
Phase I Desk Study and Site Reconnaissance

at Lapstone Playing Fields,
Horton Heath, Fair Oak,
Eastleigh, SO50 7PS

for Eastleigh Borough
Council

Report Reference: LP3176/DS/1

Report Date: 13th January 2023

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EXECUTIVE SUMMARY

The site referred to as Lapstone Playing Fields is located to the south of the town of Fair Oak, in the borough of Eastleigh in the South of England. It is 7.51 ha in area and comprises a large playing field with a cricket pitch in its centre, a bowling net on the west side and a tennis court on the eastern side, along with a two-storey club house and a storage shelter, behind which is a concrete car park, in the northeastern corner.

It is proposed to redevelop the site into two cricket squares by undertaking a cut and fill activity, as well as a wetland in the southwest.

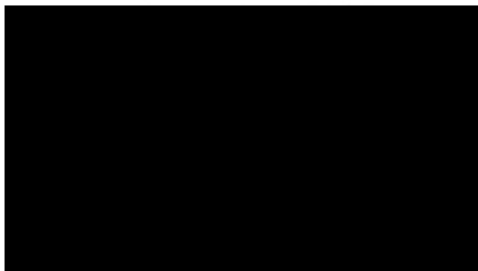
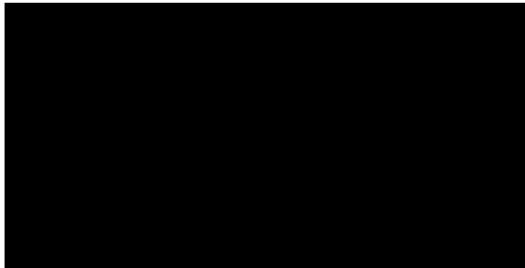
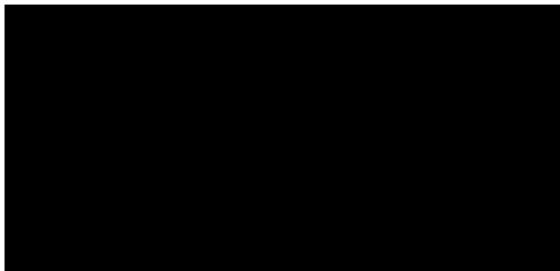
The site has a history of use as a large open field bordered by trees since it was mapped in 1868, with drainage installed in the 1960s and the club house and storeroom built in the early 2000s.

The site is mapped as being underlain by Whitecliff Sand Member in the northern third of the site and Wittering Formation in the remaining section of the site (both Secondary A aquifers). No superficial soils are mapped onsite. According to local BGS borehole records groundwater was encountered within the sandy soils at around 20m below ground level.

According to the Environment Agency the site is not mapped as a flood risk zone.

The site is not affected by Radon gas.

No significant geo-environmental and geotechnical risks have been identified as part of the desk study review and therefore no site investigation works are required to support the construction of the cricket pitch. Some sampling and geotechnical laboratory analysis is recommended to characterise the natural soils onsite for earthworks purposes.

Signed:	
Countersigned:	
Countersigned:	
Date:	13 January 2023
Revision:	Issue 1

A INTRODUCTION

1 Authority

Leap Environmental Ltd (hereafter referred to as **LEAP**) has been appointed by Eastleigh Borough Council to undertake a Phase I Desk Study, and Site Walkover of a site referred to as Lapstone Playing Fields (Figure 1a, Appendix B). The instruction was given in the Eastleigh Borough Council order ref 000337263.

2 Objective

LEAP understands that the site is currently owned by Eastleigh Borough Council and it is proposed to construct a new cricket pitch. This will be constructed alongside the current pitch by undertaking a cut and fill activity. In addition, a new wetland area will be created as detailed in the attached layout in Drawing No. TGMS1111.0-1_Rev3 in Appendix B.

The objectives of this report are to:

- Provide preliminary information on the geotechnical and environmental quality of the ground present on the site with respect to the proposed cricket pitch;
- Assess the potential health and other environmental risks posed by the site to the proposed development and to other specifically identified receptors; and
- Assess the potential for offsite contamination to adversely affect the proposed development.

3 Previous Studies

The site has previously been the subject of a feasibility report, which details some site investigation work. The reader is referred to the earlier report which should be read in conjunction with this report.

- ‘A feasibility study for the development of 2 Nr. cricket squares and outfield within Lapstone Playing Fields for Eastleigh Borough Council’ by TGMS Sports Surface Consultants dated November 2020 ref. TGMS1111.3 REV 3 26 11 2020.

4 Scope of Works

This report presents the results of a desk study and site reconnaissance. It provides a review of the previous report provided by the client as well as the following publicly accessible sources of information¹:

- British Geological Survey (BGS) 1:50,000 Series Geological Map Sheet E314, Ringwood Solid and Drift ed. 2005;
- BGS Borehole log refs SU41NE231, located 235m southeast of the site boundary;
- Groundsure database report (GS-9237376);
- Unexploded WWII aerial delivered bomb (UXB) regional risk maps produced by Zetica;
- Interrogation of the World Wide Web on 12/12/2022 for general information pertaining to the site history; and
- Interrogation of Eastleigh Borough Council Planning records for the site (F/16/78246; Z/17252/016/00; Z/17252/014/00; Z/17252/013/00).

A site reconnaissance was carried out on 15th December 2022.

The desk study and site reconnaissance have been used to develop an initial conceptual site model, which forms the basis for the site investigation strategy. The initial site conceptual model is used to identify geotechnical and geoenvironmental hazards and provide a qualitative assessment of the risk associated with them. In terms of the geoenvironmental assessment, the conceptual site model is used to identify potential sources of contamination, potential receptors and pathways by which the two may be connected. These are known as possible contaminant linkages and it is these contaminant linkages that are key to contaminated land risk assessment.

The Phase I investigation is also referred to as a Preliminary Investigation².

The terms geotechnical and geoenvironmental are referred to throughout the report:

- Geoenvironmental refers principally to the chemical nature of the ground and the degree of soil, water and/or land gas contamination and the impact that contamination may have on current or future development and also on the wider environment.

¹ The report contains British Geological Survey materials ©UKRI 2020 and public sector information licensed under the Open Government Licence v3.0.

² BS 10175:2011+A2:2017 Investigation of Potentially Contaminated Sites – Code of Practice.

- Geotechnical refers to all other aspects of the ground conditions and the impact they may have on the physical construction of existing or future development, principally foundations, slope stability, drainage, pavement and road design and groundwater control.

5 Limitations

This report has been prepared by Leap Environmental Ltd on the basis of information received from a variety of sources which Leap Environmental Ltd believes to be accurate. Nevertheless, Leap Environmental Ltd cannot and does not guarantee the authenticity or reliability of the information it has obtained from others.

Leap Environmental Ltd has used all reasonable skill, care and diligence in the design and execution of this report, taking into account the manpower and resources devoted to it in agreement with the Client. Although every reasonable effort has been made to obtain all relevant information, all potential contamination, environmental constraints or liabilities associated with the site may not necessarily have been revealed.

The conclusions reached in this report are necessarily restricted to those which can be determined from the information consulted and may be subject to amendment in the light of additional information becoming available. These conclusions may not be appropriate for alternative schemes.

This report is confidential to the Client and Leap Environmental Ltd accepts no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known, unless formally agreed by Leap Environmental Ltd beforehand. Any such party relies upon the report at their own risk.

Full details of the limitations are provided in Appendix A.

B PHASE I DESK STUDY

6 Environmental Setting

6.1 Site Location and Description

The site referred to as Lapstone Playing Fields is located to the southwest of Pavilion Close, Fair Oak, SO50 7PS as shown in Figure 1a, Appendix B.

The approximate National Grid Reference of the site is SU 49411 17925. The site lies at an estimated elevation of 26m Above Ordnance Datum (mAOD).

6.1.1 General Description and Boundaries

The current site layout is shown in Figure 1b of Appendix B. A walkover survey was carried out on 15th December 2022 and photographs are included within Appendix C.

The site comprised open grassed playing fields with a cricket pitch in the centre and a football pitch located in the northwest. The Lapstone Pavilion, a single storey brick-built building is located in the central northern part of the site, with an associated car park, which slopes down to the south. A fenced enclosure with the Lapstone Wastewater Pumping Station is located in the northeastern corner. A substation was identified on the Groundsure report in the same location as the pumping station, however this was not identified during the walkover. Additional facilities include a tennis court located along the southeastern boundary, and a small wooden store to the northeast of the cricket pitch.

6.1.2 Existing Buildings

Lapstone pavilion, a two-story brick and timber framed building used as a club house for Fair Oak Cricket Club is in the northeastern part of the site together with a storage/ garage building. There is also a large timber shed used to store sports equipment, located on the eastern side of the field.

6.1.3 Local Topography

The general topography of the local area is sloping down from the northeast to the southwest. Due to their primary use as sports pitches the fields are flat lying at an elevation of 26mAOD with slight undulations on the northern and western side of the fields, rising to 27mAOD in the west and falling to 25mAOD in the north. The fields appear to have been cut into the natural fall of the area.

6.1.4 Site Surfacing

The majority of site is grassed over and soft standing. The car park in the northeast of site is laid to hardstanding comprising blacktop.

6.1.5 Drainage

A drain is located halfway along the western boundary and trends north-south before cutting across the site towards the northeast, where it appears to have been culverted. The drain reappears on the in the northeastern corner.

6.1.6 Vegetation

The site is bordered by mature trees and hedgerows, including some birch and oak trees, with a gap in coverage in the northeastern corner, where the site transitions into the car park.

6.1.7 Surrounding Area

The site is bounded by Wyvern College and Fair Oak school and their adjacent sports pitches along the northern border, with residential streets beyond. Residential dwellings are located to the northeast and east. Adjacent to the southern and western sides of the site a wooded area with a raised wooden walkway is located, with the fields to the west beyond the woodland.

6.2 Geology

The geology of the site has been ascertained by reference to the 1:50,000 British Geological Survey Sheet 315 'Southampton' solid and drift edition 1987, the BGS website (www.bgs.ac.uk) and the Groundsure report. The site is mapped as underlain by bedrock of the Wittering Formation across the southern two thirds of the site, over Whitecliff Sand Member which is mapped in the northern third of the site. No superficial deposits are present directly beneath the site, though Alluvial deposits associated with the unnamed river are present c. 200m to the west.

6.2.1 Wittering Formation

The Wittering Formation are part of the broader Bracklesham Group which are generally formed of interbedded glauconitic shelly sands and sandy clays. The Wittering Formation is the oldest of the Bracklesham Group and is formed of greyish brown inter-laminated clays and glauconitic sands. Thin beds of lignite (brown coal) are often found at its base.

6.2.2 Whitecliff Sand Member

Dated from the Paleogene Period, these lithologies correspond to lenticular bodies of sand that fill channels in the upper parts of the sedimentary cycles C and D that comprise the London Clay. Locally thicker beds of rounded flint pebbles have also been mapped. It comprises of clayey, fine-grained sand with silty sand.

6.2.3 BGS Boreholes

The online BGS Geoindex (<http://www.bgs.ac.uk/geoindex/>) has been reviewed for detailed local geological and hydrogeological information. 6 No. Boreholes have been identified within 250m of the site, however, 5 No. of these are confidential records. The one available borehole record, ref SU41NE231, is located c. 235m southeast of the site. The record indicates ground conditions comprise brown silty clay (interpreted by LEAP as the Wittering Formation) over

pebbles over sand (interpreted by LEAP as the Whitecliff Sand Member). The log shows groundwater was encountered at a depth of 20.1mbgl.

6.3 Hydrogeology

The hydrogeology of the site has been ascertained from the Groundsure data report. The source of the data is reported to be the Environment Agency groundwater vulnerability mapping.

The Wittering Formation deposits which are mapped beneath the southern part of the site are classified as unproductive strata, whilst the underlying Whitecliff Sand Member is classified as a Secondary A Aquifer.

The site is not situated within a Groundwater Source Protection Zone (SPZ).

The Groundsure report lists no active abstraction licences within 1000m of the subject site.

Whilst it cannot be conclusively determined with the works carried out to date, it is likely given the location of Quobleigh Pond some 350m to the west-southwest, into which two unnamed rivers (which are located adjacent to the southern site boundary and c. 200m west of the site) flow, that groundwater flow would be in a south westerly direction, towards the rivers and pond.

6.4 Hydrology

There is a single surface water feature onsite, identified during the site walkover as a partially culverted drain, present at the surface in the northeast corner of the site and along the western site boundary (trending north to south). The drain is culverted under the central part of the site. Surface water flooding maps indicate that the drain is connected to the unnamed inland river c. 200m west and flows in a south westerly direction.

The closest surface water feature for which the Environment Agency have surface water quality data is the Itchen River c. 1000m southwest, which has been designated an overall moderate quality rating.

The Groundsure report indicates that there are no active discharge consents within 250m of the site.

6.5 Flooding

According to the Environment Agency, the site is not located within a flood zone, although a Flood Zone 3, associated with the River Itchen, extends to within 300m of the western site boundary.

Localised areas of the site along the drain in the northern half of the site are considered to be at high risk of surface water flooding, however the extent is minimal.

6.6 Designated Environmentally Sensitive Sites

A review of designated environmentally sensitive sites presented within the Groundsure report has been carried out. The dataset makes reference to a number of sensitive sites including the following:

- Sites of Special Scientific Interest (SSSI);
- Records of National Nature Reserves (NNR);
- Areas of Special Conservation (SAC);
- Records of Special Protection Areas (SPA);
- Records of Ramsar Sites;
- Records of Local Nature Reserves;
- Ancient Woodland Records.

An area of Ancient Woodland is located 150m to the northwest of the site. It is listed as a broadleaved deciduous woodland based on the National Forest Inventory 2014.

It should be noted that the site is located with the River Solent Nutrient Neutrality catchment area, as well as within the River Itchen Phosphate Neutrality catchment area. Should the site be proposed for residential use in the future, consideration to the nutrient neutrality potential of the site will be necessary.

6.7 Ground Workings

13 no. historical ground workings are reported by the Groundsure report within 500m of the site including a cemetery, refuse heaps, sand pits and ponds. The nearest, Fair Oak Cemetery is located 213m north and is listed on the Groundsure report from 1945 to the present day.

6.8 Mining, Extraction and Natural Cavities

The Groundsure report indicates the site is not situated within an area affected by coal mining.

There are no natural cavities listed on the Groundsure report within 500m of the site.

7 Site Usage

7.1 Current Land Use

The current site layout is shown in Figure 1b, Appendix B.

The site is currently used as a sports ground, containing cricket pitches, a cricket practice net enclosure and a double tennis court along with a pavilion used as a clubhouse by the local cricket team.

There is one active contemporary trade directory entry on site reported in the Groundsure report database search, which concerns an electricity sub-substation. This, however, was not identified during the site walkover. There are 9 further trade directory records within 250m; these relate to electrical features, water pumping stations, vehicle repairs and testing, special purpose machinery and gas features.

7.2 Evidence of Onsite Contamination

A walkover survey was carried out on 15th December 2022.

The only feature identified as a potential source of contamination onsite is a wastewater pumping station in the northeastern corner.

7.3 Neighbouring Land Use

The following features were identified as possible sources of contamination:

- Orchard c. 45m to the south of the site
- Farmland c. 100m to the west of the site (possible widespread use of agrichemicals)
- Fair Oak Cemetery c. 210m north of the site.

The Groundsure report details no fuel stations within 250m of the subject site.

7.4 Site History

The contaminative and development history of the site has been ascertained with reference to the Ordnance Survey historical maps and the Groundsure report.

In summary, there has been little change to the site since it was mapped as a large field bordered by trees in 1868. In 1968 a drainage channel was mapped running parallel to the northern border. More recent mapping showed two drains in 2001 on the northeast and northwest edges of site. Two buildings were constructed on the site and mapped in 2011, which are located in the central north of site. These are assumed to be the pavilion.

The surroundings of the site were initially mapped in 1868 as largely an area of fields, agricultural land and copse, interspersed with farm buildings and some small settlements containing churches and local businesses. 250m to the west of site is Quobleigh Pond, a large body of water. As time progresses the north of the site gradually becomes populated with residential estates, so that the town of Fair Oak is established by 1968 and housing lies within 250m of the north of site by 1980. This is in addition to the expansion of the school prior to mapping in 1981. Housing also expands around Horton Heath, 500m south, over the decades until that too lies within 25m of the site.

7.4.1 Historical Map Evidence

The historical Ordnance Survey maps provided spanned the period from 1868 to present day at scales of 1:10,000, 1:2,500 and 1:1,250. The maps are included in full in Appendix D.

Table 1: Summary of Historical Map Evidence

Year	On site	Surrounding area
1868-1869	The site is mapped as a large open field with deciduous trees along the south and south-eastern boundaries and sporadically across the site.	The surrounding area to the north, south and west is mapped as open (presumed agricultural) fields. To the east, an unnamed road is located c. 50m from the site boundary. 500m to the north is the village of Fair Oak, comprising several farms, an Inn, a school and a chapel. 250m to the west is Quobleigh Ponds (surface water feature), with Oak Lodge situated behind. The surrounding area to the West, South and East comprises more fields, with assumed agricultural use. The village of Horton Heath is 750m to the south, comprising a post office, chapel and several residential properties and farms. Additionally, c. 25m to the east is the main road, with a Smithy 100m to the northeast. A sandpit is shown 850m to the north east.
1888	No significant changes evident.	Fair Oak settlement, to the north, is shown to be developing with more buildings, including a Salvation Army Barracks. A sand pit is shown 1000m northwest.
1895-1896	No significant changes evident.	No significant changes evident.
1908-1909	No significant changes evident.	Further residential development is shown in Fair Oaks to the north and Horton Heath to the south. A sand pit is shown c. 400m to the north, below Fair Oak village. A dairy is shown 500m to the southeast and a brick works 1000m to the northwest. The sand pit to the northwest is shown to be infilled.
1937-1939	No significant changes evident.	A residential housing estate is shown c. 500-900m northwest, with a brick works constructed beyond the housing estate.
1957	No significant changes evident.	A school is shown immediately north of the site. The residential estate to the northwest is shown to have significantly expanded to the north and northwest.

		Further residential development is shown in Horton Heath to the south. 250m to the north of the site a vicarage and a cemetery are shown. Large earthworks are mapped 400m northwest and 600m northeast, along with a works 750m northeast.
1963-1964	A drain running from the northwest to northeast sides has been put on site.	No significant changes evident. A drain is marked immediately south of the site.
1968	No significant changes evident.	Fair Oak to the north has significantly expanded to the northwest and northeast. Further residential development is shown along the main road directly east of the site. Further residential development is shown in Horton Heath to the south. The road network surrounding all sides of the site has been expanded. The earthworks to the northwest and northeast are shown to be infilled and the sandpit 850m northeast has expanded..
1981-1985	No significant changes evident.	The town of Fair Oak has expanded to cover the northern third of the site boundary. A convent has been erected c. 400m west of the northern border of the site. The school directly north of the site has been expanded with a large complex of buildings. The former earthworks to the northwest and northeast are now shown to be built on.
1989	No significant changes evident.	The town to the north of site has expanded further south, with residential housing commencing 250m north of the site. There are also some additional residential properties which have been mapped 750m to the south of the site. A landfill is shown at Knowle Hill, 250m north east of the site.
1992	No significant changes evident.	No significant changes evident.
1994	No significant changes evident.	No significant changes evident.
2001	Two inland rivers have been mapped on the north-eastern and north-western borders of the site.	Ponds mapped 750m northeast of site. Further housing along the eastern border of site.
2010	Two buildings have been constructed in the north of the site, one larger rectangular structure and another smaller structure.	No significant changes evident.
2022	The larger structure on site has been expanded to the east.	No significant changes evident.

7.5 Unexploded Ordnance (UXO)

The risks from unexploded ordnance have been assessed in accordance with CIRIA guidance³. A non-UXO specialist preliminary screening assessment has been carried out. The risks have been assessed by considering firstly the likelihood of military activities on, or in the vicinity of the site as determined from the desk study and historical review. Secondly the risk of UXO has been assessed by reference to the unexploded WWII aerial delivered bomb (UXB) regional risk maps produced by Zetica.

The Zetica risk maps indicate primarily a low risk, however the area c. 300m northwest of the site is mapped as a moderate risk. An internet search indicates no military activities in the local area. Therefore, the overall risk of UXO onsite is rated as low.

7.6 Waste Planning and Landfill Records

7.6.1 Recorded Landfill Sites

The Environment Agency website and Groundsure report contain details on areas of historic and active landfilling in the vicinity of the site.

There are no areas of active landfill listed within 500m of the subject site, although there are four historic landfill sites. The nearest historic landfill site is 254m north at Sunnybank Sand and Tipping Ltd relating to the disposal of Inert, Industrial, Commercial, Household and environmental waste. The landfill is recorded as having received waste from 1985 but there is no record of licence surrender. According to the Groundsure report, landfill records have been administered to by the Environmental Agency, Natural Resources Wales and the Local Authority.

7.6.2 Waste Management, Transfer and Treatment Facilities

There are no waste management or waste transfer facilities within 250m of the site.

7.7 Radon

According to the Envirocheck report database search and the UKHSA 2022 map, the site is not within a radon affected area (less than 1% of homes are above the action level for radon). Therefore, no special protective measures are required in the construction of buildings on this site, in respect of radon gas.

7.8 Planning Records

A search of the Eastleigh Borough Council planning records for Lapstone Playing Fields returned 4 No. planning applications relating to the site. These relate to the construction of

³ CIRIA C681 2009. Unexploded ordnance (UXO) - A guide for the construction industry

cricket scoreboard & storage cabin (ref: F/16/78246), a change of use to playing fields, recreation ground, and car park (ref: Z/17252/016/00), as well as residential development, playing fields and car park for school to the north of the site (ref: Z/17252/014/00; ref: Z/17252/013/00).

7.9 Summary of Previous Investigations

A feasibility assessment was undertaken by TGMS Sports Surface Consultants in order to characterise the site as well as develop an indicative work programme and budgetary options, based on the proposed construction of an additional natural turf cricket pitch.

In addition to a background desk study, two hand dug pits were excavated onsite in targeted locations. The soil profile comprised topsoil described as 'poorly structured/very friable clay loam' of between 0.2m and 0.22m thick, underlain by subsoil described as 'de-structured', 'very friable' and 'clay loam' to between 0.5m and 0.7mbgl. No groundwater was encountered in the pits.

Laboratory analysis was also undertaken to assess the soil texture and nutrient status. It concluded that the soil could provide reasonably good drainage. Furthermore, the topography of the site primarily complies with current guidelines for the slope of sports pitches. The report states that the development will remove and relocate the cricket net enclosure, as well as remove the original cricket pitch and replace it with two pitches located in the north-western and south-eastern corners. It was concluded that to fulfil the brief significant tree removal followed by earthworks will be needed to provide sufficient drainage.

C PRELIMINARY RISK ASSESSMENT

8 Preliminary Geoenvironmental Conceptual Site Model

8.1 Approach

A risk-based approach is used in the UK to assess contaminated or potentially contaminated land. For a potential risk to exist, there must be a contaminant linkage in place, i.e. there must be a source of contamination, a potential receptor, and a pathway linking the two. The purpose of this preliminary conceptual site model (CSM) was to systematically identify the potential contaminant linkages using the information provided in Section B of this report. The preliminary CSM was then used to enable uncertainties and further assessment requirements to be identified to allow a suitable intrusive investigation to be scoped.

8.2 Potential Sources of Contamination

Based on a review of the available information discussed in Section B of this report, the relevant DoE Industry Profile(s)⁴ and Annex 3 of R&D66⁵, Table 2 provides a summary of the potential plausible current and historical on- and off-site sources with the anticipated nature and distribution of the sources:

Table 2: Potential Plausible Sources of Contamination

Potential Source	Potential Contaminants of Concern	Anticipated Distribution
On-Site		
Made Ground	Wide range of contaminants possible including: asbestos, metals, polycyclic aromatic hydrocarbons (PAH), petroleum hydrocarbons, ground gases	Beneath carpark and buildings located in the northeast of site.
Historical agricultural use	Pesticides and herbicides	Site-wide
Lapstone Wastewater Pumping Station	Organic matter, pathogenic bacteria	May be localised to the area around the pumping station, situated in the northeastern corner of the car park, although the culverted drain running through the site has the potential to cause wider spread issues

⁴ Department of the Environment (DoE), Industry Profile 'Sewage Works and Sewage Farms' (1995).

⁵ NHBC and Environment Agency 'Guidance for the Safe Development of Housing on Land Affected by Contamination' R&D Publication 66: 2008.

Off-Site		
Former farming activities in the surrounding areas	Pesticides, herbicides and heavy metals	Widespread distribution with low concentration and low impact
Cemetery 300m to the north	Ground gases, organic matter, pathogenic bacteria, preservative chemicals, chloride, sulphate	Possible release of contaminants to groundwater
Historical tank 8m to the north	Petroleum hydrocarbons	Unspecified content, but has low potential of leaks and spills of oils
Historic Landfill 250m to the northeast	Ground Gases	

Made ground may be present onsite, associated with the construction of the buildings and car park, and may contain contaminants such as asbestos, metals and polycyclic aromatic hydrocarbons (PAH). However, given the nature of the building and its age (constructed between 2001 and 2010) the made ground is unlikely to contain significant concentrations of contaminants.

The site has been historically mapped as a field and therefore may have been used historically for farming, prior to the site's designation as a sports field. Therefore, pesticides and herbicides may have been used on the site.

The wastewater pumping station on the northeast of site is thought to be of low risk due to its location on the far side of the car park. Furthermore no evidence of leakages were noted during the site walkover. However, it may pose some risk as the underlying geology comprises Whitecliff Sand Member to the north of site, with Wittering Formation further south.

The cemetery has potential to be a source of ground gases through the processes of decomposition and may also release potentially hazardous chemicals which can infiltrate into the soils and consequently the groundwater. The historical landfill 254m northeast of the site is also a potential source of ground gases, though both the landfill and cemetery are a fair distance from the site.

8.3 Potential Receptors

In the context of the proposed future land use, the following potential receptors of ground contamination were identified:

Human Health

- Future site users of the recreation ground and sports pitches
- Construction workers.
- Current site users

Controlled Waters

- Secondary A aquifer in the Wittering Formation and Whitecliff Sand Formation.
- Proposed wetland onsite.
- Drainage ditches onsite.
- Inland river 200m to the west of the site.

Other

- Material construction of buildings and infrastructure.
- Neighbouring properties.

8.4 Potential Contaminant Linkages

The potential plausible contaminant linkages are summarised in the table appended in Appendix E and were assigned a qualitative risk classification in line with the guidance presented in Annex 4 of R&D66. The preliminary risk levels were determined following a review of the available desk-based information with the significance of particular contaminant linkages being dependant both upon the likelihood of exposure occurring and the severity of that exposure.

8.4.1 Human Health

The proposed development is not changing significantly from its current use as a recreational sports pitches for cricket. Therefore, most generic Contaminated Land Exposure Assessment (CLEA)⁶ exposure linkages between humans and potential contaminants in the ground are plausible i.e. direct ingestion of soil, and inhalation of indoor and outdoor vapours and dusts. Groundworkers could be potentially exposed via all these pathways. No edible plants are understood to be grown on site and consumption of grown produce is therefore not considered a plausible pathway.

There is a low likelihood for high concentrations of contaminants to be present in the potential sources on-site. The continued use of the site as recreational ground/public open space is also not considered to be a significantly sensitive site use and so the severity of exposure to any contaminants is low. Furthermore, the made ground associated with the buildings onsite (which is considered to be the main potential source of contamination) will not be disturbed by the proposed activities and so the likelihood of current and future site users being exposed

⁶ Environment Agency 'Updated technical background to the CLEA model' Science Report: SC050021/SR3. January 2009.

is low. Therefore, the overall potential for unacceptable risks to human health via these pathways is considered to be very low

The assessment of future site users is considered to be protective of the surrounding off-site residents and commercial workers.

8.4.2 Ground Gases

Potential offsite sources of ground gases were identified as the historical landfill 250m to the northeast and the cemetery 300m to the north. Given that no buildings are proposed to be constructed, any ground gases that may migrate beneath the site will be dispersed within the atmosphere and thus significantly reducing the potential concentration of ground gases that could be inhaled.

Furthermore, any potential made ground beneath the club house is unlikely to generate significant concentrations of gases, given the size and nature of the building, so it is unlikely that ground gases could build up in confined spaces within building structures and be released particularly during significant falling and low-pressure atmospheric conditions. Offsite sources are also unlikely to generate high concentrations of gases which could migrate beneath the site.

Therefore, the overall risk to current and future site users from ground gases is considered to be very low.

