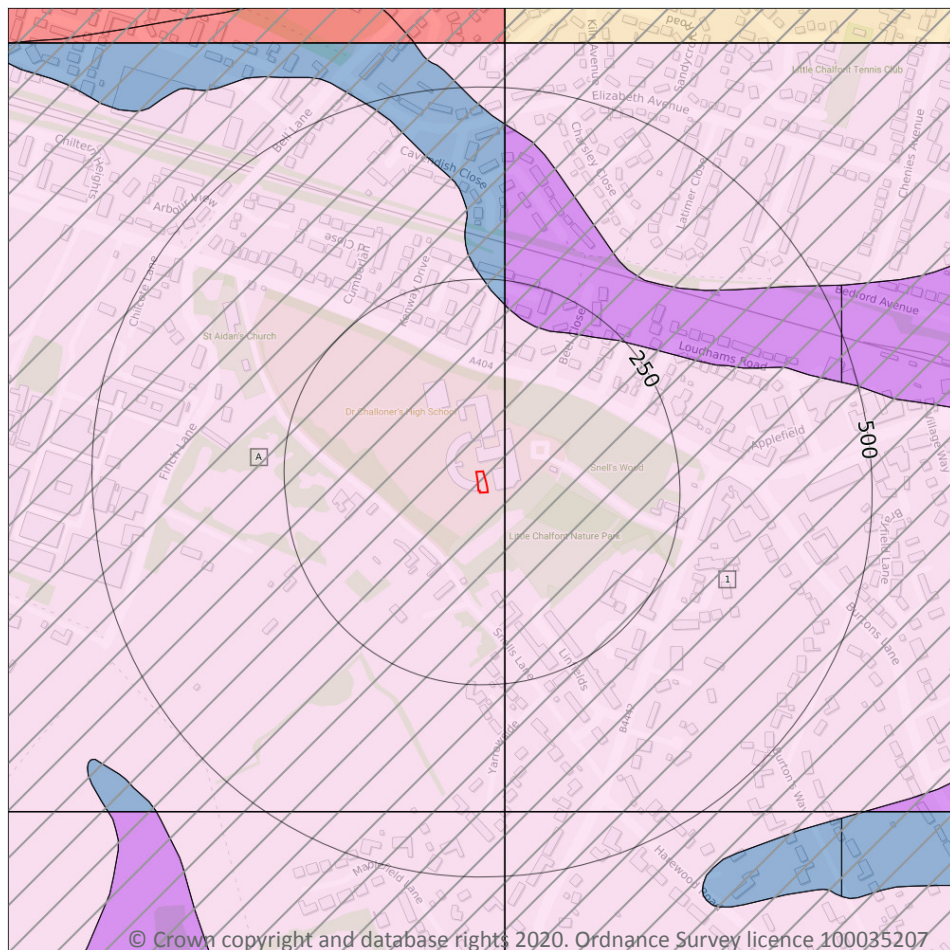
Features are displayed on the Bedrock aquifer map on **page 33**

ID	Location	Designation	Description
1	On site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

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



## Groundwater vulnerability



### 5.3 Groundwater vulnerability

#### Records within 50m

2

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

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

Features are displayed on the Groundwater vulnerability map on **page 34**



ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
A	On site	<b>Summary Classification:</b> Secondary superficial aquifer - Medium Vulnerability <b>Combined classification:</b> Productive Bedrock Aquifer, Productive Superficial Aquifer	<b>Leaching class:</b> Intermediate <b>Infiltration value:</b> 40-70% <b>Dilution value:</b> 300-550mm/year	<b>Vulnerability:</b> Medium <b>Aquifer type:</b> Secondary <b>Thickness:</b> >10m <b>Patchiness value:</b> >90% <b>Recharge potential:</b> Low	<b>Vulnerability:</b> Low <b>Aquifer type:</b> Principal <b>Flow mechanism:</b> Well connected fractures
1	22m E	Summary Classification: Secondary superficial aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Intermediate Infiltration value: >70% Dilution value: 300-550mm/year	Vulnerability: Medium Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: Low	Vulnerability: Medium Aquifer type: Principal Flow mechanism: Well connected fractures

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

## 5.4 Groundwater vulnerability- soluble rock risk

<b>Records on site</b>	<b>1</b>
------------------------	----------

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

ID	Maximum soluble risk category	Percentage of grid square covered by maximum risk
A	<b>Significant soluble rocks are likely to be present. Problems unlikely except with considerable surface or subsurface water flow.</b>	<b>100.0%</b>

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

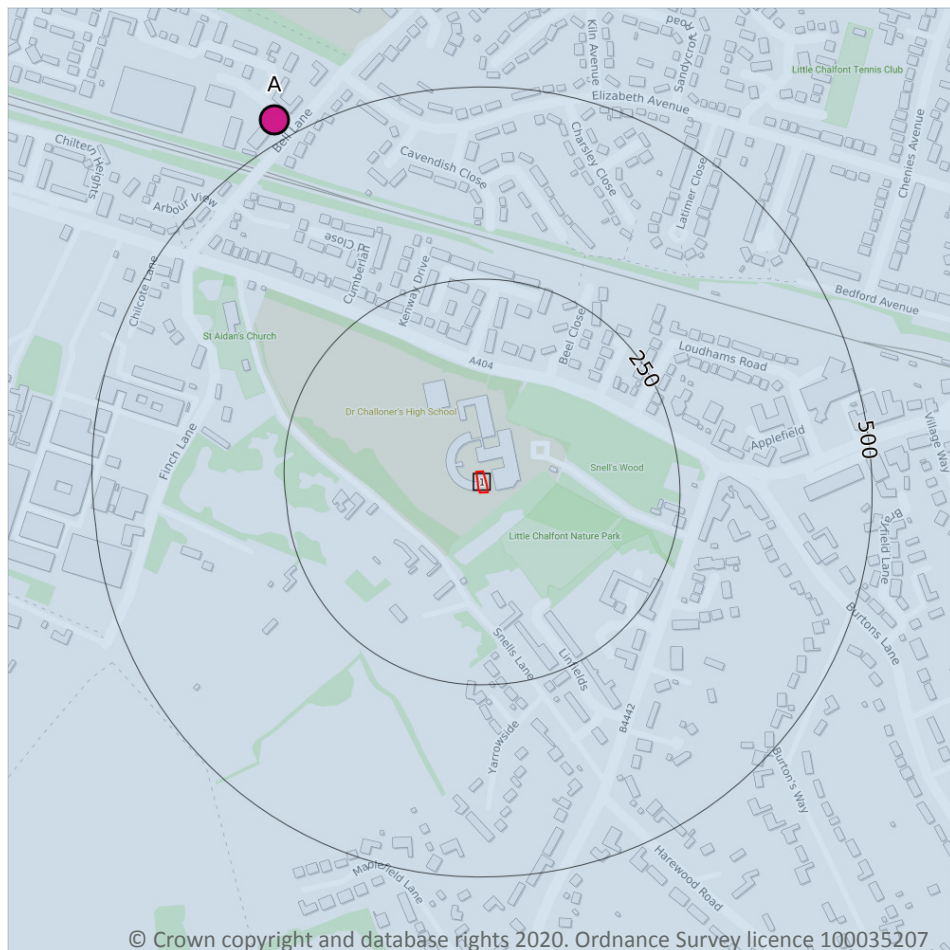
## 5.5 Groundwater vulnerability- local information

<b>Records on site</b>	<b>0</b>
------------------------	----------

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

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

## Abstractions and Source Protection Zones



- Site Outline
- Search buffers in metres (m)**
- Source Protection Zone 1  
Inner catchment
- Source Protection Zone 2  
Outer catchment
- Source Protection Zone 3  
Total catchment
- Source Protection Zone 4  
Zone of Special Interest
- Source Protection Zone 1c  
Inner catchment - confined aquifer
- Source Protection Zone 2c  
Outer catchment - confined aquifer
- Source Protection Zone 3c  
Total catchment - confined aquifer
- Drinking water abstraction licences  
Polygon features
- Drinking water abstraction licences  
Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

### 5.6 Groundwater abstractions

#### Records within 2000m

1

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 36**

ID	Location	Details	
A	527m NW	Status: Historical Licence No: 28/39/28/0310 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT BELL LANE, AMERSHAM Data Type: Point Name: GRANT Easting: 498700 Northing: 197900	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 08/05/1967 Expiry Date: - Issue No: 101 Version Start Date: 01/12/1999 Version End Date: -

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

## 5.7 Surface water abstractions

### Records within 2000m

4

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 36**

ID	Location	Details	
-	1456m NE	Status: Historical Licence No: 28/39/28/0497 Details: Fish Farm/Cress Pond Throughflow Direct Source: THAMES SURFACE WATER - NON TIDAL Point: RIVER INLET AND PIPE 'A' AT GREAT WATER AT LATIMER PARK FARM Data Type: Point Name: LATIMER PARK FARM LTD Easting: 499740 Northing: 198680	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 01/04/1991 Version End Date: -
-	1456m NE	Status: Active Licence No: 28/39/28/0497 Details: Fish Farm/Cress Pond Throughflow Direct Source: THAMES SURFACE WATER - NON TIDAL Point: RIVER CHESS AT LATIMER PARK FARM- RIVER INLET AND PIPE 'A' Data Type: Point Name: RESTORE HOPE LATIMER Easting: 499740 Northing: 198680	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): 10,650 Original Application No: - Original Start Date: 01/04/1991 Expiry Date: - Issue No: 101 Version Start Date: 19/11/2002 Version End Date: -



ID	Location	Details	
-	1478m NE	Status: Historical Licence No: 28/39/28/0497 Details: Fish Farm/Cress Pond Throughflow Direct Source: THAMES SURFACE WATER - NON TIDAL Point: RIVER INLET AND PIPE 'B' AT GREAT WATER AT LATIMER PARK FARM Data Type: Point Name: LATIMER PARK FARM LTD Easting: 499810 Northing: 198660	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 01/04/1991 Version End Date: -
-	1478m NE	Status: Active Licence No: 28/39/28/0497 Details: Fish Farm/Cress Pond Throughflow Direct Source: THAMES SURFACE WATER - NON TIDAL Point: RIVER CHESS AT LATIMER PARK FARM- RIVER INLET AND PIPE 'B' Data Type: Point Name: RESTORE HOPE LATIMER Easting: 499810 Northing: 198660	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): 10,650 Original Application No: - Original Start Date: 01/04/1991 Expiry Date: - Issue No: 101 Version Start Date: 19/11/2002 Version End Date: -

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

## 5.8 Potable abstractions

### Records within 2000m

1

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 36**

ID	Location	Details	
A	527m NW	Status: Historical Licence No: 28/39/28/0310 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT BELL LANE, AMERSHAM Data Type: Point Name: GRANT Easting: 498700 Northing: 197900	Annual Volume (m <sup>3</sup> ): - Max Daily Volume (m <sup>3</sup> ): - Original Application No: - Original Start Date: 08/05/1967 Expiry Date: - Issue No: 101 Version Start Date: 01/12/1999 Version End Date: -

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





## 5.9 Source Protection Zones

**Records within 500m****1**

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination. Features are displayed on the Abstractions and Source Protection Zones map on **page 36**

ID	Location	Type	Description
1	On site	2	Outer catchment

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

## 5.10 Source Protection Zones (confined aquifer)

**Records within 500m****0**

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

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



## 6 Hydrology



- Site Outline
- Search buffers in metres (m)
- Water Network (OS MasterMap)
- Surface water features (wider than 5m)
- Surface water features (narrower than 5m)
- ⋯ WFD River, canal and surface water transfer water bodies
- WFD Lake water bodies
- WFD Transitional and coastal water bodies
- WFD Surface water body catchments boundaries
- WFD Groundwater body boundaries

### 6.1 Water Network (OS MasterMap)

Records within 250m

0

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

*This data is sourced from the Ordnance Survey.*

### 6.2 Surface water features

Records within 250m

0

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



*This data is sourced from the Ordnance Survey.*

## 6.3 WFD Surface water body catchments

### Records on site

1

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

Features are displayed on the Hydrology map on **page 40**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	On site	River WB catchment	Colne (Confluence with Chess to River Thames)	GB106039023090	Colne	Colne

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

## 6.4 WFD Surface water bodies

### Records identified

1

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

Features are displayed on the Hydrology map on **page 40**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Biological rating	Year
-	6361m SE	River	Colne (Confluence with Chess to River Thames)	<a href="#">GB106039023090</a>	Moderate	Good	Moderate	2016

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



## 6.5 WFD Groundwater bodies

### Records on site

**1**

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

Features are displayed on the Hydrology map on **page 40**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
2	On site	Mid-Chilterns Chalk	<a href="#"><u>GB40601G601200</u></a>	Poor	Poor	Poor	2015

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



## 7 River and coastal flooding

### 7.1 Risk of Flooding from Rivers and Sea (RoFRaS)

**Records within 50m****0**

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance).

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

### 7.2 Historical Flood Events

**Records within 250m****0**

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

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

### 7.3 Flood Defences

**Records within 250m****0**

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

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

### 7.4 Areas Benefiting from Flood Defences

**Records within 250m****0**

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

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



## 7.5 Flood Storage Areas

Records within 250m

0

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

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





## River and coastal flooding - Flood Zones

### 7.6 Flood Zone 2

Records within 50m

0

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

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

### 7.7 Flood Zone 3

Records within 50m

0

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

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



## 8 Surface water flooding

### 8.1 Surface water flooding

Highest risk on site

Negligible

Highest risk within 50m

Negligible

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

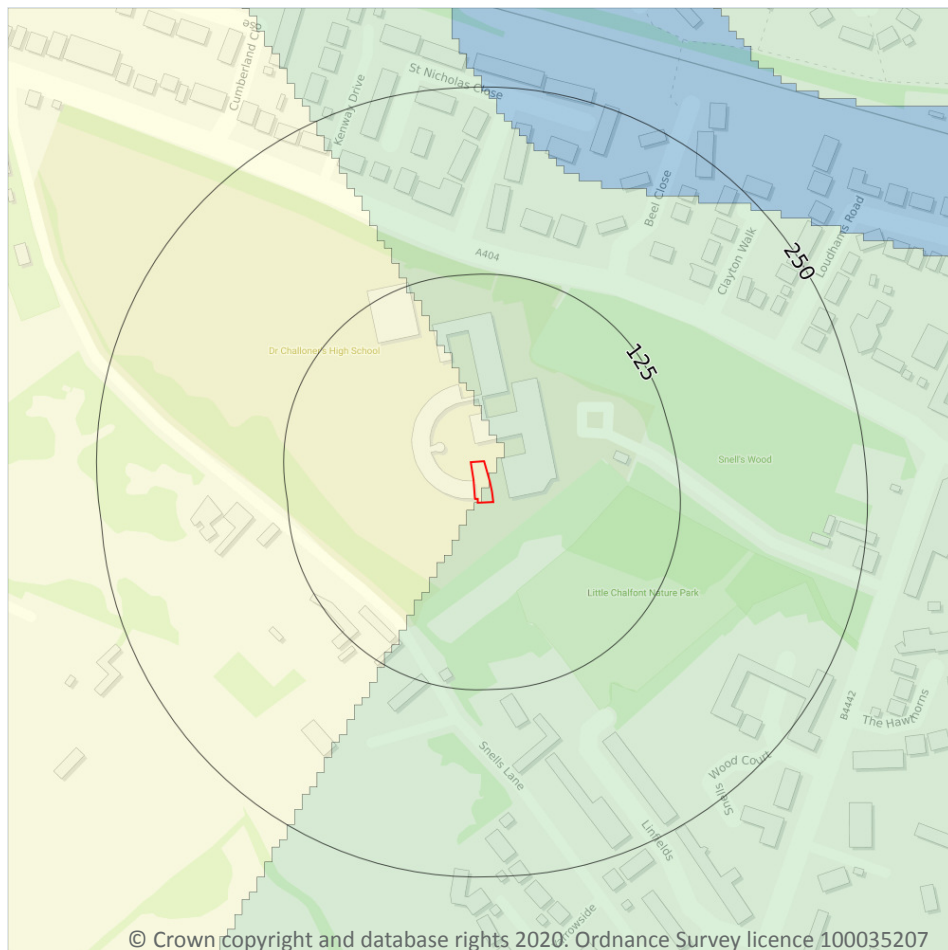
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site. The table below shows the maximum flood depths for a range of return periods for the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

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

*This data is sourced from Ambiental Risk Analytics.*



## 9 Groundwater flooding



— Site Outline  
Search buffers in metres (m)

- High
- Moderate - High
- Moderate
- Low
- Negligible

### 9.1 Groundwater flooding

**Highest risk on site**

**Moderate**

**Highest risk within 50m**

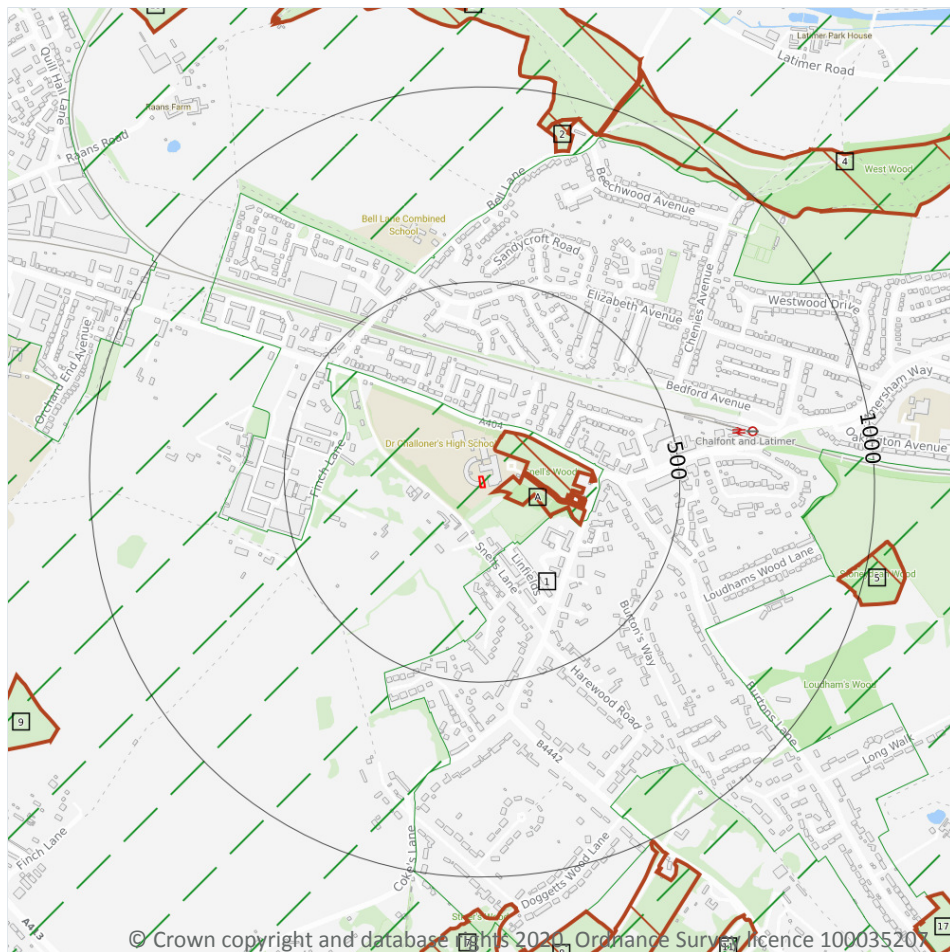
**Moderate**

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

Features are displayed on the Groundwater flooding map on **page 47**

*This data is sourced from Ambiantal Risk Analytics.*

## 10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Designated Ancient Woodland
- Green Belt

### 10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

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

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



## 10.2 Conserved wetland sites (Ramsar sites)

**Records within 2000m****0**

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

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

## 10.3 Special Areas of Conservation (SAC)

**Records within 2000m****0**

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

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

## 10.4 Special Protection Areas (SPA)

**Records within 2000m****0**

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

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

## 10.5 National Nature Reserves (NNR)

**Records within 2000m****0**

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

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



## 10.6 Local Nature Reserves (LNR)

Records within 2000m

0

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

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

## 10.7 Designated Ancient Woodland

Records within 2000m

26

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

Features are displayed on the Environmental designations map on **page 48**

ID	Location	Name	Woodland Type
A	27m SE	Unknown	Ancient & Semi-Natural Woodland
A	74m NE	Unknown	Ancient & Semi-Natural Woodland
2	855m N	Unknown	Ancient & Semi-Natural Woodland
3	904m N	Unknown	Ancient Replanted Woodland
4	927m N	Unknown	Ancient Replanted Woodland
5	938m E	Unknown	Ancient & Semi-Natural Woodland
6	1006m SE	POLLARDS/BAILEY WOODS	Ancient Replanted Woodland
7	1072m S	Unknown	Ancient & Semi-Natural Woodland
8	1119m S	Unknown	Ancient & Semi-Natural Woodland
9	1249m SW	HOVEL WOOD	Ancient & Semi-Natural Woodland
-	1257m S	Unknown	Ancient & Semi-Natural Woodland
11	1282m SE	Unknown	Ancient & Semi-Natural Woodland
-	1296m W	WILLOW WOOD	Ancient & Semi-Natural Woodland
-	1298m E	Unknown	Ancient & Semi-Natural Woodland
-	1330m N	Unknown	Ancient & Semi-Natural Woodland
15	1414m NW	Unknown	Ancient & Semi-Natural Woodland





ID	Location	Name	Woodland Type
-	1509m E	Unknown	Ancient & Semi-Natural Woodland
17	1550m SE	Unknown	Ancient & Semi-Natural Woodland
-	1581m SE	Unknown	Ancient & Semi-Natural Woodland
-	1616m NW	MARKET READING WOOD	Ancient Replanted Woodland
-	1670m W	Unknown	Ancient & Semi-Natural Woodland
-	1676m N	Unknown	Ancient & Semi-Natural Woodland
-	1717m NE	Unknown	Ancient Replanted Woodland
-	1731m E	OLD HANGING WOOD	Ancient Replanted Woodland
-	1920m N	FRITH/CODMORE WOODS	Ancient Replanted Woodland
-	1988m SE	CROSSLANE WOOD	Ancient & Semi-Natural Woodland

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

## 10.8 Biosphere Reserves

**Records within 2000m**

**0**

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

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

## 10.9 Forest Parks

**Records within 2000m**

**0**

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

*This data is sourced from the Forestry Commission.*



## 10.10 Marine Conservation Zones

Records within 2000m

0

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

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

## 10.11 Green Belt

Records within 2000m

1

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

Features are displayed on the Environmental designations map on **page 48**

ID	Location	Name	Local Authority name
1	On site	London Area Greenbelt	Chiltern District