8.4.3 Controlled Waters

The site is underlain by the Wittering Formation and Whitecliff Sand Formation, both of which are classified as Secondary A aquifers in the bedrock. The water table is anticipated to be at depth, possibly 20mbgl or greater, based on local BGS boreholes. Drainage ditches are present onsite, which flow into an inland river 200m to the west. A wetland is also proposed to be developed as part of the proposed works in the southwest of the site.

Low to very low concentrations of contaminants are anticipated to be present within the soils onsite. Based on this and the fact that groundwater is likely to be present at a significant depth below the site, it is unlikely that the Secondary A aquifers underlying the site will be significantly impacted by leaching of contaminants into the groundwater. Therefore, the overall risk to groundwater is considered to be low. The overall risk to surface water features, both the current drainage ditches and the proposed wetland, is also considered to be low given the low concentrations of contaminants anticipated in the soils onsite.

8.4.4 Below Ground Infrastructure

The area where the new cricket pitches will be constructed is previously undeveloped ground which is unlikely to be contaminated. Therefore, the potential for unacceptable impacts to below ground infrastructure, including concrete and plastic pipework, is considered to be very low.

8.5 Summary of Geo-Environmental Preliminary Risk Assessment

The main potential source of contamination present on site was considered to be made ground which may be present in the northeast of the site in the locality of the carpark and club house building. However, given that neither the car park nor the clubhouse will be disturbed by the proposed works, the overall risk to future site users from this is considered to be very low. The pumping station which is located in the same area is also expected to pose a very low risk for the same reason.

Low concentrations of contaminants are anticipated within the soils onsite, including any within potential made ground, based on the nature of the site, and therefore the risk to controlled waters is also considered to be very low. Ground gas risk is also considered to be very low and unchanging due to the work.

9 Geotechnical Risk Assessment

9.1 Preliminary Ground Model

Based on the findings of the desk study, the preliminary ground model for the site is summarised in Table 3 below.

Table 3: Preliminary Ground Model

Ground Model	Characteristics	Notes
Ground Conditions	Bedrock: Whitecliff Sand Member (north), Wittering Formation (south)	The northern third of site comprises sand, with patches of flint gravel and silty clayey sand. The southern section is characterized by laminated clay, interbedded and overlain with sand.
Groundwater	Local boreholes indicate groundwater at >20m bgl	Deposits beneath the site are variable and some perched groundwater may be present in sandy horizons.
Surface Water features	Drainage ditches along the north-eastern and north-western site borders	Ditches culverted beneath the centre and south of the site.
Topography	Generally flat	Conditions to comply with sports regulations mean the site must be on level ground.
Existing structures	Two storey clubhouse building in the north-eastern corner of site along with an equipment storage shed in the central eastern side of site.	Clubhouse will not be disturbed by proposed works.
History	Open undesignated fields with sports pitches and club house built in early 2000s	The proposed cricket pitches will be built on previously undeveloped land, so risk of contamination is low.

9.2 Geotechnical Risk Register

In order to establish the minimum requirements for geotechnical investigations, designs and post construction monitoring, it is necessary to establish the complexity of the geotechnical design and the associated risks.

The preliminary geotechnical risk register for the proposed development is summarised in the table in Appendix E. Details of the risk assessment methodology are presented in Appendix E AMEND QRA table for attachment in Appendix E.

9.3 Summary of Preliminary Geotechnical Risk Register

Based on the proposed development and review of information relating to the site, no geotechnical hazards were assessed as a substantial to intolerable risk.

The soils onsite were considered to be a low risk of shrink-ability, though there may be some variability in the soils beneath the site given the mapped geology. The natural soils are also considered to be frost-susceptible, due to the presence of fine particles (silt, fine sand) in the mapped geology. However, neither geotechnical hazard is considered to pose a significant risk to the proposed cricket pitch.

10 Sustainability Considerations

The geological, geotechnical and hydrological conditions of the site along with the potential for contamination can significantly influence the suitability of sustainable options on site.

The conceptual site model has indicated a low risk of contamination on site as such it is anticipated subject to testing that the soils will be suitable for reuse on site and caution should be taken to limit the disturbance of natural soils.

11 Recommendations for Intrusive Ground Investigation

No significant geo-environmental and geotechnical risks have been identified as part of the desk study review, and therefore no site investigation works are deemed to be required to support the proposed cricket pitch construction. However, it is recommended that some sampling and geotechnical laboratory analysis is undertaken to characterise the natural soils onsite for earthworks purposes. This will allow for a suitable earthworks strategy to be devised and improve the reuse potential of the natural soils onsite.

APPENDIX A – Limitations

Limitations

LIMITATIONS

This report is confidential to the Client, and Leap Environmental Ltd accepts no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known, unless formally agreed by Leap Environmental Ltd beforehand. Any such party relies upon the report at their own risk. Unless explicitly agreed otherwise in writing, this report has been prepared under LEAP's standard terms and conditions, as included in the quotation for this works.

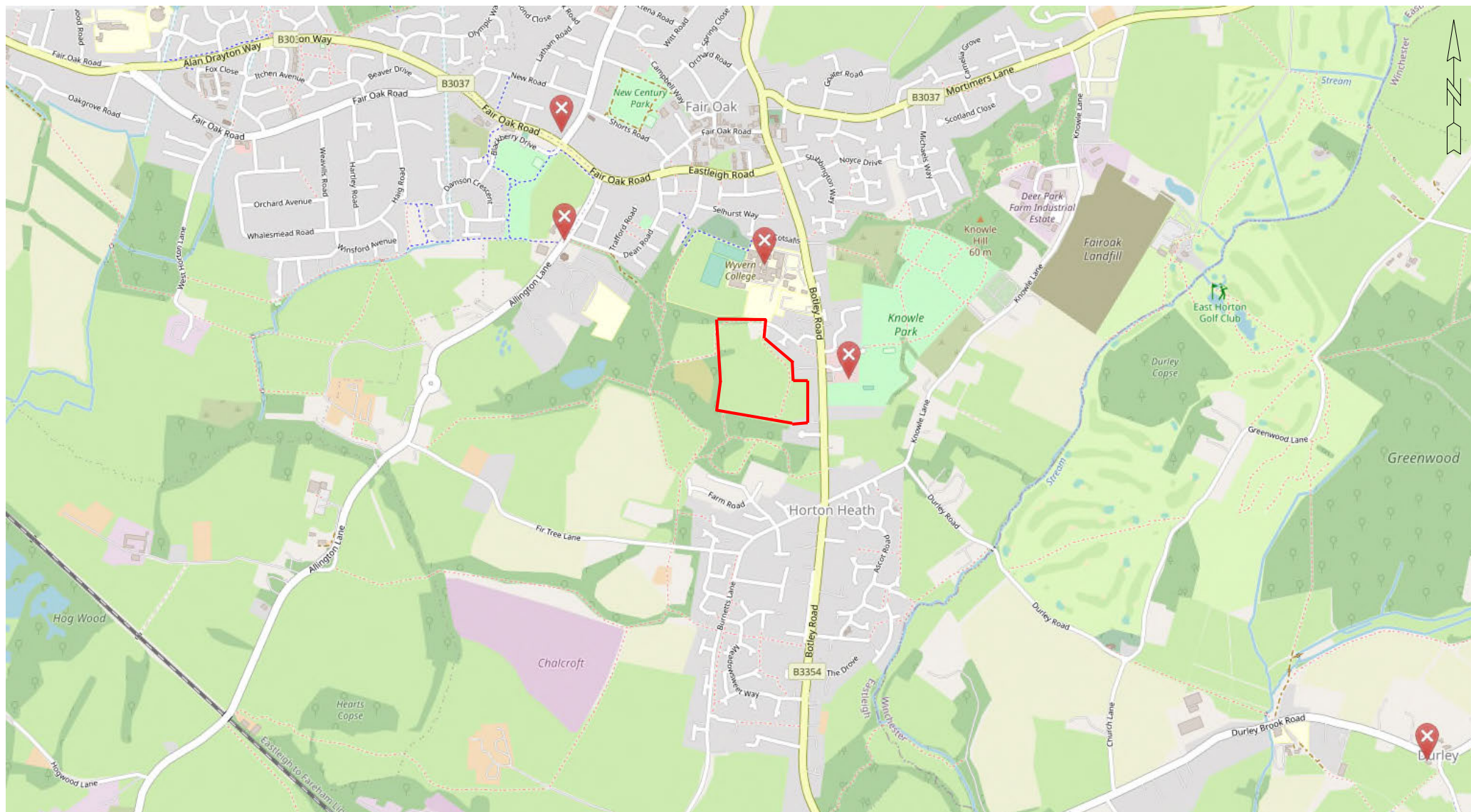
This report has been prepared by Leap Environmental Ltd on the basis of information received from a variety of sources which Leap Environmental Ltd believes to be accurate. Nevertheless, Leap Environmental Ltd cannot and does not guarantee the authenticity or reliability of the information it has obtained from others.

Leap Environmental Ltd has used all reasonable skill, care and diligence in the design and execution of this report, taking into account the manpower and resources devoted to it in agreement with the Client. Although every reasonable effort has been made to obtain all relevant information, all potential contamination, environmental constraints or liabilities associated with the site may not necessarily have been revealed. LEAP cannot be held responsible for any disclosures or changes in regulation that are provided post production of this report, and will not automatically update the report.

The conclusions reached in this report are necessarily restricted to those which can be determined from the information consulted, and may be subject to amendment in the light of additional information becoming available. These conclusions may not be appropriate for alternative schemes.

APPENDIX B – Figures and Drawings

Figures and Drawings



Basemap: © OpenStreetMaps Contributors



Client: Eastleigh Borough Council

Date: 13th January 2023

Project ID: LP3176

Project: Lapstone Playing Fields

Title: Site Location

Fig. No. 1a



LEGEND		Proposed Cricket Levels		Proposed Features		Proposed Wetland	
Existing Features		Major Contours - 1m Intervals		ECB Recommended Cricket Pitch		Wetland Area (602m²)	
Minor Contours - 25cm Intervals		Minor Contours - 25cm Intervals		Boundary & 2.74m Safety Margin		Major Contours - 50cm Intervals	
Top Bank Level		1:3 Fill Batter Slope		Proposed Artificial Pitch		Minor Contours - 10cm Intervals	
Bottom Bank Level		1:3 Cut Batter Slope		64m Ball Strike Zone			
Top of Bank		Proposed Gradient		Ballstop Netting (Height tbc)			
Bottom of Bank		Graded Plateau		Dimensions (m)			
Existing 9v9 Football Pitch				Proposed Cricket Nets			
Building				Cricket Hut Relocation 13.5m x 4.5m			
Cricket Nets				1.8m Wide Footpath			
Synthetic Area				Indicative Football Pitch			
Cricket Pitch							

Revisions					
Rev	Date	Description	Drawn By	Checked By	
1	09/09/2022	Amendments made to layout, ballstop netting added	CM	MY	
2	12/10/2022	Wetland area and cross section added. Paper size changed to A1, scale changed to 1:500	CM	MY	
3	24/10/2022	Wetland area relocated and cross section amended	CM	MY	

TGMS

Sports Surface Consultants

TGMS, 4 Doctitle Mill, Froggall Road, Arngill, Bedfordshire, MK45 2ND

Tel: 01525 307060

Web: www.tgms.co.uk

Email: enquiries@tgms.co.uk

TGMS and PSD Agency are trading names of Professional Sports Turf Design (PSD) Ltd.

Company Number 3107759

Registered Office: Sharnock House, 1 Faraday Court, Fulwood, Preston, Lancashire, PR2 9AB.

Directors: Charles Henderson, Justin Laithwaite

Notes:

Earthworks Volumes

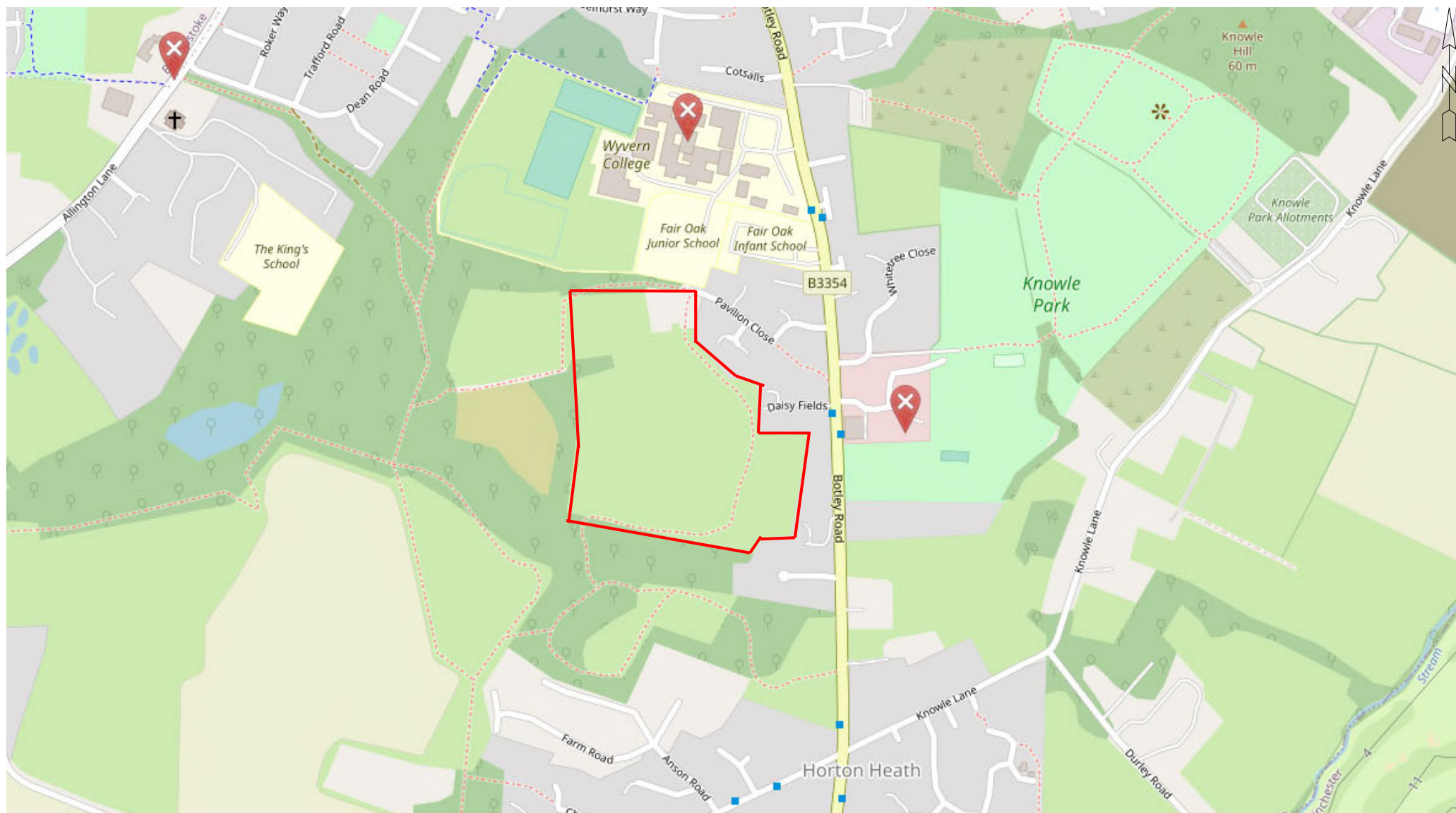
A) Ditch
Cut = 0m³, Fill = 1695m³, Net = 1695m³ (Fill material required)

B) Southern Outfield
Cut = 865m³, Fill = 0m³, Net = 865m³ (Cut material to be removed)

C) Wetland Area
Cut = 89m³, Fill = 0m³, Net = 90m³ (Cut material to be removed)

<u>Drawing Title</u>			NORTH ↑ INDICATED ONLY
Proposed Levels and Layout			
Project : Lapstone Playing Fields			
Client : Eastleigh Borough Council			
Consultant : Matt Young			
Date : 20/06/2022		Drawing Status : Design	
Scale : 1:500		Paper Size : A2	
Drawn by : OM	Checked by : MY	Approved by : MY	
<u>Drawing Number</u>			<u>Revision</u>
TGMS1111.9-1			
			3

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Basemap: © OpenStreetMaps Contributors



Client:	Eastleigh Borough Council	Date:	13 th January 2023	Project ID:	LP3176
Project:	Lapstone Playing Fields	Title:	Site layout	Fig. No.	1b

APPENDIX C – Photographic Record

Photographic Record



Plate 1 – looking north at car park



Plate 2 – Looking at Waste Water Pumping Station



Plate 3 - Looking north east at Pavillion



Plate 4 – Looking north west across football pitch



Plate 5 -Standing on culverted part of drain looking westward



Plate 6 – Looking south east cross the site



Plate 7 -woodland to the west of the site



Plate 8 – Looking west along southern boundary



Plate 5 -Standing on culverted part of drain looking westward



Plate 6 – Looking south east cross the site



Plate 9 -looking north across site from the southern boundary



Plate 10– Looking north along eastern part of the site showing gradient

APPENDIX D – Groundsure Report

Groundsure Report

FAIR OAK SPORTS PAVILION, PAVILION CLOSE, FAIR OAK, SO50 7PS

Order Details

Date: 02/12/2022

Your ref: LPO6844

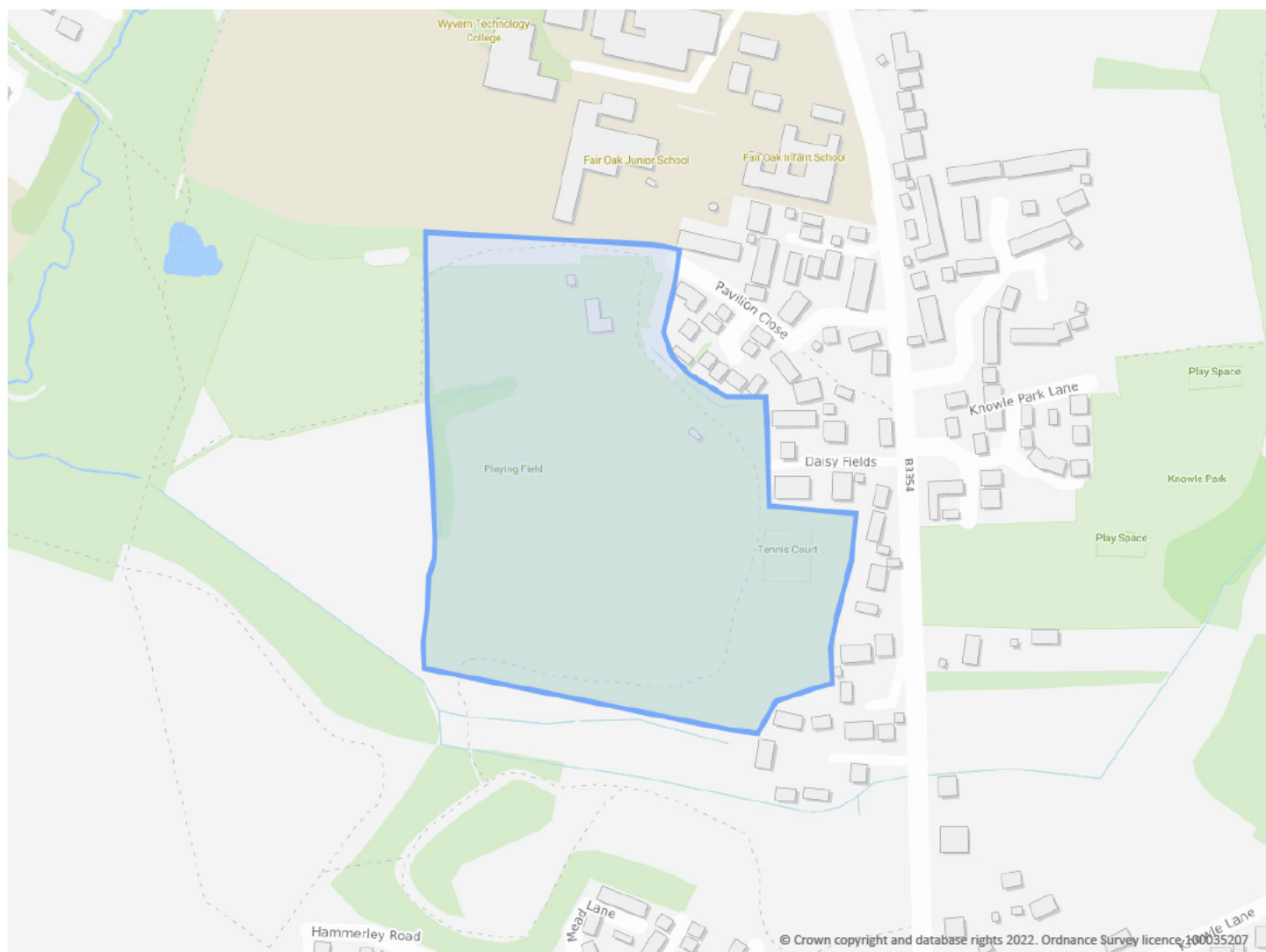
Our Ref: GS-9237376

Site Details

Location: 449399 117865

Area: 7.51 ha

Authority: [Eastleigh Borough Council](#)



Summary of findings

p. 2 **Aerial image**

p. 8

OS MasterMap site plan

p.13 groundsure.com/insightuserguide

Contact us with any questions at:

info@groundsure.com

08444 159 000

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
14	1.1	Historical industrial land uses	1	0	4	15	-
15	1.2	Historical tanks	0	1	0	0	-
16	1.3	Historical energy features	1	0	1	11	-
17	1.4	Historical petrol stations	0	0	0	0	-
17	1.5	Historical garages	0	0	0	3	-
17	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
18	2.1	Historical industrial land uses	1	0	6	18	-
19	2.2	Historical tanks	0	1	0	0	-
20	2.3	Historical energy features	1	0	3	27	-
21	2.4	Historical petrol stations	0	0	0	0	-
21	2.5	Historical garages	0	0	0	8	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
23	3.1	Active or recent landfill	0	0	0	0	-
23	3.2	Historical landfill (BGS records)	0	0	0	0	-
24	3.3	Historical landfill (LA/mapping records)	0	0	0	4	-
24	3.4	Historical landfill (EA/NRW records)	0	0	0	1	-
25	3.5	Historical waste sites	0	0	0	0	-
25	3.6	Licensed waste sites	0	0	0	0	-
25	3.7	Waste exemptions	0	0	6	12	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
27	4.1	Recent industrial land uses	1	0	9	-	-
28	4.2	Current or recent petrol stations	0	0	0	0	-
28	4.3	Electricity cables	0	0	0	0	-
28	4.4	Gas pipelines	0	0	0	0	-
29	4.5	Sites determined as Contaminated Land	0	0	0	0	-



29	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
29	4.7	Regulated explosive sites	0	0	0	0	-
29	4.8	Hazardous substance storage/usage	0	0	0	0	-
29	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
30	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
30	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
30	4.12	Radioactive Substance Authorisations	0	0	0	0	-
30	4.13	<u>Licensed Discharges to controlled waters</u>	0	1	2	3	-
31	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
32	4.15	Pollutant release to public sewer	0	0	0	0	-
32	4.16	List 1 Dangerous Substances	0	0	0	0	-
32	4.17	List 2 Dangerous Substances	0	0	0	0	-
32	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
32	4.19	Pollution inventory substances	0	0	0	0	-
33	4.20	Pollution inventory waste transfers	0	0	0	0	-
33	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
34	5.1	<u>Superficial aquifer</u>	Identified (within 500m)				
36	5.2	<u>Bedrock aquifer</u>	Identified (within 500m)				
38	5.3	<u>Groundwater vulnerability</u>	Identified (within 50m)				
39	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
39	5.5	Groundwater vulnerability- local information	None (within 0m)				
40	5.6	Groundwater abstractions	0	0	0	0	0
41	5.7	<u>Surface water abstractions</u>	0	0	0	0	6
42	5.8	Potable abstractions	0	0	0	0	0
42	5.9	Source Protection Zones	0	0	0	0	-
42	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
43	6.1	<u>Water Network (OS MasterMap)</u>	4	3	7	-	-



45	<u>6.2</u>	<u>Surface water features</u>	1	5	7	-	-
45	<u>6.3</u>	<u>WFD Surface water body catchments</u>	1	-	-	-	-
45	<u>6.4</u>	<u>WFD Surface water bodies</u>	0	0	0	-	-
46	<u>6.5</u>	<u>WFD Groundwater bodies</u>	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
47	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
47	7.2	Historical Flood Events	0	0	0	-	-
47	7.3	Flood Defences	0	0	0	-	-
48	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
48	7.5	Flood Storage Areas	0	0	0	-	-
49	7.6	Flood Zone 2	None (within 50m)				
49	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
50	<u>8.1</u>	<u>Surface water flooding</u>	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding					
52	<u>9.1</u>	<u>Groundwater flooding</u>	High (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
53	<u>10.1</u>	<u>Sites of Special Scientific Interest (SSSI)</u>	0	0	0	0	2
54	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
54	<u>10.3</u>	<u>Special Areas of Conservation (SAC)</u>	0	0	0	0	1
55	10.4	Special Protection Areas (SPA)	0	0	0	0	0
55	10.5	National Nature Reserves (NNR)	0	0	0	0	0
55	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
55	<u>10.7</u>	<u>Designated Ancient Woodland</u>	0	0	0	0	18
56	10.8	Biosphere Reserves	0	0	0	0	0
56	10.9	Forest Parks	0	0	0	0	0
57	10.10	Marine Conservation Zones	0	0	0	0	0
57	10.11	Green Belt	0	0	0	0	0
57	10.12	Proposed Ramsar sites	0	0	0	0	0



57	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
57	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
58	10.15	Nitrate Sensitive Areas	0	0	0	0	0
58	10.16	<u>Nitrate Vulnerable Zones</u>	1	0	0	0	2
59	10.17	<u>SSSI Impact Risk Zones</u>	4	-	-	-	-
62	10.18	<u>SSSI Units</u>	0	0	0	0	1
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
64	11.1	World Heritage Sites	0	0	0	-	-
65	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
65	11.3	National Parks	0	0	0	-	-
65	11.4	<u>Listed Buildings</u>	0	1	1	-	-
66	11.5	Conservation Areas	0	0	0	-	-
66	11.6	Scheduled Ancient Monuments	0	0	0	-	-
66	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
67	12.1	<u>Agricultural Land Classification</u>	Grade 3a (within 250m)				
68	12.2	Open Access Land	0	0	0	-	-
68	12.3	Tree Felling Licences	0	0	0	-	-
68	12.4	Environmental Stewardship Schemes	0	0	0	-	-
69	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
70	13.1	<u>Priority Habitat Inventory</u>	1	4	9	-	-
71	13.2	<u>Habitat Networks</u>	4	0	2	-	-
72	13.3	Open Mosaic Habitat	0	0	0	-	-
72	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
73	14.1	<u>10k Availability</u>	Identified (within 500m)				
74	14.2	<u>Artificial and made ground (10k)</u>	0	0	0	3	-
75	14.3	<u>Superficial geology (10k)</u>	0	0	1	1	-

76	14.4	Landslip (10k)	0	0	0	0	-
77	14.5	<u>Bedrock geology (10k)</u>	2	0	0	1	-
78	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
79	15.1	<u>50k Availability</u>	Identified (within 500m)				
80	15.2	<u>Artificial and made ground (50k)</u>	0	0	1	2	-
81	15.3	Artificial ground permeability (50k)	0	0	-	-	-
82	15.4	<u>Superficial geology (50k)</u>	0	0	1	1	-
83	15.5	Superficial permeability (50k)	None (within 50m)				
83	15.6	Landslip (50k)	0	0	0	0	-
83	15.7	Landslip permeability (50k)	None (within 50m)				
84	15.8	<u>Bedrock geology (50k)</u>	2	0	0	1	-
85	15.9	<u>Bedrock permeability (50k)</u>	Identified (within 50m)				
85	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
86	16.1	<u>BGS Boreholes</u>	0	0	6	-	-
Page	Section	Natural ground subsidence					
88	17.1	<u>Shrink swell clays</u>	Moderate (within 50m)				
89	17.2	<u>Running sands</u>	Low (within 50m)				
91	17.3	<u>Compressible deposits</u>	Negligible (within 50m)				
92	17.4	<u>Collapsible deposits</u>	Very low (within 50m)				
93	17.5	<u>Landslides</u>	Very low (within 50m)				
94	17.6	<u>Ground dissolution of soluble rocks</u>	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
95	18.1	Natural cavities	0	0	0	0	-
96	18.2	<u>BritPits</u>	0	0	0	1	-
96	18.3	<u>Surface ground workings</u>	0	0	17	-	-
97	18.4	Underground workings	0	0	0	0	0
97	18.5	<u>Historical Mineral Planning Areas</u>	0	0	0	2	-



98	18.6	Non-coal mining	0	0	0	0	0
98	18.7	Mining cavities	0	0	0	0	0
98	18.8	JPB mining areas	None (within 0m)				
98	18.9	Coal mining	None (within 0m)				
98	18.10	Brine areas	None (within 0m)				
99	18.11	Gypsum areas	None (within 0m)				
99	18.12	Tin mining	None (within 0m)				
99	18.13	Clay mining	None (within 0m)				
Page	Section	Radon					
100	19.1	Radon	Less than 1% (within 0m)				
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
101	20.1	<u>BGS Estimated Background Soil Chemistry</u>	4	2	-	-	-
101	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
102	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
103	21.1	Underground railways (London)	0	0	0	-	-
103	21.2	Underground railways (Non-London)	0	0	0	-	-
103	21.3	Railway tunnels	0	0	0	-	-
103	21.4	Historical railway and tunnel features	0	0	0	-	-
103	21.5	Royal Mail tunnels	0	0	0	-	-
104	21.6	Historical railways	0	0	0	-	-
104	21.7	Railways	0	0	0	-	-
104	21.8	Crossrail 1	0	0	0	0	-
104	21.9	Crossrail 2	0	0	0	0	-
104	21.10	HS2	0	0	0	0	-

Recent aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2022. All Rights Reserved.

Capture Date: 05/04/2020

Site Area: 7.51ha



Recent site history - 2017 aerial photograph



Capture Date: 21/06/2017

Site Area: 7.51ha



Recent site history - 2013 aerial photograph



Capture Date: 04/06/2013

Site Area: 7.51ha



Recent site history - 2005 aerial photograph

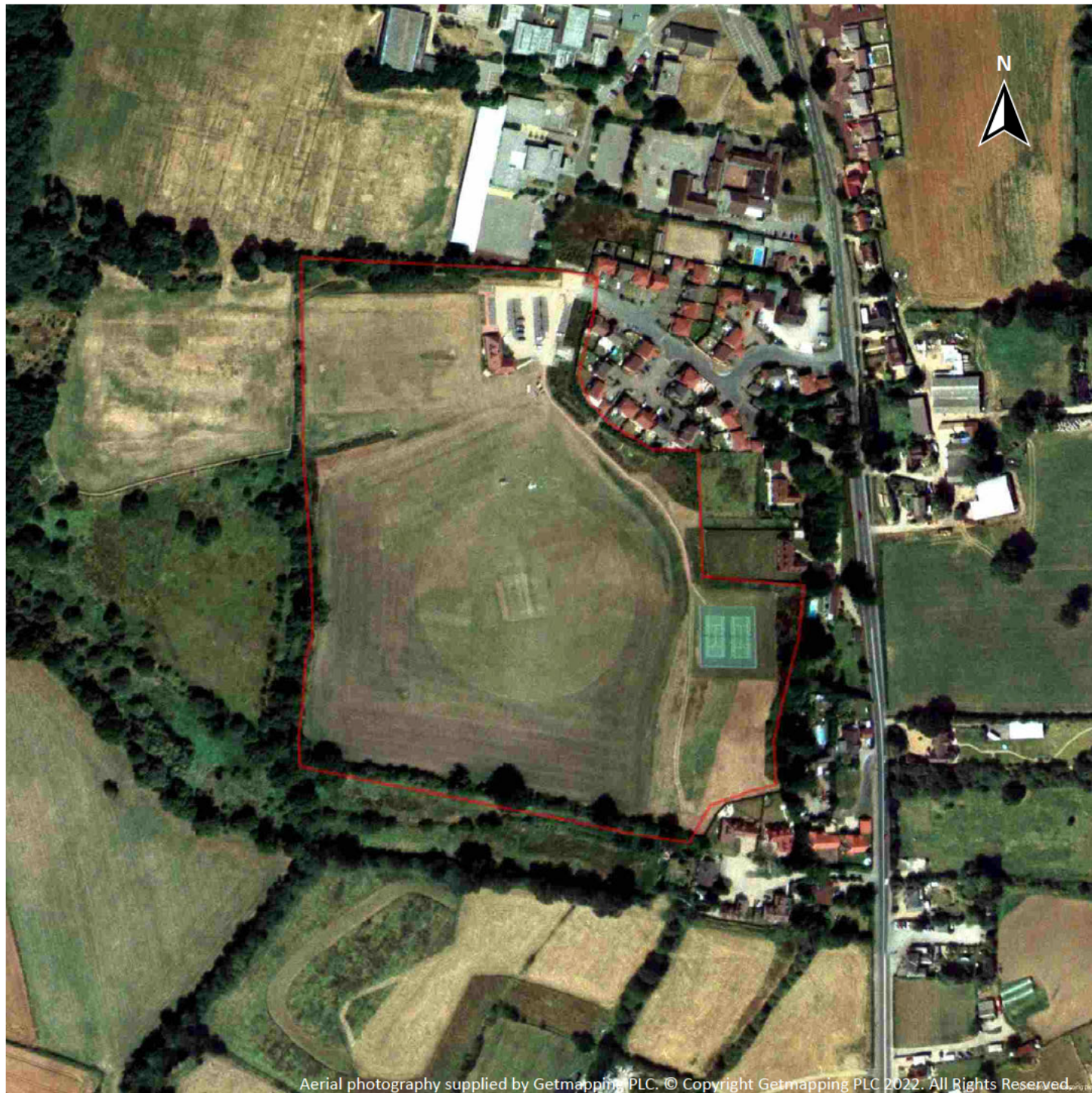


Capture Date: 23/06/2005

Site Area: 7.51ha



Recent site history - 1999 aerial photograph



Capture Date: 27/07/1999

Site Area: 7.51ha



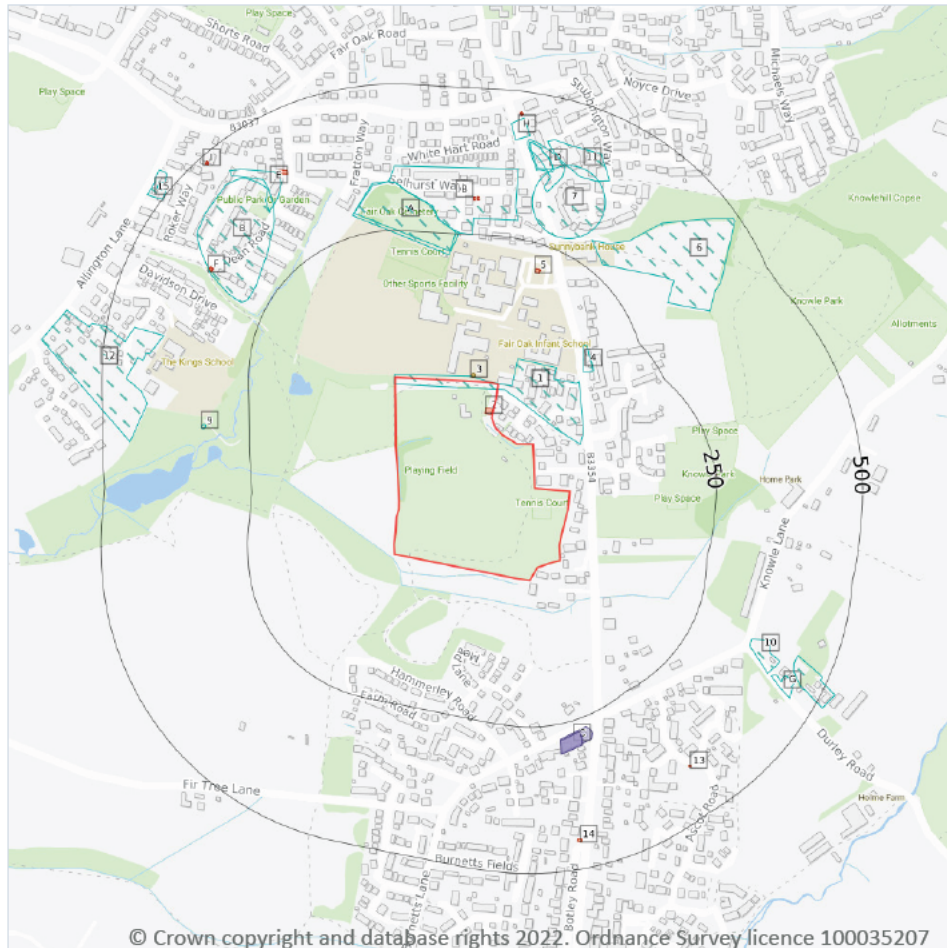
OS MasterMap site plan



Site Area: 7.51ha



1 Past land use



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

1.1 Historical industrial land uses

Records within 500m

20

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 14**

ID	Location	Land use	Dates present	Group ID
1	On site	Nursery	1989	1867664



ID	Location	Land use	Dates present	Group ID
4	148m NE	Smithy	1868	1875502
A	213m N	Cemetery	1957	1950202
A	219m N	Cemetery	1968 - 1989	1965222
B	250m N	Nursery	1968	1867675
6	271m NE	Refuse Heap	1989	1883996
7	271m N	Sand Pit	1981	1968627
8	284m NW	Refuse Heap	1957 - 1968	1936604
9	324m W	Boat House	1908 - 1938	1951642
D	339m N	Refuse Heap	1957	1966802
10	354m SE	Refuse Heap	1868	1883978
E	355m NW	Refuse Heap	1968	1904103
D	371m N	Sand Pit	1908 - 1938	1925448
D	374m N	Refuse Heap	1895	1920735
11	381m N	Refuse Heap	1968	1883994
12	401m NW	Nursery	1989	1867663
G	411m SE	Refuse Heap	1868	1883977
H	416m N	Cuttings	1957	1881878
G	436m SE	Dairy	1908	1884651
15	499m NW	Refuse Heap	1868	1883997

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

1

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 14](#)



ID	Location	Land use	Dates present	Group ID
3	8m N	Unspecified Tank	1962	302959

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	13
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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 14**

ID	Location	Land use	Dates present	Group ID
2	On site	Electricity Substation	1997	188323
5	201m N	Electricity Substation	1967 - 1989	212040
B	309m N	Electricity Substation	1981	188337
B	310m N	Electricity Substation	1975	188338
F	361m NW	Electricity Substation	1974 - 1986	201720
F	362m NW	Electricity Substation	1997	207424
E	392m NW	Electricity Substation	1975 - 1981	200327
13	413m SE	Electricity Substation	1996 - 1997	202891
14	448m S	Electricity Substation	1985 - 1997	209982
H	459m N	Electricity Substation	1975 - 1989	197351
H	459m N	Electricity Substation	1985 - 1988	201532
I	482m NW	Electricity Substation	1967 - 1986	205087
I	484m NW	Electricity Substation	1997	201076

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m

0

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

Records within 500m

3

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 14**

ID	Location	Land use	Dates present	Group ID
C	267m SE	Garage	1985 - 1992	63771
C	270m SE	Garage	1994 - 1997	63339
C	272m SE	Garage	1997	61679

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

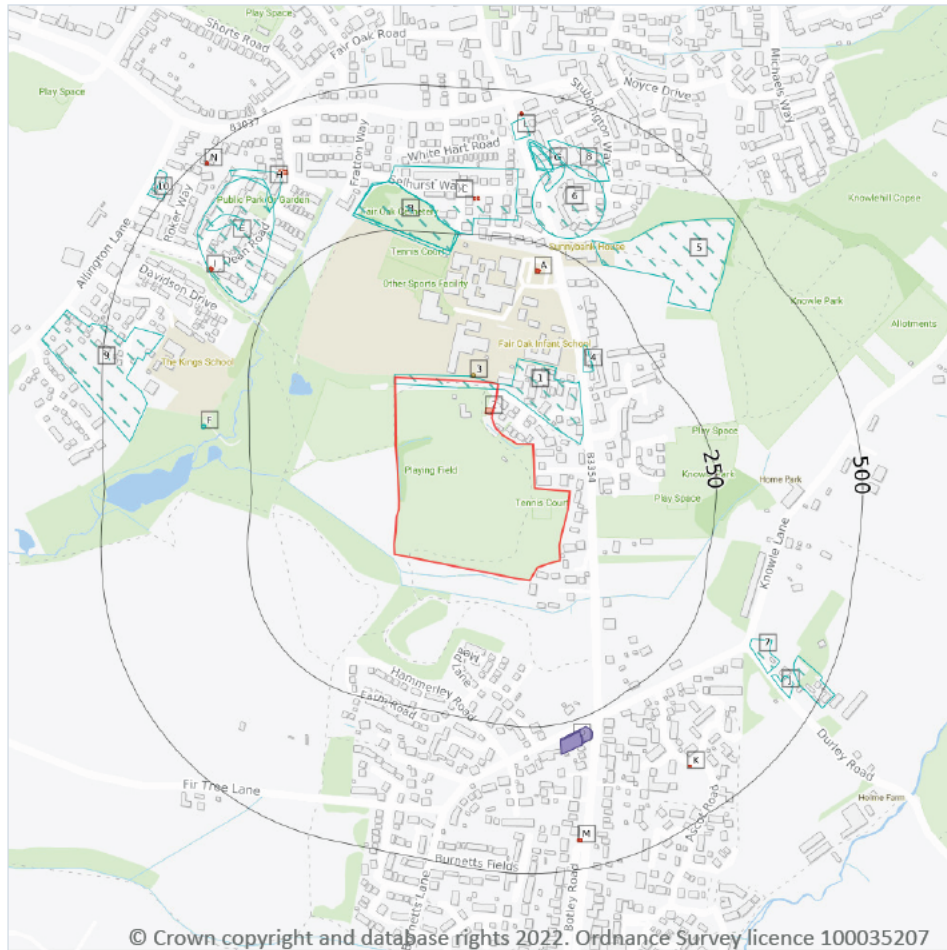
Records within 500m

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

25

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 18

ID	Location	Land Use	Date	Group ID
1	On site	Nursery	1989	1867664
4	148m NE	Smithy	1868	1875502
B	213m N	Cemetery	1957	1950202



ID	Location	Land Use	Date	Group ID
B	219m N	Cemetery	1989	1965222
B	219m N	Cemetery	1968	1965222
B	219m N	Cemetery	1981	1965222
C	250m N	Nursery	1968	1867675
5	271m NE	Refuse Heap	1989	1883996
6	271m N	Sand Pit	1981	1968627
E	284m NW	Refuse Heap	1957	1936604
F	324m W	Boat House	1938	1951642
F	325m W	Boat House	1908	1951642
G	339m N	Refuse Heap	1957	1966802
7	354m SE	Refuse Heap	1868	1883978
H	355m NW	Refuse Heap	1968	1904103
E	367m NW	Refuse Heap	1968	1936604
G	371m N	Sand Pit	1908	1925448
G	374m N	Refuse Heap	1895	1920735
G	374m N	Sand Pit	1938	1925448
8	381m N	Refuse Heap	1968	1883994
9	401m NW	Nursery	1989	1867663
J	411m SE	Refuse Heap	1868	1883977
L	416m N	Cuttings	1957	1881878
J	436m SE	Dairy	1908	1884651
10	499m NW	Refuse Heap	1868	1883997

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

1

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 18

ID	Location	Land Use	Date	Group ID
3	8m N	Unspecified Tank	1962	302959

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	31
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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 18

ID	Location	Land Use	Date	Group ID
2	On site	Electricity Substation	1997	188323
A	201m N	Electricity Substation	1985	212040
A	202m N	Electricity Substation	1989	212040
A	202m N	Electricity Substation	1967	212040
C	309m N	Electricity Substation	1981	188337
C	310m N	Electricity Substation	1975	188338
I	361m NW	Electricity Substation	1974	201720
I	362m NW	Electricity Substation	1997	207424
I	362m NW	Electricity Substation	1986	201720
H	392m NW	Electricity Substation	1981	200327
H	397m NW	Electricity Substation	1975	200327
K	413m SE	Electricity Substation	1997	202891
K	413m SE	Electricity Substation	1997	202891
K	413m SE	Electricity Substation	1996	202891
M	448m S	Electricity Substation	1985	209982
M	448m S	Electricity Substation	1989	209982
M	448m S	Electricity Substation	1992	209982
M	448m S	Electricity Substation	1997	209982



ID	Location	Land Use	Date	Group ID
M	448m S	Electricity Substation	1997	209982
M	448m S	Electricity Substation	1994	209982
M	448m S	Electricity Substation	1994	209982
M	448m S	Electricity Substation	1996	209982
L	459m N	Electricity Substation	1989	197351
L	459m N	Electricity Substation	1975	197351
L	459m N	Electricity Substation	1985	201532
L	459m N	Electricity Substation	1988	201532
L	459m N	Electricity Substation	1987	201532
N	482m NW	Electricity Substation	1974	205087
N	483m NW	Electricity Substation	1986	205087
N	484m NW	Electricity Substation	1967	205087
N	484m NW	Electricity Substation	1997	201076

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m

8

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 18**

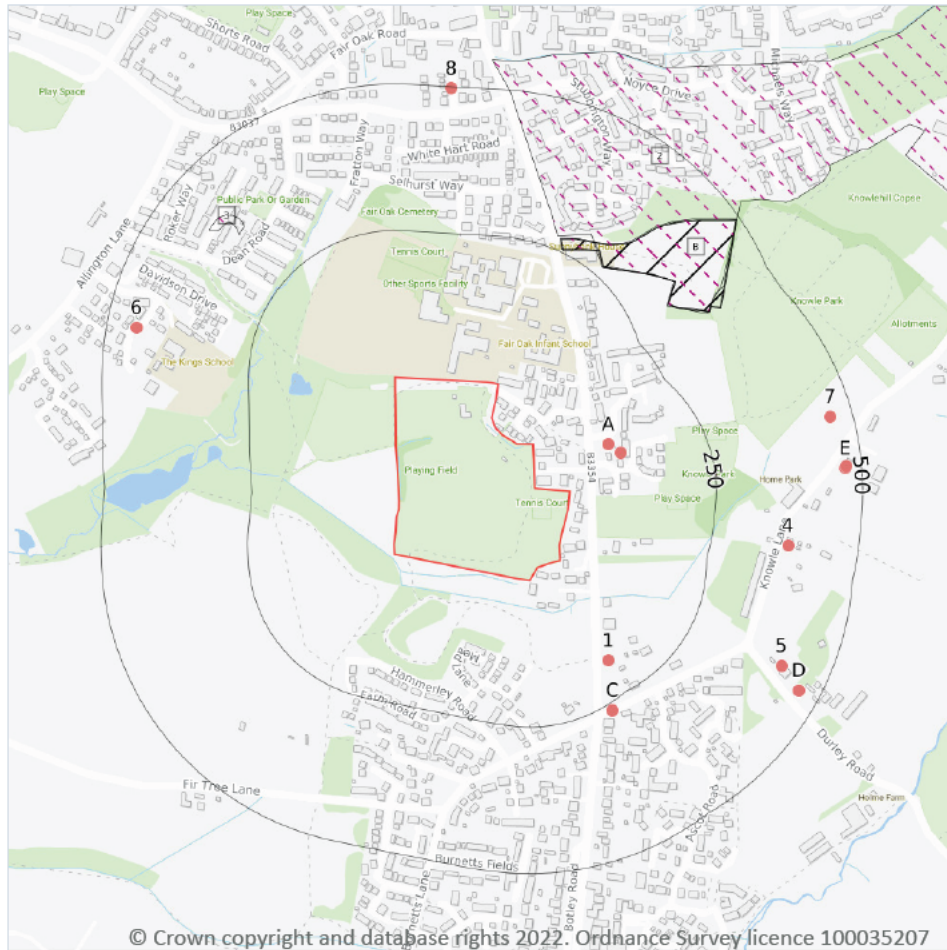


ID	Location	Land Use	Date	Group ID
D	267m SE	Garage	1989	63771
D	267m SE	Garage	1992	63771
D	267m SE	Garage	1985	63771
D	270m SE	Garage	1997	63339
D	270m SE	Garage	1994	63339
D	270m SE	Garage	1994	63339
D	270m SE	Garage	1996	63339
D	272m SE	Garage	1997	61679

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Historical landfill (EA/NRW)
- Historical landfill (LA/OS)
- 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

4

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

Features are displayed on the Waste and landfill map on **page 23**

ID	Location	Site address	Source	Data type
B	255m N	Sunnybank Sand and Tipping Limited	Eastleigh Borough Council	Polygon
2	267m NE	Fair Oak Landfill	Eastleigh	Polygon
B	268m NE	Refuse Tip	1988 mapping	Polygon
3	360m NW	Refuse Tip	1962 mapping	Polygon

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

3.4 Historical landfill (EA/NRW records)

Records within 500m

1

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.

Features are displayed on the Waste and landfill map on **page 23**

ID	Location	Details		
B	254m N	Site Address: Sunny Bank Sand and Tipping Limited, Botley Road, Fair Oak, Hampshire Licence Holder Address: Botley Road, Fair Oak, Hampshire	Waste Licence: Yes Site Reference: 9/15A, FEA8 Waste Type: Inert, Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: 08/08/1985 Licence Surrender: -	Operator: - Licence Holder: Sunnybank Sand Limited First Recorded 08/08/1985 Last Recorded: -

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

3.5 Historical waste sites

Records within 500m	0
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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
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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	18
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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 23**

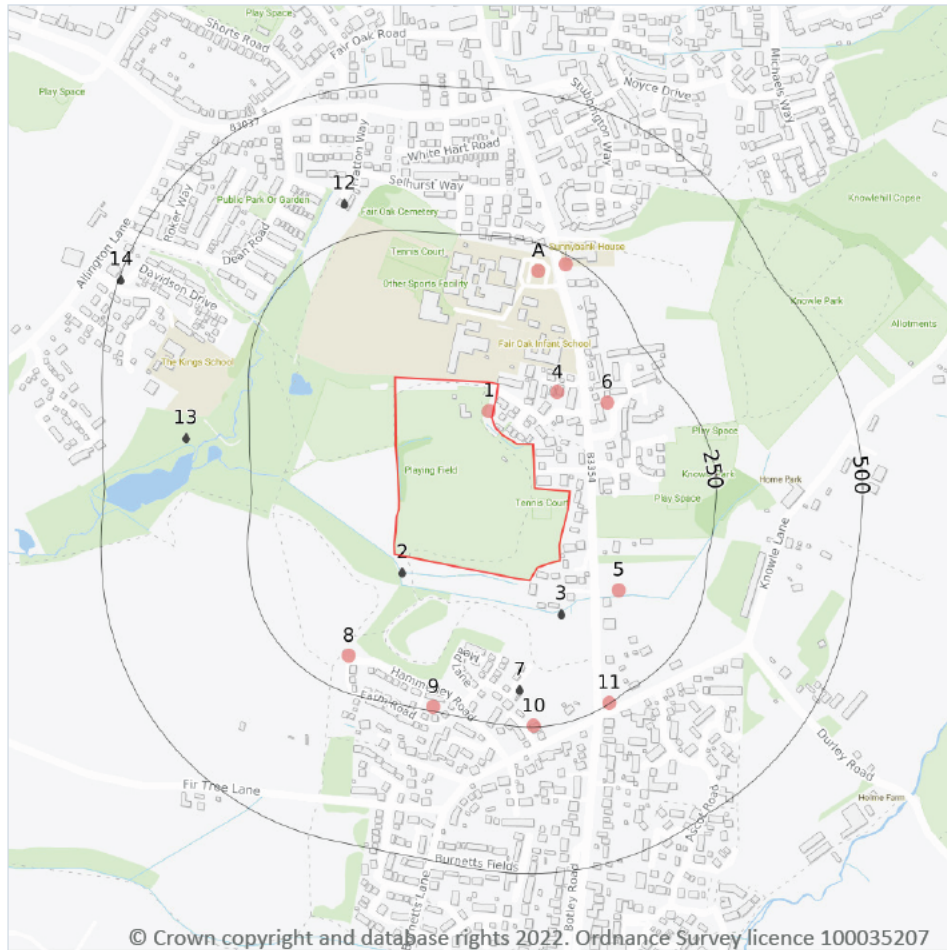
ID	Location	Site	Reference	Category	Sub-Category	Description
A	103m E	Whitetree Farm Botley Road EASTLEIGH Hampshire SO50 7AP	EPR/SE5384G G/A001	Treating waste exemption	Agricultural Waste Only	Aerobic composting and associated prior treatment
A	103m E	Whitetree Farm Botley Road EASTLEIGH Hampshire SO50 7AP	EPR/SE5384G G/A001	Using waste exemption	Agricultural Waste Only	Use of waste in construction
A	103m E	Whitetree Farm Botley Road EASTLEIGH Hampshire SO50 7AP	EPR/SE5384G G/A001	Using waste exemption	Agricultural Waste Only	Burning of waste as a fuel in a small appliance
A	103m E	Whitetree Farm Botley Road EASTLEIGH Hampshire SO50 7AP	EPR/SE5384G G/A001	Using waste exemption	Agricultural Waste Only	Use of waste for a specified purpose
A	108m E	WHITETREE FARM, BOTLEY ROAD, FAIR OAK, EASTLEIGH, SO50 7AP	WEX068396	Disposing of waste exemption	On a farm	Burning waste in the open
1	190m SE	LECHLADE COTTAGE, BOTLEY ROAD, FAIR OAK, EASTLEIGH, SO50 7AP	WEX231414	Using waste exemption	On a Farm	Use of waste in construction

ID	Location	Site	Reference	Category	Sub-Category	Description
C	263m SE	-	WEX127348	Treating waste exemption	Not on a farm	Treatment of waste food
C	263m SE	-	WEX127351	Treating waste exemption	Not on a farm	Aerobic composting and associated prior treatment
4	380m E	-	WEX260864	Using waste exemption	Not on a farm	Use of waste in construction
5	418m SE	COCKPIT FARM, DURLEY ROAD, HORTON HEATH, EASTLEIGH, SO50 7DY	WEX122181	Using waste exemption	On a farm	Use of waste in construction
6	450m NW	-	WEX315218	Using waste exemption	Not on a Farm	Use of waste in construction
7	461m E	Yard Knowle Lane Hampshire SO50 7DZ	EPR/BE5252W Y/A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste in construction
D	464m SE	COCKPIT, WISTERIA COTTAGE, DURLEY ROAD, HORTON HEATH, EASTLEIGH, SO50 7DY	WEX132948	Using waste exemption	On a farm	Use of waste in construction
D	464m SE	COCKPIT, WISTERIA COTTAGE, DURLEY ROAD, HORTON HEATH, EASTLEIGH, SO50 7DY	WEX081913	Using waste exemption	On a farm	Use of waste in construction
D	464m SE	COCKPIT, WISTERIA COTTAGE, DURLEY ROAD, HORTON HEATH, EASTLEIGH, SO50 7DY	WEX025582	Using waste exemption	On a farm	Use of waste in construction
E	471m E	6, KNOWLE LANE, HORTON HEATH, EASTLEIGH, SO50 7DZ	WEX234519	Using waste exemption	Not on a farm	Use of waste in construction
E	473m E	Hanscott Livery 6 Knowle Lane SO50 7DZ	EPR/XE5880W X/A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste in construction
8	496m N	Dorney Wood Dorney Wood Road SLOUGH SL1 8PY	EPR/ZF0938QC /A001	Treating waste exemption	Non-Agricultural Waste Only	Aerobic composting and associated prior treatment

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 Discharges to controlled waters

4.1 Recent industrial land uses

Records within 250m

10

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on page 27

ID	Location	Company	Address	Activity	Category
1	On site	Electricity Sub Station	Hampshire, SO50	Electrical Features	Infrastructure and Facilities
4	97m NE	Towbar Services	Pavilion Close, Fair Oak, Hampshire, SO50 7PS	Vehicle Repair, Testing and Servicing	Repair and Servicing
5	112m SE	Pump House	Hampshire, SO50	Water Pumping Stations	Industrial Features



ID	Location	Company	Address	Activity	Category
6	145m NE	Electricity Sub Station	Hampshire, SO50	Electrical Features	Infrastructure and Facilities
8	190m SW	Pumping Station	Hampshire, SO50	Water Pumping Stations	Industrial Features
A	206m N	Electricity Sub Station	Hampshire, SO50	Electrical Features	Infrastructure and Facilities
A	235m NE	Electricity Sub Station	Hampshire, SO50	Electrical Features	Infrastructure and Facilities
9	242m S	Electricity Sub Station	Hampshire, SO50	Electrical Features	Infrastructure and Facilities
10	248m S	Titan Fire Services	8 Saxon Court, Burnetts Lane, Horton Heath, Hampshire, SO50 7FG	Special Purpose Machinery and Equipment	Industrial Products
11	248m SE	Gas Governor	Hampshire, SO50	Gas Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m

0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m

0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m

0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.