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

## 10.12 Proposed Ramsar sites

Records within 2000m

0

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

*This data is sourced from Natural England.*

## 10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

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

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

## 10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

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

*This data is sourced from Natural England.*

## 10.15 Nitrate Sensitive Areas

Records within 2000m

0

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

*This data is sourced from Natural England.*

## 10.16 Nitrate Vulnerable Zones

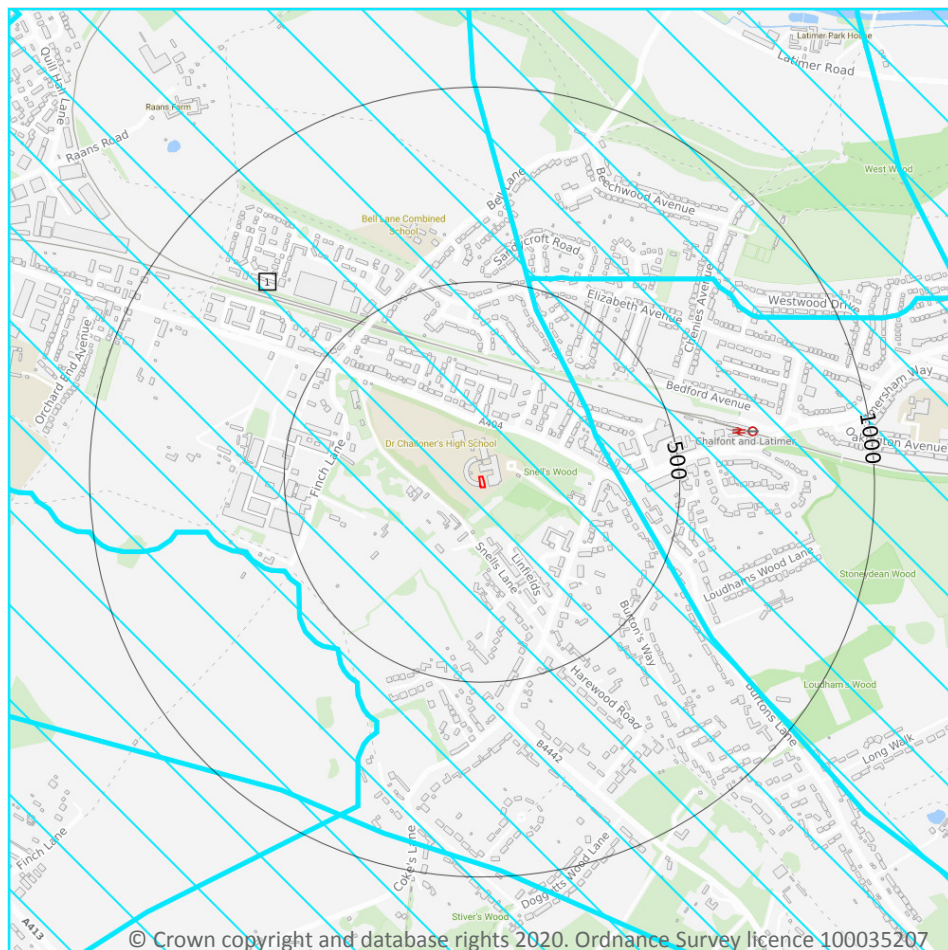
Records within 2000m

0

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

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

## SSSI Impact Zones and Units



- Site Outline
- Search buffers in metres (m)
- SSSI Impact Risk Zones
- SSSI Units
- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

### 10.17 SSSI Impact Risk Zones

#### Records on site

1

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

Features are displayed on the SSSI Impact Zones and Units map on **page 54**

ID	Location	Type of developments requiring consultation
1	On site	<p>Infrastructure - Airports, helipads and other aviation proposals.</p> <p>Air pollution - Livestock &amp; poultry units with floorspace &gt; 500m<sup>2</sup>, slurry lagoons &gt; 750m<sup>2</sup> &amp; manure stores &gt; 3500t.</p> <p>Discharges - Any discharge of water or liquid waste of more than 20m<sup>3</sup>/day to ground (ie to seep away) or to surface water, such as a beck or stream (NB This does not include discharges to mains sewer which are unlikely to pose a risk at this location).</p>

*This data is sourced from Natural England.*

## 10.18 SSSI Units

Records within 2000m	0
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Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

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

## 11 Visual and cultural designations



- Site Outline
- Search buffers in metres (m)
- Listed buildings
- Conservation areas
- Conservation areas - no data
- National Parks
- Areas of Outstanding Natural Beauty
- Registered parks and gardens
- Scheduled Monuments
- World Heritage Sites

### 11.1 World Heritage Sites

Records within 250m

0

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

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



## 11.2 Area of Outstanding Natural Beauty

Records within 250m

0

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

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

## 11.3 National Parks

Records within 250m

0

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

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

## 11.4 Listed Buildings

Records within 250m

4

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

Features are displayed on the Visual and cultural designations map on **page 56**

ID	Location	Name	Grade	Reference Number	Listed date
1	119m SW	Hances Cottage	II	1393374	03/07/2009
2	133m S	Snells Farmhouse	II	1237997	17/05/1984
3	162m SW	Walled Garden At Hances Cottage And Beel House	II	1393375	03/07/2009
4	177m W	Beel House	II*	1238695	22/12/1958

*This data is sourced from English Heritage, Cadw and Historic Environment Scotland.*



## 11.5 Conservation Areas

Records within 250m

0

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

*This data is sourced from English Heritage, Cadw and Historic Environment Scotland.*

## 11.6 Scheduled Ancient Monuments

Records within 250m

0

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

*This data is sourced from English Heritage, Cadw and Historic Environment Scotland.*

## 11.7 Registered Parks and Gardens

Records within 250m

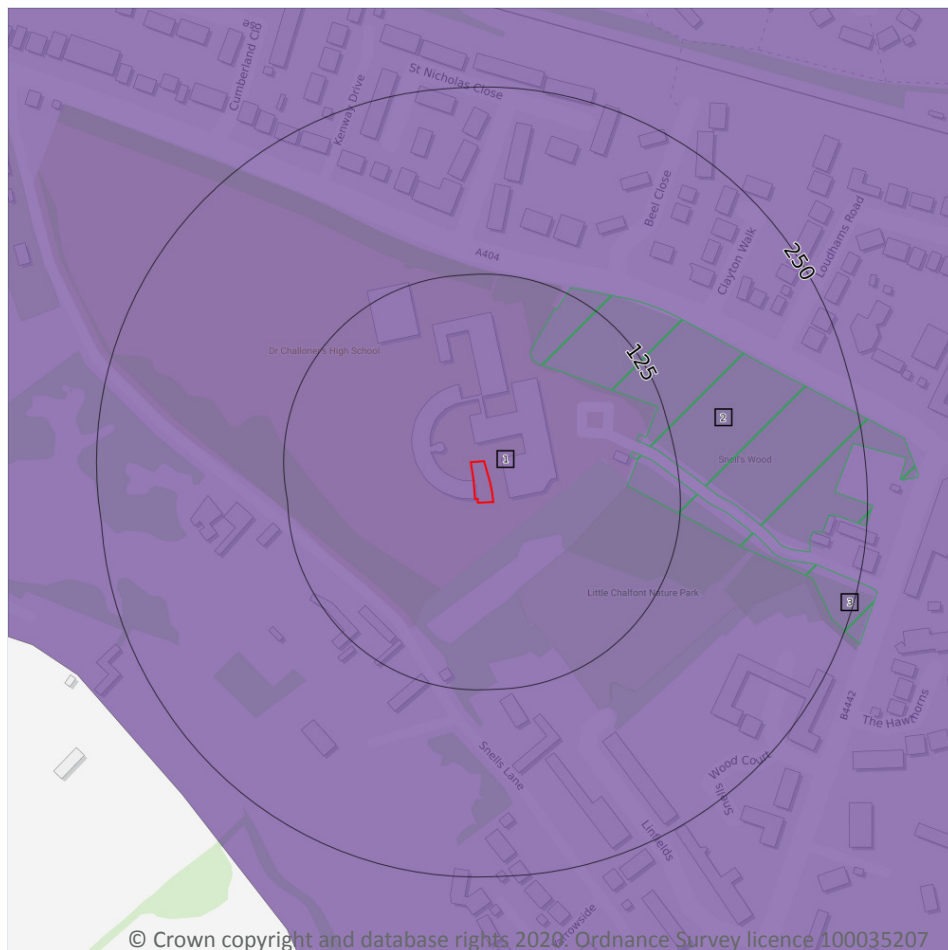
0

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

*This data is sourced from English Heritage, Cadw and Historic Environment Scotland.*



## 12 Agricultural designations



- Site Outline
- Search buffers in metres (m)
- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

### 12.1 Agricultural Land Classification

Records within 250m

1

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

Features are displayed on the Agricultural designations map on **page 59**

ID	Location	Classification	Description
1	On site	Urban	-

*This data is sourced from Natural England.*



## 12.2 Open Access Land

**Records within 250m****0**

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

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

## 12.3 Tree Felling Licences

**Records within 250m****2**

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

Features are displayed on the Agricultural designations map on **page 59**

ID	Location	Description	Reference	Application date
2	74m NE	Selective Fell/Thin (Unconditional)	019/512/11-12	25/04/2012
3	90m E	Selective Fell/Thin (Unconditional)	019/512/11-12	25/04/2012

*This data is sourced from the Forestry Commission.*

## 12.4 Environmental Stewardship Schemes

**Records within 250m****0**

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment.

*This data is sourced from Natural England.*

## 12.5 Countryside Stewardship Schemes

**Records within 250m****0**

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

*This data is sourced from Natural England.*



## 13 Habitat designations



- Site Outline**
- Search buffers in metres (m)**
- Priority Habitat Inventory
  - Open Mosaic Habitat
  - Limestone Pavement Orders
- Habitat Networks**
- Primary Habitat
  - Restorable Habitat
  - Associated Habitats
  - Habitat Restoration-Creation
  - Network Enhancement Zone 1
  - Network Enhancement Zone 2

### 13.1 Priority Habitat Inventory

Records within 250m

15

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

Features are displayed on the Habitat designations map on **page 61**

ID	Location	Main Habitat	Other habitats
1	24m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	25m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	53m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	58m SE	Traditional orchard	Main habitat: TORCH (INV > 50%)



ID	Location	Main Habitat	Other habitats
A	62m S	Traditional orchard	Main habitat: TORCH (INV > 50%)
4	74m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
5	101m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
6	102m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
7	107m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
8	110m SE	Traditional orchard	Main habitat: TORCH (INV > 50%)
9	112m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
10	112m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
11	187m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
12	216m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
13	225m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

*This data is sourced from Natural England.*

## 13.2 Habitat Networks

**Records within 250m**

**0**

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

*This data is sourced from Natural England.*

## 13.3 Open Mosaic Habitat

**Records within 250m**

**0**

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

*This data is sourced from Natural England.*





## 13.4 Limestone Pavement Orders

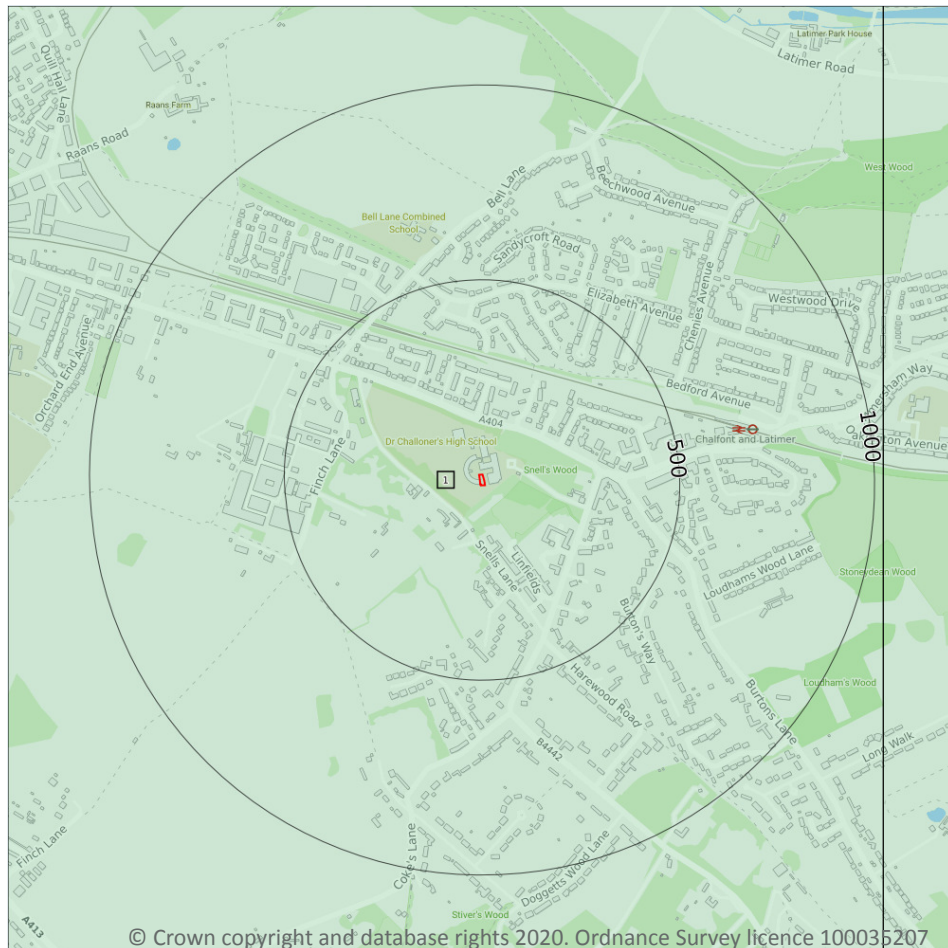
**Records within 250m****0**

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

*This data is sourced from Natural England.*



## 14 Geology 1:10,000 scale - Availability



— Site Outline  
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

### 14.1 10k Availability

#### Records within 500m

1

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

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 64**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	SU99NE

*This data is sourced from the British Geological Survey.*



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



— Site Outline  
Search buffers in metres (m)

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

### 14.2 Artificial and made ground (10k)

Records within 500m

4

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

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 65**

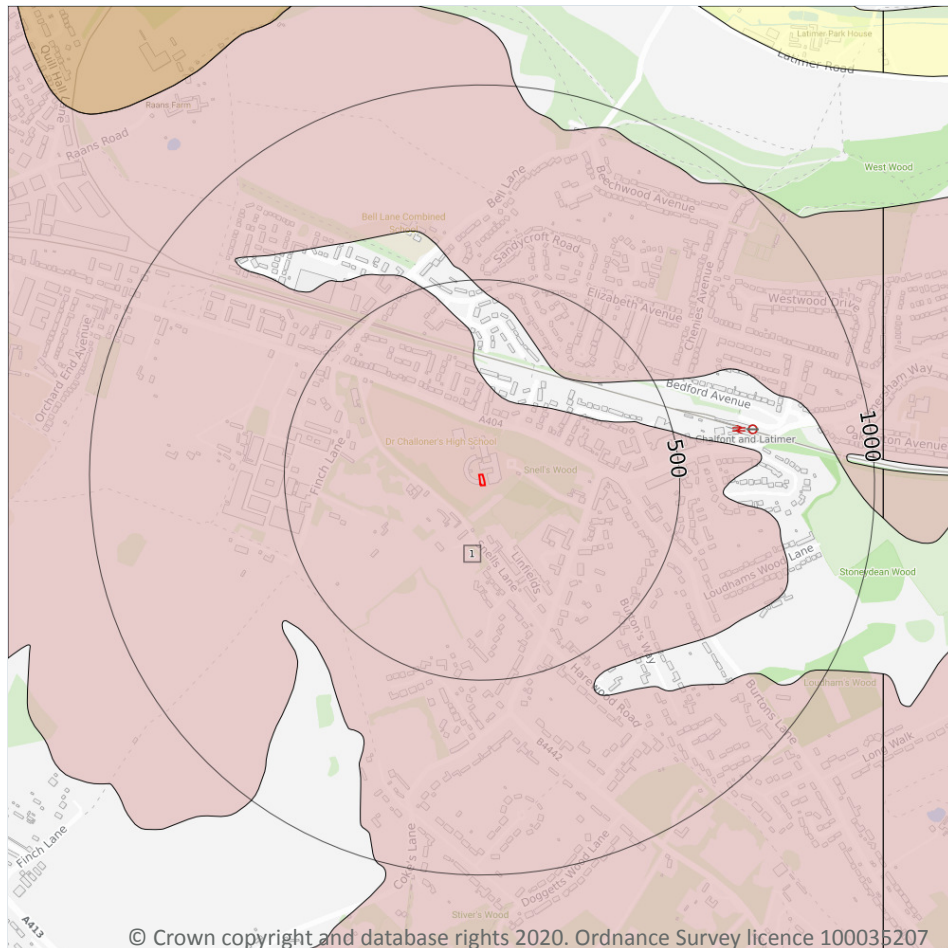
ID	Location	LEX Code	Description	Rock description
1	116m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	271m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	383m NW	WGR-VOID	Worked Ground (Undivided)	Void
4	488m N	WGR-VOID	Worked Ground (Undivided)	Void



*This data is sourced from the British Geological Survey.*



## Geology 1:10,000 scale - Superficial



**Site Outline**

Search buffers in metres (m)

**Landslip (10k)**

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

### 14.3 Superficial geology (10k)

#### Records within 500m

1

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 67**

ID	Location	LEX Code	Description	Rock description
1	On site	HEAD-V	Head - Gravel	Gravel

*This data is sourced from the British Geological Survey.*



## 14.4 Landslip (10k)

Records within 500m

0

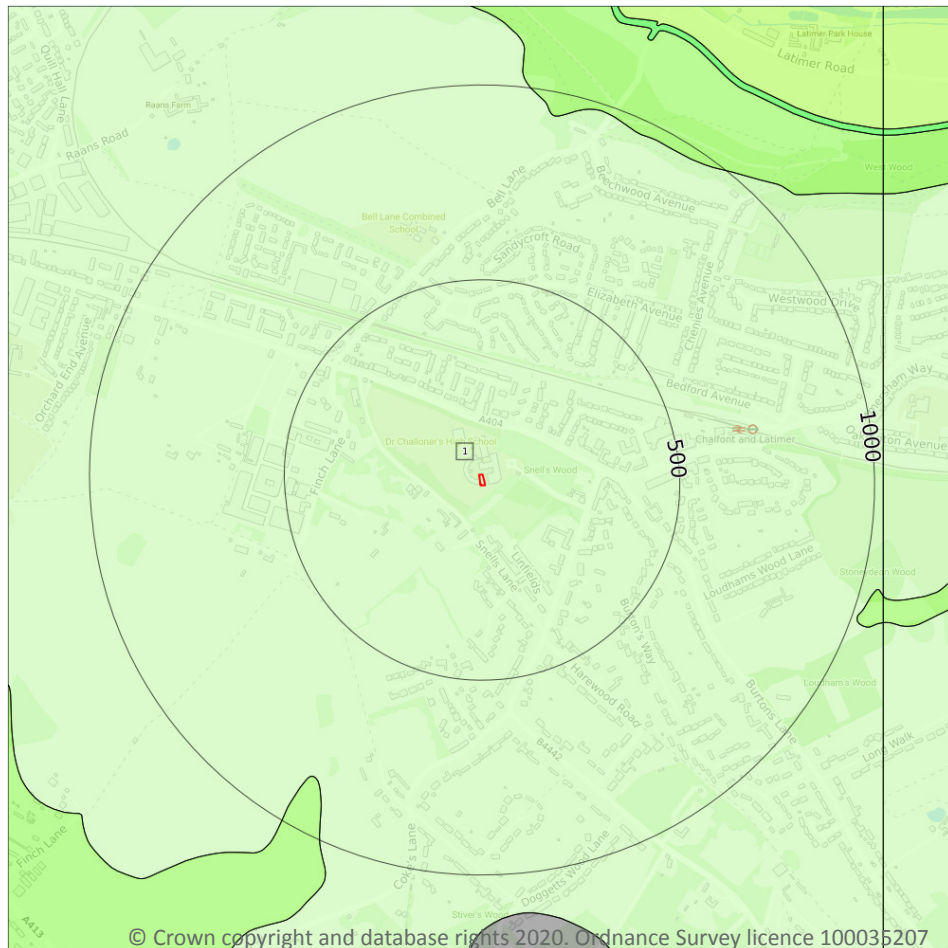
Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

*This data is sourced from the British Geological Survey.*





## Geology 1:10,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (10k)

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

### 14.5 Bedrock geology (10k)

#### Records within 500m

1

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

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 69**

ID	Location	LEX Code	Description	Rock age
1	On site	SNCK-CHLK	Seaford Chalk Formation And Newhaven Chalk Formation (undifferentiated) - Chalk	Campanian Age - Coniacian Age

*This data is sourced from the British Geological Survey.*



## 14.6 Bedrock faults and other linear features (10k)

Records within 500m

0

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

*This data is sourced from the British Geological Survey.*





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

### 15.2 Artificial and made ground (50k)

Records within 500m

0

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

*This data is sourced from the British Geological Survey.*

### 15.3 Artificial ground permeability (50k)

Records within 50m

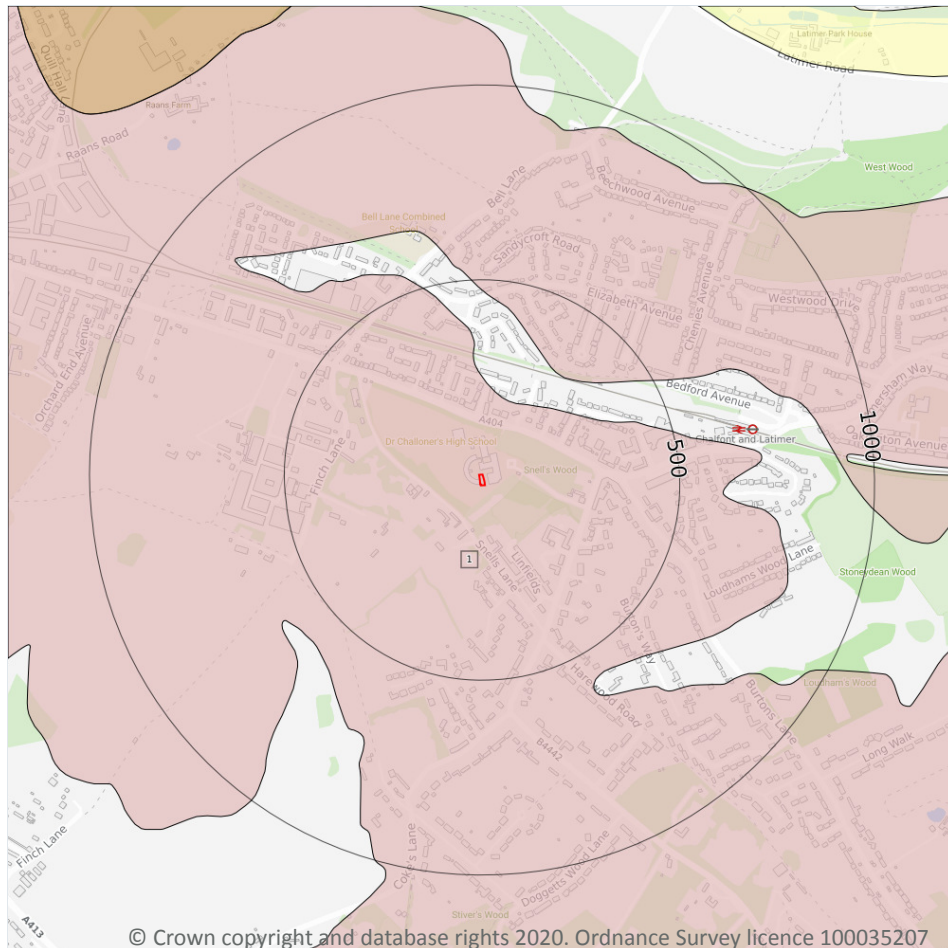
0

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

*This data is sourced from the British Geological Survey.*



## Geology 1:50,000 scale - Superficial



**Site Outline**

Search buffers in metres (m)

**Landslip (50k)**

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

### 15.4 Superficial geology (50k)

#### Records within 500m

1

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 73**

ID	Location	LEX Code	Description	Rock description
1	On site	HEAD-V	HEAD	GRAVEL

This data is sourced from the British Geological Survey.