4.5 Sites determined as Contaminated Land

Records within 500m

0

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m

0

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m

0

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m

0

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m

0

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

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

4.10 Licensed industrial activities (Part A(1))

Records within 500m

0

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

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

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

Records within 500m

0

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

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m

0

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m

6

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 27](#)

ID	Location	Address	Details	
2	28m SW	LAPSTONE FARM, HORTON HEATH, EASTLEIGH, HAMPSHIRE	Effluent Type: UNSPECIFIED Permit Number: H01761 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: PRE NRA LEGISLATION WHERE ISSUE DATE 01-SEP-89 (HISTORIC ONLY) Issue date: 16/04/1970 Effective Date: 16/04/1970 Revocation Date: 01/07/1991

ID	Location	Address	Details	
3	76m SE	BOTLEY ROAD PS (HORTON HEATH), BOTLEY ROAD PS, BOTLEY ROAD, HORTON HEATH, EASTLEIGH, HAMPSHIRE, SO50 7AN	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: A00618 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: SURRENDERED UNDER EPR 2010 Issue date: 02/03/1992 Effective Date: 02/03/1992 Revocation Date: 28/09/2021
7	187m S	LECHLADE, HORTON HEATH, EASTLEIGH, HAMPSHIRE	Effluent Type: SEWAGE DISCHARGES - UNSPECIFIED - NOT WATER COMPANY Permit Number: H01714 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 12/07/1963 Effective Date: 12/07/1963 Revocation Date: 31/03/1997
12	309m NW	FRATTON WAY PUMPING STATION, FRATTON WAY P.S, FAIR OAK HAMPSHIRE	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: A00203 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 01/04/1991 Effective Date: 01/04/1991 Revocation Date: 14/03/1997
13	358m W	ALLINGTON LANE, FAIR OAK, EASTLEIGH, HAMPSHIRE	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: P02870 Permit Version: 1 Receiving Water: FRESHWATER RIVER	Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 27/03/1990 Effective Date: 27/03/1990 Revocation Date: 31/03/1997
14	496m NW	CHURCH HALL AT ALLINGTON LANE, FAIR OAK, HAMPSHIRE	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: N03272 Permit Version: 1 Receiving Water: INTO LAND	Status: LAPSED UNDER SCHEDULE 23 ENVIRONMENT ACT 1995 Issue date: 04/10/1977 Effective Date: 04/10/1977 Revocation Date: 31/03/1997

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

4.14 Pollutant release to surface waters (Red List)

Records within 500m

0

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

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



4.15 Pollutant release to public sewer

Records within 500m

0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m

0

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

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

4.17 List 2 Dangerous Substances

Records within 500m

0

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m

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

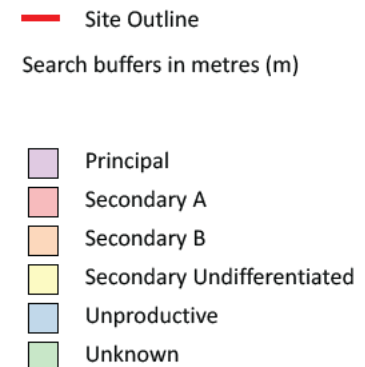
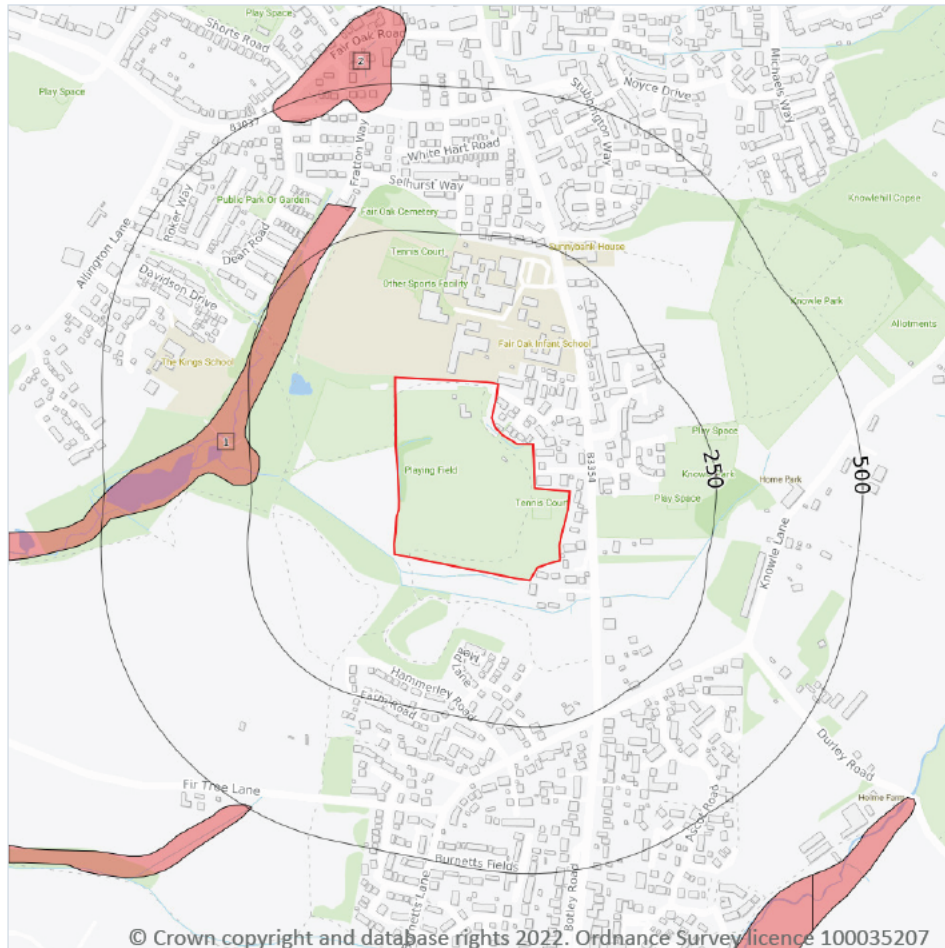
Records within 500m

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



5.1 Superficial aquifer

Records within 500m

2

Aquifer status of groundwater held within superficial geology.

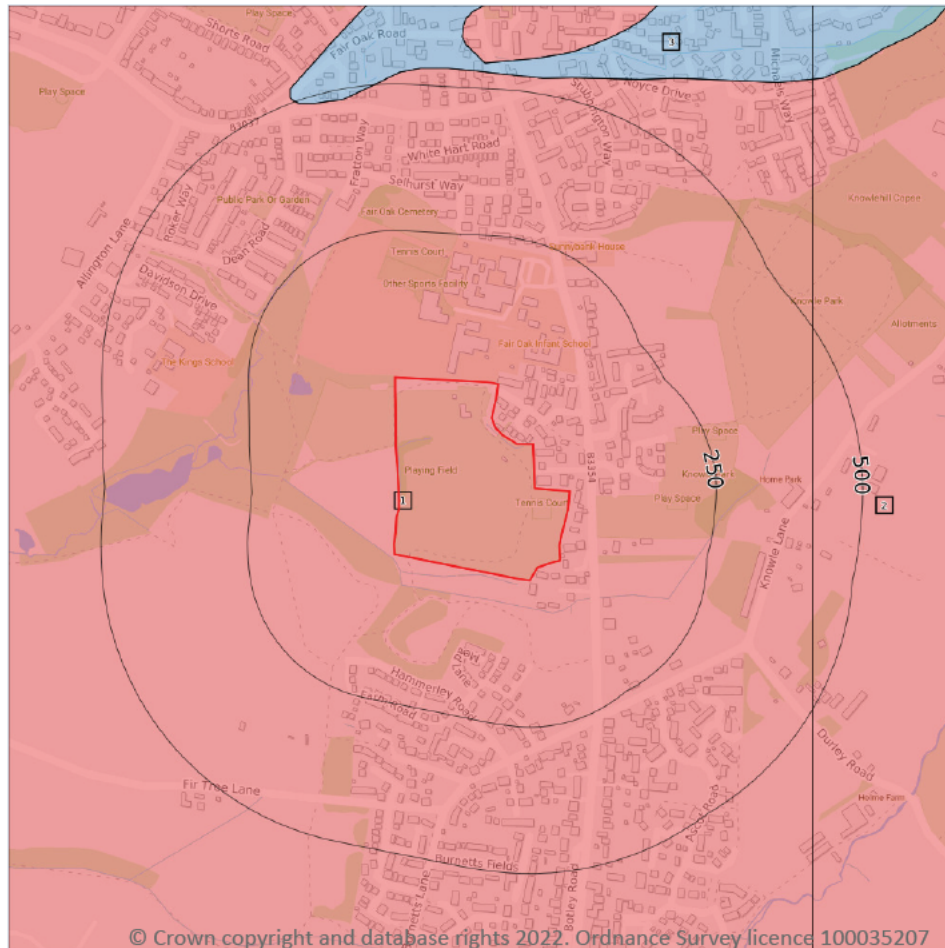
Features are displayed on the Hydrogeology map on page 34

ID	Location	Designation	Description
1	197m NW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	455m N	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

3

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on page 36

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	415m E	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

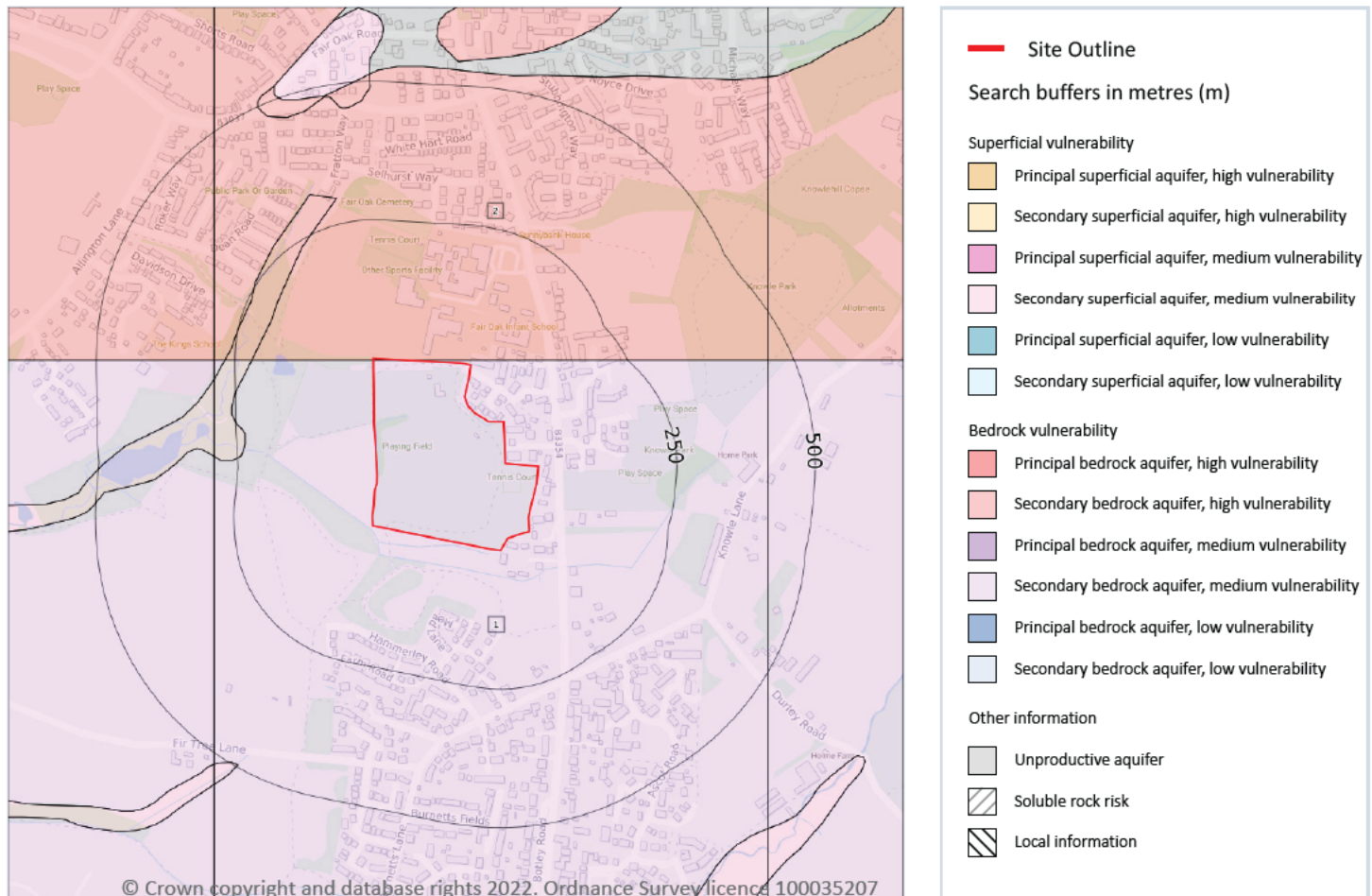


ID	Location	Designation	Description
3	482m N	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

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



Groundwater vulnerability



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 38**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Low Infiltration value: 40- 70% Dilution value: 300- 550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Intergranular
2	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: Intermediate Infiltration value: 40- 70% Dilution value: 300- 550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Secondary Flow mechanism: Mixed

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site

0

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

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

5.5 Groundwater vulnerability- local information

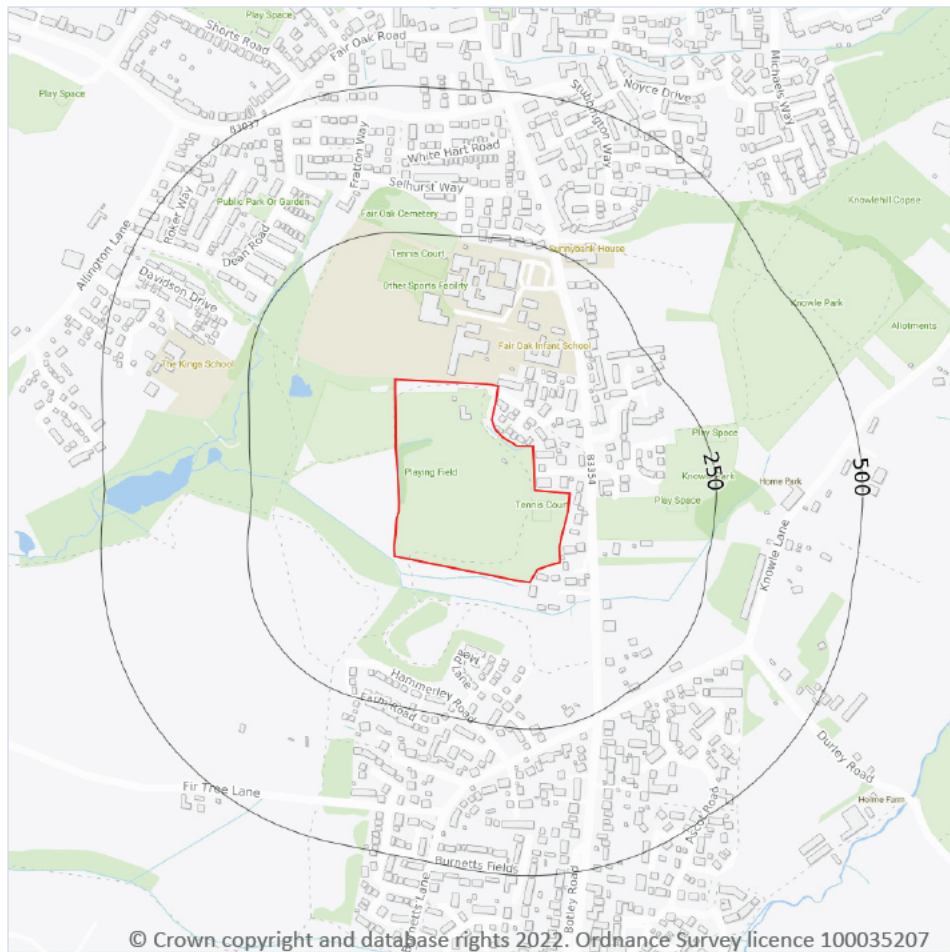
Records on site

0

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

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

Abstractions and Source Protection Zones



- Site Outline
- Search buffers in metres (m)**
- Source Protection Zone 1
Inner catchment
- Source Protection Zone 2
Outer catchment
- Source Protection Zone 3
Total catchment
- Source Protection Zone 4
Zone of Special Interest
- Source Protection Zone 1c
Inner catchment - confined aquifer
- Source Protection Zone 2c
Outer catchment - confined aquifer
- Source Protection Zone 3c
Total catchment - confined aquifer
- Drinking water abstraction licences
Point features
- 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

0

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.

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

5.7 Surface water abstractions

Records within 2000m

6

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 40](#)

ID	Location	Details	
-	1193m W	Status: Historical Licence No: 11/42/22.10/120 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: TRIBUTARY OF RIVER ITCHEN AT ALLINGTON MANOR FARM, FAIR OAK Data Type: Line Name: Arturi Easting: 447870 Northing: 117610	Annual Volume (m ³): 2275 Max Daily Volume (m ³): 100 Original Application No: - Original Start Date: 23/12/1965 Expiry Date: - Issue No: 101 Version Start Date: 23/10/2018 Version End Date: -
-	1249m E	Status: Historical Licence No: 31/088CA Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: EAST HORTON FARM, FAIR OAK Data Type: Point Name: East Horton Golf Centre Ltd Easting: 450800 Northing: 118100	Annual Volume (m ³): 9000 Max Daily Volume (m ³): 88 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 06/09/1999 Version End Date: -
-	1249m E	Status: Historical Licence No: 30/054 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: EAST HORTON FARM, FAIR OAK Data Type: Point Name: East Horton Golf Centre Ltd Easting: 450800 Northing: 118100	Annual Volume (m ³): 9000 Max Daily Volume (m ³): 88 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 1 Version Start Date: 12/06/2009 Version End Date: -
-	1261m E	Status: Historical Licence No: 30/050 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: POINT A AT EAST HORTON FARM Data Type: Point Name: East Horton Golf Centre Ltd Easting: 450800 Northing: 118150	Annual Volume (m ³): 9091 Max Daily Volume (m ³): 126 Original Application No: - Original Start Date: - Expiry Date: 15/03/2014 Issue No: 101 Version Start Date: 12/06/2009 Version End Date: -

ID	Location	Details	
-	1262m E	Status: Active Licence No: 30/050/R01 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: POINT A AT EAST HORTON FARM Data Type: Point Name: East Horton Golf Centre Ltd Easting: 450803 Northing: 118143	Annual Volume (m ³): 8,182 Max Daily Volume (m ³): 126 Original Application No: NPS/WR/012658 Original Start Date: 16/03/2014 Expiry Date: 31/03/2028 Issue No: 1 Version Start Date: 01/04/2021 Version End Date: -
-	1381m E	Status: Active Licence No: 30/054 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: EAST HORTON FARM, FAIR OAK Data Type: Point Name: East Horton Golf Centre Ltd Easting: 450949 Northing: 118030	Annual Volume (m ³): 9,000 Max Daily Volume (m ³): 37.03 Original Application No: NPS/WR/015184 Original Start Date: 02/11/1992 Expiry Date: - Issue No: 2 Version Start Date: 19/12/2014 Version End Date: -

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

5.8 Potable abstractions

Records within 2000m	0
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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.

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

5.9 Source Protection Zones

Records within 500m	0
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Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

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

5.10 Source Protection Zones (confined aquifer)

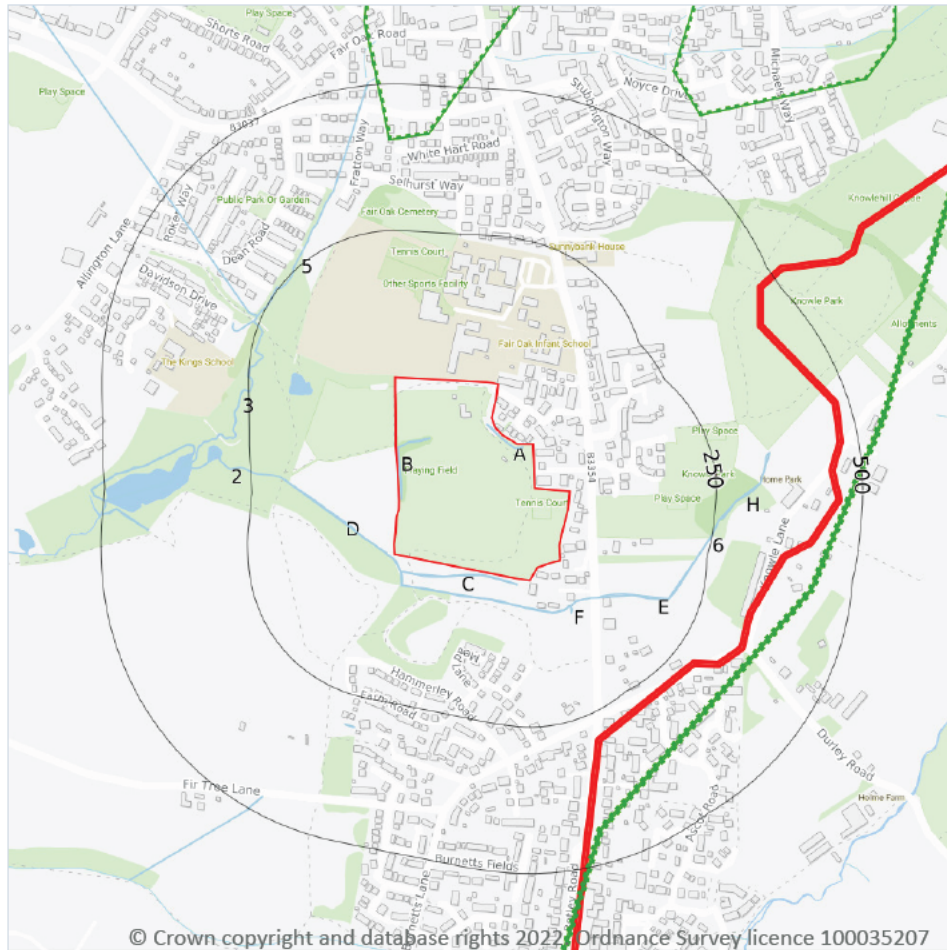
Records within 500m	0
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Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only 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

14

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

Features are displayed on the Hydrology map on page 43

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



ID	Location	Type of water feature	Ground level	Permanence	Name
A	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
B	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	5m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	7m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	26m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	74m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	79m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
2	201m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
3	228m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
5	245m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
6	246m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	248m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.



6.2 Surface water features

Records within 250m

13

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

Features are displayed on the Hydrology map on [page 43](#)

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 43](#)

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
B	On site	River	Itchen	GB107042022580	Itchen	Test and Itchen

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 43](#)

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	1027m SW	River	Itchen	GB107042022580	Moderate	Fail	Good	2019

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 43**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
B	On site	Central Hants Bracklesham Group	<u>GB40702G500900</u>	Good	Good	Good	2019

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 the sea

Records within 50m

0

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

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

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
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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

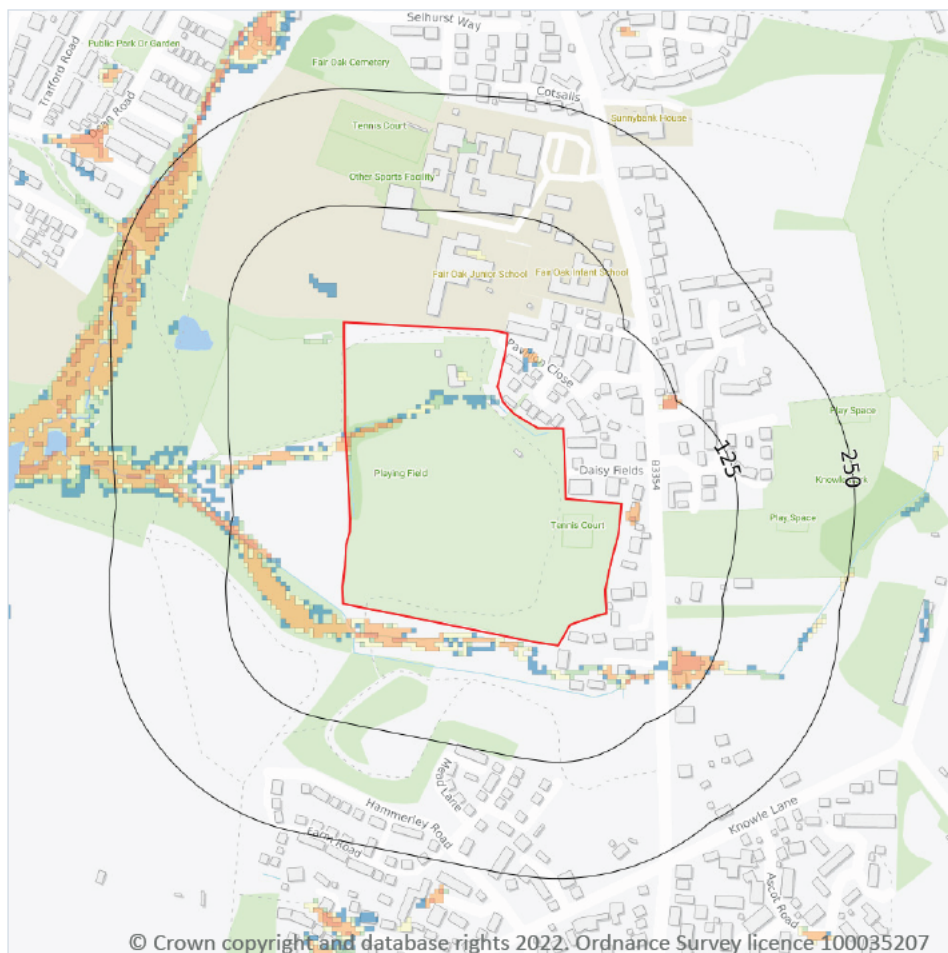
Records within 50m	0
--------------------	---

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



— Site Outline

Search buffers in metres (m)

1 in 1000 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site

1 in 30 year, 0.3m - 1.0m

Highest risk within 50m

1 in 30 year, 0.3m - 1.0m

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

Features are displayed on the Surface water flooding map on page 50

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

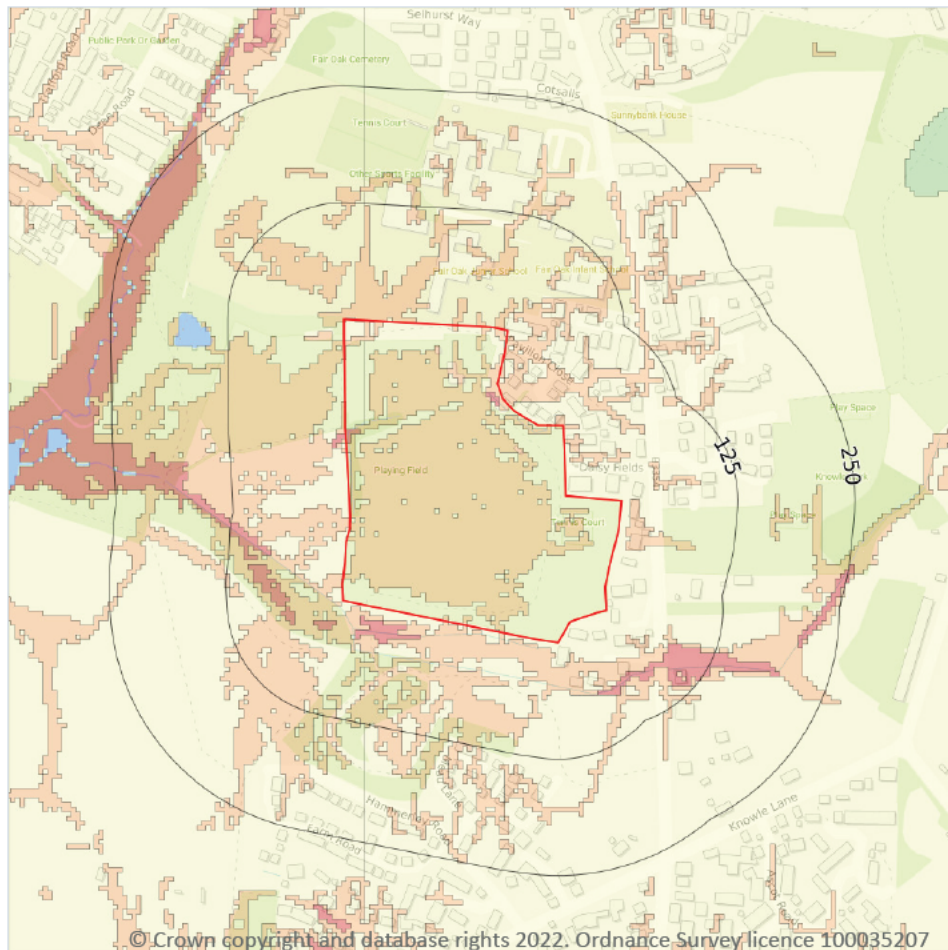
The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Greater than 1.0m
1 in 250 year	Between 0.3m and 1.0m
1 in 100 year	Between 0.3m and 1.0m
1 in 30 year	Between 0.3m and 1.0m

This data is sourced from Ambiantal 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

High

Highest risk within 50m

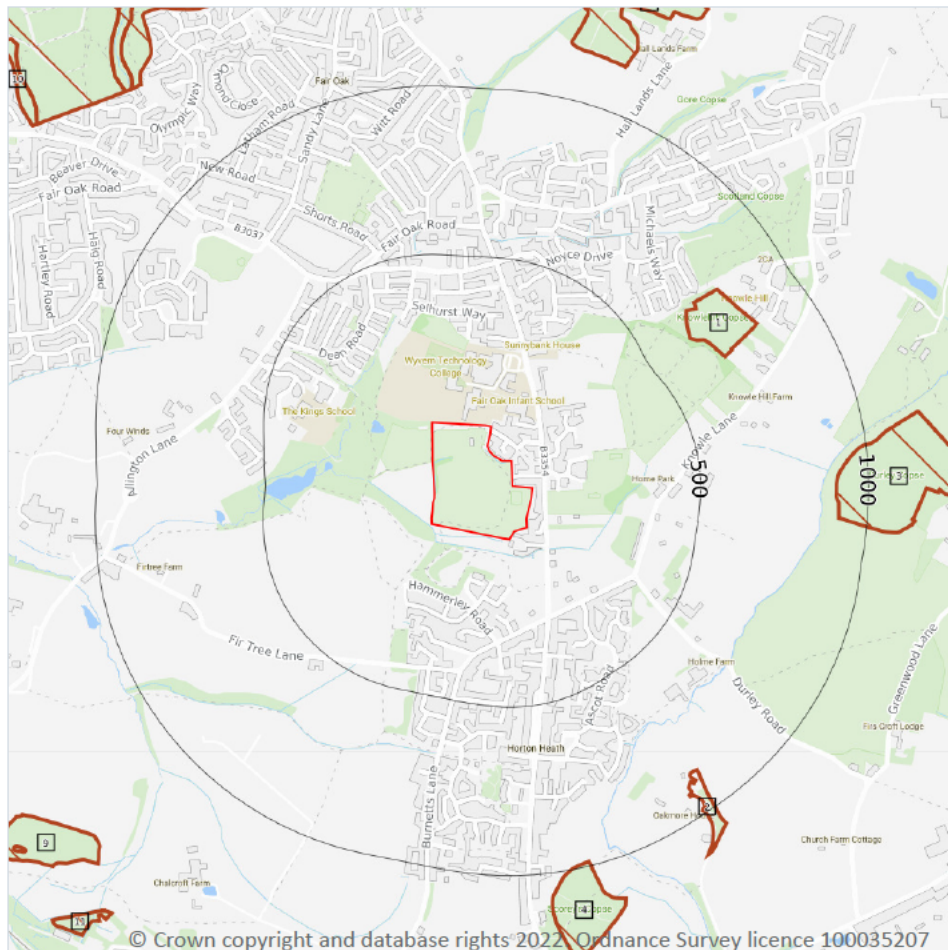
High

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 52](#)

This data is sourced from Ambient Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Sites of Special Scientific Interest (SSSI)
- + Special Areas of Conservation (SAC)
- Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

2

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

Features are displayed on the Environmental designations map on page 53

ID	Location	Name	Data source
-	1900m W	River Itchen	Natural England



ID	Location	Name	Data source
-	1902m W	River Itchen	Natural England

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0
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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	1
----------------------	---

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.