## 15.5 Superficial permeability (50k)

Records within 50m

1

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

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

*This data is sourced from the British Geological Survey.*

## 15.6 Landslip (50k)

Records within 500m

0

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

*This data is sourced from the British Geological Survey.*

## 15.7 Landslip permeability (50k)

Records within 50m

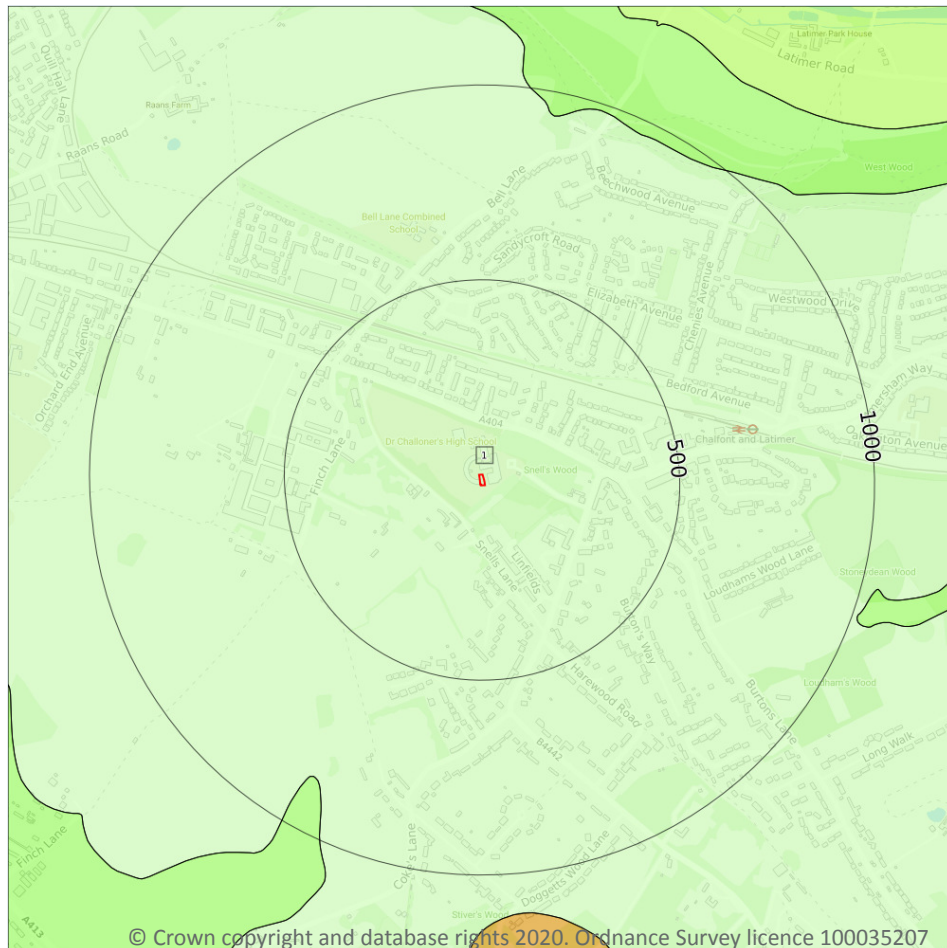
0

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

*This data is sourced from the British Geological Survey.*



## Geology 1:50,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (50k)

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

### 15.8 Bedrock geology (50k)

#### Records within 500m

1

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 75**

ID	Location	LEX Code	Description	Rock age
1	On site	SNCK-CHLK	SEAFORD CHALK FORMATION AND NEWHAVEN CHALK FORMATION (UNDIFFERENTIATED) - CHALK	CONIACIAN

*This data is sourced from the British Geological Survey.*

## 15.9 Bedrock permeability (50k)

### Records within 50m

**1**

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

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

*This data is sourced from the British Geological Survey.*

## 15.10 Bedrock faults and other linear features (50k)

### Records within 500m

**0**

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

*This data is sourced from the British Geological Survey.*



## 16 Boreholes

### 16.1 BGS Boreholes

Records within 250m

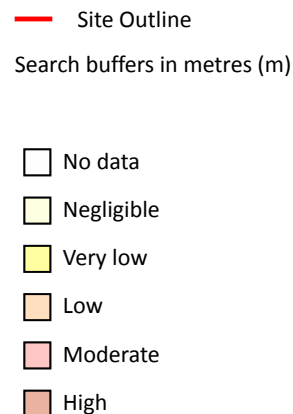
0

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

*This data is sourced from the British Geological Survey.*



## 17 Natural ground subsidence - Shrink swell clays



### 17.1 Shrink swell clays

#### Records within 50m

1

The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 78**

Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.

*This data is sourced from the British Geological Survey.*



## Natural ground subsidence - Running sands



### 17.2 Running sands

#### Records within 50m

1

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 79**

Location	Hazard rating	Details
On site	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.

*This data is sourced from the British Geological Survey.*



## Natural ground subsidence - Compressible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
  - ☐ Negligible
  - ☐ Very low
  - ☐ Low
  - ☐ Moderate
  - ☐ High

### 17.3 Compressible deposits

#### Records within 50m

1

The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 80**

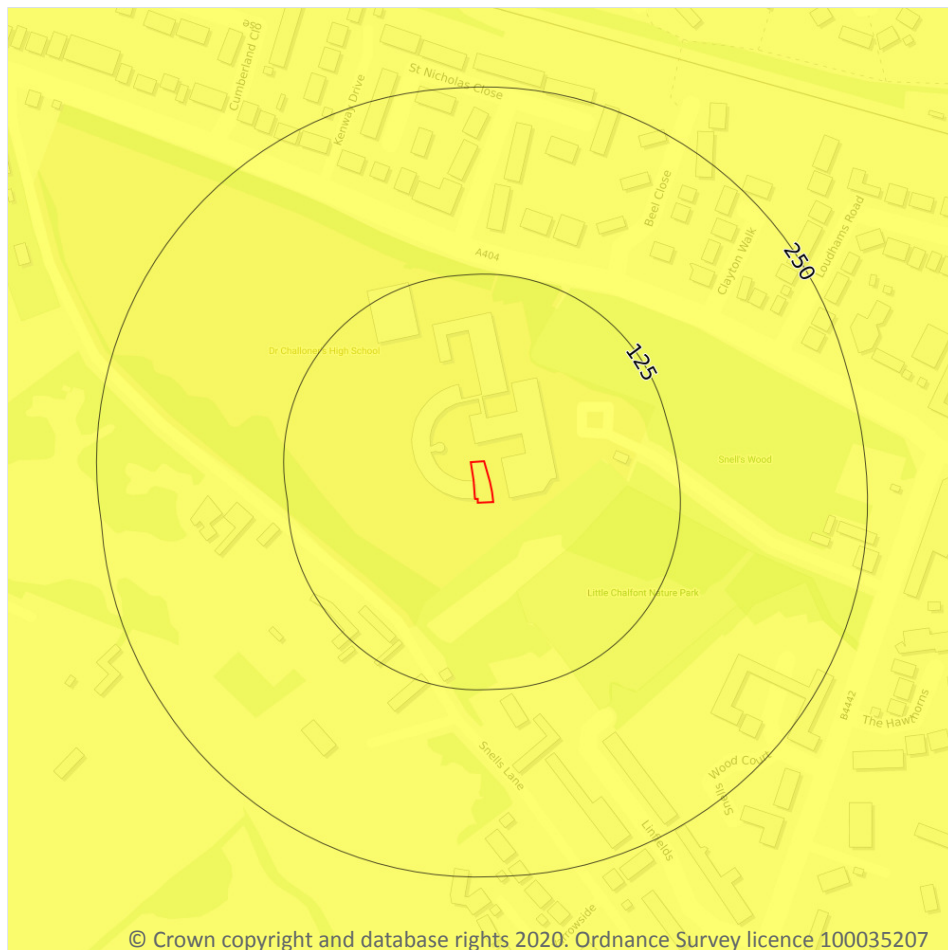
Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.

*This data is sourced from the British Geological Survey.*





## Natural ground subsidence - Collapsible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
  - ☐ Negligible
  - ☒ Very low
  - ☐ Low
  - ☐ Moderate
  - ☐ High

### 17.4 Collapsible deposits

#### Records within 50m

1

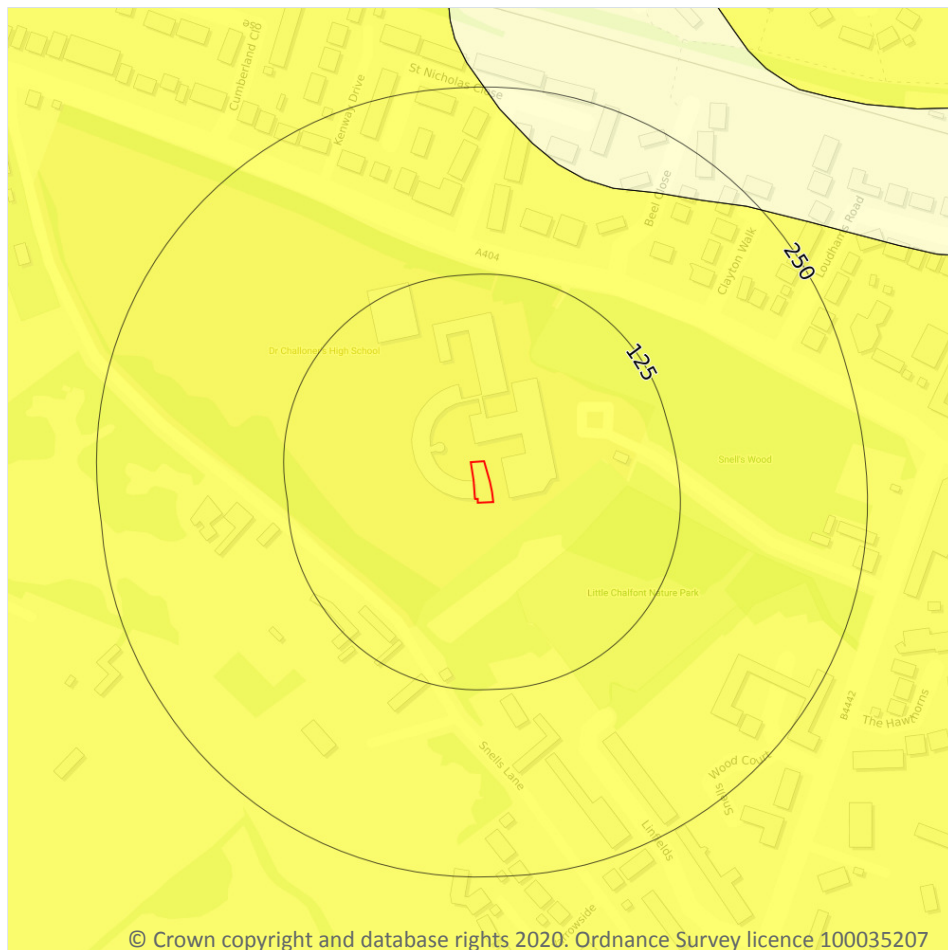
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 81**

Location	Hazard rating	Details
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.

*This data is sourced from the British Geological Survey.*

## Natural ground subsidence - Landslides



- Site Outline
- Search buffers in metres (m)
- ☐ No data
  - ☐ Negligible
  - ☐ Very low
  - ☐ Low
  - ☐ Moderate
  - ☐ High

### 17.5 Landslides

#### Records within 50m

1

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 82**

Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

*This data is sourced from the British Geological Survey.*



## Natural ground subsidence - Ground dissolution of soluble rocks



— Site Outline  
Search buffers in metres (m)

- ☐ No data
- ☐ Negligible
- ☐ Very low
- ☐ Low
- ☐ Moderate
- ☐ High

### 17.6 Ground dissolution of soluble rocks

#### Records within 50m

1

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

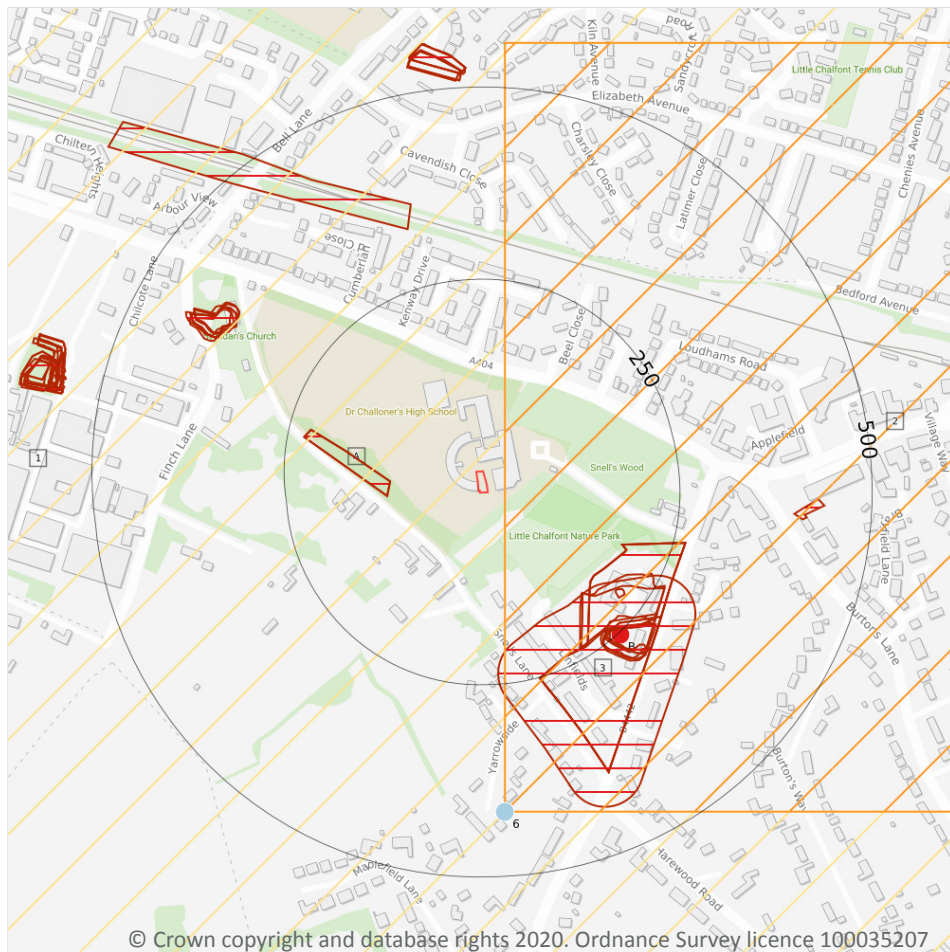
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 83**

Location	Hazard rating	Details
On site	Very low	Soluble rocks are present within the ground. Few dissolution features are likely to be present. Potential for difficult ground conditions or localised subsidence are at a level where they need not be considered.

*This data is sourced from the British Geological Survey.*



## 18 Mining, ground workings and natural cavities



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities
- Non Coal Mining
- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

### 18.1 Natural cavities

Records within 500m

0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

*This data is sourced from Peter Brett Associates (PBA).*



## 18.2 BritPits

### Records within 500m

**1**

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

Features are displayed on the Mining, ground workings and natural cavities map on **page 85**

ID	Location	Details	Description
B	253m SE	Name: Amersham Common Brick Works Address: Amersham Common, AMERSHAM, Buckinghamshire Commodity: Clay & Shale Status: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Type: Ceased Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

*This data is sourced from the British Geological Survey.*

## 18.3 Surface ground workings

### Records within 250m

**15**

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining, ground workings and natural cavities map on **page 85**

ID	Location	Land Use	Year of mapping	Mapping scale
A	113m W	Unspecified Heap	1990	1:10000
A	113m W	Unspecified Heap	1976	1:10000
B	176m SE	Brick Works	1938	1:10560
B	176m SE	Brick Works	1913	1:10560
B	176m SE	Brick Works	1897	1:10560
3	179m SE	Brick Works	1897	1:10560
B	180m SE	Brick Works	1898	1:10560
B	180m SE	Brick Works	1882	1:10560
B	210m SE	Unspecified Pit	1882	1:10560
B	231m SE	Unspecified Pit	1897	1:10560
B	233m SE	Unspecified Ground Workings	1882	1:10560





ID	Location	Land Use	Year of mapping	Mapping scale
B	237m SE	Unspecified Pit	1897	1:10560
B	239m SE	Unspecified Pit	1898	1:10560
B	241m SE	Unspecified Pit	1938	1:10560
B	241m SE	Unspecified Pit	1913	1:10560

*This data is sourced from Ordnance Survey/Groundsure.*

## 18.4 Underground workings

**Records within 1000m** **0**

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

*This data is sourced from Ordnance Survey/Groundsure.*

## 18.5 Historical Mineral Planning Areas

**Records within 500m** **0**

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

*This data is sourced from the British Geological Survey.*

## 18.6 Non-coal mining

**Records within 1000m** **2**

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

Features are displayed on the Mining, ground workings and natural cavities map on **page 85**

ID	Location	Name	Commodity	Class	Likelihood
1	On site	Not available	Chalk	A	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered



ID	Location	Name	Commodity	Class	Likelihood
2	22m E	Not available	Chalk	C	Small scale underground mining may have occurred; mine adits, shafts and tunnels may be present. Potential for localised difficult ground conditions are at a level where they should be considered

*This data is sourced from the British Geological Survey.*

## 18.7 Mining cavities

<b>Records within 1000m</b>	<b>1</b>
-----------------------------	----------

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

Features are displayed on the Mining, ground workings and natural cavities map on **page 85**

ID	Location	Mine Address	Mineral	Data source	Publisher
6	416m S	'Chalfont Road Mine', Little Chalfont, Buckinghamshire	Chalk	-	Chelsea Speleological Society

*This data is sourced from Peter Brett Associates (PBA).*

## 18.8 JPB mining areas

<b>Records on site</b>	<b>0</b>
------------------------	----------

Areas which could be affected by former coal mining. This data includes some mine plans unavailable to the Coal Authority.

*This data is sourced from Johnson Poole and Bloomer.*

## 18.9 Coal mining

<b>Records on site</b>	<b>0</b>
------------------------	----------

Areas which could be affected by past, current or future coal mining.

*This data is sourced from the Coal Authority.*

## 18.10 Brine areas

Records on site	0
-----------------	---

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

*This data is sourced from the Cheshire Brine Subsidence Compensation Board.*

## 18.11 Gypsum areas

Records on site	0
-----------------	---

Generalised areas that may be affected by gypsum extraction.

*This data is sourced from British Gypsum.*

## 18.12 Tin mining

Records on site	0
-----------------	---

Generalised areas that may be affected by historical tin mining.

*This data is sourced from Mining Searches UK.*

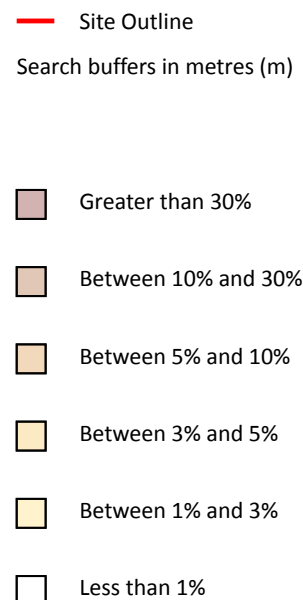
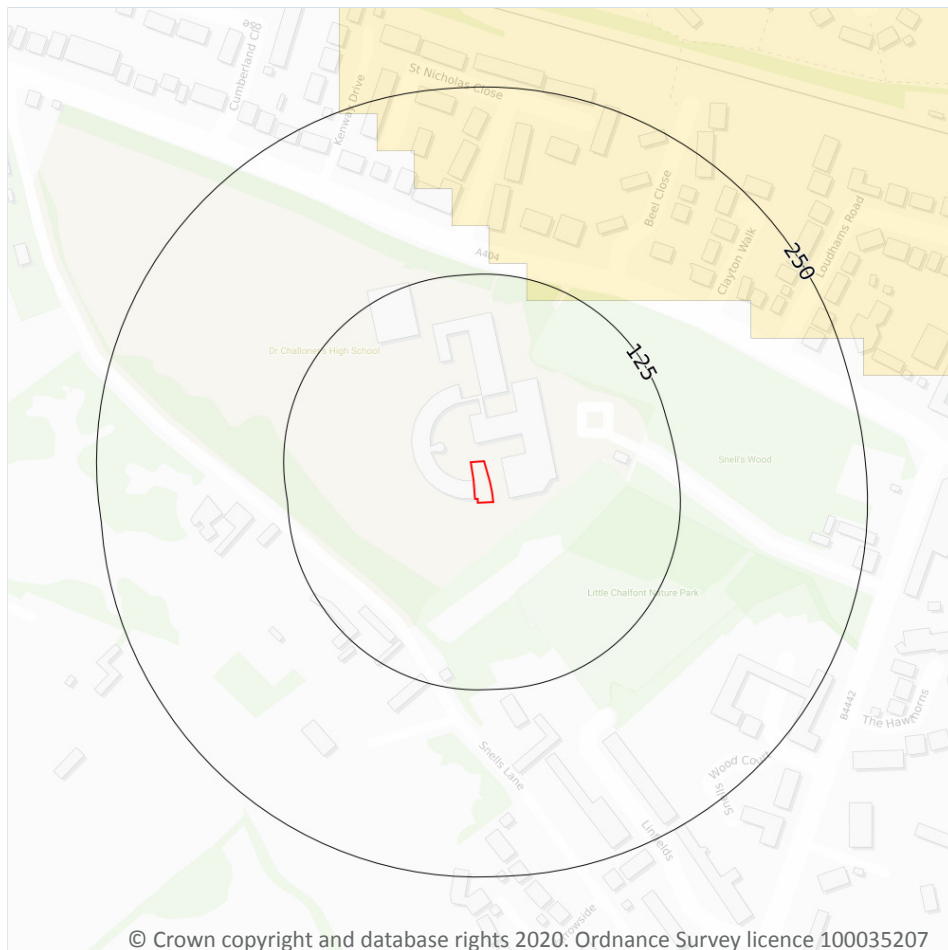
## 18.13 Clay mining

Records on site	0
-----------------	---

Generalised areas that may be affected by kaolin and ball clay extraction.

*This data is sourced from the Kaolin and Ball Clay Association (UK).*

## 19 Radon



### 19.1 Radon

#### Records on site

1

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 90**

Location	Estimated properties affected	Radon Protection Measures required
On site	Less than 1%	None**

*This data is sourced from the British Geological Survey and Public Health England.*



## 20 Soil chemistry

### 20.1 BGS Estimated Background Soil Chemistry

Records within 50m

2

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km<sup>2</sup>. In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km<sup>2</sup>; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 mg/kg
22m SE	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 mg/kg

*This data is sourced from the British Geological Survey.*

### 20.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km<sup>2</sup>).

*This data is sourced from the British Geological Survey.*

### 20.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km<sup>2</sup>.

*This data is sourced from the British Geological Survey.*



## 21 Railway infrastructure and projects

### 21.1 Underground railways (London)

Records within 250m	0
---------------------	---

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

*This data is sourced from publicly available information by Groundsure.*

### 21.2 Underground railways (Non-London)

Records within 250m	0
---------------------	---

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

*This data is sourced from publicly available information by Groundsure.*

### 21.3 Railway tunnels

Records within 250m	0
---------------------	---

Railway tunnels taken from contemporary Ordnance Survey mapping.

*This data is sourced from the Ordnance Survey.*

### 21.4 Historical railway and tunnel features

Records within 250m	0
---------------------	---

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

*This data is sourced from Ordnance Survey/Groundsure.*

### 21.5 Royal Mail tunnels

Records within 250m	0
---------------------	---

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.





*This data is sourced from Groundsure/the Postal Museum.*

## 21.6 Historical railways

Records within 250m	0
---------------------	---

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

*This data is sourced from OpenStreetMap.*

## 21.7 Railways

Records within 250m	0
---------------------	---

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

*This data is sourced from Ordnance Survey and OpenStreetMap.*

## 21.8 Crossrail 1

Records within 500m	0
---------------------	---

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

*This data is sourced from publicly available information by Groundsure.*

## 21.9 Crossrail 2

Records within 500m	0
---------------------	---

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

*This data is sourced from publicly available information by Groundsure.*

## 21.10 HS2

Records within 500m	0
---------------------	---

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

*This data is sourced from HS2 Ltd.*



## Data providers

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

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## Appendix 2

### Historical Maps

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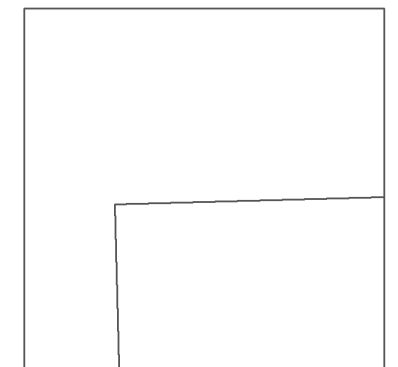
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**Grid Ref:** 498970, 197429

**Map Name:** County Series

**Map date:** 1865

**Scale:** 1:10,560

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



Surveyed 1865  
Revised 1865  
Edition N/A  
Copyright N/A  
Levelled N/A

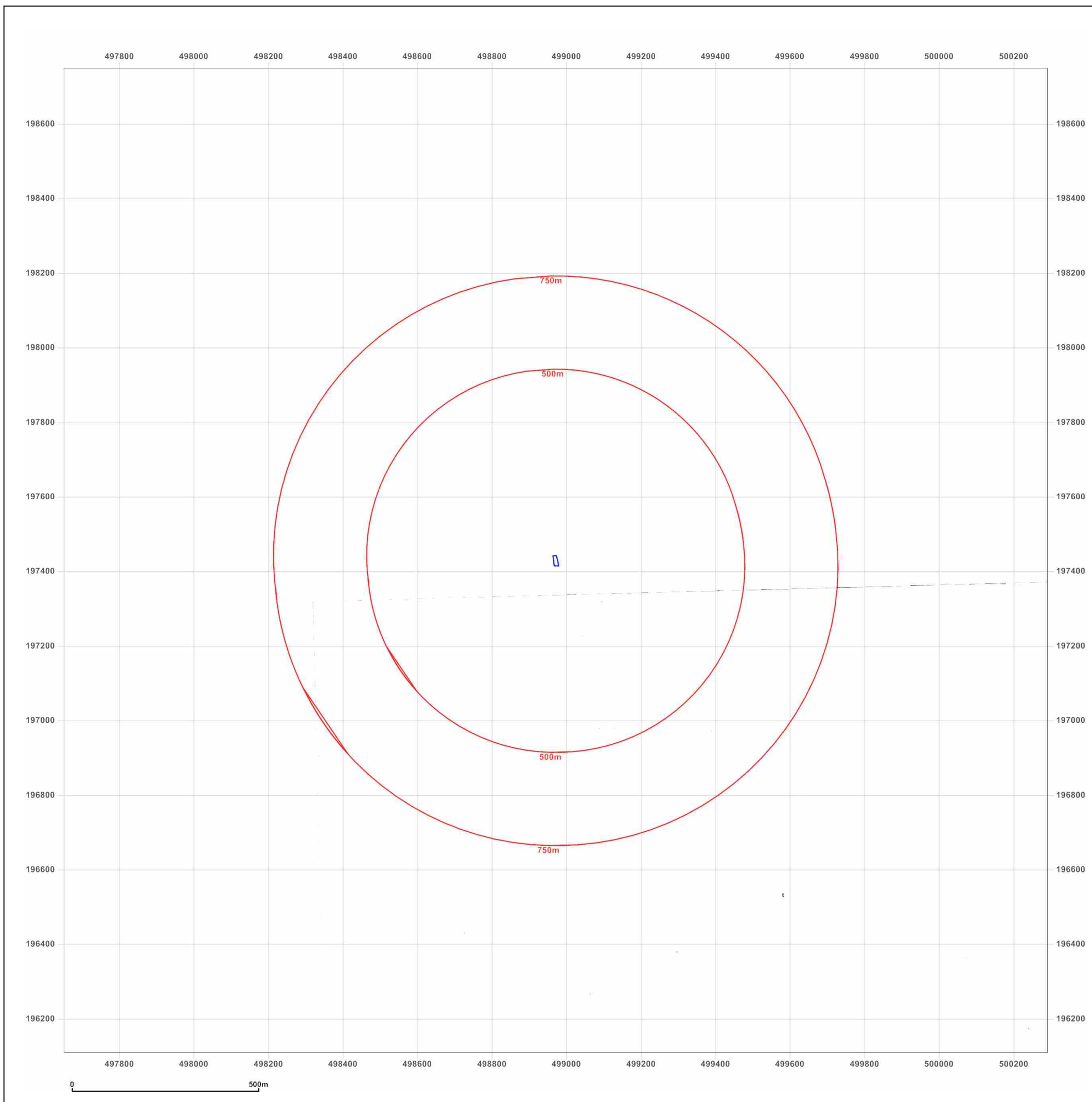


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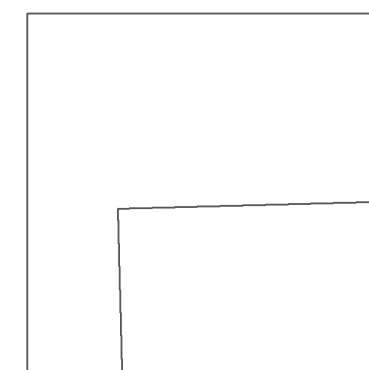
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**Map Name:** County Series

**Map date:** 1868

**Scale:** 1:10,560

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



Surveyed 1865  
Revised N/A  
Edition 1868  
Copyright N/A  
Levelled N/A

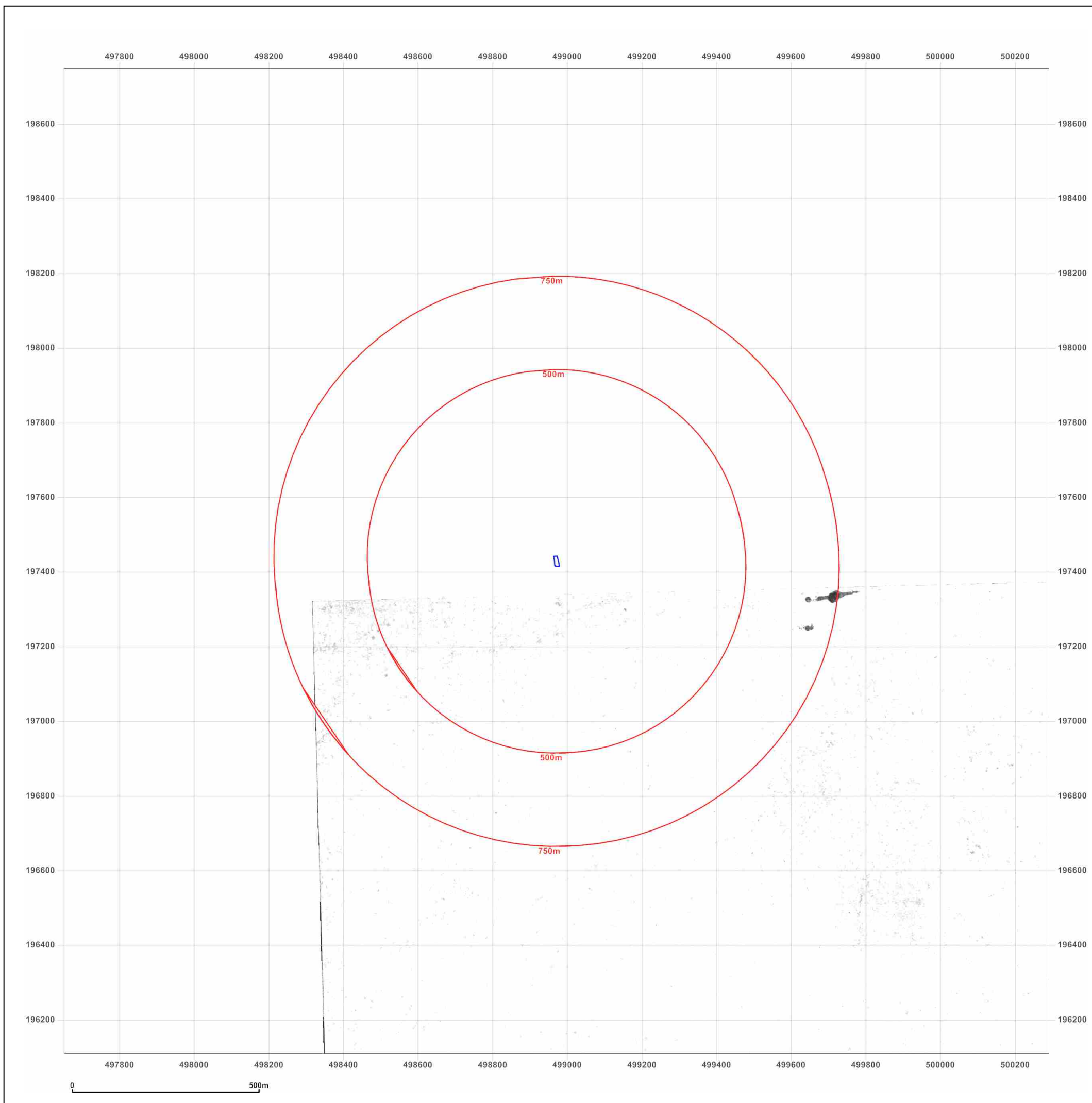


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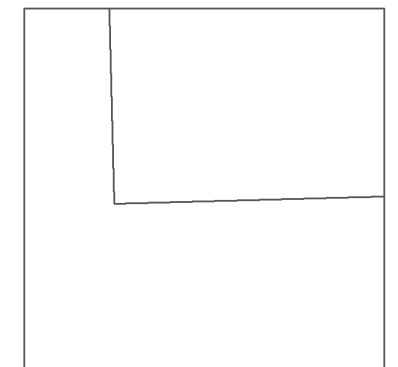
**Map date:** 1877

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



Surveyed 1877  
Revised 1877  
Edition N/A  
Copyright N/A  
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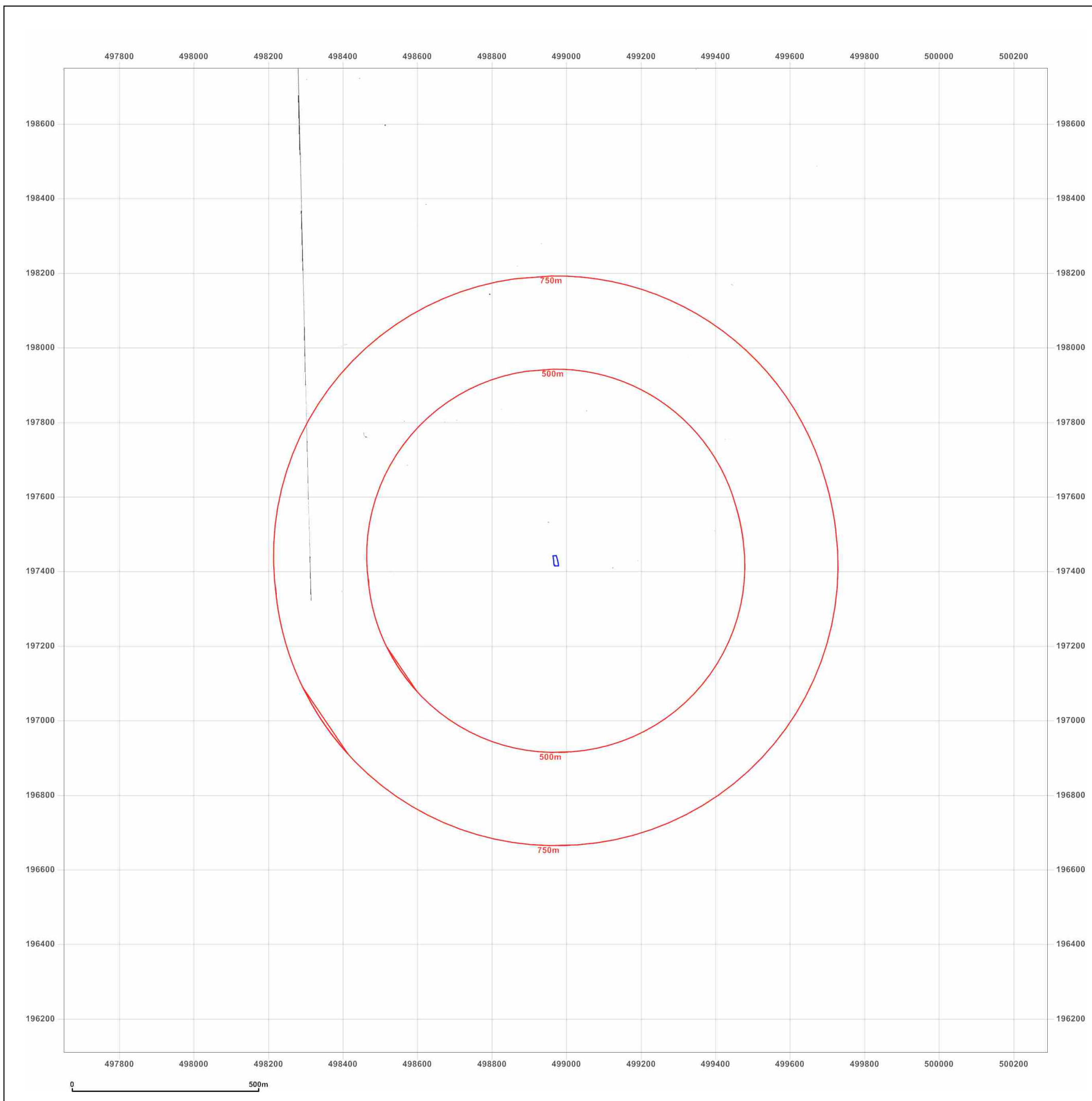


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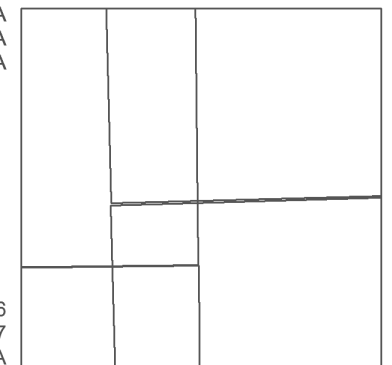
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**Printed at:** 1:10,560



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Revised 1897  
Edition N/A  
Copyright N/A  
Levelled N/A



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Revised 1897  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1877  
Revised 1897  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1877  
Revised 1897  
Edition N/A  
Copyright N/A  
Levelled N/A

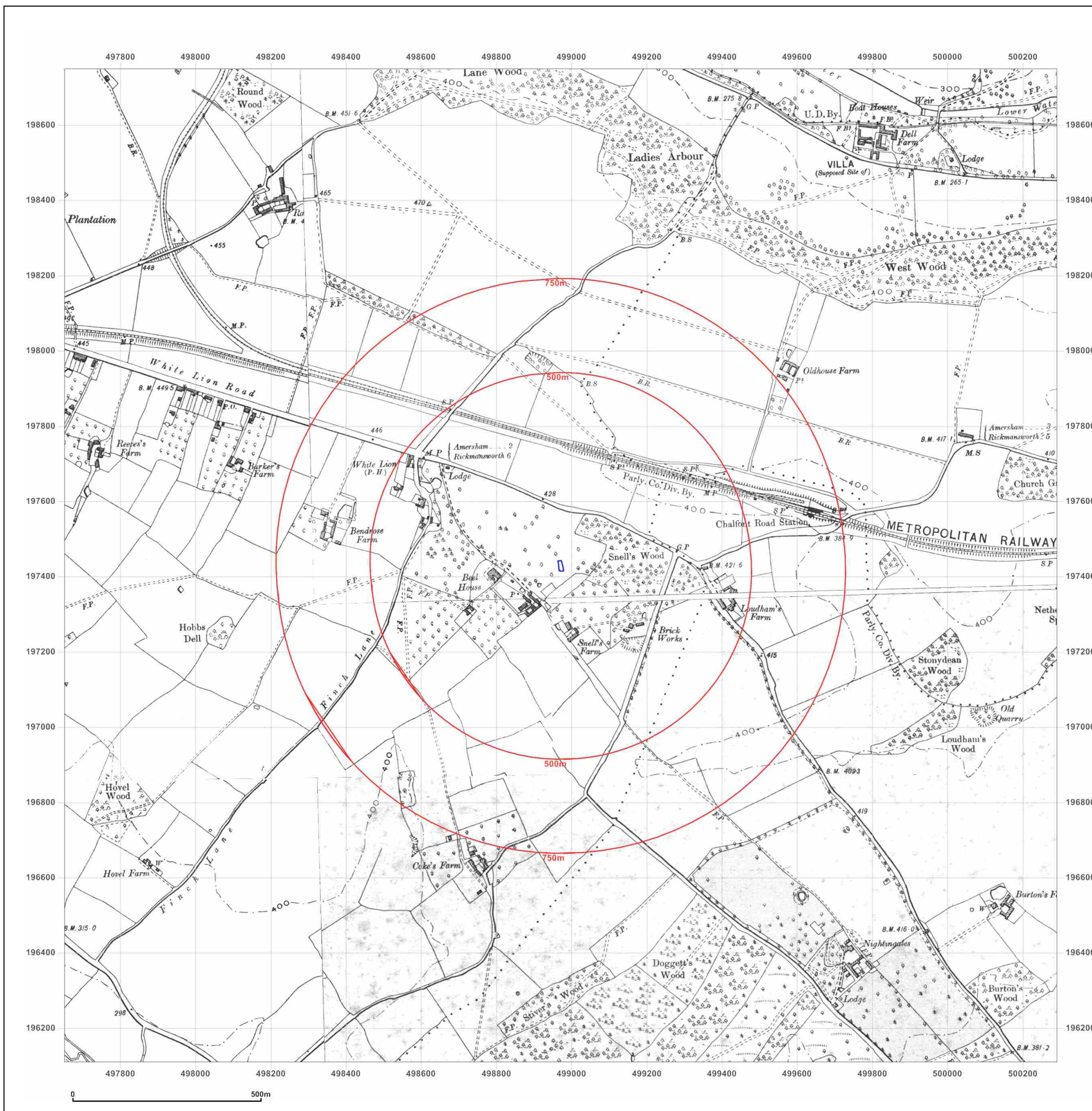


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Revised 1897  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1876  
Revised 1897  
Edition N/A  
Copyright N/A  
Levelled N/A

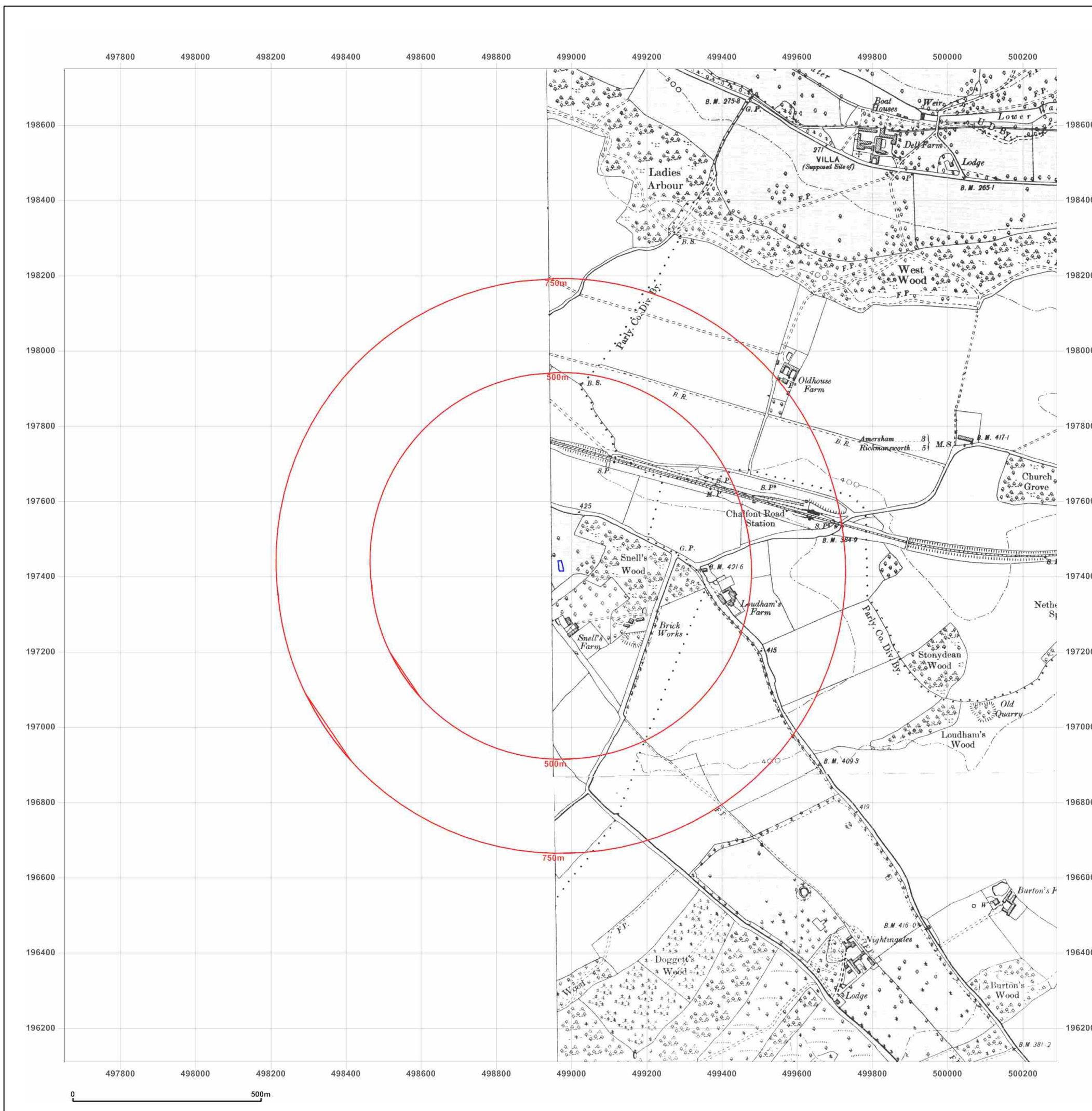


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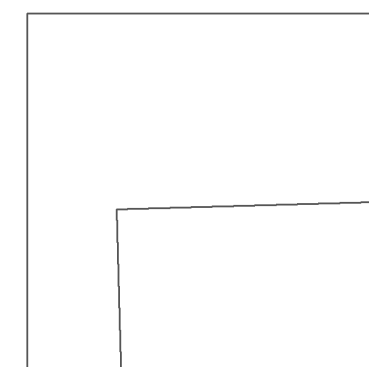
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**Scale:** 1:10,560

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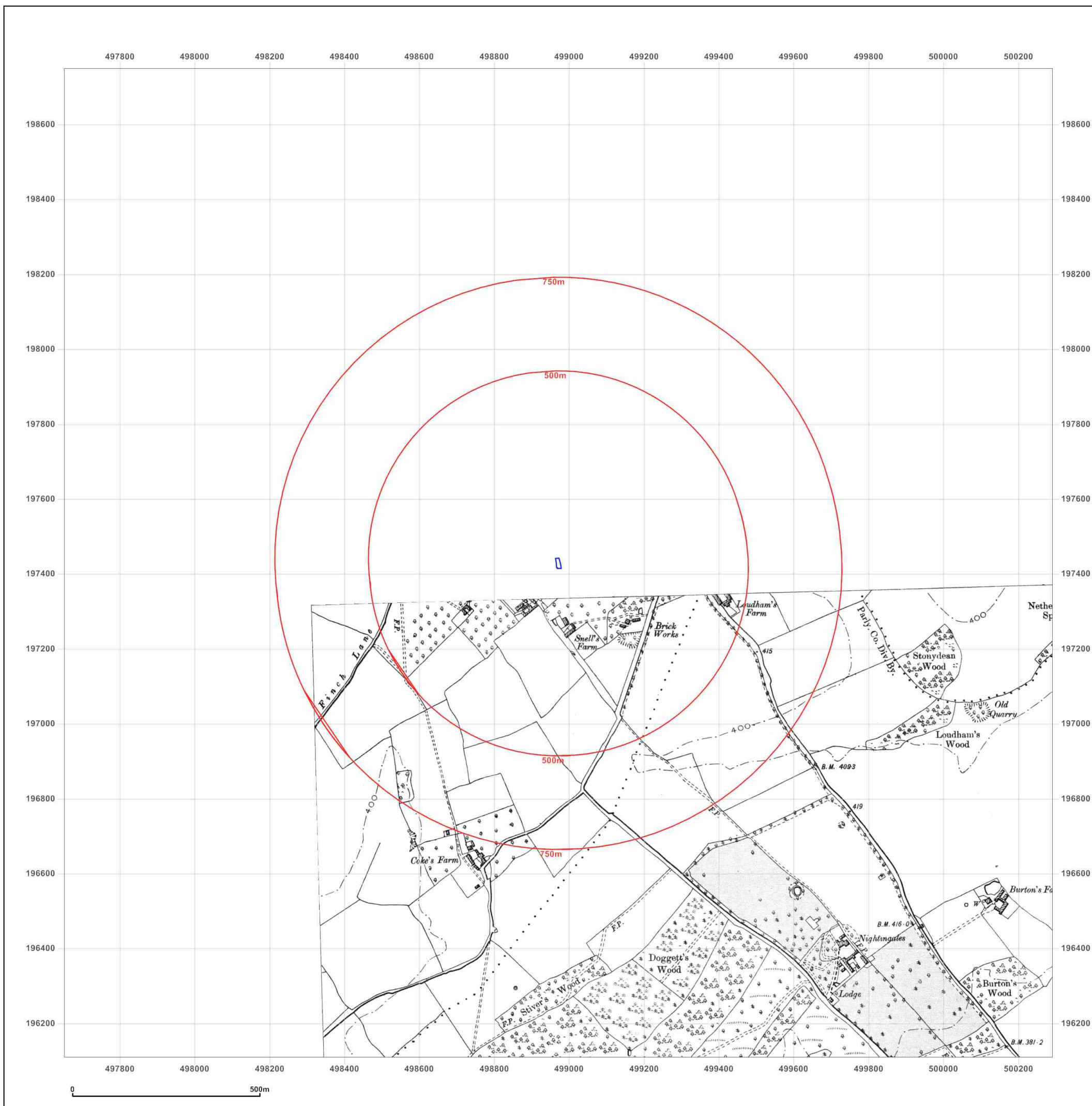