Features are displayed on the Environmental designations map on [page 53](#)

ID	Location	Name	Features of interest	Habitat description	Data source
-	1900m W	River Itchen	Rivers with floating vegetation often dominated by water-crowfoot; Sea lamprey; Brook lamprey; River lamprey; Atlantic salmon; Bullhead; Desmoulin's whorl snail; Southern damselfly; White-clawed (or Atlantic stream) crayfish; Otter.	Mixed woodland; Humid grassland, Mesophile grassland; Broad-leaved deciduous woodland; Improved grassland; Bogs, Marshes, Water fringed vegetation, Fens; Inland water bodies (Standing water, Running water); Non-forest areas cultivated with woody plants (including Orchards, groves, Vineyards, Dehesas)	Natural England

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

18

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 53](#)

ID	Location	Name	Woodland Type
1	645m NE	Unknown	Ancient & Semi-Natural Woodland
2	877m SE	Unknown	Ancient & Semi-Natural Woodland
3	904m E	Durley Copse	Ancient Replanted Woodland
4	987m S	Scoreys Copse	Ancient & Semi-Natural Woodland

ID	Location	Name	Woodland Type
5	1141m N	Hall Lands Copse	Ancient & Semi-Natural Woodland
6	1325m NW	Stoke Park Wood	Ancient Replanted Woodland
7	1335m NW	Stoke Park Wood	Ancient & Semi-Natural Woodland
8	1342m NW	Stoke Park Wood	Ancient Replanted Woodland
9	1367m SW	Unknown	Ancient & Semi-Natural Woodland
10	1471m NW	Stoke Park Wood	Ancient & Semi-Natural Woodland
11	1497m SW	Unknown	Ancient & Semi-Natural Woodland
-	1630m NW	Stoke Park Wood	Ancient Replanted Woodland
-	1687m E	Greenwood	Ancient Replanted Woodland
-	1705m NE	Tippers Copse	Ancient & Semi-Natural Woodland
-	1754m NW	Stoke Park Wood	Ancient & Semi-Natural Woodland
-	1781m N	Park Hill's Wood	Ancient & Semi-Natural Woodland
-	1781m N	Park Hill's Wood	Ancient Replanted Woodland
-	1850m N	Park Hill's Wood	Ancient Replanted Woodland

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

10.8 Biosphere Reserves

Records within 2000m

0

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

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

10.9 Forest Parks

Records within 2000m

0

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

This data is sourced from the Forestry Commission.



10.10 Marine Conservation Zones

Records within 2000m

0

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

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

10.11 Green Belt

Records within 2000m

0

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

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

10.12 Proposed Ramsar sites

Records within 2000m

0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

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

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

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

This data is sourced from Natural England.



10.15 Nitrate Sensitive Areas

Records within 2000m

0

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m

3

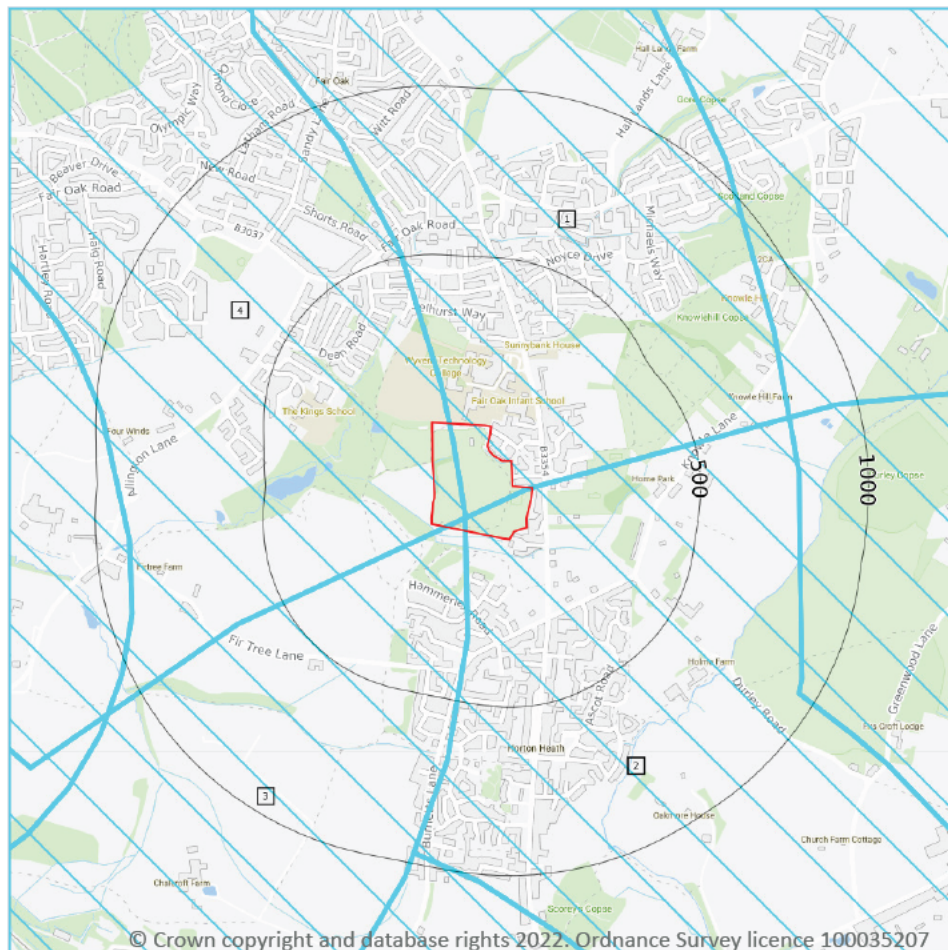
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
On site	Hamble Estuary Eutrophic NVZ (TraC)	Eutrophic Water	3	Existing
1674m S	Hamble Estuary Eutrophic NVZ (TraC)	Eutrophic Water	3	Existing
1683m N	Bow Lake NVZ	Surface Water	811	Existing

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



SSSI Impact Zones and Units



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

10.17 SSSI Impact Risk Zones

Records on site

4

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 59](#)

ID	Location	Type of developments requiring consultation
1	On site	Infrastructure - Airports, helipads and other aviation proposals. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t). Combustion - General combustion processes >50mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Discharges - Any discharge of water or liquid waste that is discharged to ground (ie to seep away) or to surface water, such as a beck or stream. Notes: Solent nutrient impact area. for new development with overnight accommodation reg 63 of the conservation of habitats and species regulations 2017 must be applied. lpa to refer to natural england's solent nutrient neutrality advice note june 2019.
2	On site	Infrastructure - Airports, helipads and other aviation proposals. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Residential - Residential development of 500 units or more. Rural residential - Any residential development of 500 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t). Combustion - General combustion processes >50mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Discharges - Any discharge of water or liquid waste that is discharged to ground (ie to seep away) or to surface water, such as a beck or stream. Notes: For new residential development in this area financial contributions are required to mitigate increased recreational disturbance on coastal spas and ramsar sites. check with local planning authority. Solent nutrient impact area. for new development with overnight accommodation reg 63 of the conservation of habitats and species regulations 2017 must be applied. lpa to refer to natural england's solent nutrient neutrality advice note june 2019.



ID	Location	Type of developments requiring consultation
3	On site	Infrastructure - Pipelines, pylons and overhead cables. any transport proposal including road, rail and by water (excluding routine maintenance). airports, helipads and other aviation proposals. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where footprint exceeds 1ha. Residential - Residential development of 500 units or more. Rural residential - Any residential development of 100 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste that is discharged to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more. Notes: For new residential development in this area financial contributions are required to mitigate increased recreational disturbance on coastal spas and ramsar sites. check with local planning authority. Solent nutrient impact area. for new development with overnight accommodation reg 63 of the conservation of habitats and species regulations 2017 must be applied. lpa to refer to natural england's solent nutrient neutrality advice note june 2019.

ID	Location	Type of developments requiring consultation
4	On site	Infrastructure - Pipelines, pylons and overhead cables. any transport proposal including road, rail and by water (excluding routine maintenance). airports, helipads and other aviation proposals. Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, review of minerals permissions (romp), extensions, variations to conditions etc. oil & gas exploration/extraction. Rural non-residential - Large non residential developments outside existing settlements/urban areas where footprint exceeds 1ha. Rural residential - Any residential development of 100 or more houses outside existing settlements/urban areas. Air pollution - Any industrial/agricultural development that could cause air pollution (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t). Combustion - General combustion processes >20mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion. Waste - Landfill. incl: inert landfill, non-hazardous landfill, hazardous landfill. Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. Discharges - Any discharge of water or liquid waste that is discharged to ground (ie to seep away) or to surface water, such as a beck or stream. Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more. Notes: Solent nutrient impact area. for new development with overnight accommodation reg 63 of the conservation of habitats and species regulations 2017 must be applied. lpa to refer to natural england's solent nutrient neutrality advice note june 2019.

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	1
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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.

Features are displayed on the SSSI Impact Zones and Units map on page 59

ID:	-
Location:	1900m W
SSSI name:	River Itchen
Unit name:	95
Broad habitat:	Neutral Grassland - Lowland
Condition:	Unfavourable - Recovering
Reportable features:	



Feature name	Feature condition	Date of assessment
Floodplain fen (lowland)	Unfavourable - Recovering	21/06/2011
Invert. assemblage W314 reed-fen & pools	-	-
Lowland mire grassland and rush pasture	Unfavourable - Recovering	21/06/2011
Nationally rare and scarce dragonfly species - Coenagrion mercuriale, Southern Damselfly	Unfavourable - Recovering	21/06/2011
Otter, Lutra lutra	Favourable	21/06/2011
S1044 Southern damselfly, Coenagrion mercuriale	Unfavourable - Recovering	21/06/2011
S1355 Otter, Lutra lutra	Favourable	21/06/2011

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

2

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 64](#)

ID	Location	Name	Grade	Reference Number	Listed date
1	15m SE	The Bush, Fair Oak and Horton Heath, Eastleigh, Hampshire, SO50	II	1204040	14/02/1983
2	230m S	Saxon Court, Fair Oak and Horton Heath, Eastleigh, Hampshire, SO50	II	1111947	14/02/1983

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

11.5 Conservation Areas

Records within 250m

0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m

0

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

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

11.7 Registered Parks and Gardens

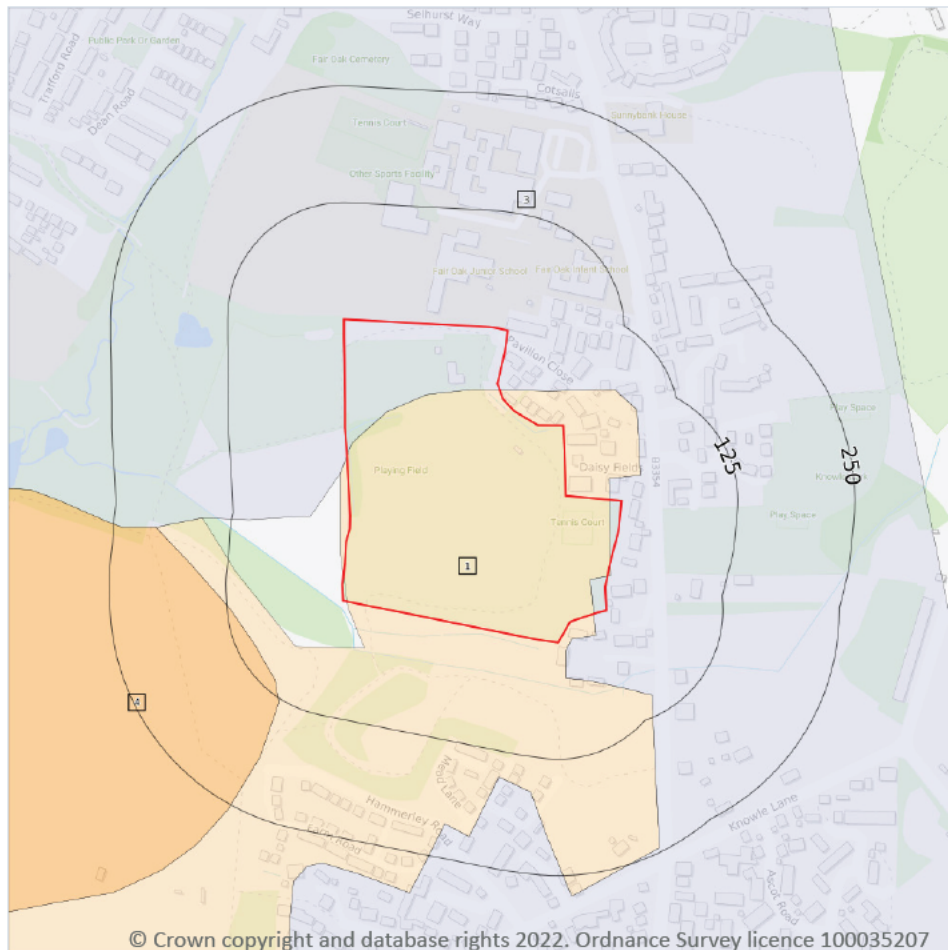
Records within 250m

0

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

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

12 Agricultural designations



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

12.1 Agricultural Land Classification

Records within 250m

3

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

Features are displayed on the Agricultural designations map on page 67

ID	Location	Classification	Description
1	On site	Grade 3b	Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

ID	Location	Classification	Description
3	On site	Grade 4	Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.
4	106m SW	Grade 3a	Good quality agricultural land. Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.

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	0
---------------------	---

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

This data is sourced from the Forestry Commission.

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. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

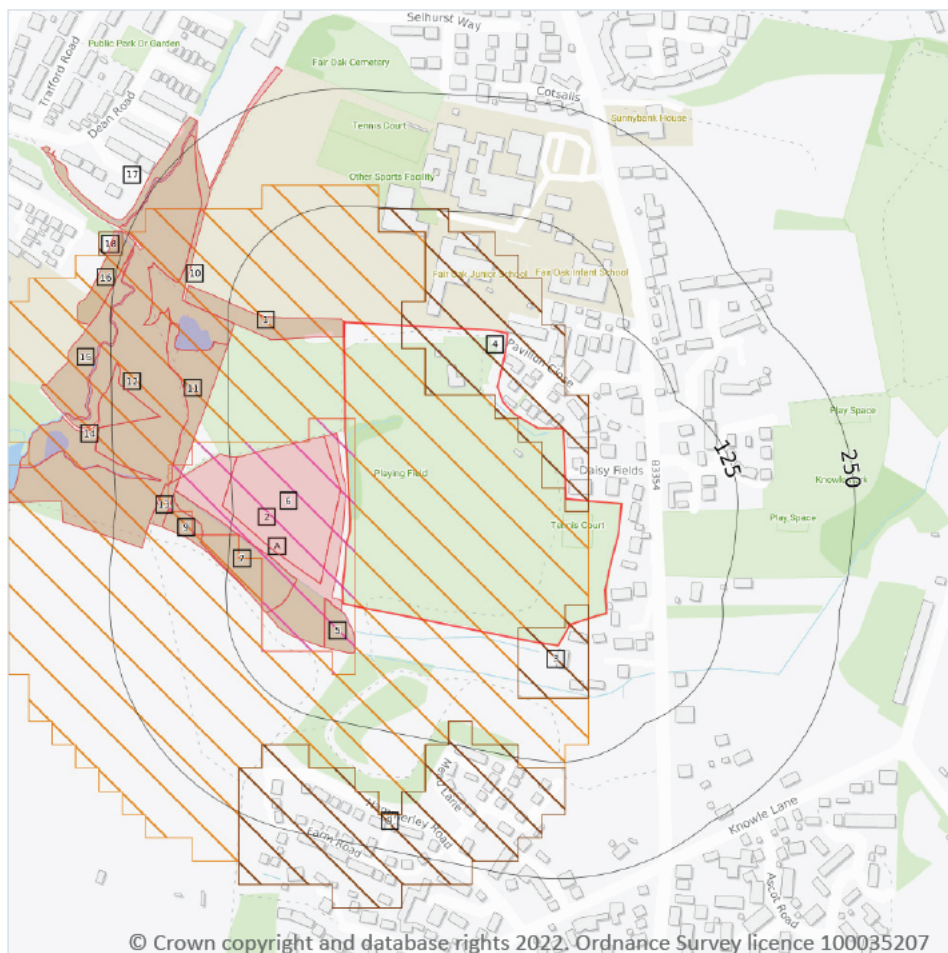
0

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

14

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 70

ID	Location	Main Habitat	Other habitats
1	On site	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	1m SW	Good quality semi-improved grassland	Main habitat: LMEAD (INV > 50%)
5	7m SW	Good quality semi-improved grassland	Main habitat: LMEAD (INV > 50%)
6	9m W	Good quality semi-improved grassland	Main habitat: LMEAD (INV > 50%); PMGRP (FEP + HLS)



ID	Location	Main Habitat	Other habitats
7	50m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%); LMEAD (INV > 50%)
9	103m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
10	117m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
11	124m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
12	168m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
13	180m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
14	198m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
15	229m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
16	239m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
17	246m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

6

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.

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

ID	Location	Type	Habitat
2	On site	Network Enhancement Zone 1	Not specified
3	On site	Network Enhancement Zone 2	Not specified
4	On site	Network Enhancement Zone 2	Not specified
A	On site	Associated Habitats	Other associated habitats
8	97m S	Network Enhancement Zone 2	Not specified
18	248m NW	Network Enhancement Zone 2	Not specified

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

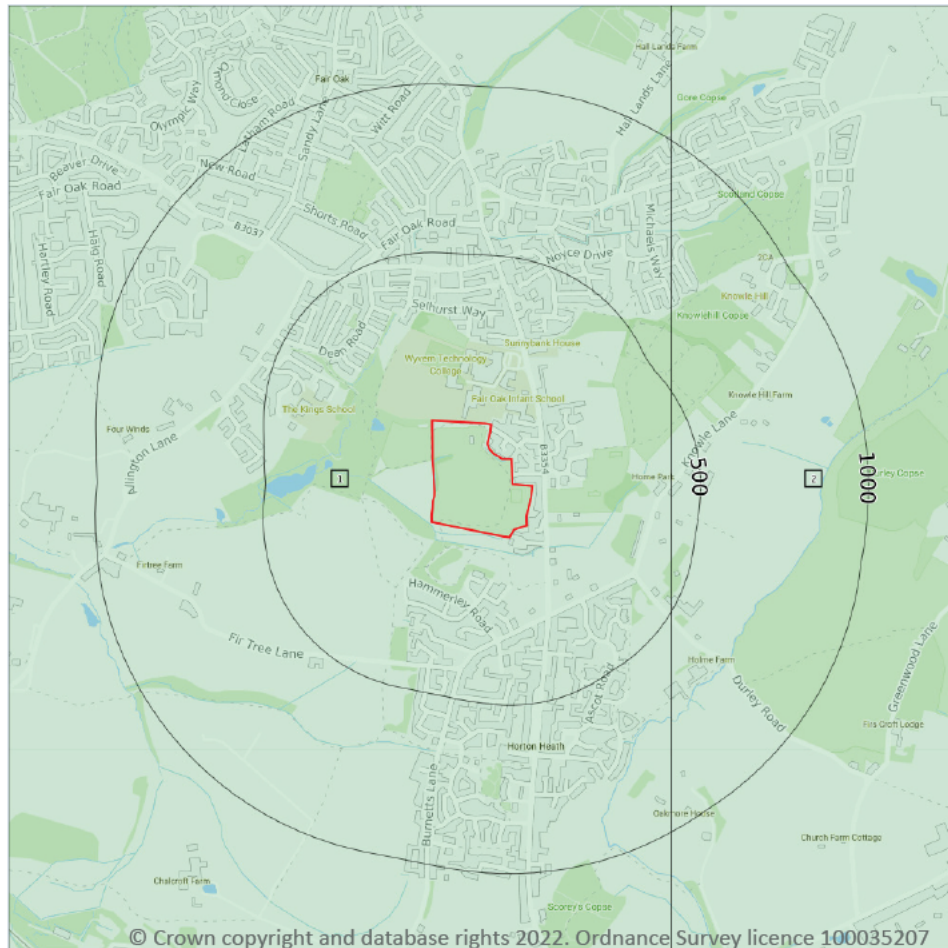
Records within 250m

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

2

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.

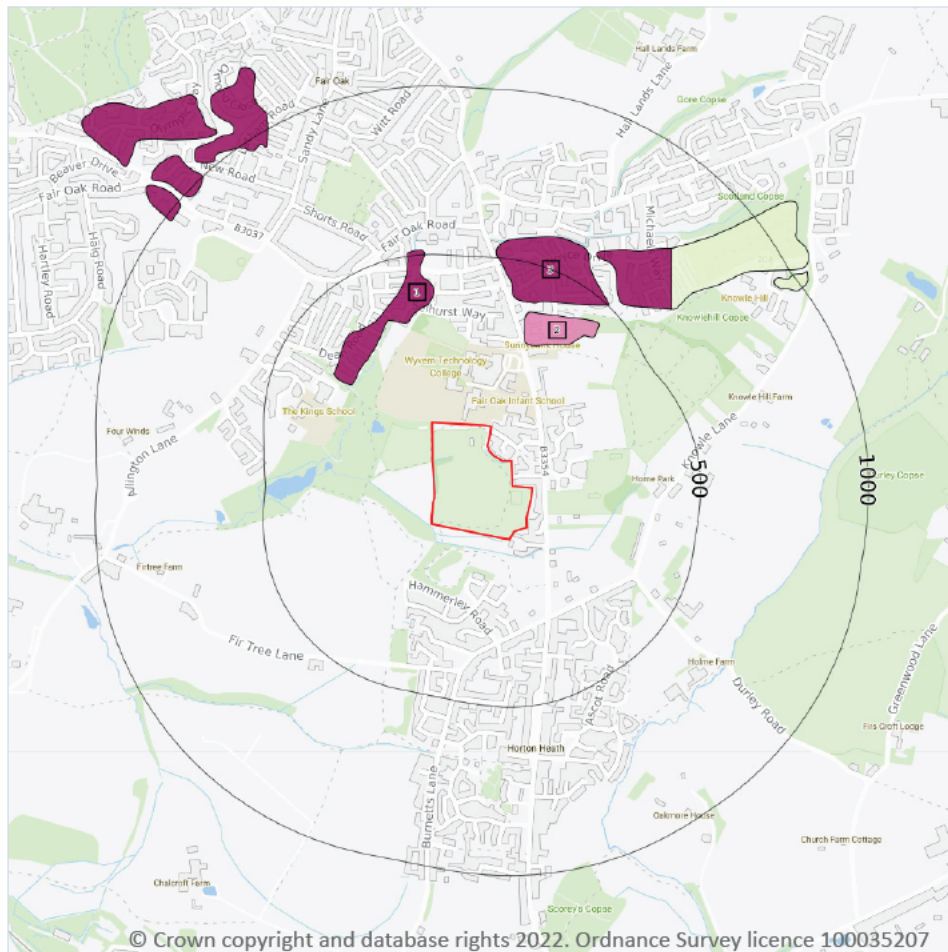
Features are displayed on the Geology 1:10,000 scale - Availability map on [page 73](#)

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	SU41NE
2	415m E	Full	Full	Full	No coverage	SU51NW

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

3

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.