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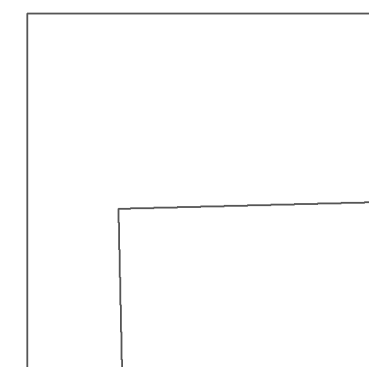
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**Printed at:** 1:10,560



Surveyed 1871  
Revised 1913  
Edition N/A  
Copyright N/A  
Levelled N/A

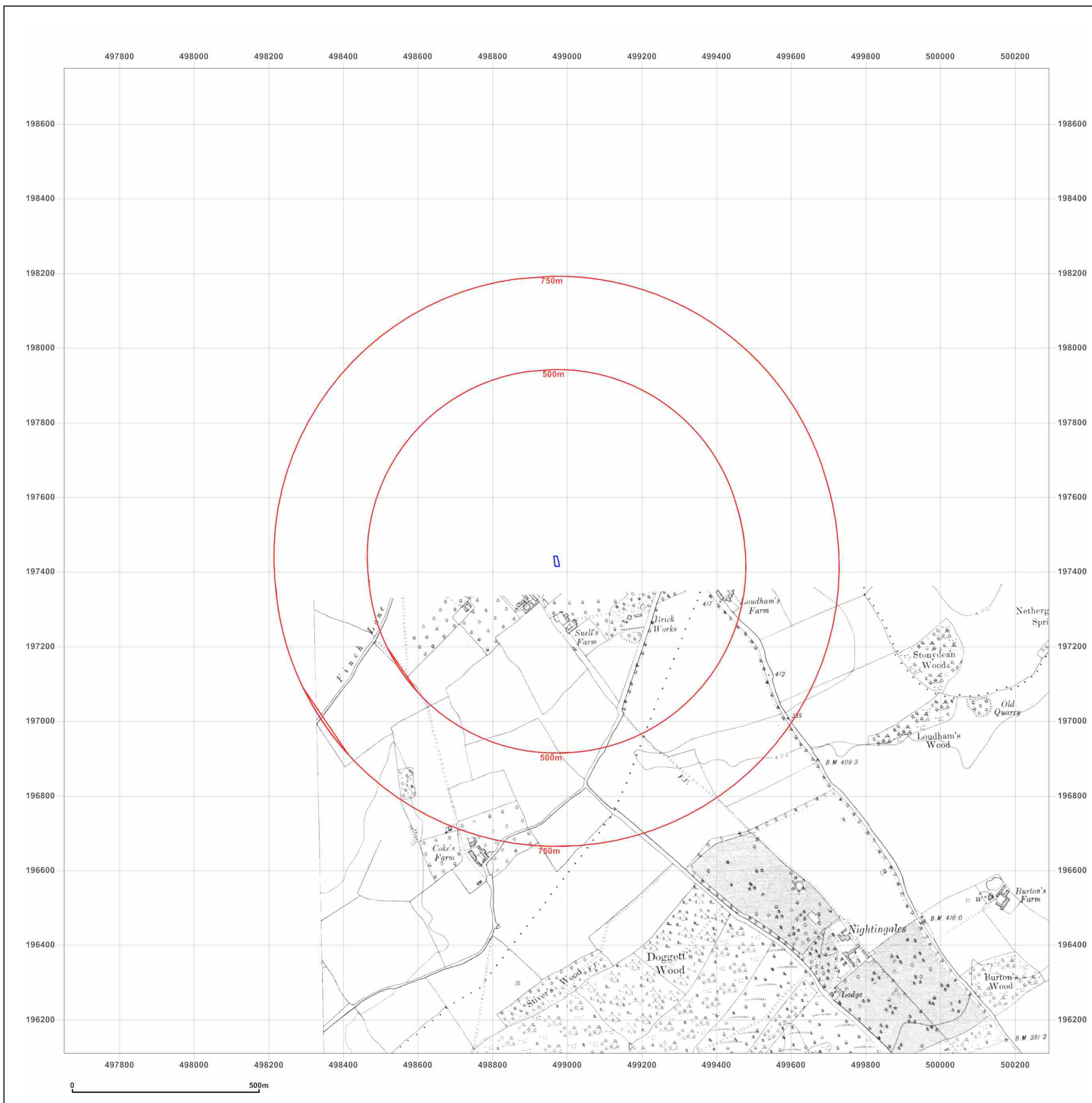


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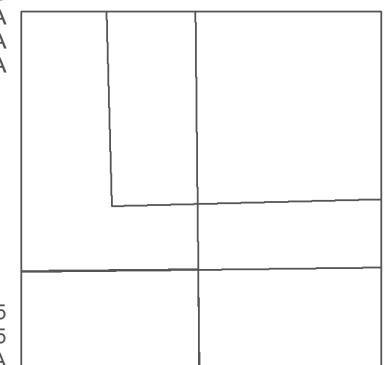
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Surveyed 1876  
Revised 1923  
Edition N/A  
Copyright N/A  
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Revised 1925  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1876  
Revised 1923  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1875  
Revised 1926  
Edition N/A  
Copyright N/A  
Levelled N/A

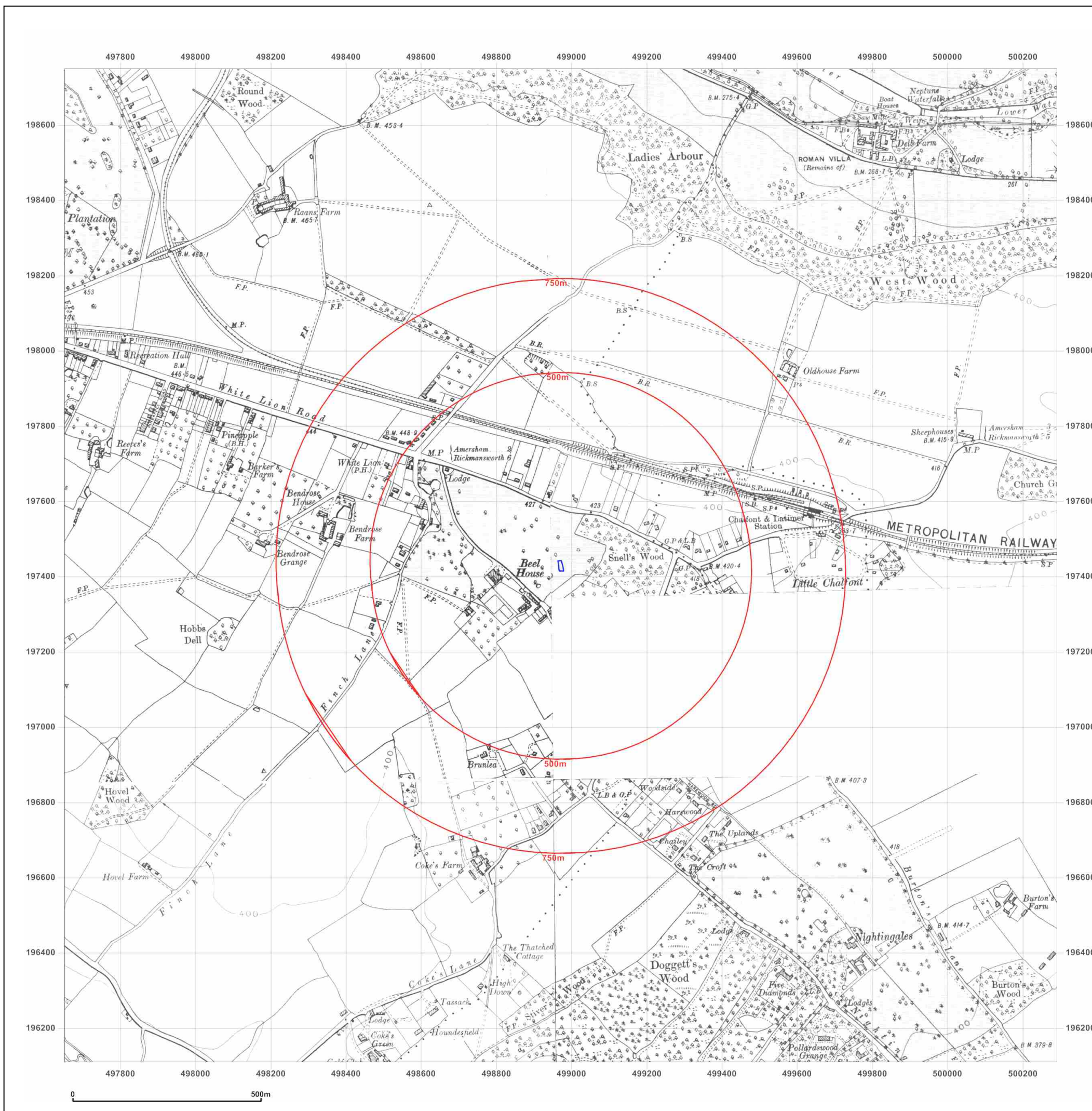


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**Map Name:** County Series

**Map date:** 1926

**Scale:** 1:10,560

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



Surveyed 1876  
Revised 1926  
Edition N/A  
Copyright N/A  
Levelled N/A

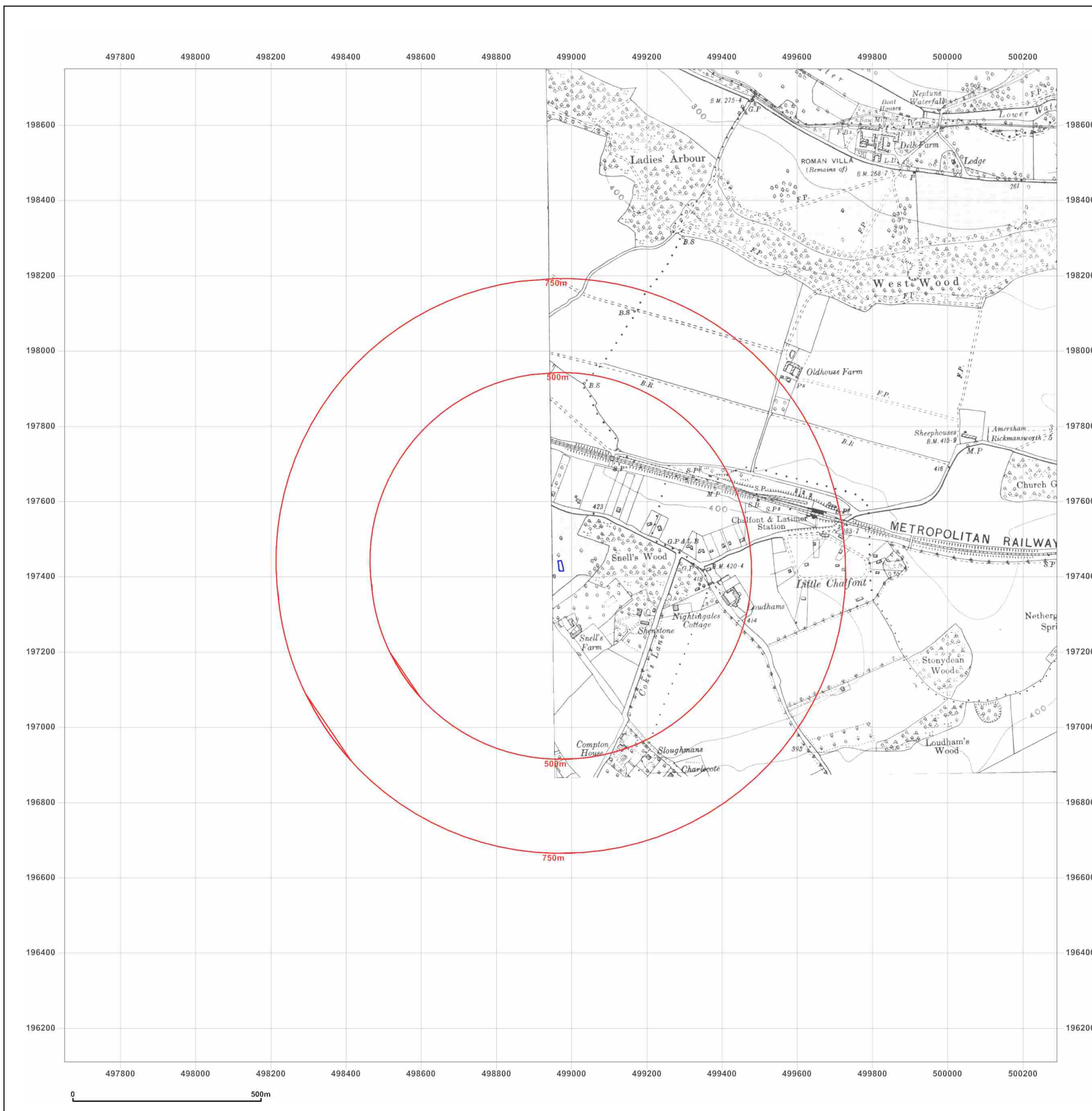


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**Client Ref:** C475\_20\_E\_695\_PO-0596  
**Report Ref:** GS-6608039  
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**Map Name:** County Series

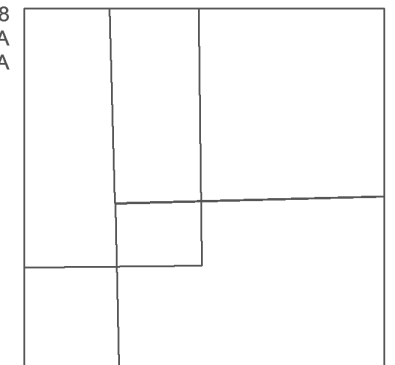
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**Scale:** 1:10,560

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



Surveyed 1876  
Revised 1938  
Edition 1938  
Copyright N/A  
Levelled N/A



Surveyed 1876  
Revised 1938  
Edition N/A  
Copyright N/A  
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Surveyed 1871  
Revised 1938  
Edition N/A  
Copyright N/A  
Levelled N/A

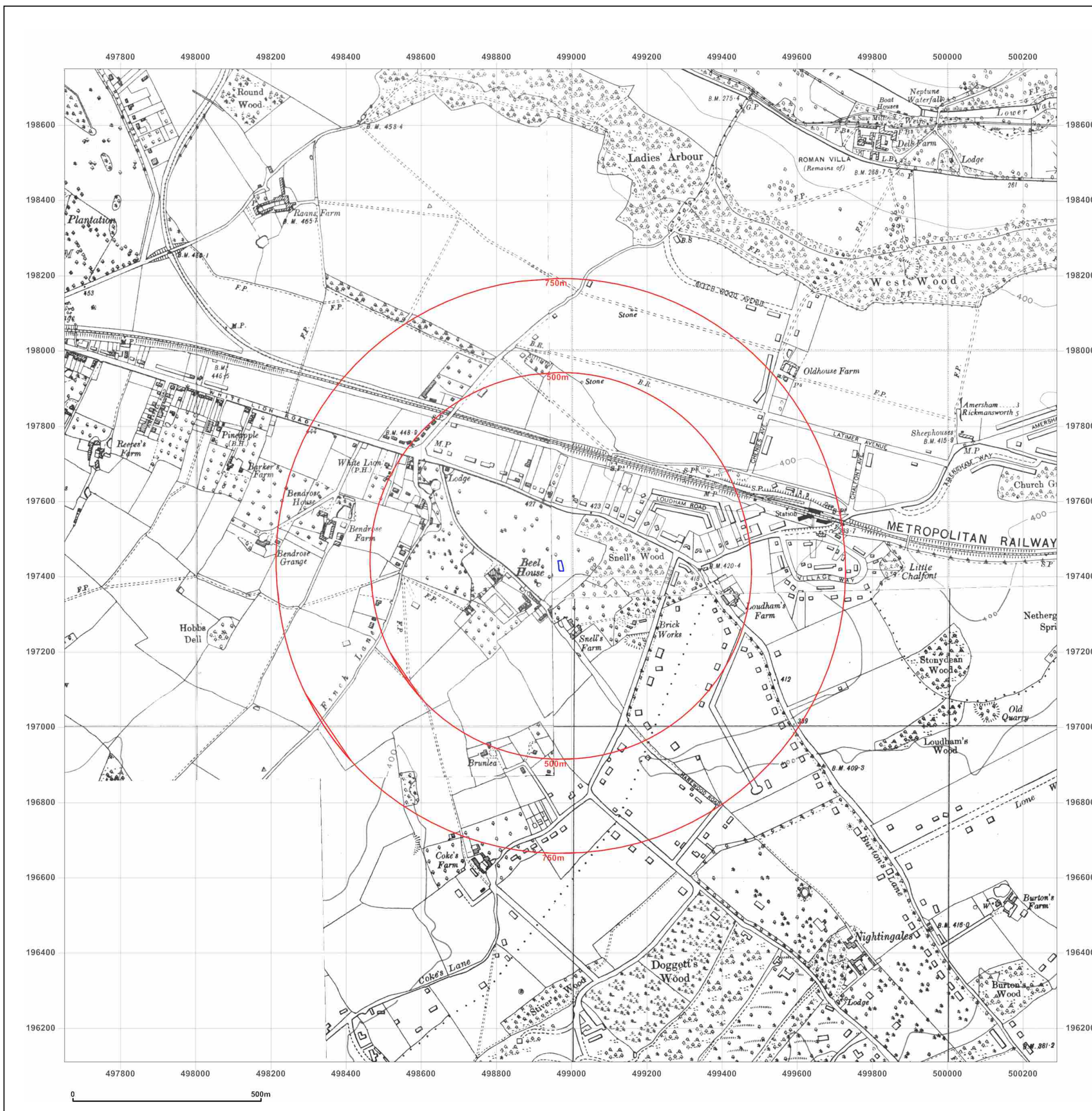


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**Map Name:** Provisional

**Map date:** 1955-1959

**Scale:** 1:10,560

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



Surveyed 1955  
Revised 1955  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1955  
Revised 1955  
Edition N/A  
Copyright N/A  
Levelled N/A

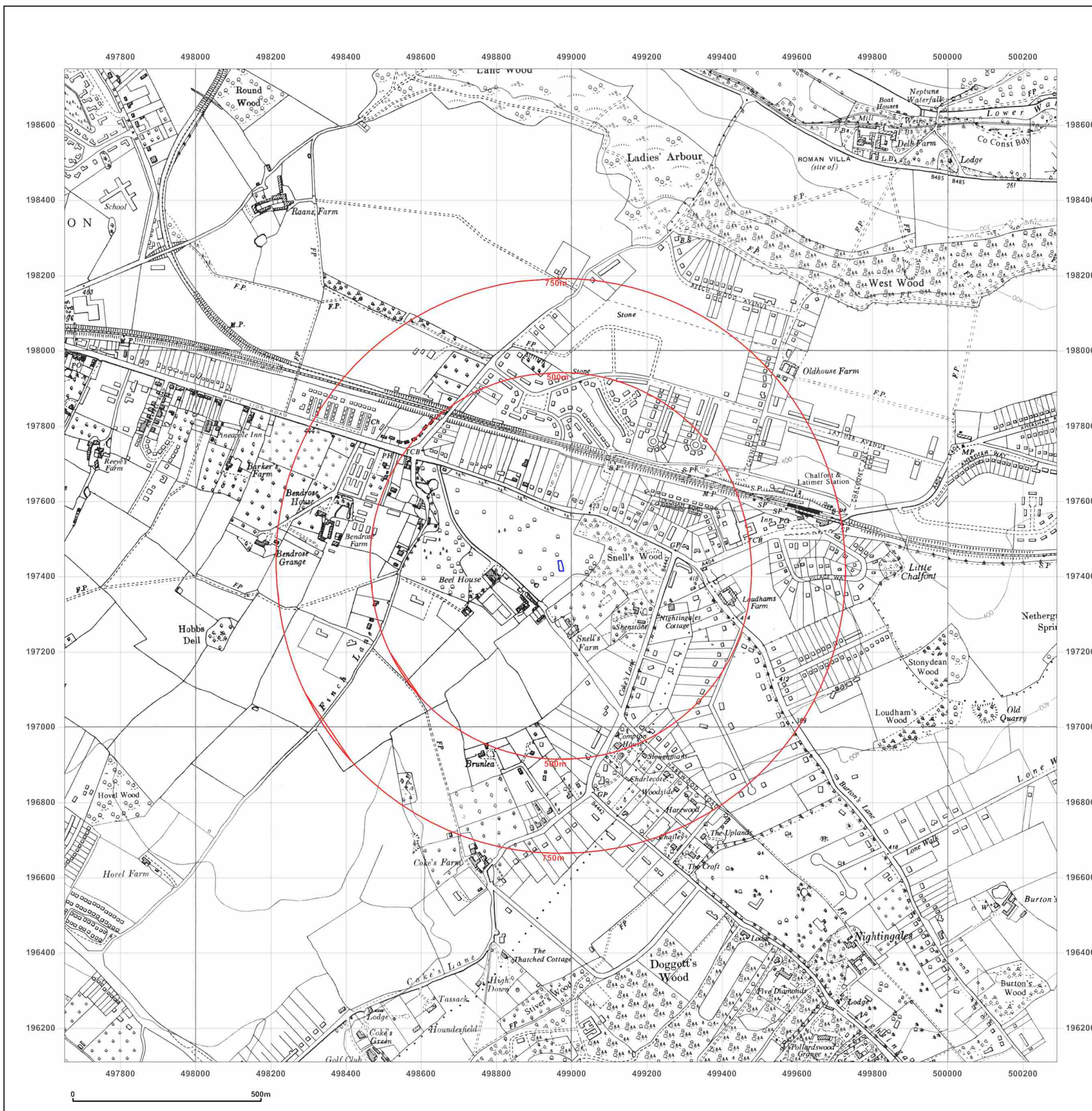


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**Report Ref:** GS-6608039  
**Grid Ref:** 498970, 197429

**Map Name:** National Grid

**Map date:** 1978

**Scale:** 1:10,000

**Printed at:** 1:10,000



Surveyed 1974  
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**Client Ref:** C475\_20\_E\_695\_PO-0596  
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**Map Name:** National Grid