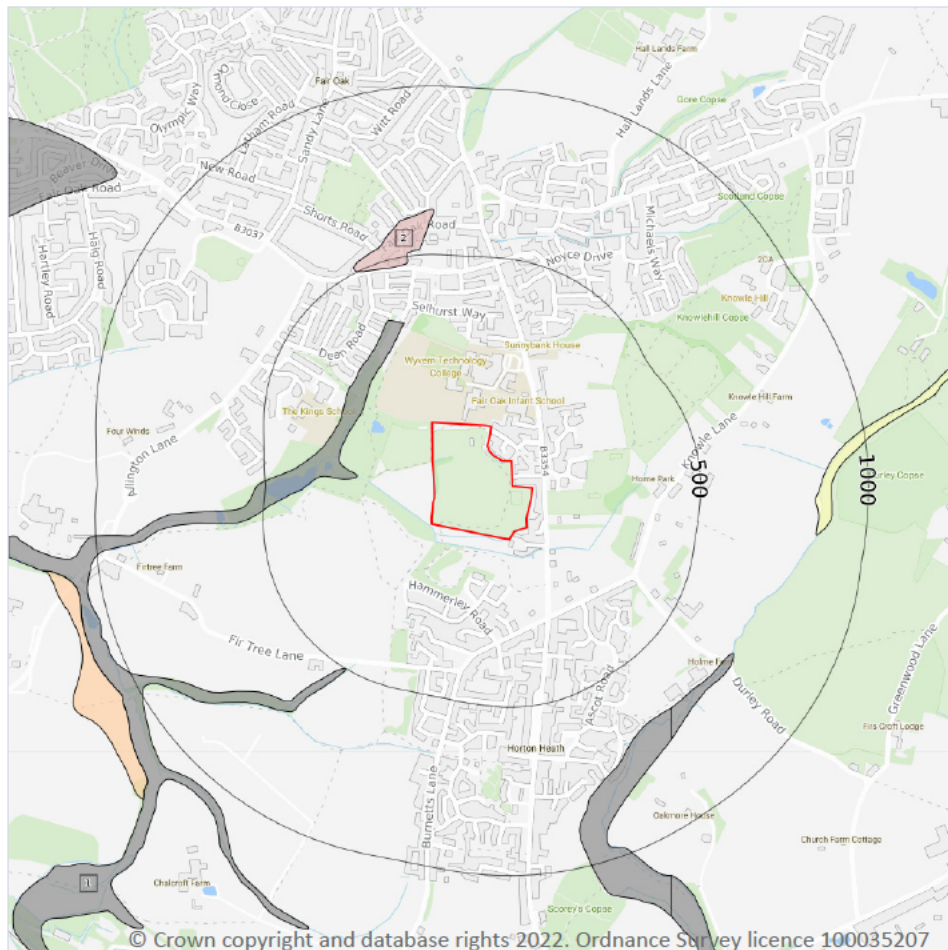
Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on [page 74](#)

ID	Location	LEX Code	Description	Rock description
1	261m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	268m N	WGR-VOID	Worked Ground (Undivided)	Void
3	384m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m

2

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 75

ID	Location	LEX Code	Description	Rock description
1	208m NW	ALV-Z	Alluvium - Silt (unlithified Deposits Coding Scheme)	Silt
2	475m N	HEAD-V	Head - Gravel	Gravel

This data is sourced from the British Geological Survey.



14.4 Landslip (10k)

Records within 500m

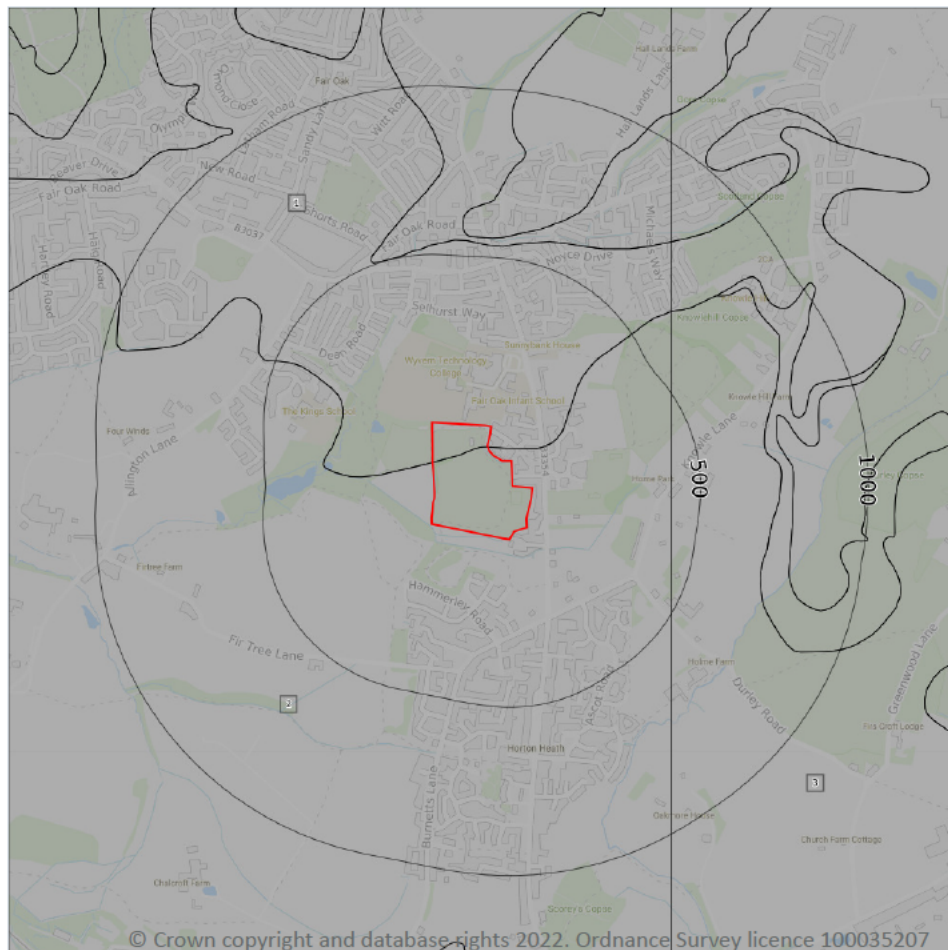
0

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

3

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 77

ID	Location	LEX Code	Description	Rock age
1	On site	WHI-SV	Whitecliff Sand Member - Gravelly Sand	Palaeogene Period
2	On site	WTT-SACL	Wittering Formation - Sandy Clay	Lutetian Age - Ypresian Age
3	415m E	WTT-CLSISA	Wittering Formation - Clay, Silt And Sand	Lutetian Age - Ypresian Age

This data is sourced from the British Geological Survey.



14.6 Bedrock faults and other linear features (10k)

Records within 500m

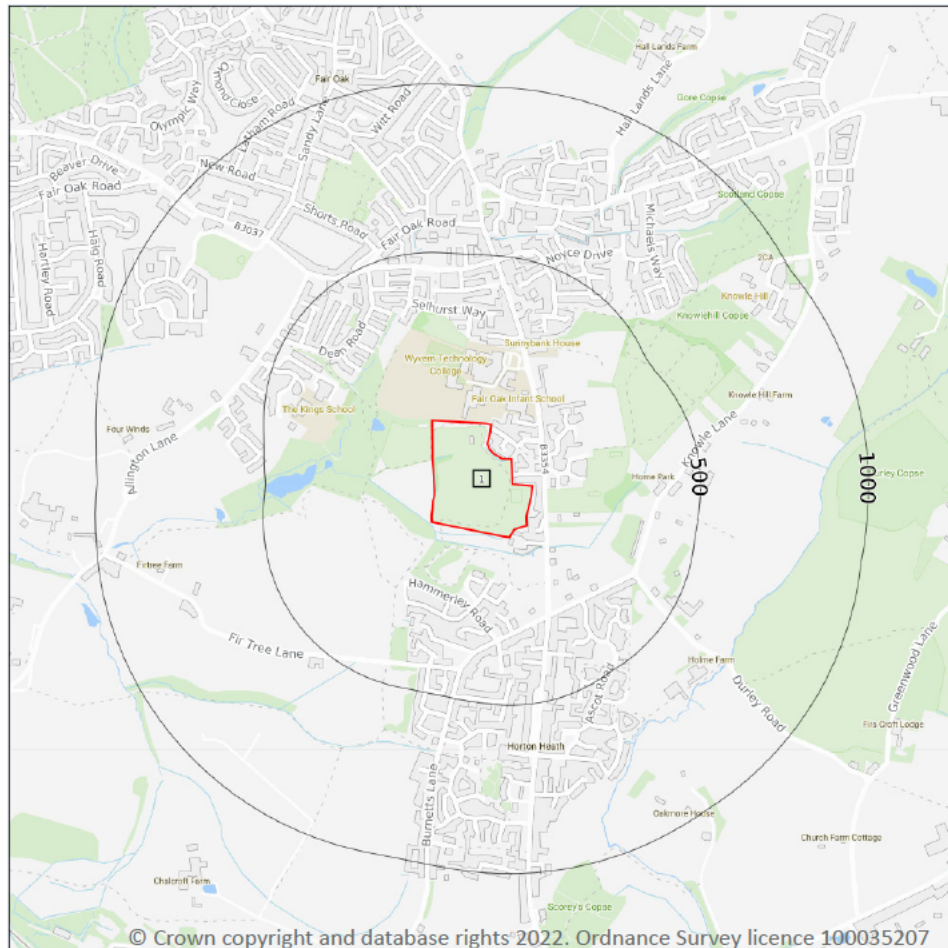
0

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.



15 Geology 1:50,000 scale - Availability



Site Outline

Search buffers in metres (m)

☐ Geological map tile

15.1 50k Availability

Records within 500m

1

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

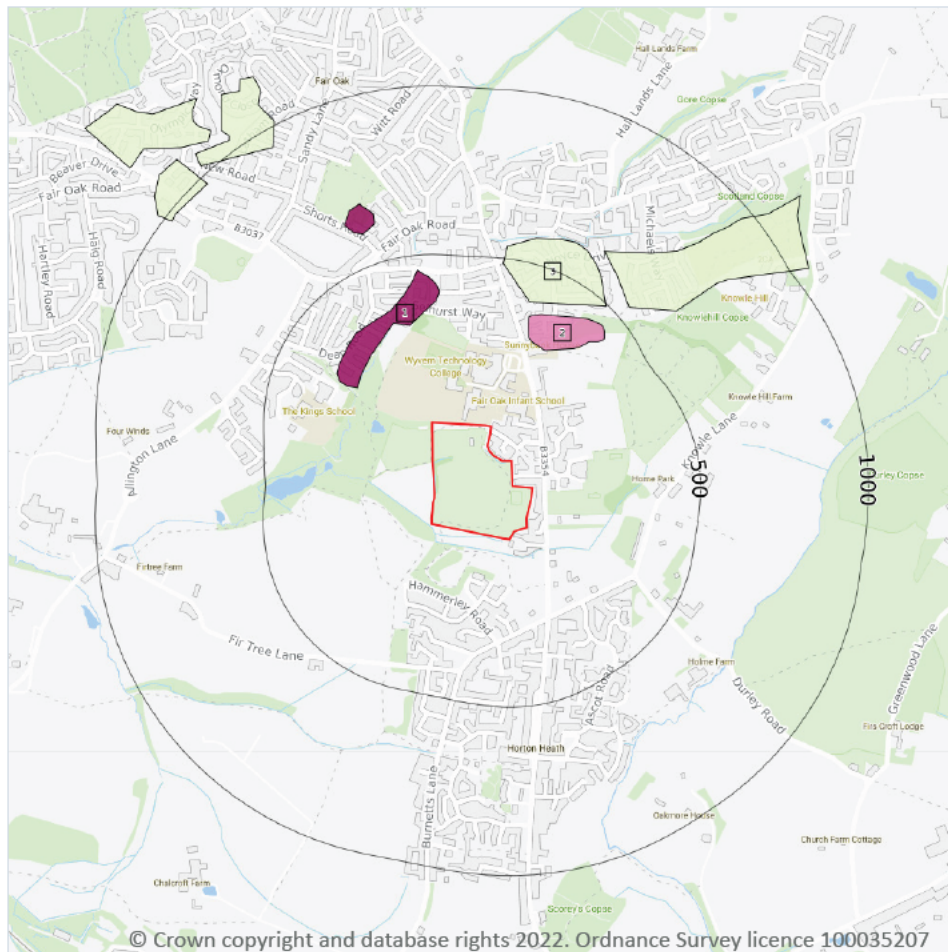
Features are displayed on the Geology 1:50,000 scale - Availability map on page 79

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW315_southampton_v4

This data is sourced from the British Geological Survey.



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



- Site Outline**
- Search buffers in metres (m)**
- Made ground
 - Worked ground
 - Infilled ground
 - Disturbed ground
 - Landscaped ground

15.2 Artificial and made ground (50k)

Records within 500m

3

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

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on page 80

ID	Location	LEX Code	Description	Rock description
1	244m NW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	276m NE	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
3	387m N	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.



15.3 Artificial ground permeability (50k)

Records within 50m

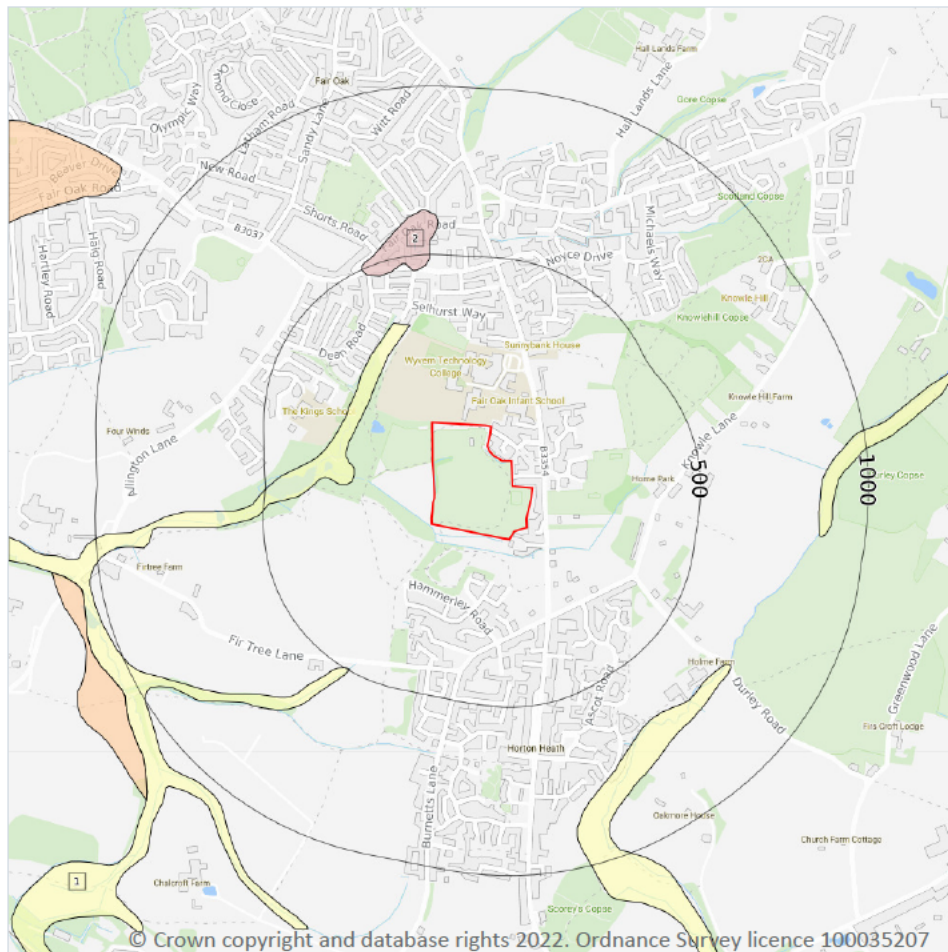
0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

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

15.4 Superficial geology (50k)

Records within 500m

2

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on page 82

ID	Location	LEX Code	Description	Rock description
1	197m NW	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
2	455m N	HEAD-XVSZC	HEAD	GRAVEL, SAND, SILT AND CLAY

This data is sourced from the British Geological Survey.



15.5 Superficial 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 superficial deposits (the zone between the land surface and the water table).

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

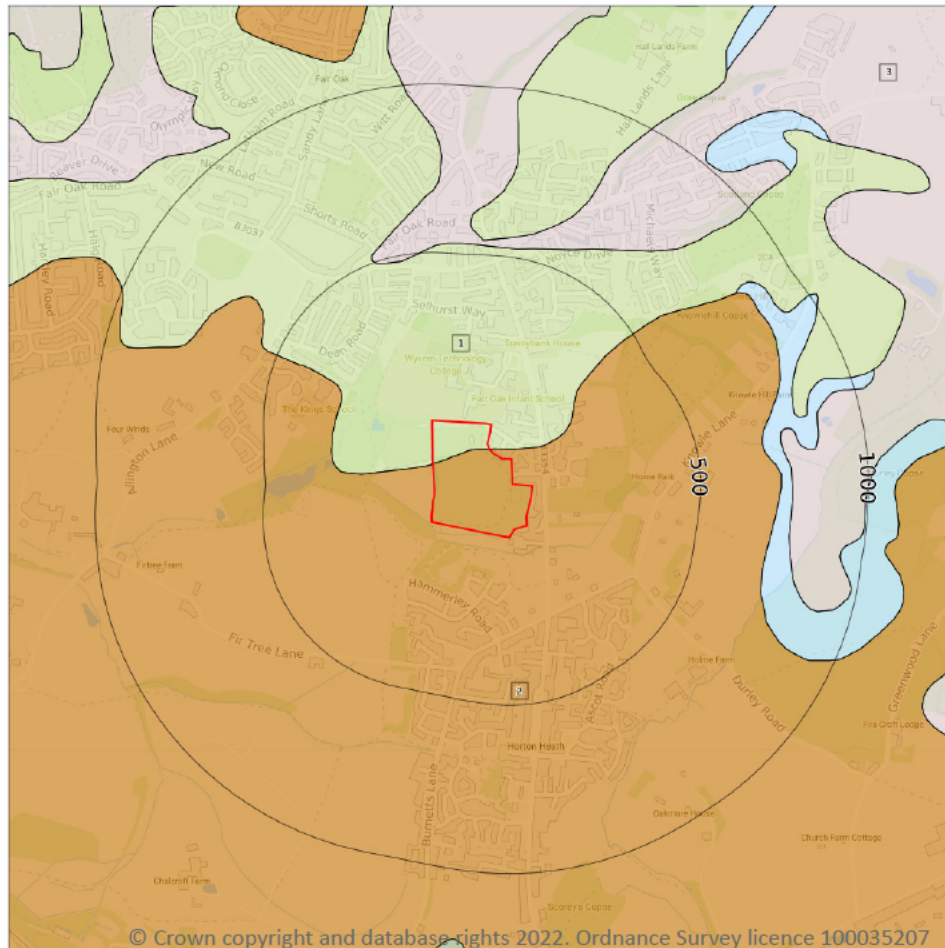
0

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

3

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 84

ID	Location	LEX Code	Description	Rock age
1	On site	WHI-S	WHITECLIFF SAND MEMBER - SAND	-
2	On site	WTT-XSZC	WITTERING FORMATION - SAND, SILT AND CLAY	YPRESIAN
3	482m N	LC-XCZS	LONDON CLAY FORMATION - CLAY, SILT AND SAND	YPRESIAN

This data is sourced from the British Geological Survey.



15.9 Bedrock permeability (50k)

Records within 50m

2

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	Intergranular	High	High
On site	Intergranular	High	Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m

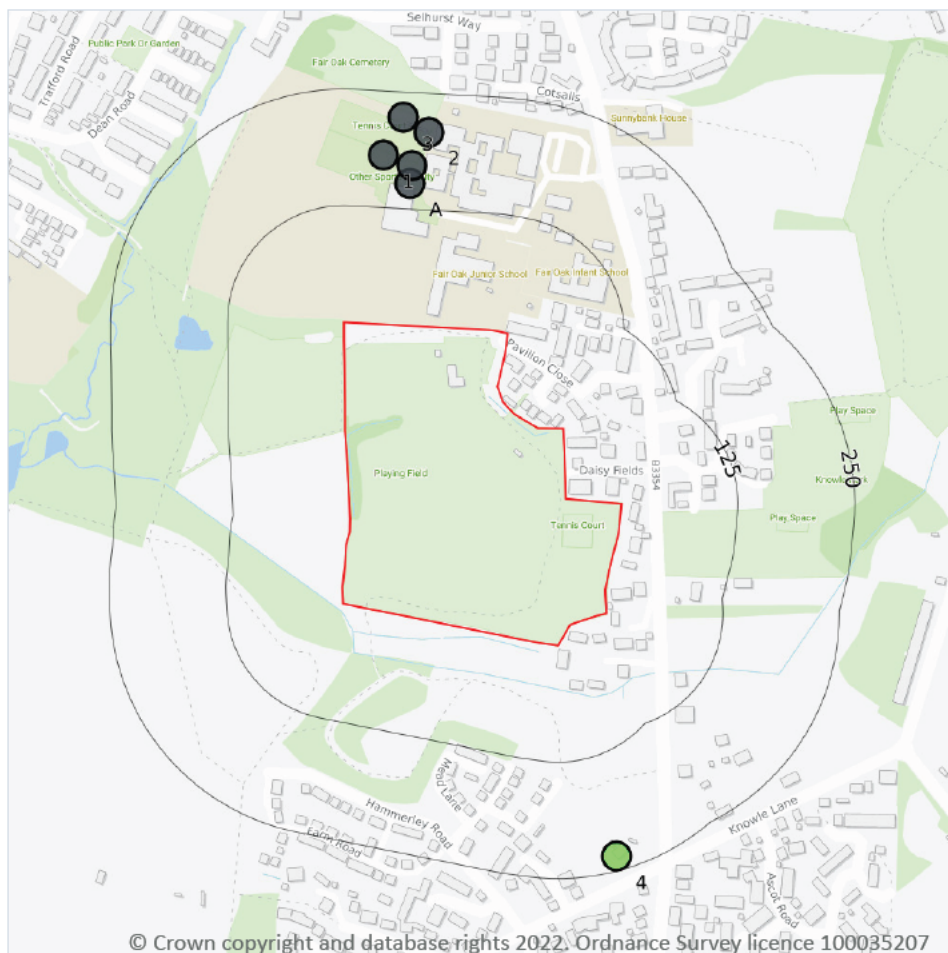
0

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



Site Outline
Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

16.1 BGS Boreholes

Records within 250m

6

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

Features are displayed on the Boreholes map on [page 86](#)

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	153m N	449359 118152	THE WYVERN SCHOOL TP1	-	Y	N/A
A	172m N	449361 118171	THE WYVERN SCHOOL TP2	-	Y	N/A
1	181m N	449330 118182	THE WYVERN SCHOOL TP3	-	Y	N/A

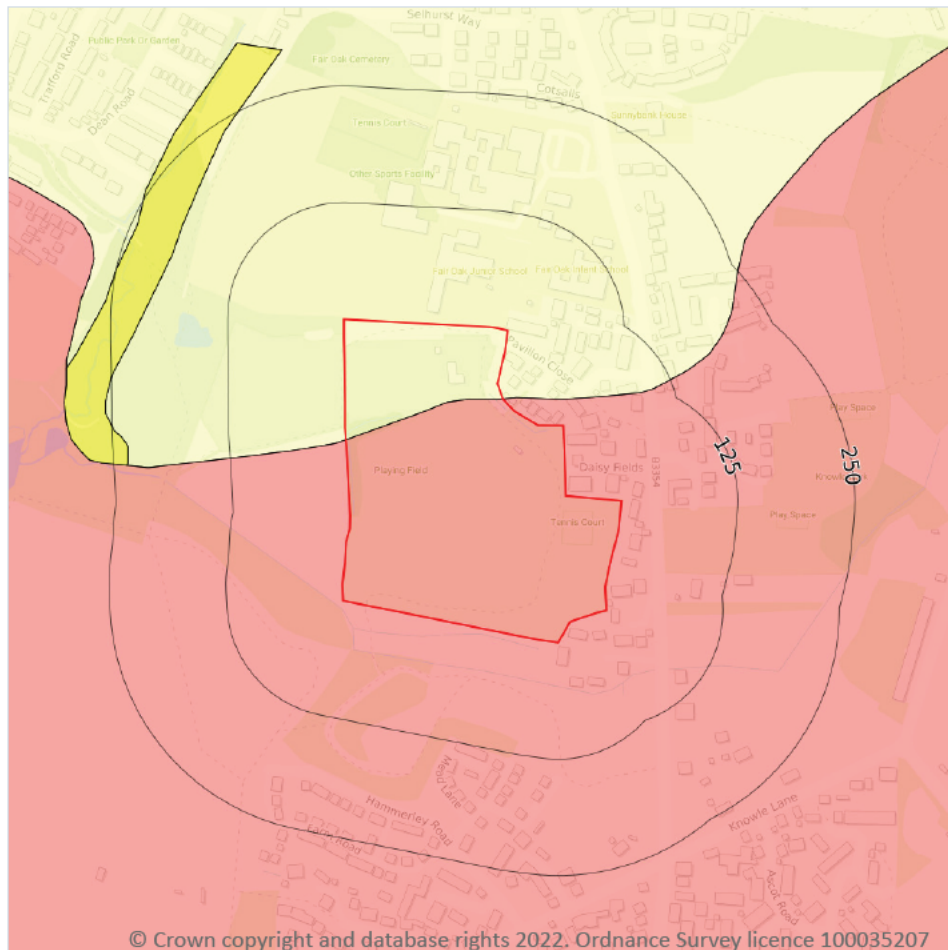


ID	Location	Grid reference	Name	Length	Confidential	Web link
2	209m N	449379 118207	THE WYVERN SCHOOL TP5	-	Y	N/A
3	223m N	449351 118223	THE WYVERN SCHOOL TP4	-	Y	N/A
4	235m SE	449580 117430	LECKLANDE FAIR OAK	23.77	N	409373

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



— Site Outline
Search buffers in metres (m)

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

17.1 Shrink swell clays

Records within 50m

2

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).