**Map date:** 1990

**Scale:** 1:10,000

**Printed at:** 1:10,000



Surveyed 1987  
Revised 1990  
Edition N/A  
Copyright N/A  
Levelled N/A

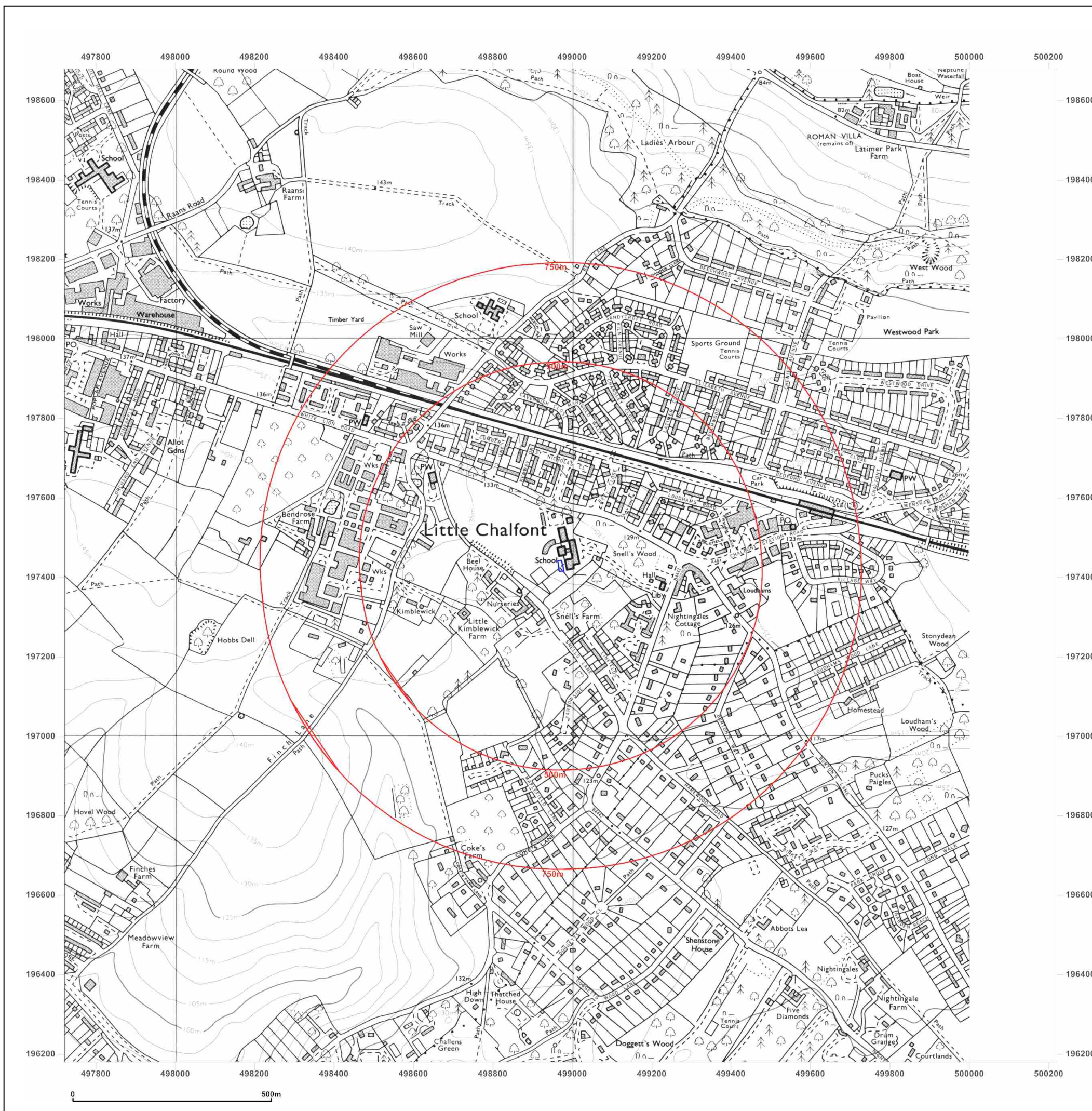


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2020

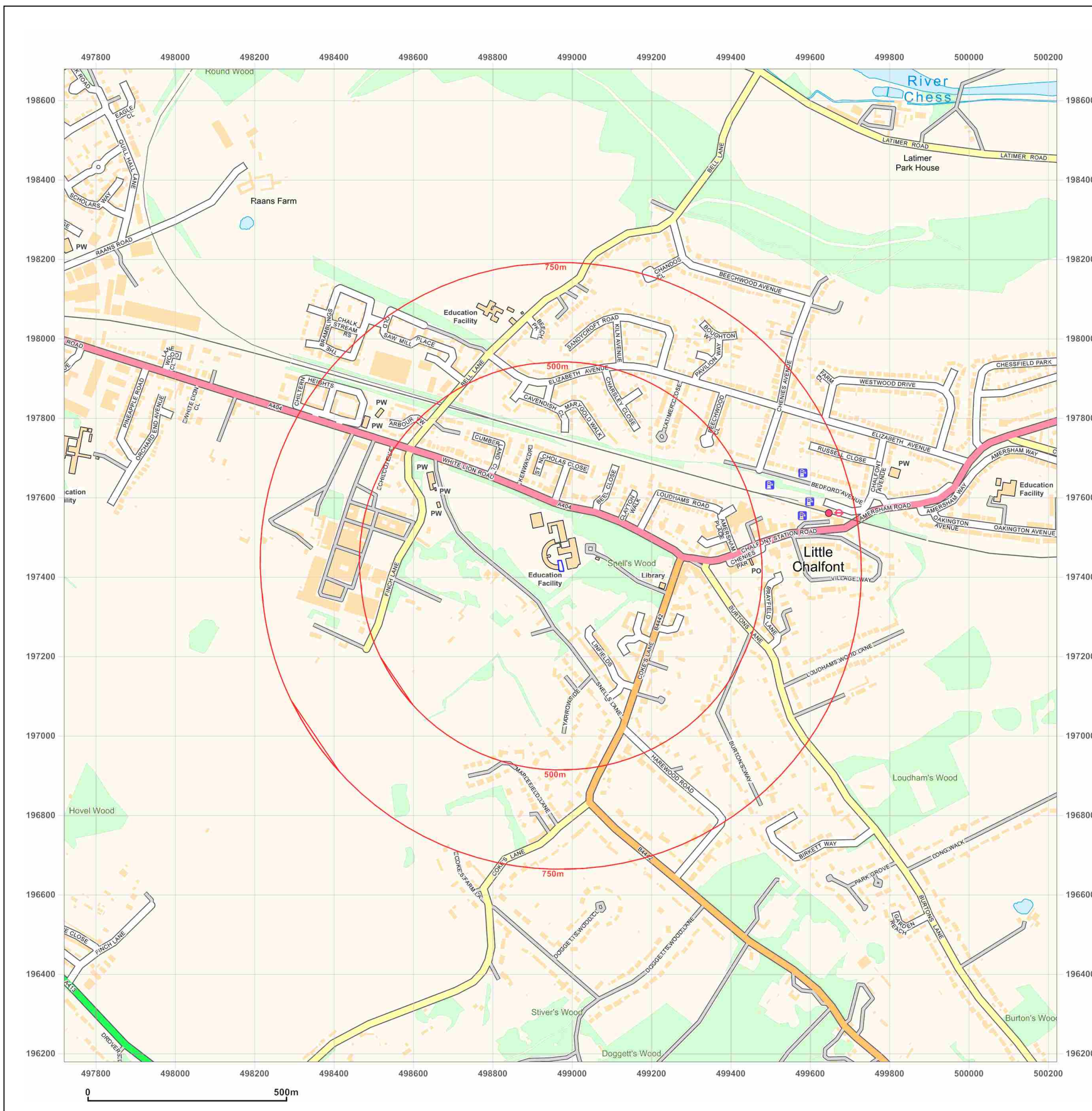


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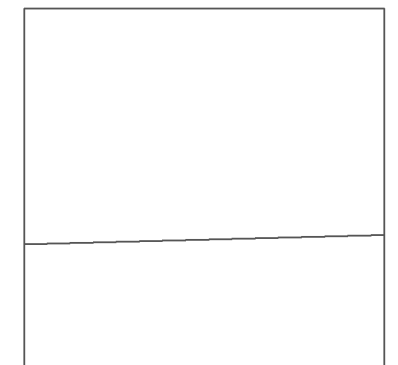
**Map date:** 1877

**Scale:** 1:2,500

**Printed at:** 1:2,500



Surveyed 1877  
Revised 1877  
Edition N/A  
Copyright N/A  
Levelled N/A

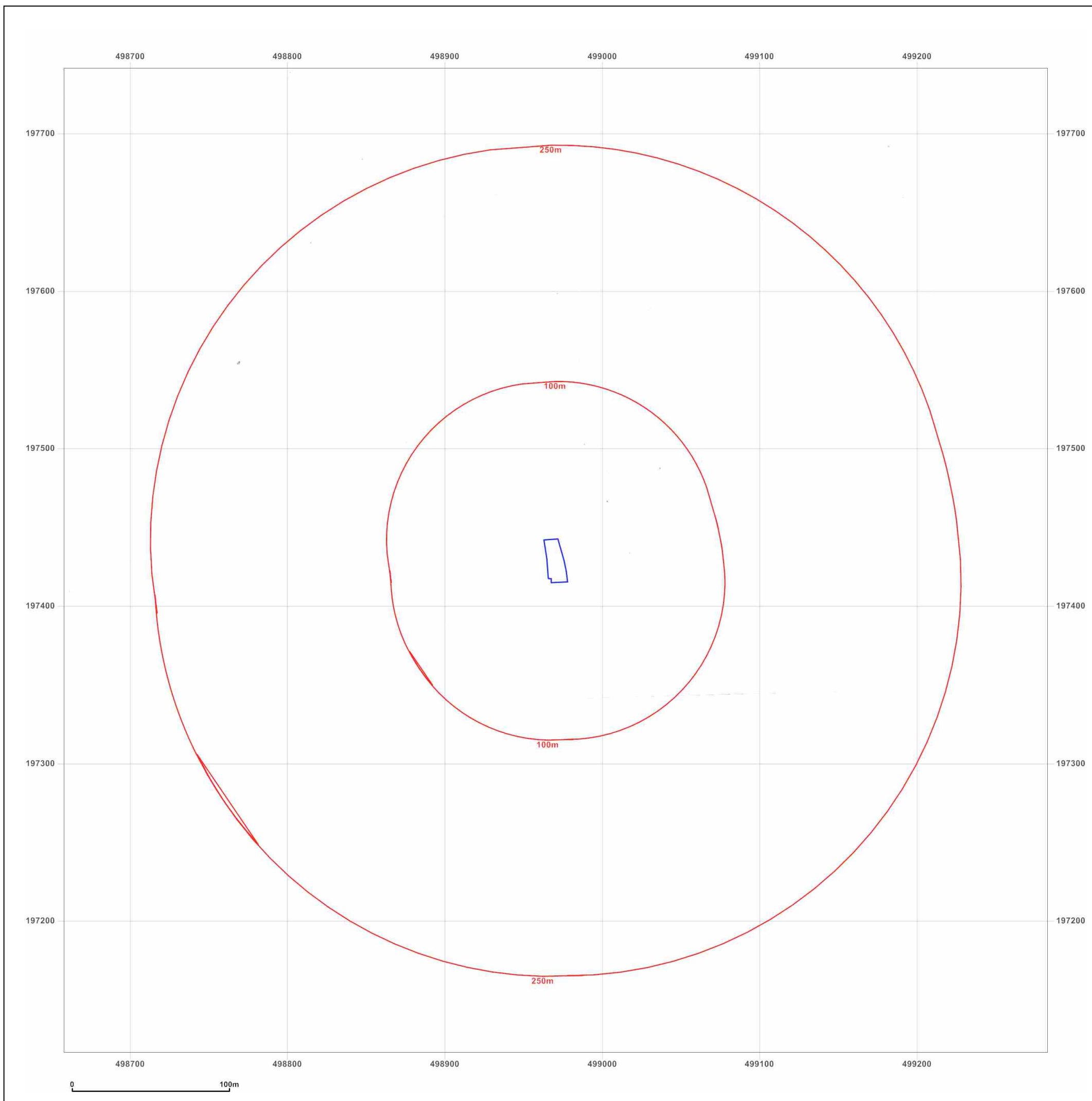


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**Report Ref:** GS-6608039  
**Grid Ref:** 498970, 197429

**Map Name:** County Series

**Map date:** 1877-1882

**Scale:** 1:2,500

**Printed at:** 1:2,500



Surveyed 1882  
Revised 1882  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1877  
Revised 1877  
Edition N/A  
Copyright N/A  
Levelled N/A

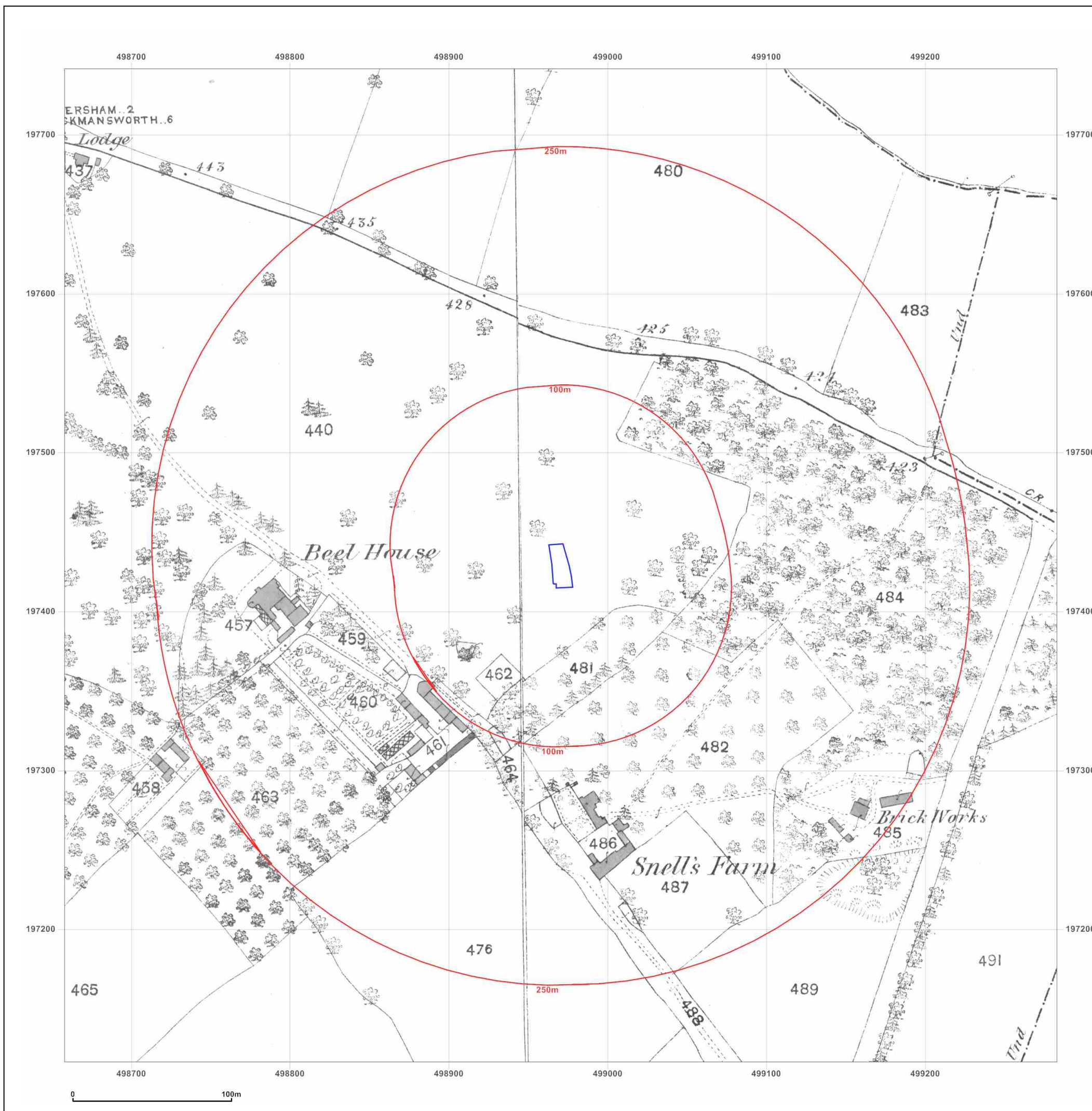


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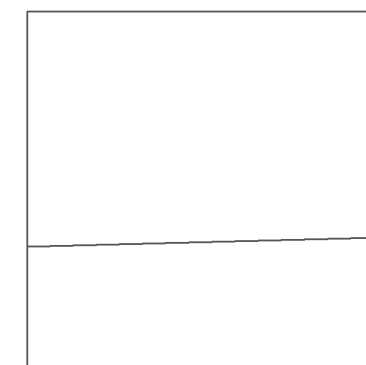
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Surveyed 1898  
Revised 1898  
Edition N/A  
Copyright N/A  
Levelled N/A

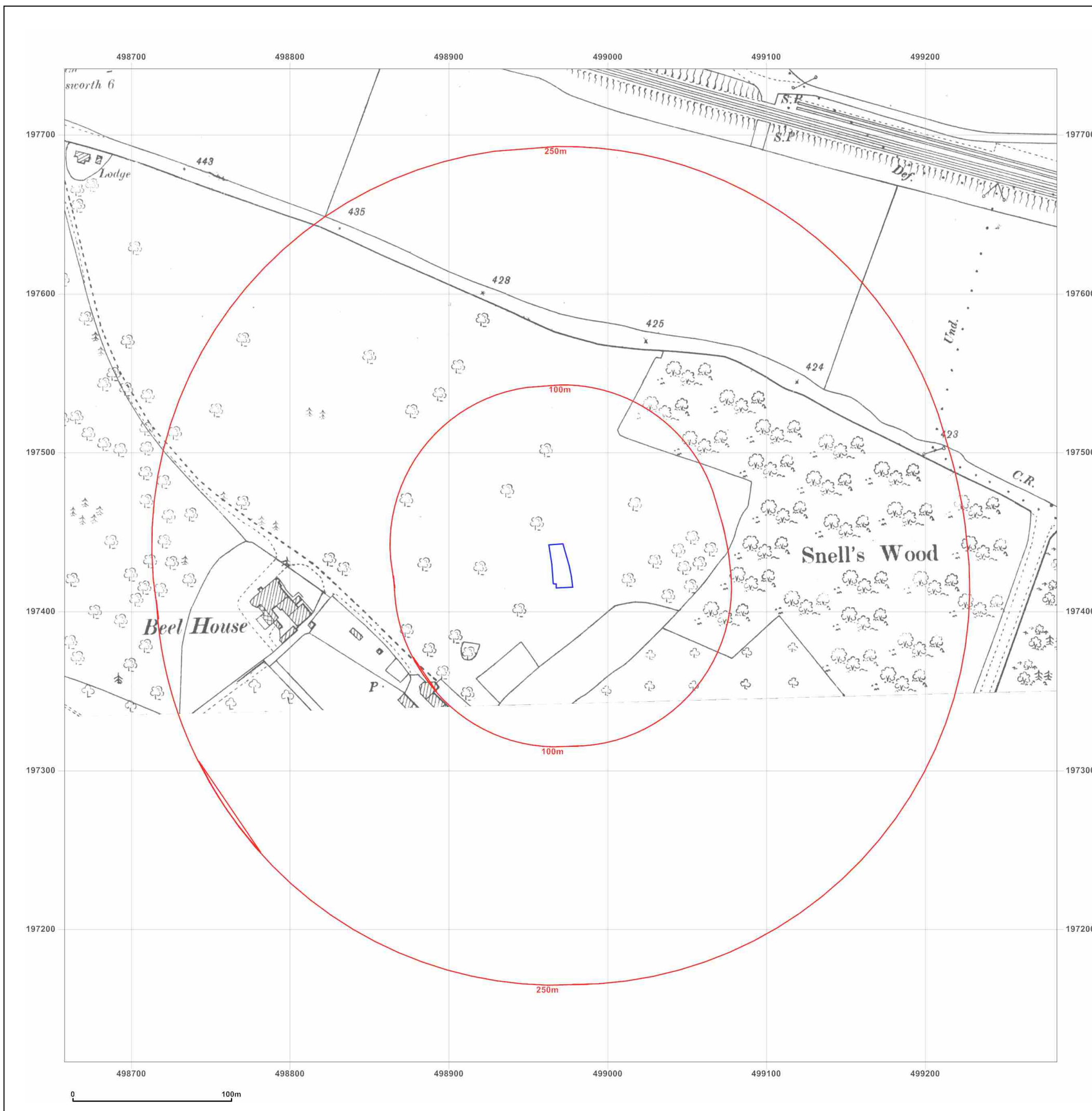


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[www.groundsure.com/sites/default/files/groundsure\\_legend.pdf](http://www.groundsure.com/sites/default/files/groundsure_legend.pdf)



#### Site Details:

DR CHALLONERS HIGH  
SCHOOL, COKES LANE, LITTLE  
CHALFONT, HP7 9QB

**Client Ref:** C475\_20\_E\_695\_PO-0596  
**Report Ref:** GS-6608039  
**Grid Ref:** 498970, 197429

**Map Name:** County Series

**Map date:** 1898

**Scale:** 1:2,500

**Printed at:** 1:2,500



Surveyed 1898  
Revised 1898  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1898  
Revised 1898  
Edition N/A  
Copyright N/A  
Levelled N/A

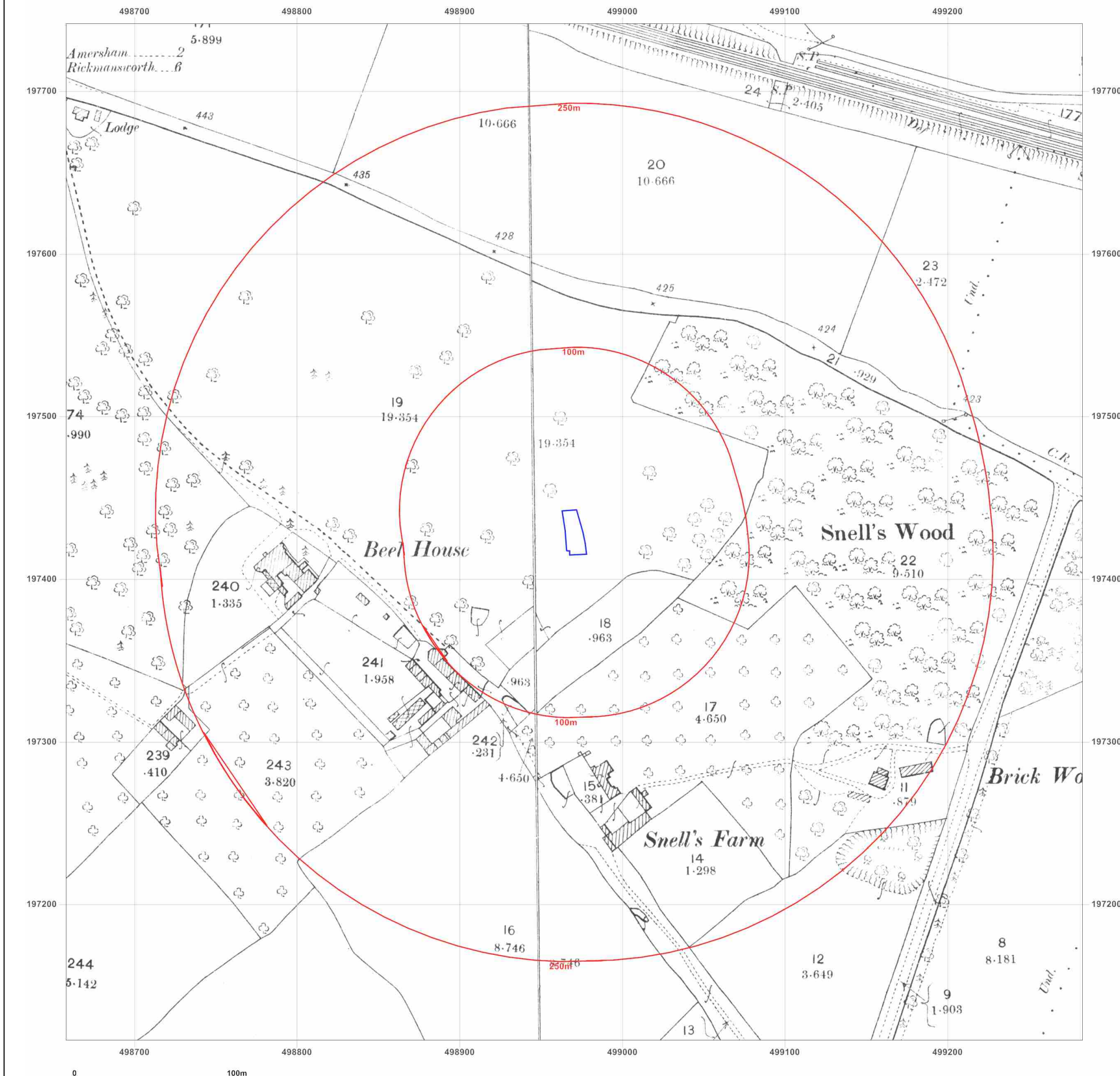


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#### Site Details:

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CHALFONT, HP7 9QB

**Client Ref:** C475\_20\_E\_695\_PO-0596  
**Report Ref:** GS-6608039  
**Grid Ref:** 498970, 197429

**Map Name:** County Series

**Map date:** 1925

**Scale:** 1:2,500

**Printed at:** 1:2,500



Surveyed 1925  
Revised 1925  
Edition N/A  
Copyright N/A  
Levelled N/A

Surveyed 1925  
Revised 1925  
Edition N/A  
Copyright N/A  
Levelled N/A

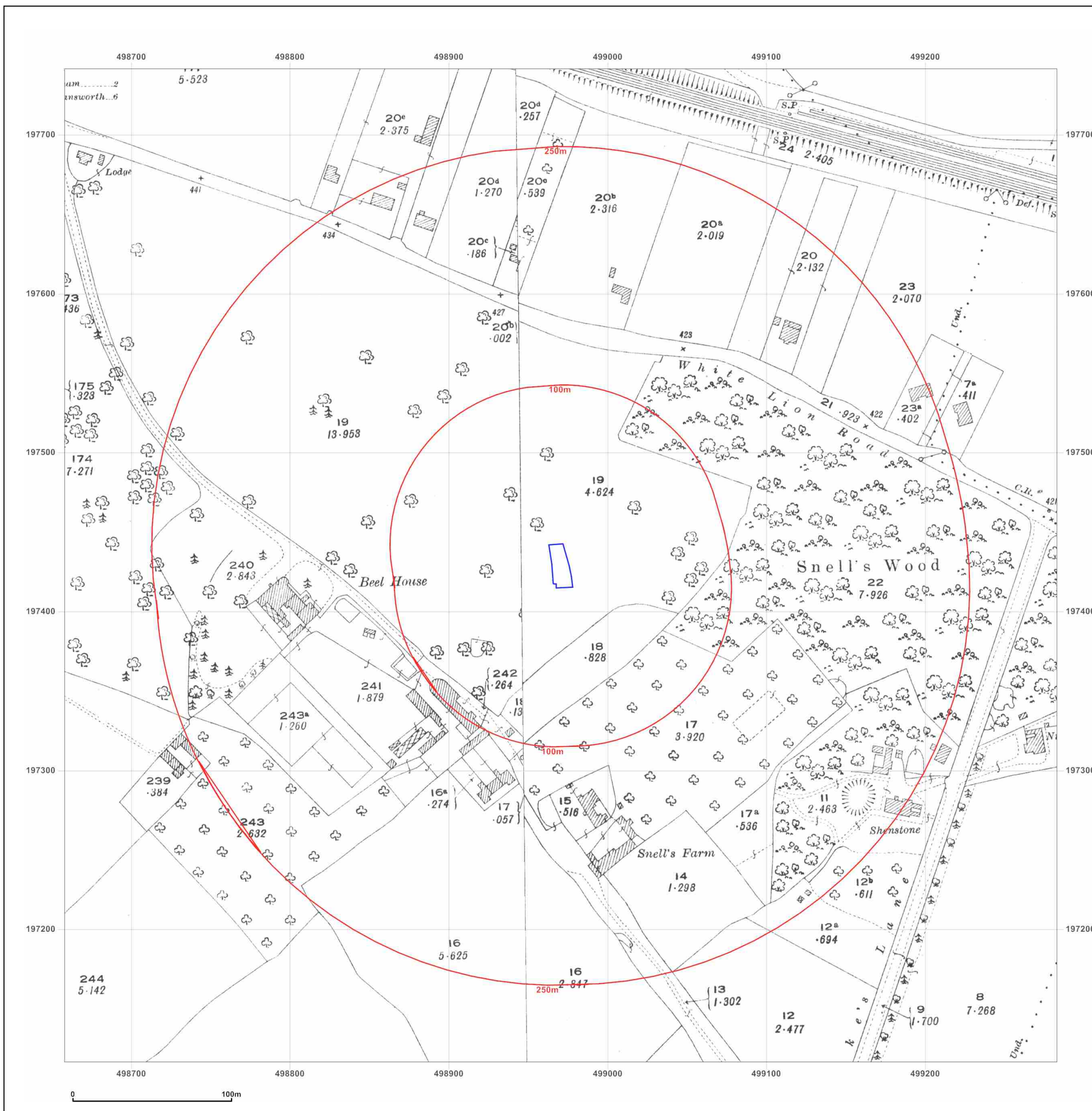


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**Client Ref:** C475\_20\_E\_695\_PO-0596  
**Report Ref:** GS-6608039  
**Grid Ref:** 498970, 197429

**Map Name:** National Grid

**Map date:** 1961

**Scale:** 1:2,500

**Printed at:** 1:2,500



Surveyed 1961  
Revised 1961  
Edition 1963  
Copyright 1963  
Levelled 1957

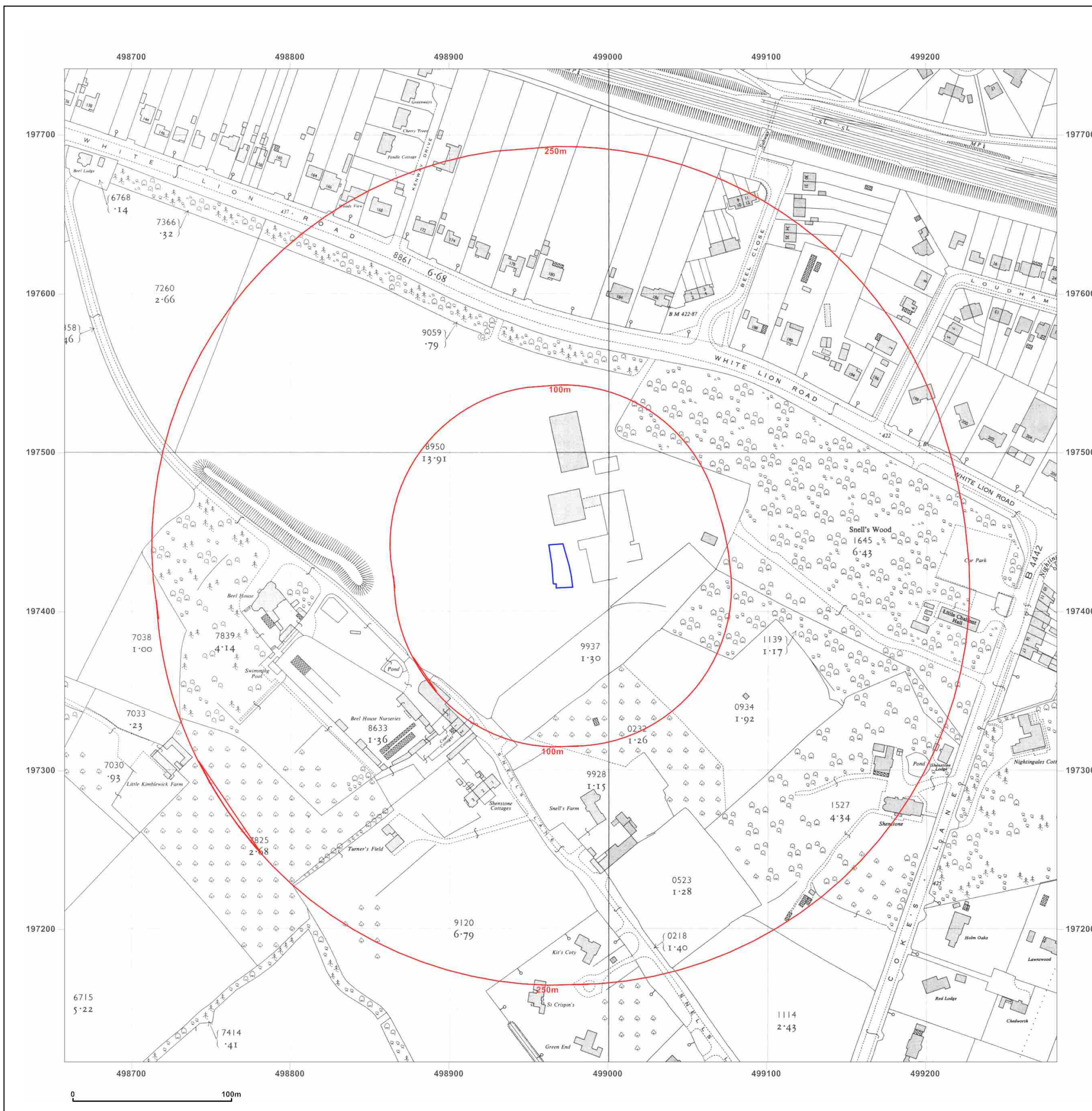


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#### Site Details:

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SCHOOL, COKES LANE, LITTLE  
CHALFONT, HP7 9QB

**Client Ref:** C475\_20\_E\_695\_PO-0596  
**Report Ref:** GS-6608039  
**Grid Ref:** 498970, 197429

**Map Name:** National Grid

**Map date:** 1961-1962

**Scale:** 1:1,250

**Printed at:** 1:2,000



Surveyed 1961  
Revised 1961  
Edition N/A  
Copyright 1962  
Levelled 1956

Surveyed 1961  
Revised 1961  
Edition N/A  
Copyright 1962  
Levelled 1956

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

Surveyed 1961  
Revised 1961  
Edition N/A  
Copyright 1962  
Levelled 1957

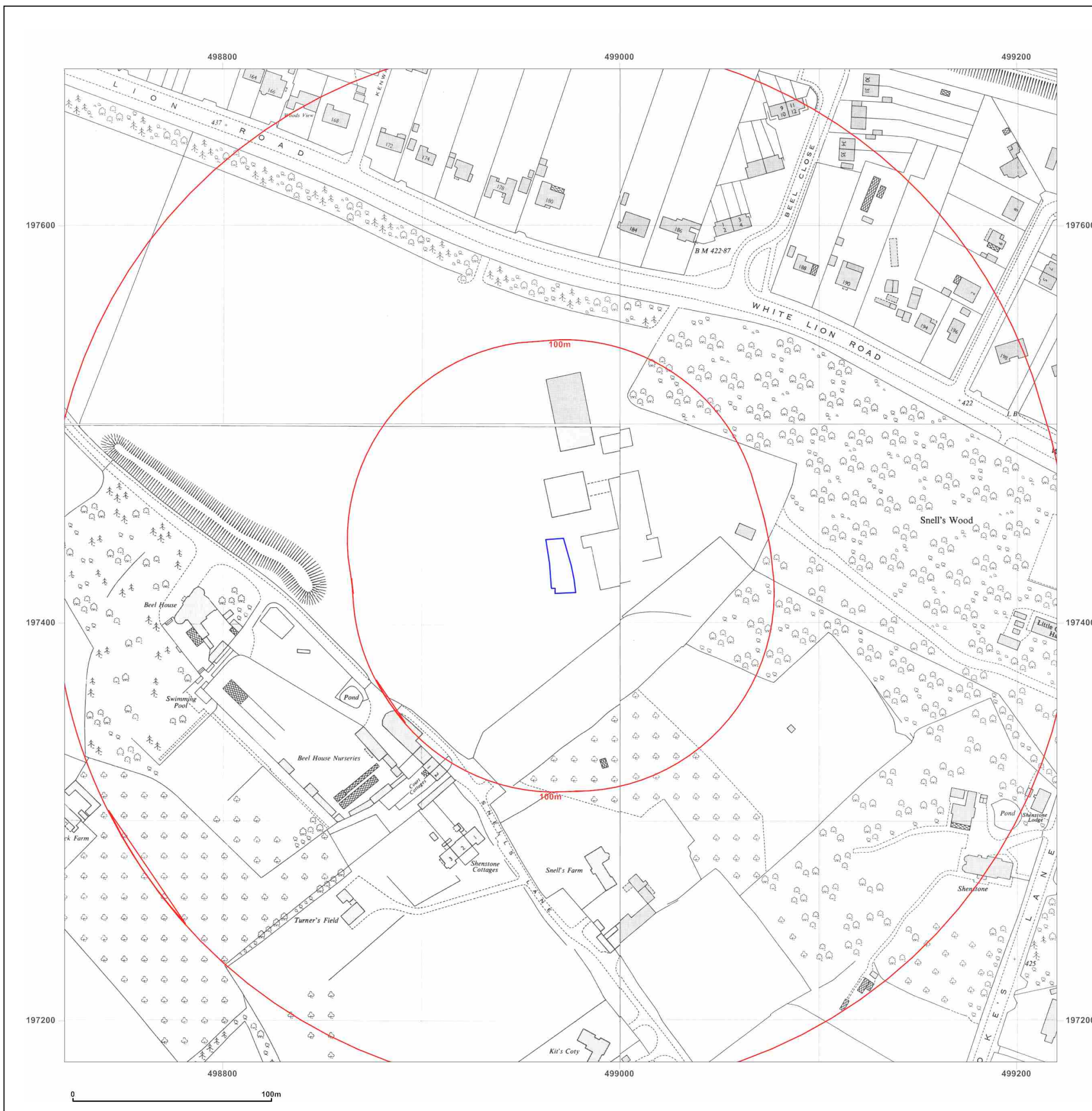


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**Client Ref:** C475\_20\_E\_695\_PO-0596  
**Report Ref:** GS-6608039  
**Grid Ref:** 498970, 197429

**Map Name:** National Grid

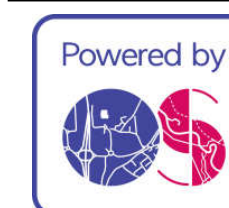
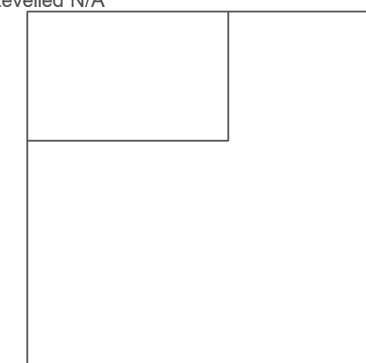
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Revised N/A  
Edition N/A  
Copyright N/A  
Levelled N/A

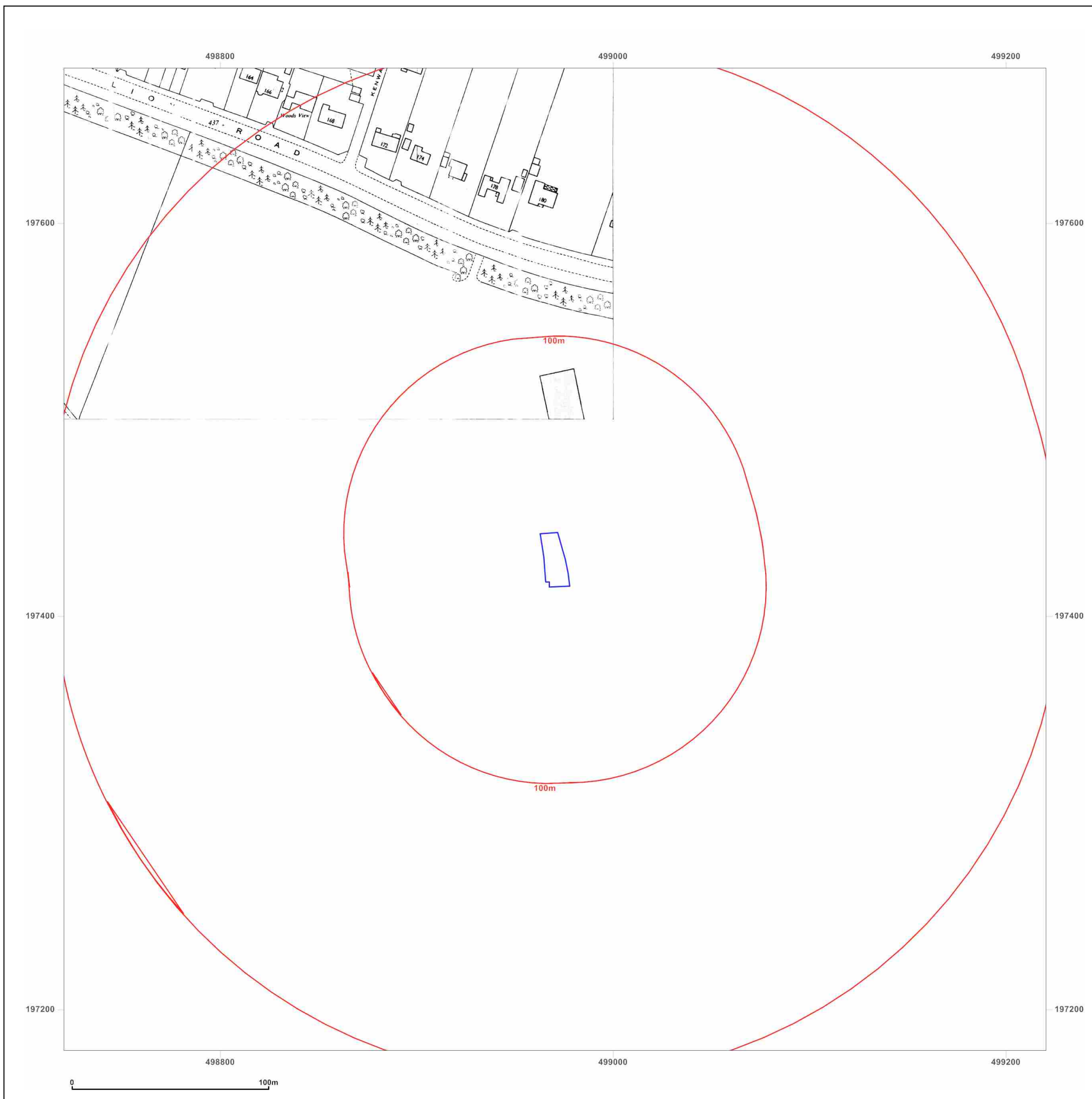


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CHALFONT, HP7 9QB

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**Report Ref:** GS-6608039  
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**Map Name:** National Grid

**Map date:** 1971-1976

**Scale:** 1:1,250

**Printed at:** 1:2,000



Surveyed 1961  
Revised 1971  
Edition N/A  
Copyright 1972  
Levelled 1956

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

Surveyed 1961  
Revised 1970  
Edition N/A  
Copyright 1971  
Levelled 1957

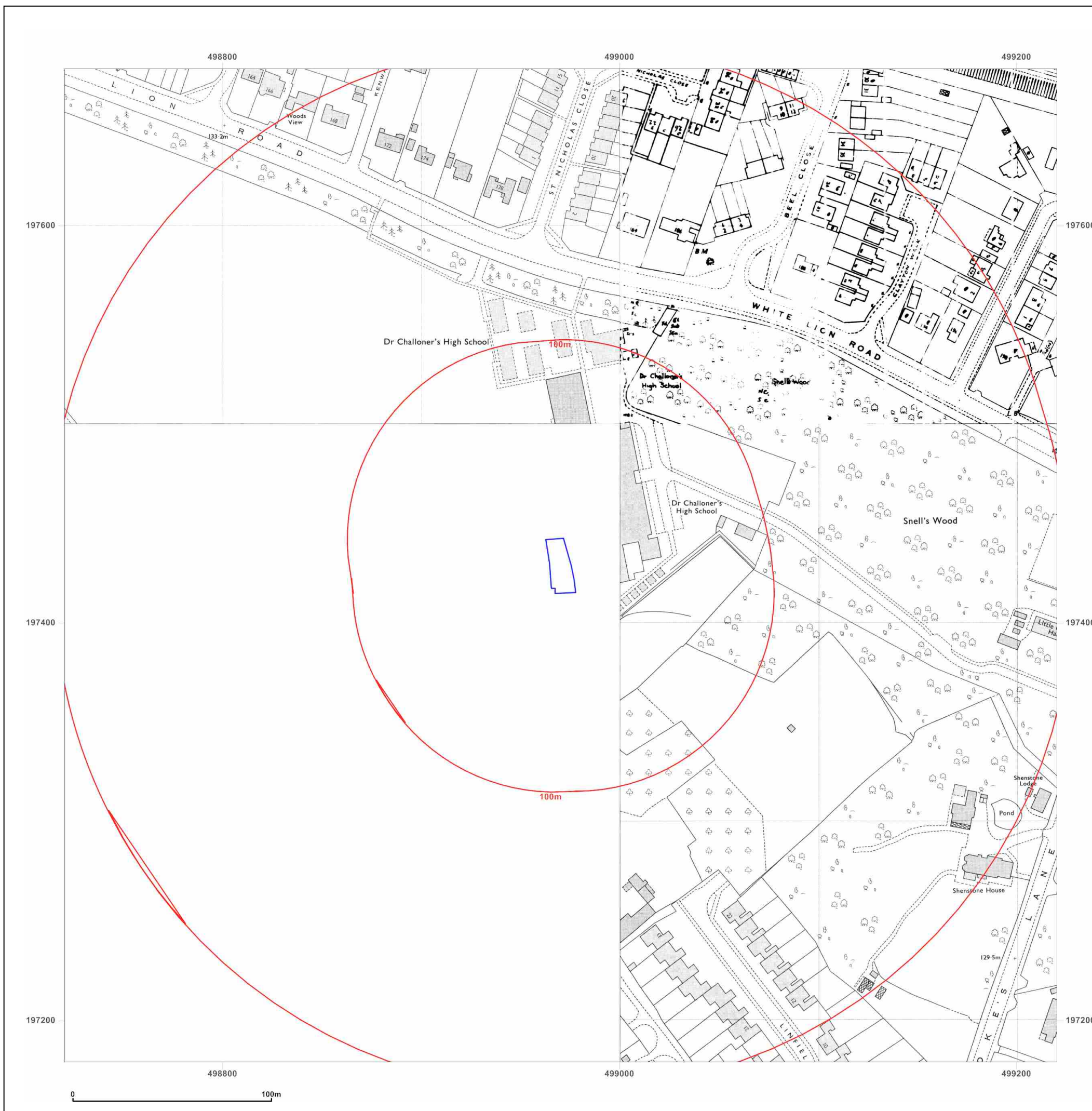


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#### Site Details:

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CHALFONT, HP7 9QB

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**Report Ref:** GS-6608039  
**Grid Ref:** 498970, 197429

**Map Name:** National Grid

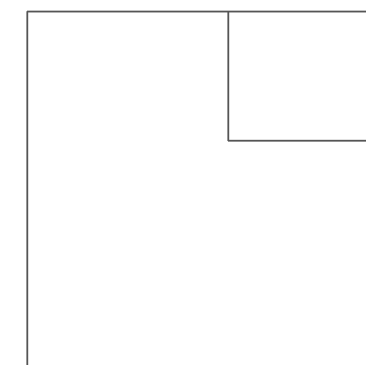
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Edition N/A  
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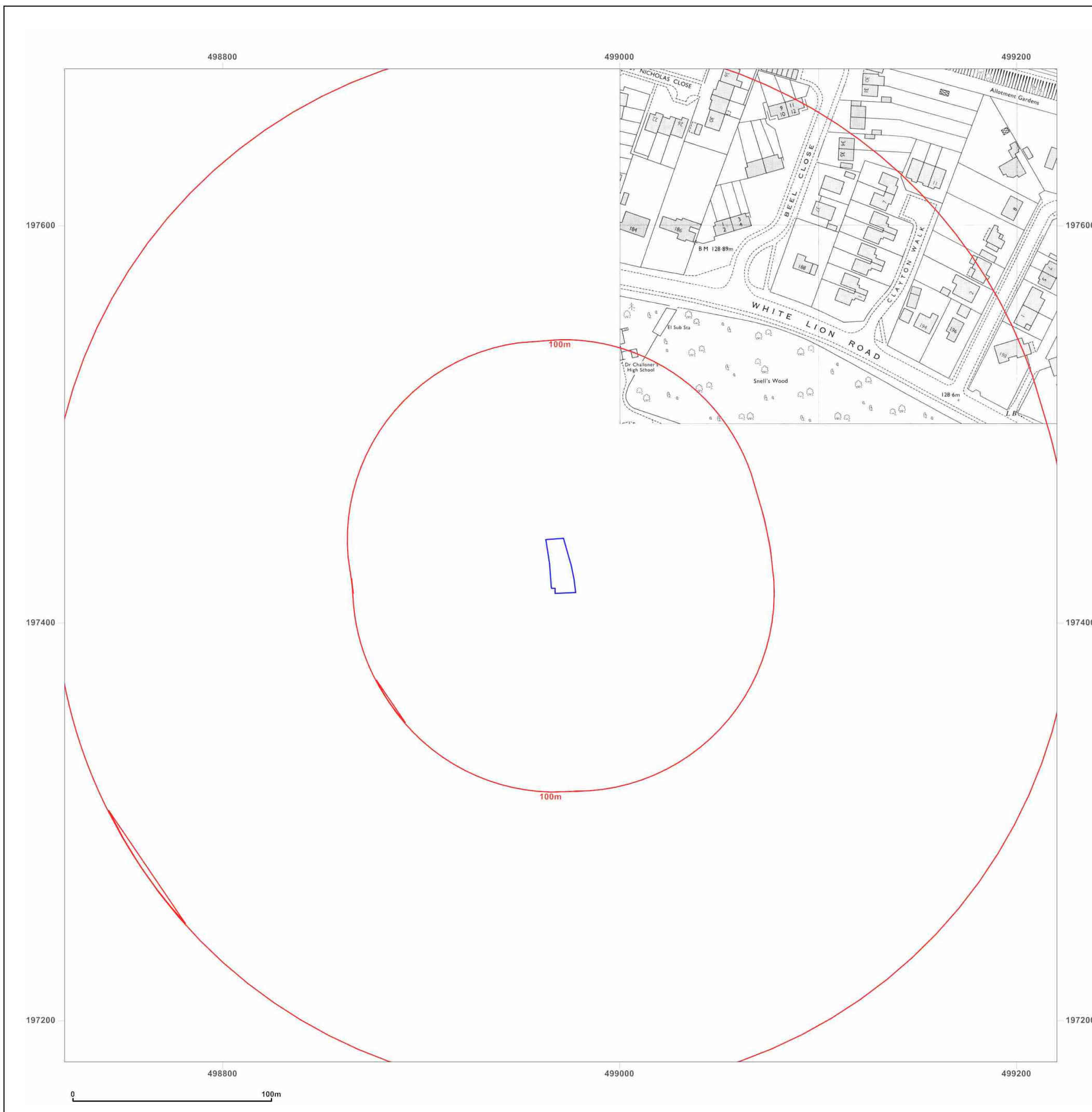


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**Client Ref:** C475\_20\_E\_695\_PO-0596  
**Report Ref:** GS-6608039  
**Grid Ref:** 498970, 197429

**Map Name:** National Grid

**Map date:** 1985-1989

**Scale:** 1:1,250

**Printed at:** 1:2,000



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 Revised N/A  
 Edition N/A  
 Copyright 1985  
 Levelled 1975

Surveyed 1957  
 Revised 1989  
 Edition N/A  
 Copyright 1989  
 Levelled 1957

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 Edition N/A  
 Copyright 1989  
 Levelled 1957

Surveyed 1975  
 Revised 1985  
 Edition N/A  
 Copyright 1985  
 Levelled 1975

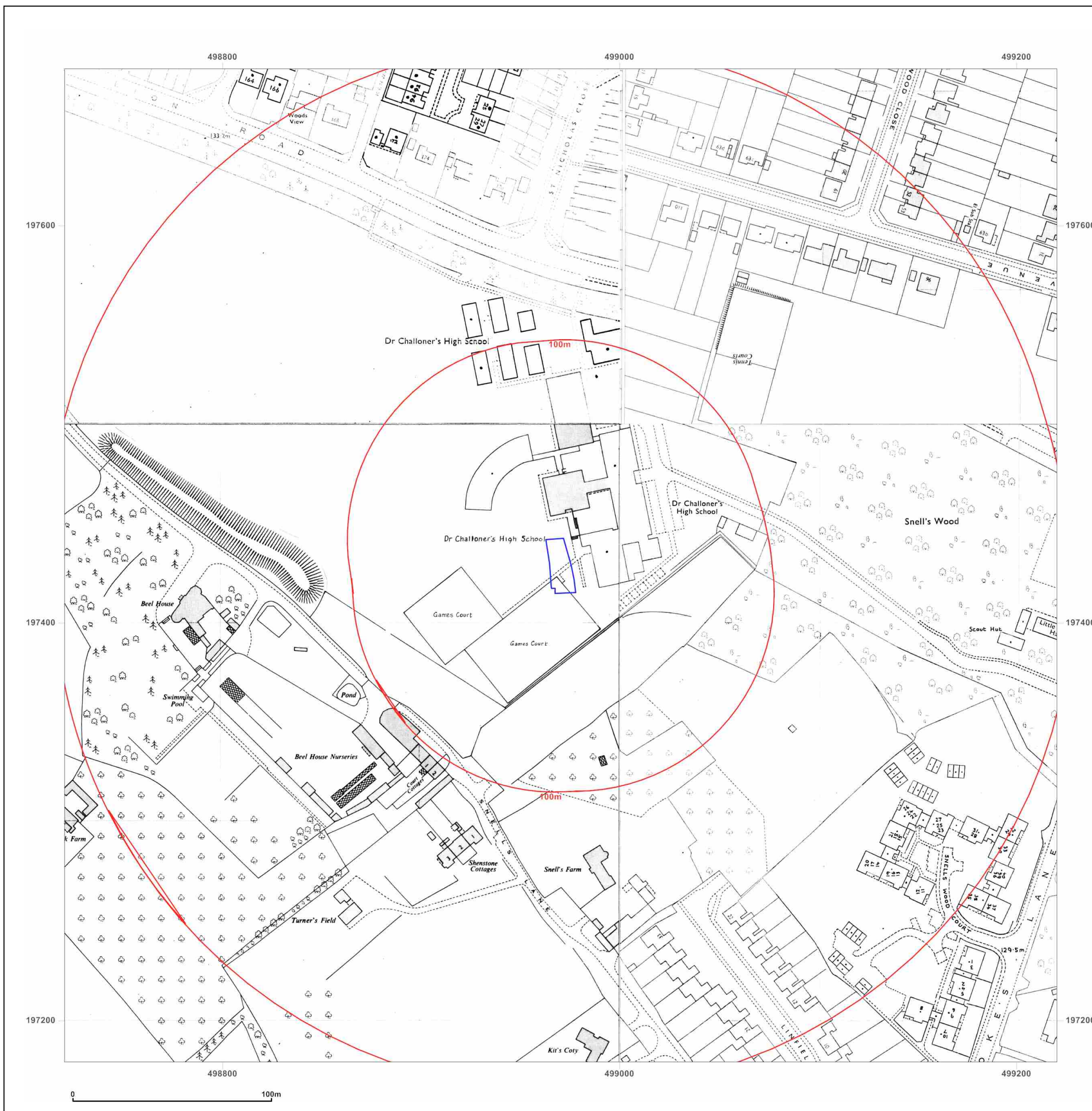


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**Client Ref:** C475\_20\_E\_695\_PO-0596  
**Report Ref:** GS-6608039  
**Grid Ref:** 498970, 197429

**Map Name:** National Grid

**Map date:** 1989-1993

**Scale:** 1:1,250

**Printed at:** 1:2,000



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Revised N/A  
Edition N/A  
Copyright 1991  
Levelled 1975

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Revised N/A  
Edition N/A  
Copyright 1993  
Levelled N/A

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Revised N/A  
Edition N/A  
Copyright 1993  
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Surveyed 1957  
Revised 1989  
Edition N/A  
Copyright 1989  
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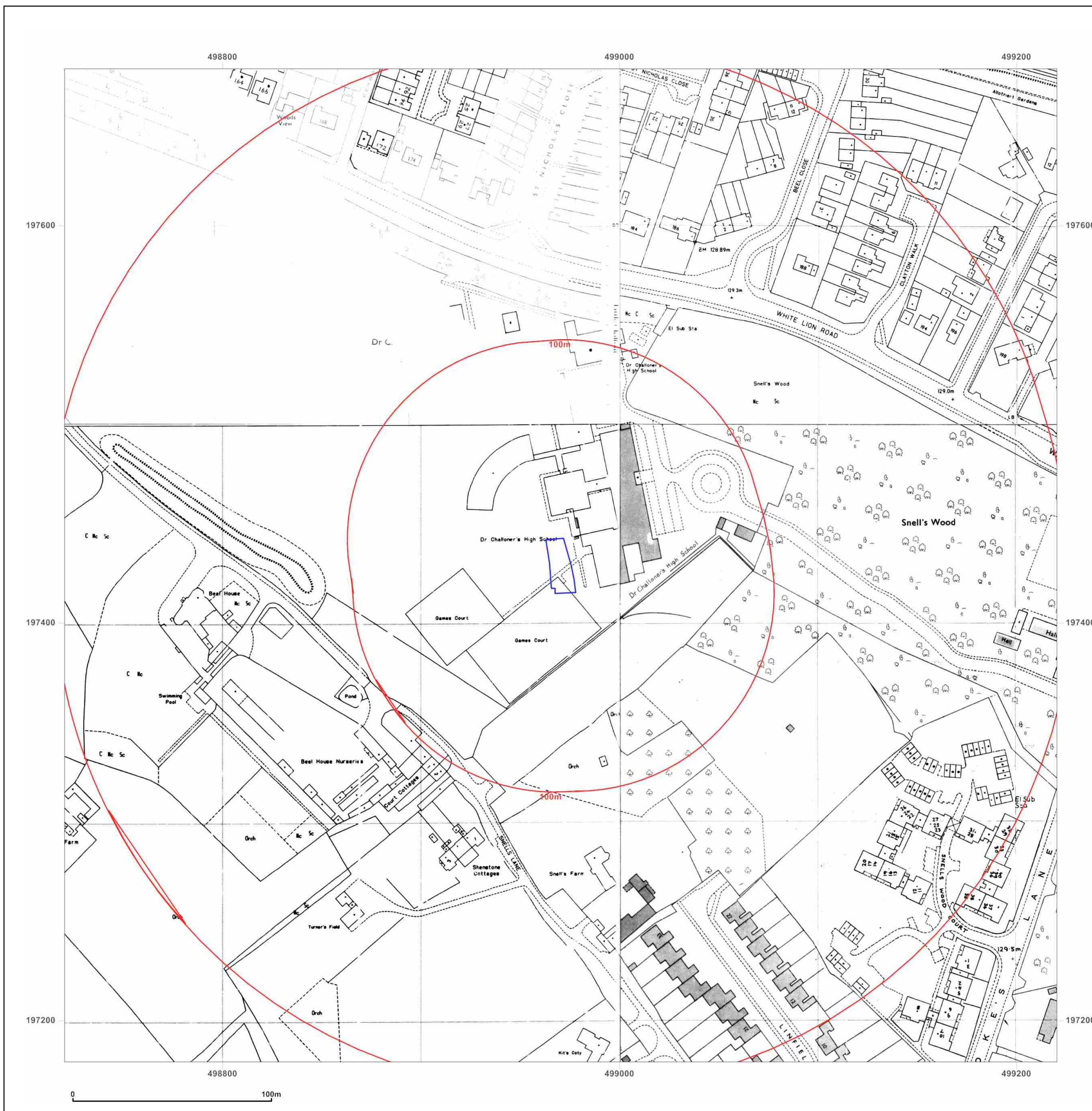


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CHALFONT, HP7 9QB

**Client Ref:** C475\_20\_E\_695\_PO-0596  
**Report Ref:** GS-6608039  
**Grid Ref:** 498970, 197429

**Map Name:** National Grid

**Map date:** 1991-1995

**Scale:** 1:1,250

**Printed at:** 1:2,000



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Revised 1991  
Edition N/A  
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Levelled 1975

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

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

Surveyed 1993  
Revised N/A  
Edition N/A  
Copyright 1993  
Levelled N/A

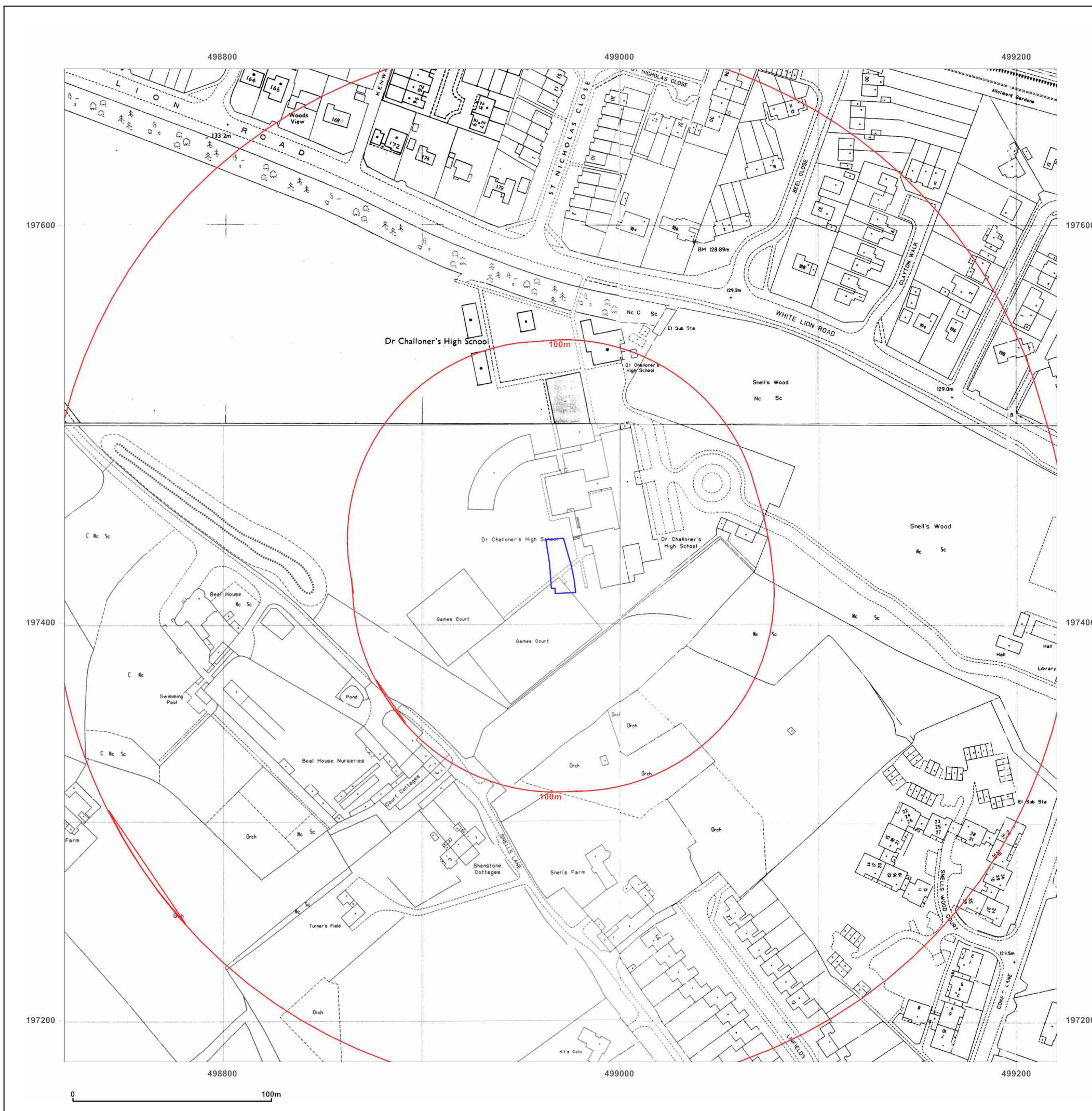


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SCHOOL, COKES LANE, LITTLE  
CHALFONT, HP7 9QB

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**Grid Ref:** 498970, 197429

**Map Name:** National Grid

**Map date:** 1993-1995

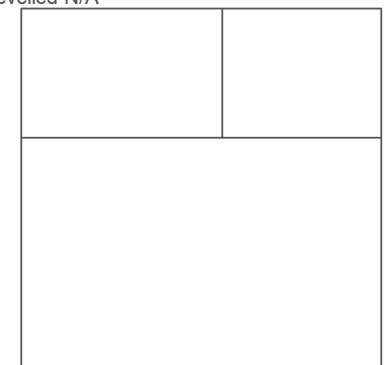
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**Printed at:** 1:2,000



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Revised N/A  
Edition N/A  
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Levelled N/A

Surveyed 1995  
Revised 1995  
Edition N/A  
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**Client Ref:** C475\_20\_E\_695\_PO-0596  
**Report Ref:** GS-6608039  
**Grid Ref:** 498970, 197429

**Map Name:** LandLine

**Map date:** 2003

**Scale:** 1:1,250

**Printed at:** 1:1,250



2003



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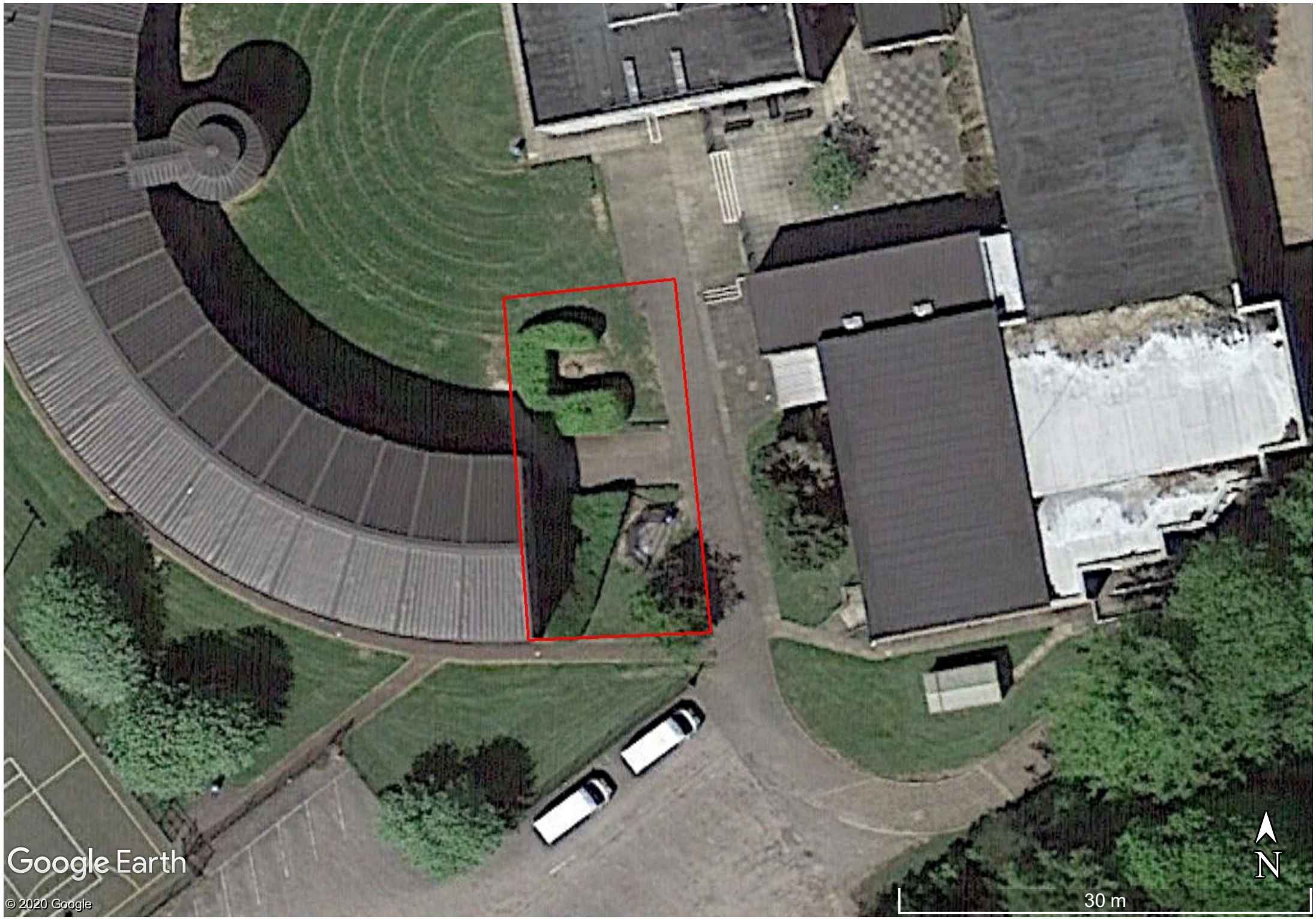
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## Appendix 3

### Site Plans

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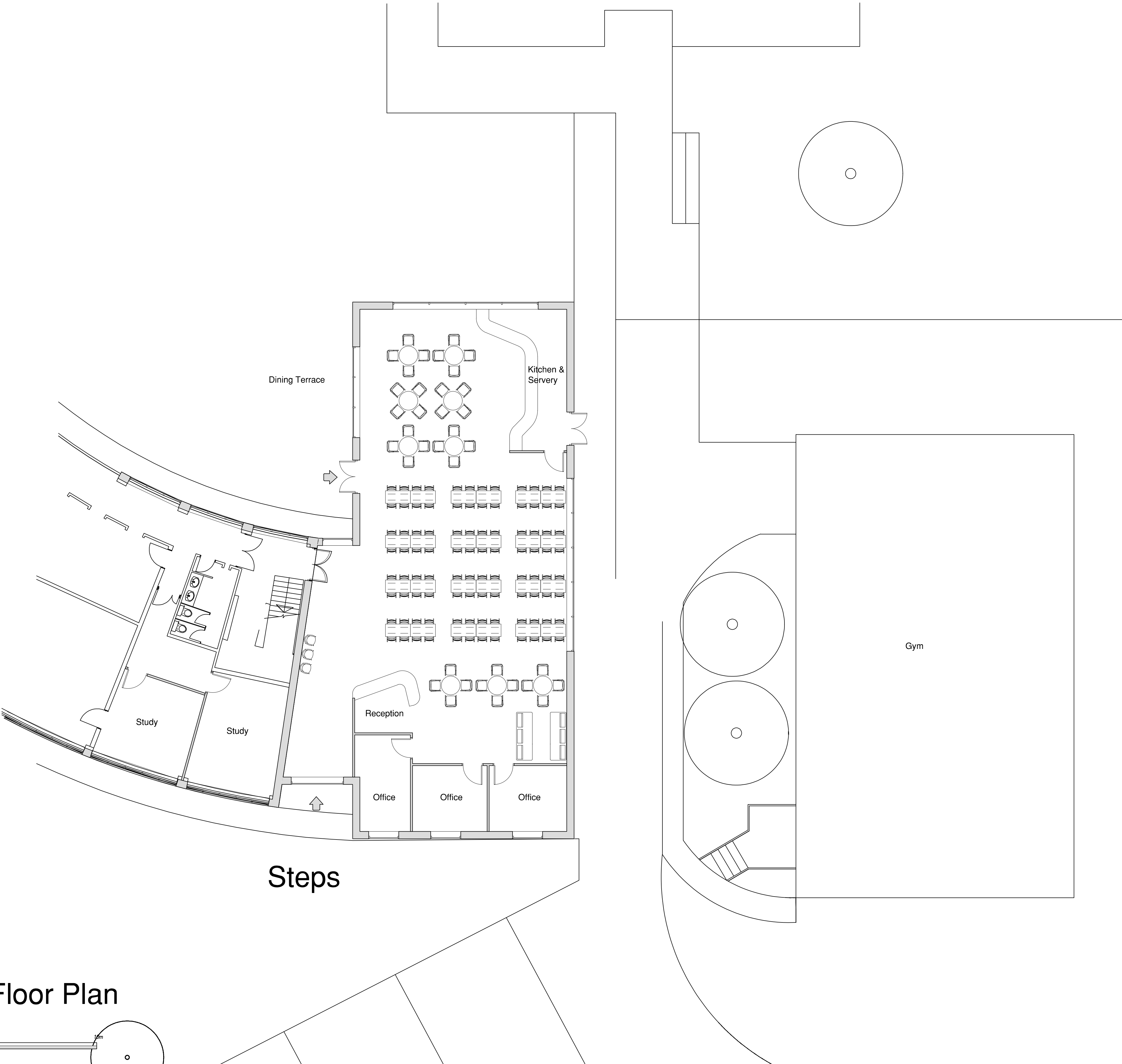


Google Earth

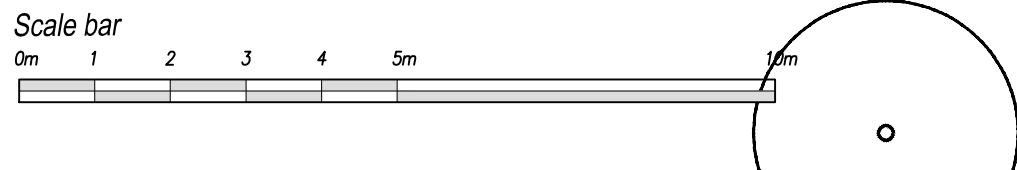
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30 m



Ground Floor Plan







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## Appendix 4

### Photographs

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**Rogers**  
**Geotechnical**  
**Services Ltd**

Project Name:  
**Dr Challoners School**

Project Number:  
**C475/20/E/694**





**Rogers**  
**Geotechnical**  
**Services Ltd**

Project Name:  
**Dr Challoners High School**

Project Number:  
**C475/20/E/694**