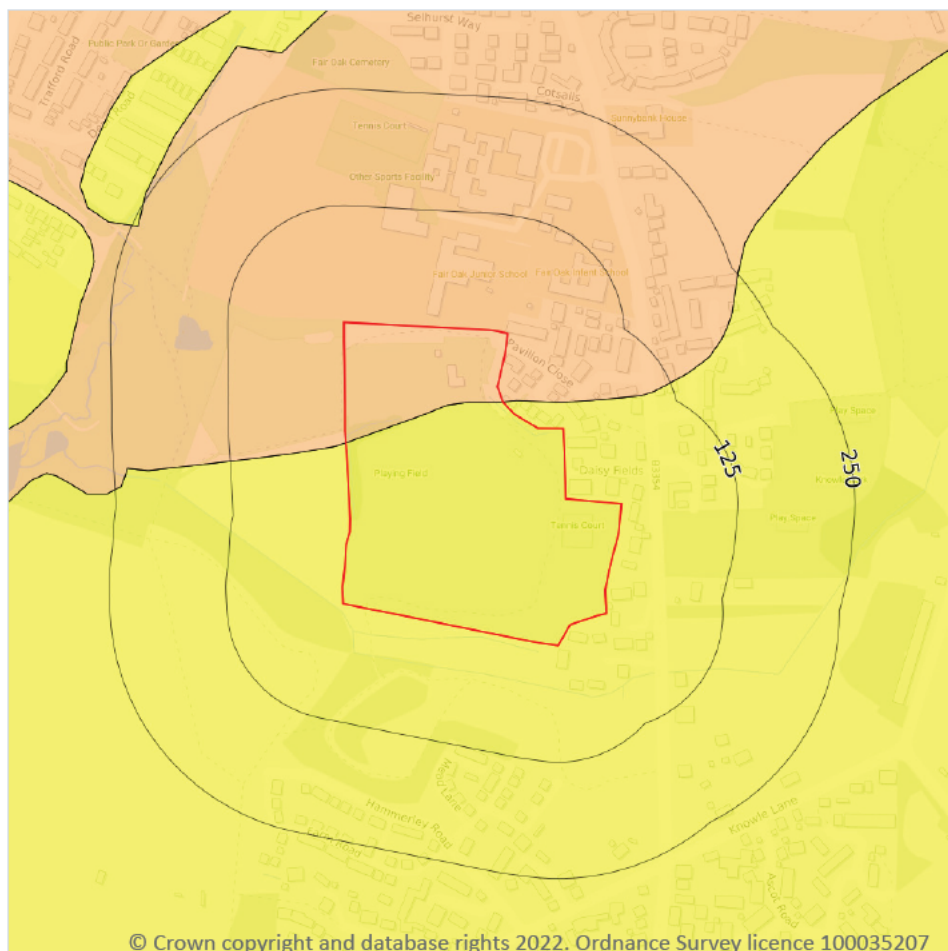
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 88](#)

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



— Site Outline
Search buffers in metres (m)

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

17.2 Running sands

Records within 50m

2

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 89](#)

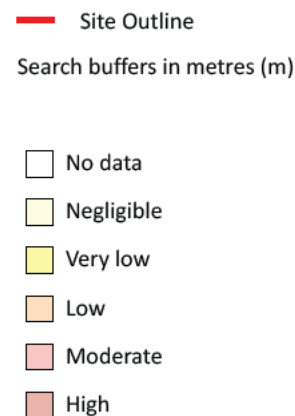
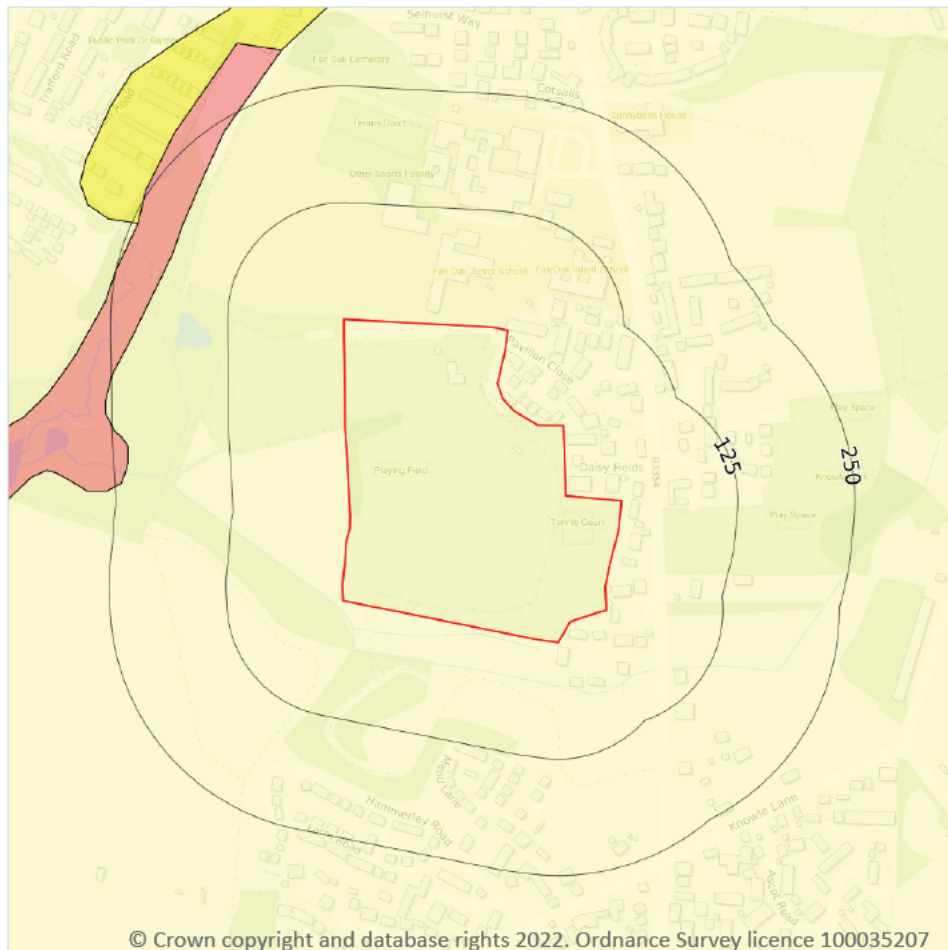
Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

Location	Hazard rating	Details
On site	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



17.3 Compressible deposits

Records within 50m

1

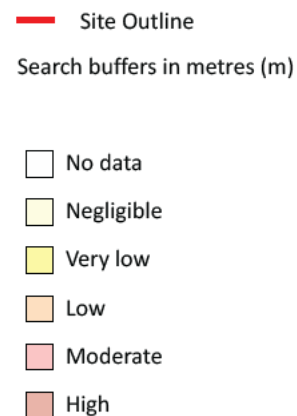
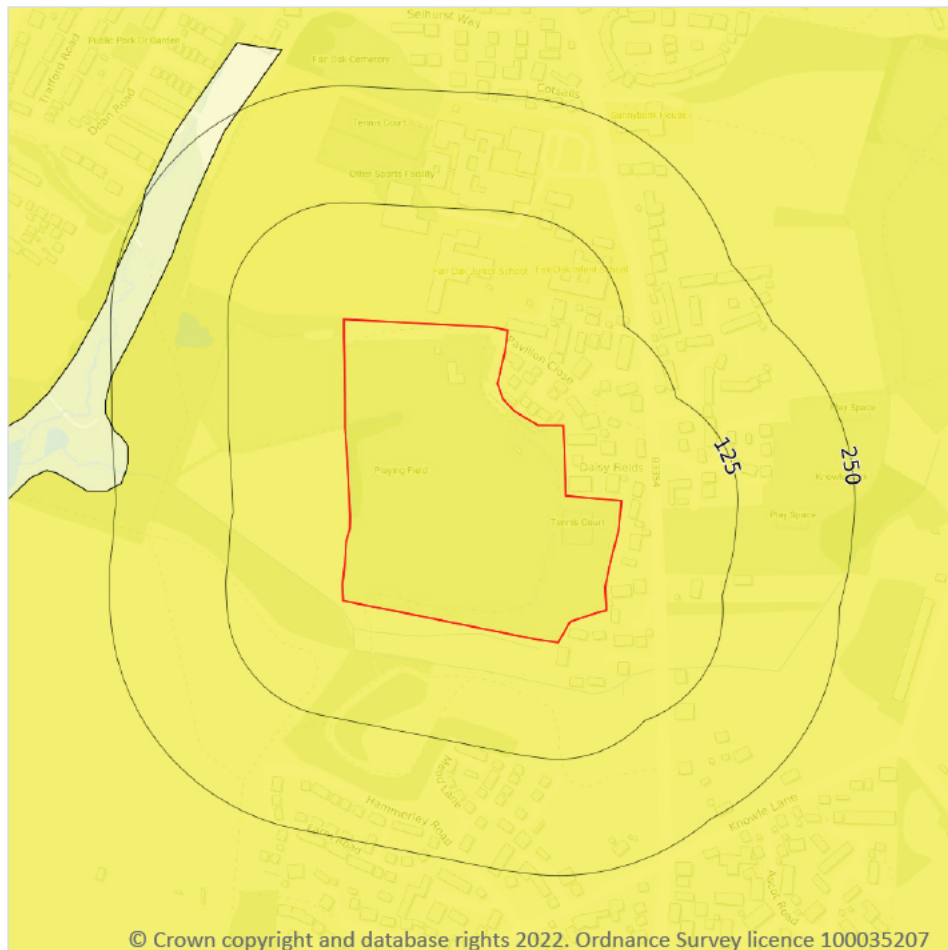
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 91**

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



17.4 Collapsible deposits

Records within 50m

1

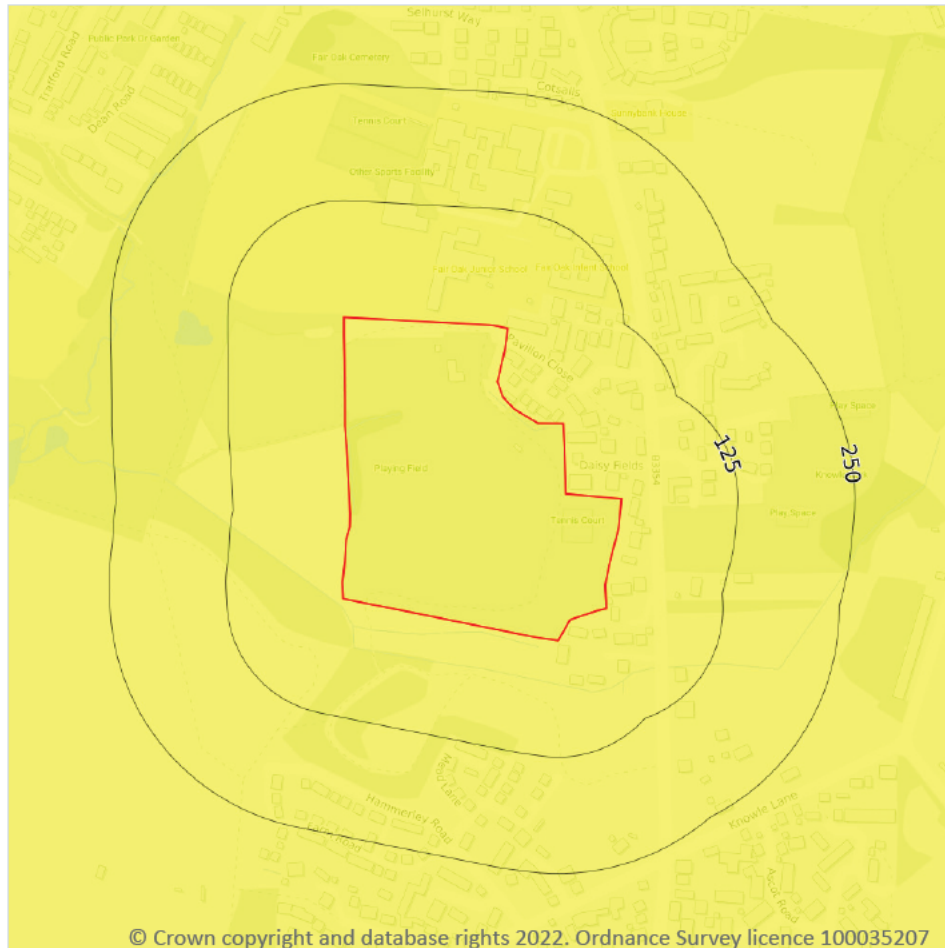
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on page 92

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.

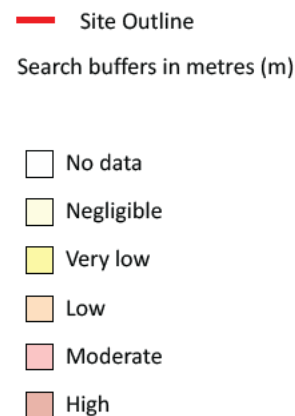
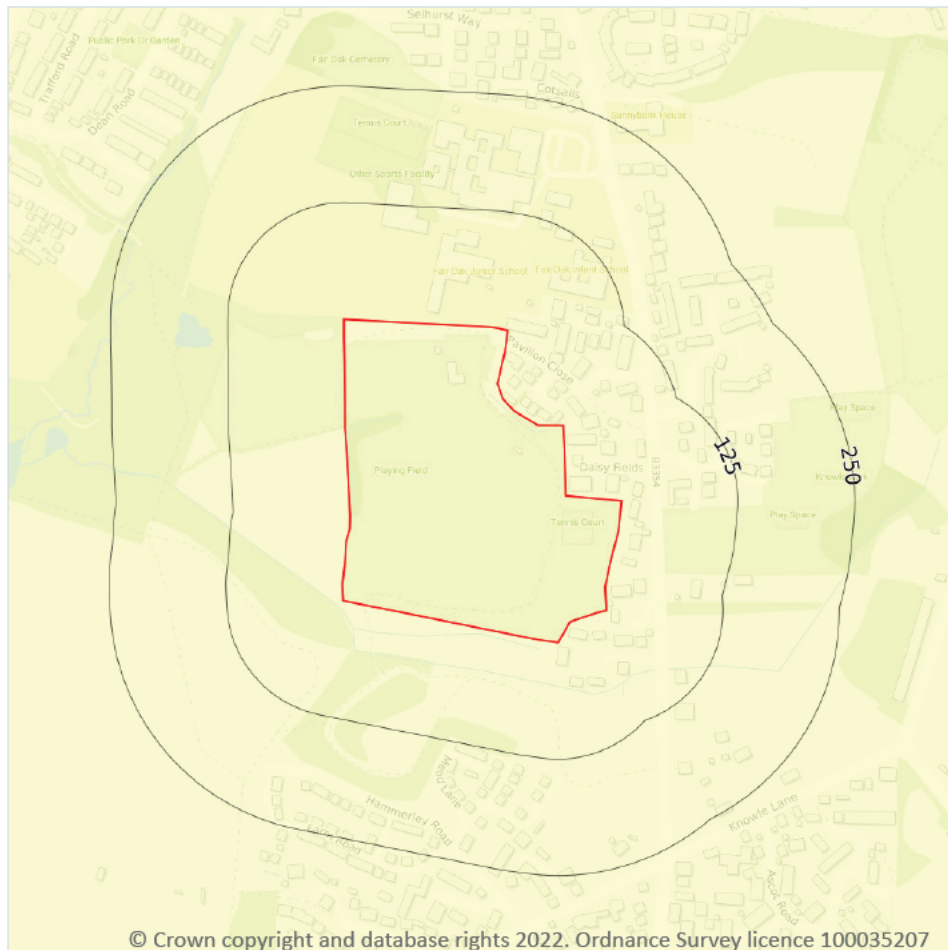
Features are displayed on the Natural ground subsidence - Landslides map on [page 93](#)

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



17.6 Ground dissolution of soluble rocks

Records within 50m

1

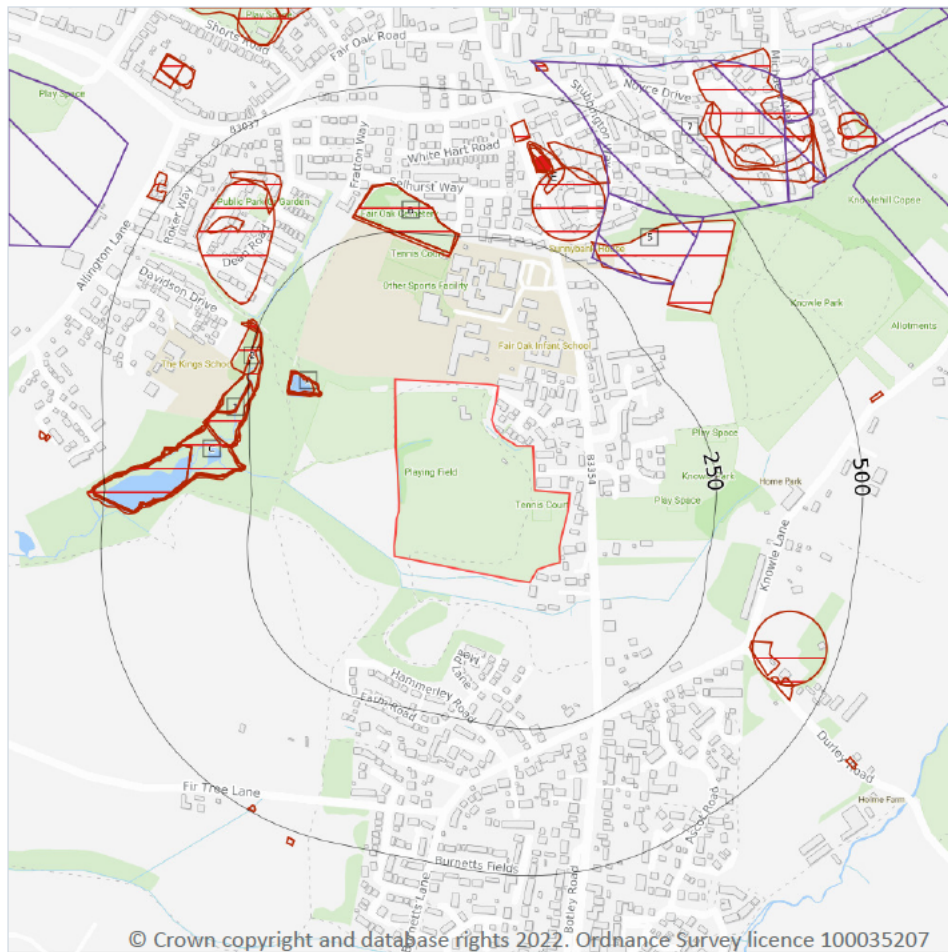
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 94**

Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

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 Stantec UK Ltd.

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 95](#)

ID	Location	Details	Description
E	385m N	Name: Fair Oak Sand Pit Address: Fair Oak, EASTLEIGH, Hampshire Commodity: Sand Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site 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

17

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 95](#)

ID	Location	Land Use	Year of mapping	Mapping scale
A	126m NW	Pond	1908	1:10560
A	127m NW	Pond	1938	1:10560
A	127m NW	Pond	1895	1:10560
A	127m NW	Pond	1868	1:10560
A	128m NW	Pond	1968	1:10560
A	128m NW	Pond	1957	1:10560
A	128m NW	Pond	1981	1:10000
A	138m NW	Pond	1989	1:10000
B	213m N	Cemetery	1957	1:10560
B	219m N	Cemetery	1989	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
B	219m N	Cemetery	1968	1:10560
B	219m N	Cemetery	1981	1:10000
C	227m NW	Ponds	1868	1:10560
1	230m NW	Pond	1895	1:10560
2	235m NW	Ponds	1938	1:10560
C	239m NW	Ponds	1908	1:10560
C	242m NW	Ponds	1957	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

2

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.

Features are displayed on the Mining, ground workings and natural cavities map on **page 95**

ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
5	272m NE	Knowles Hill Copse	Sand	Surface mineral working	Valid	Not available
7	380m NE	Knowles Hill Copse	Sand	Surface mineral working	Valid	Not available

This data is sourced from the British Geological Survey.



18.6 Non-coal mining

Records within 1000m

0

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).

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m

0

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.

This data is sourced from Stantec UK Ltd.

18.8 JPB mining areas

Records on site

0

Areas which could be affected by former coal and other 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

Records on site

0

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 Groundsure.

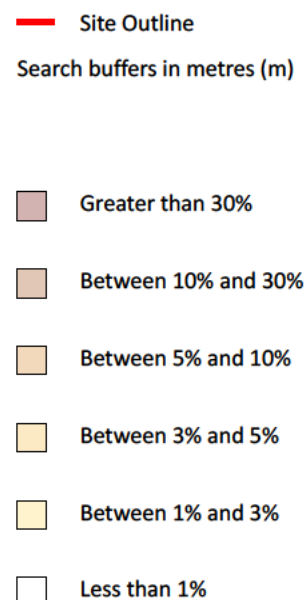
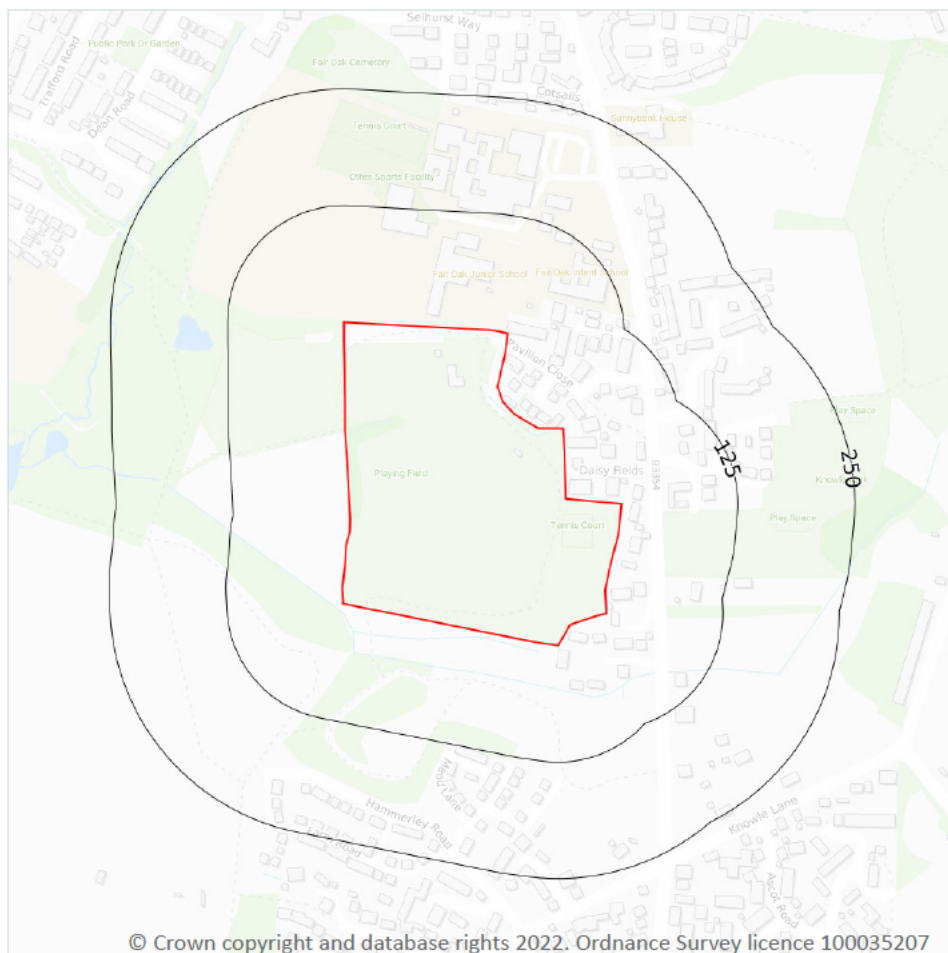
18.13 Clay mining

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 100](#)

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

6

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 km². 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 km²; 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	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
27m NE	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
38m NE	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 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 km²).

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 km².

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

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Site Details:

FAIR OAK SPORTS PAVILION,
PAVILION CLOSE, FAIR OAK,
SO50 7PS

Client Ref: LPO6844
Report Ref: GS-9237375
Grid Ref: 449436, 117829

Map Name: County Series

Map date: 1868

Scale: 1:10,560

Printed at: 1:10,560



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

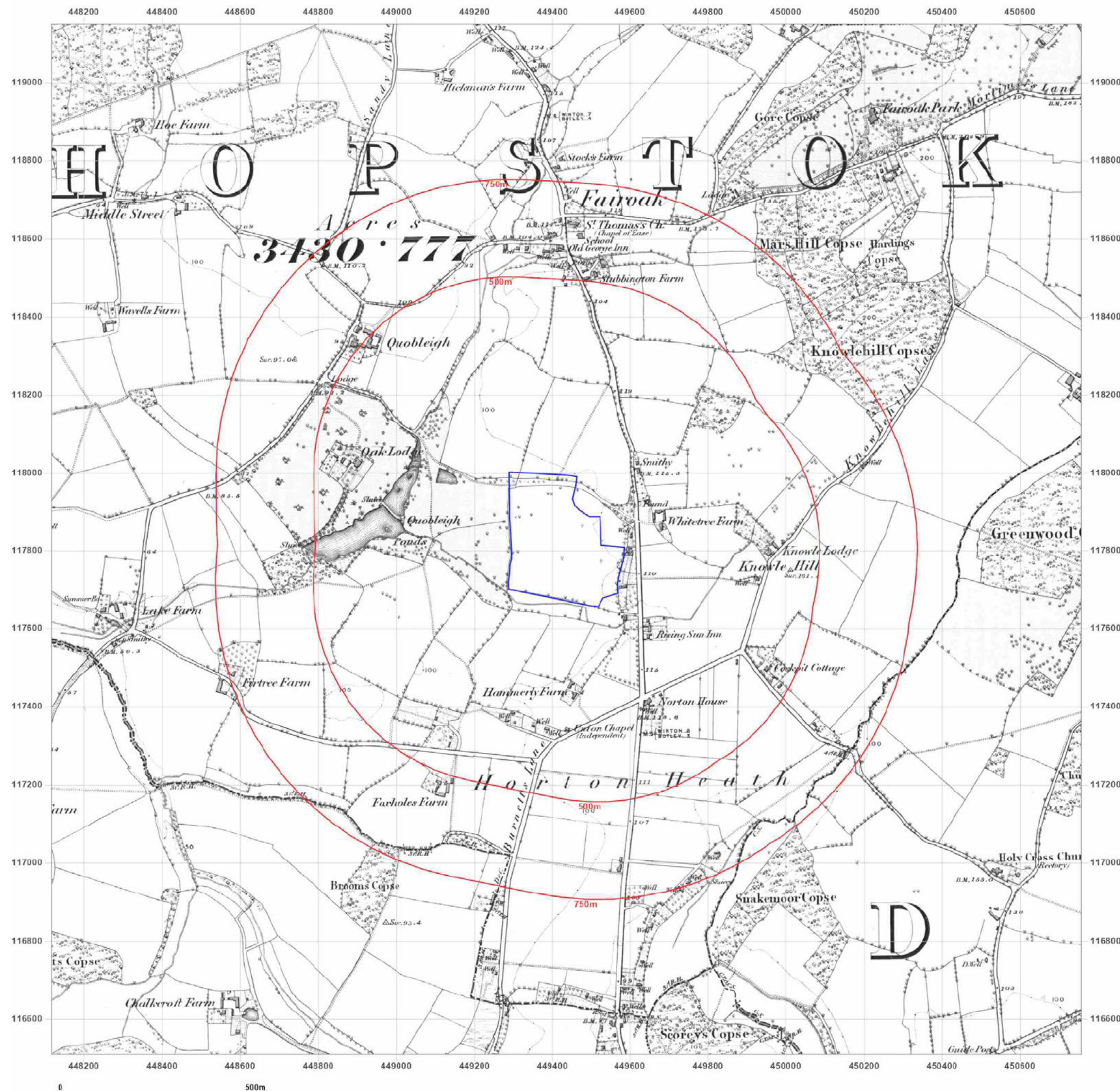


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Production date: 02 December 2022

Map legend available at:
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Site Details:

FAIR OAK SPORTS PAVILION,
PAVILION CLOSE, FAIR OAK,
SO50 7PS

Client Ref: LPO6844
Report Ref: GS-9237375
Grid Ref: 449436, 117829

Map Name: County Series

Map date: 1888

Scale: 1:10,560

Printed at: 1:10,560



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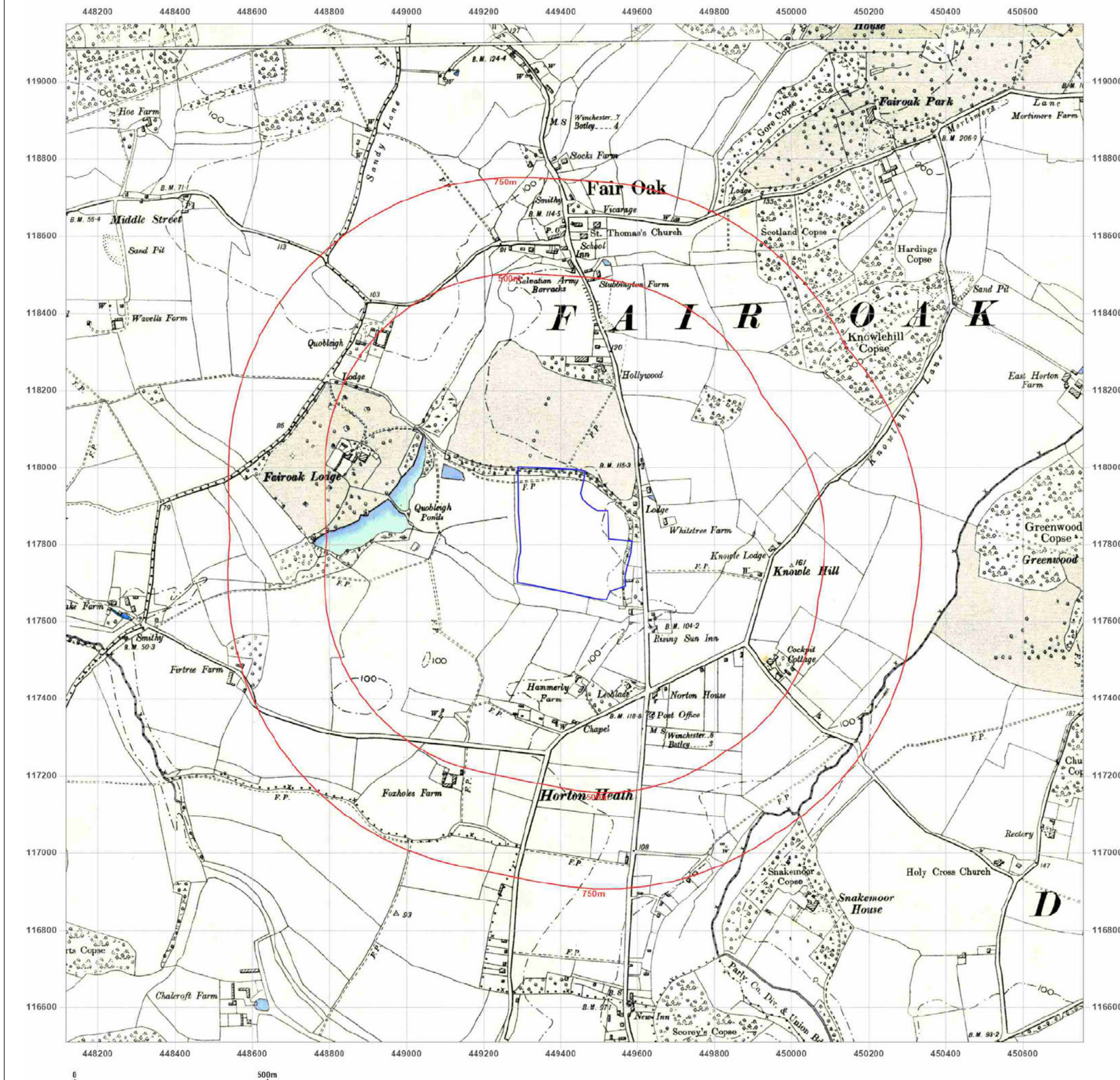


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Site Details:

FAIR OAK SPORTS PAVILION,
PAVILION CLOSE, FAIR OAK,
SO50 7PS

Client Ref: LPO6844
Report Ref: GS-9237375
Grid Ref: 449436, 117829

Map Name: County Series

Map date: 1895

Scale: 1:10,560

Printed at: 1:10,560



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Revised 1895
Edition N/A
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Revised 1895
Edition N/A
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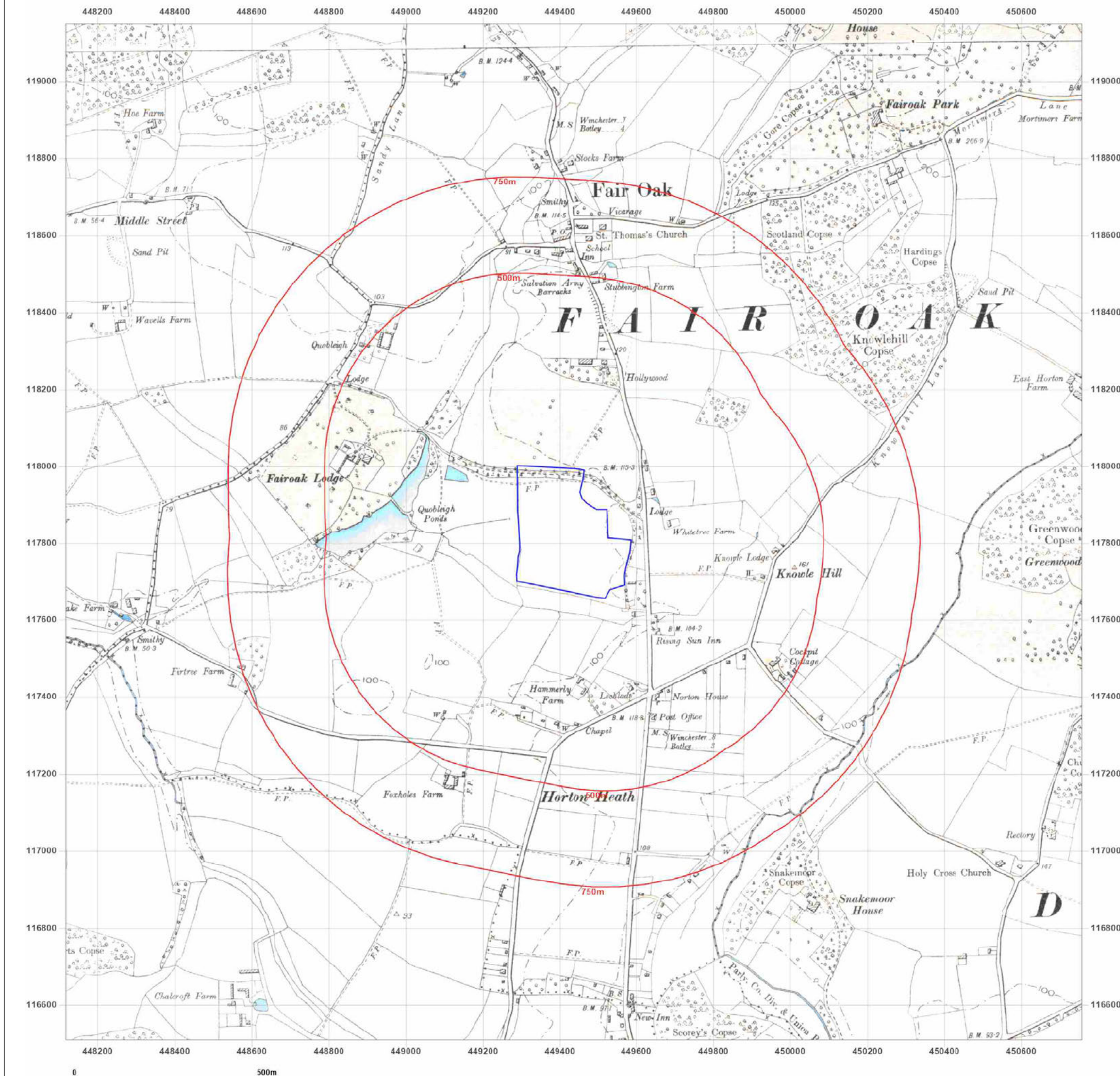


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Site Details:

FAIR OAK SPORTS PAVILION,
PAVILION CLOSE, FAIR OAK,
SO50 7PS

Client Ref: LPO6844
Report Ref: GS-9237375
Grid Ref: 449436, 117829

Map Name: County Series

Map date: 1938-1939

Scale: 1:10,560

Printed at: 1:10,560



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

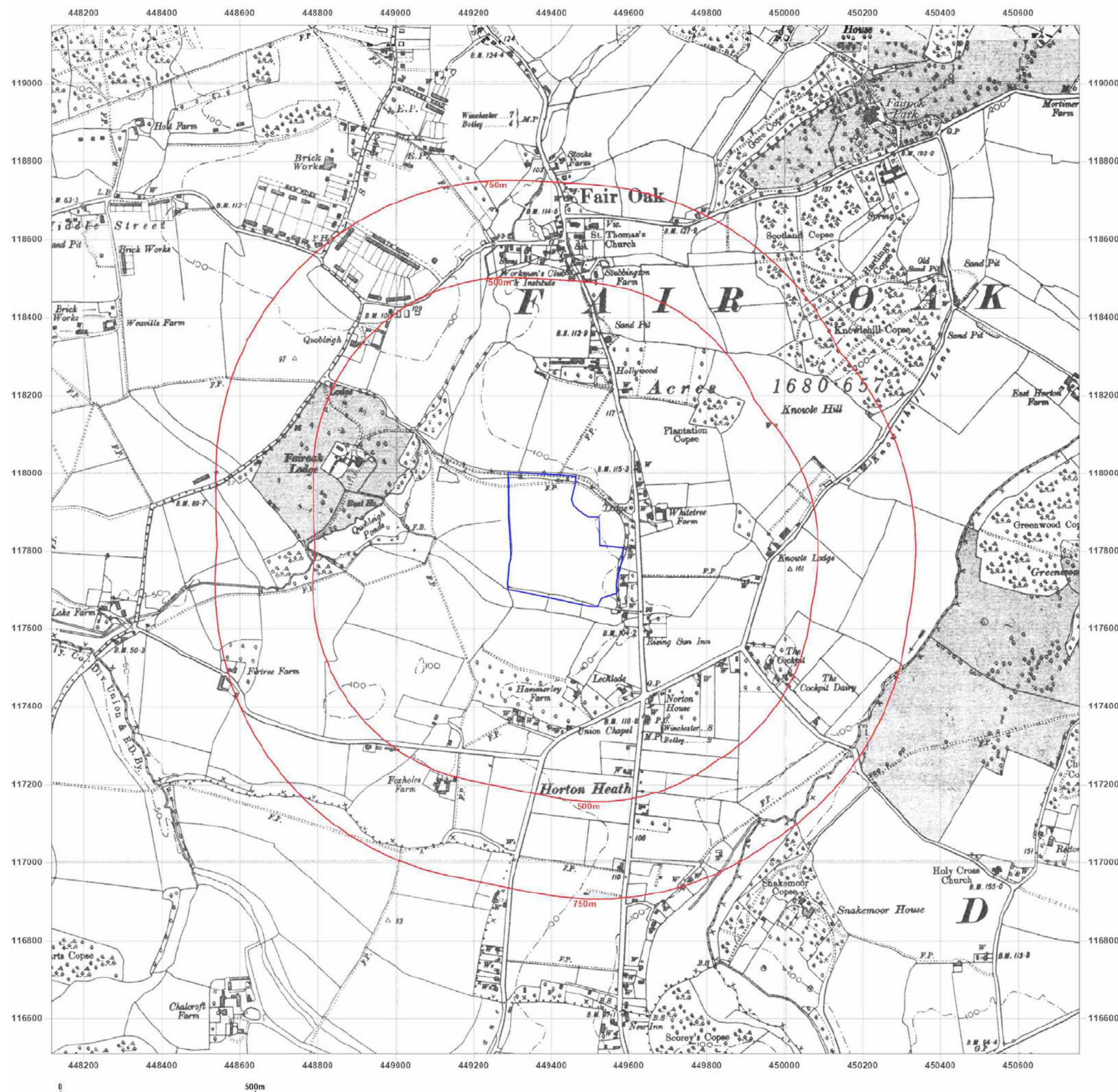


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Map legend available at:
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Site Details:

FAIR OAK SPORTS PAVILION,
PAVILION CLOSE, FAIR OAK,
SO50 7PS

Client Ref: LPO6844
Report Ref: GS-9237375
Grid Ref: 449436, 117829

Map Name: Provisional

Map date: 1957

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1868
Revised 1957
Edition N/A
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Surveyed 1957
Revised 1957
Edition N/A
Copyright N/A
Levelled N/A

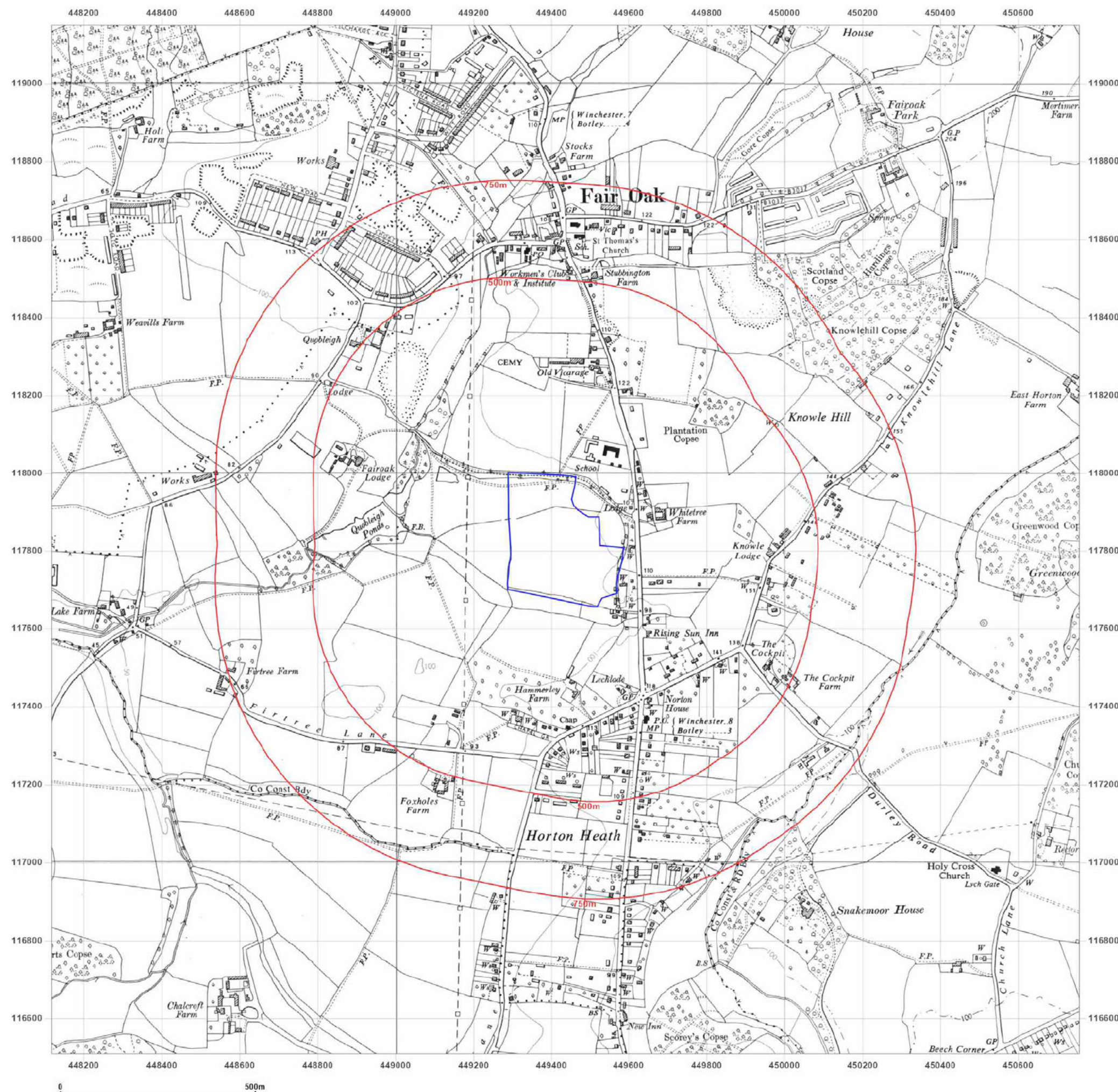


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Site Details:

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PAVILION CLOSE, FAIR OAK,
SO50 7PS

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Report Ref: GS-9237375
Grid Ref: 449436, 117829

Map Name: Provisional

Map date: 1968

Scale: 1:10,560

Printed at: 1:10,560



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Edition N/A
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Surveyed 1968
Revised 1968
Edition N/A
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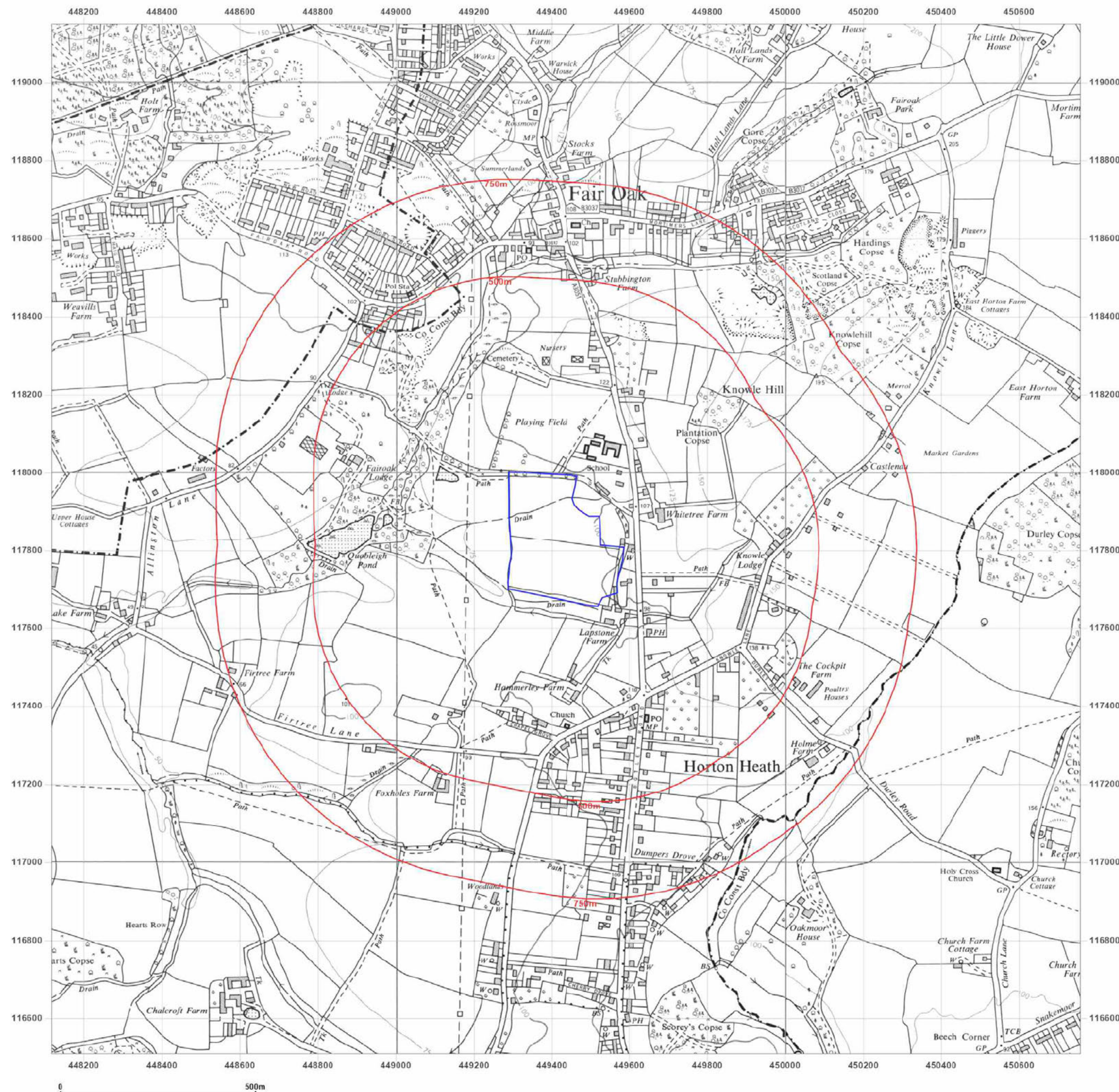


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SO50 7PS

Client Ref: LPO6844
Report Ref: GS-9237375
Grid Ref: 449436, 117829

Map Name: National Grid

Map date: 1981-1985

Scale: 1:10,000

Printed at: 1:10,000



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Surveyed 1963
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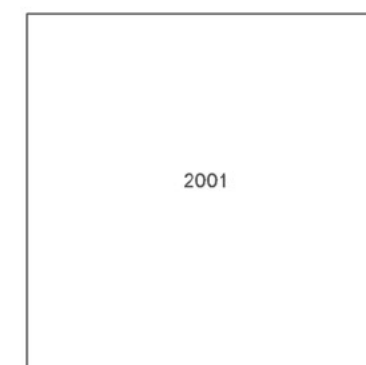
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Grid Ref: 449436, 117829

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000

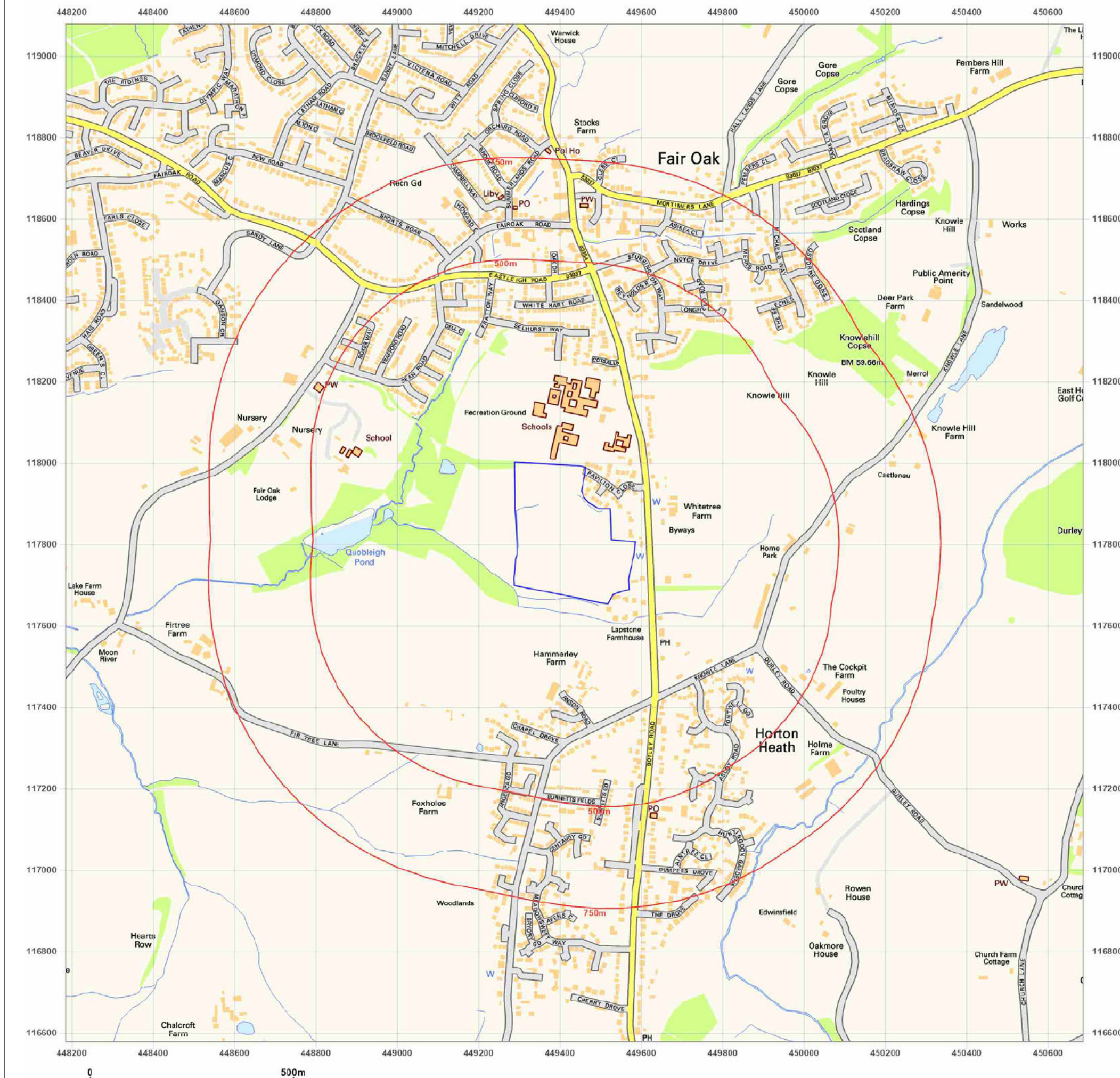


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SO50 7PS

Client Ref: LPO6844
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Grid Ref: 449436, 117829

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



2010

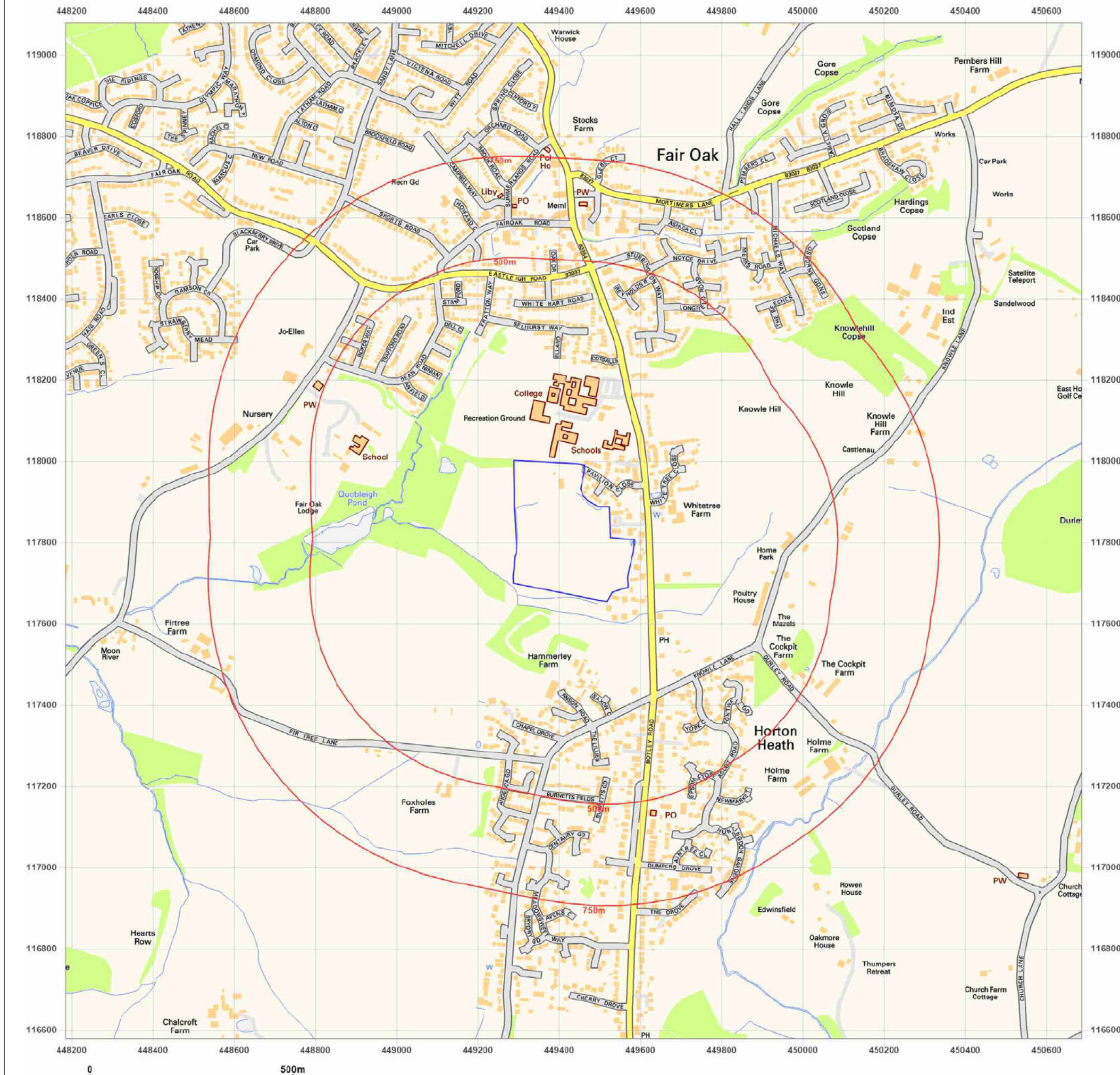


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SO50 7PS

Client Ref: LPO6844
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Grid Ref: 449436, 117829

Map Name: National Grid

Map date: 2022

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Printed at: 1:10,000



2022

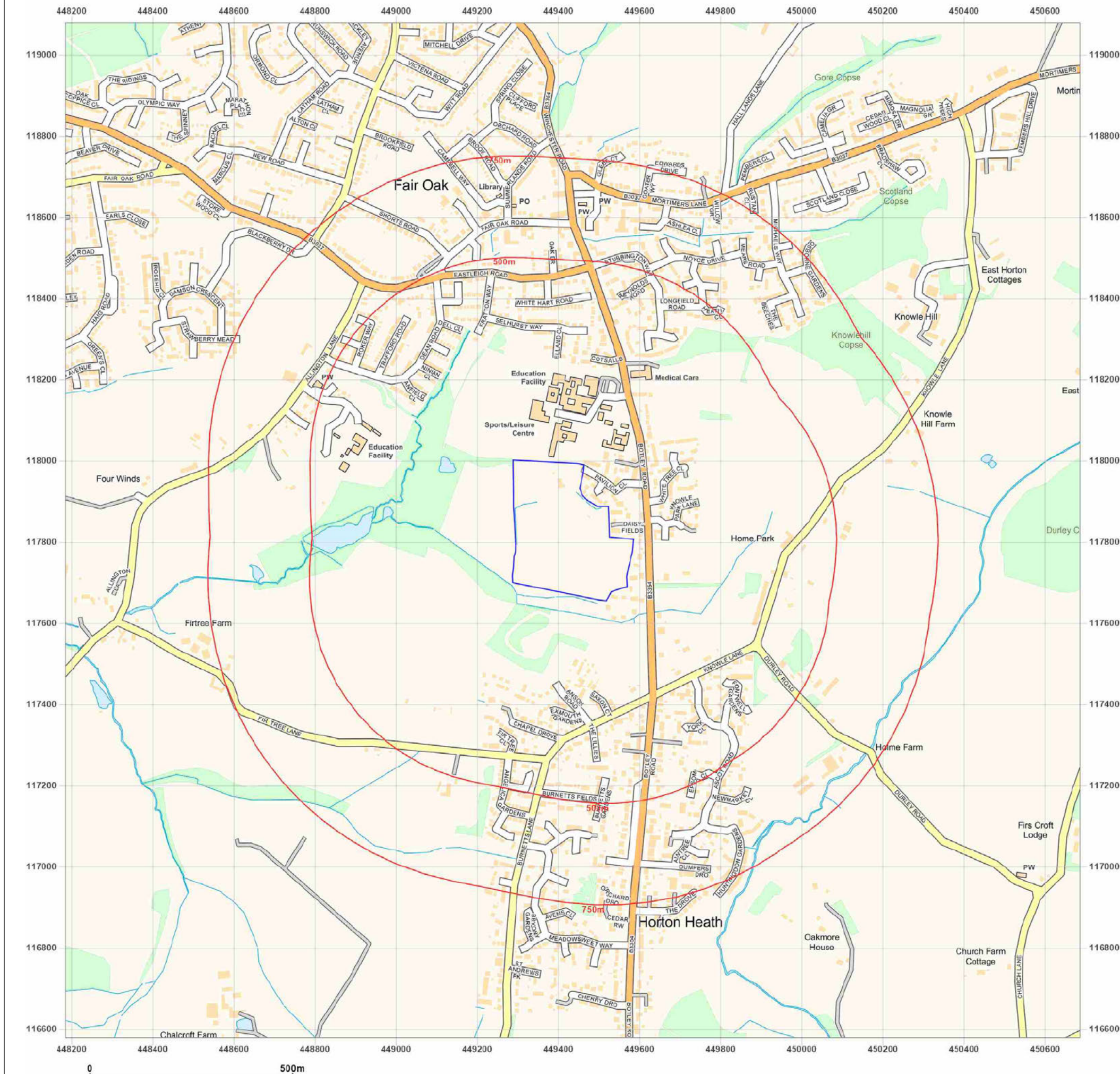


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SO50 7PS

Client Ref: LPO6844
Report Ref: GS-9237375_1250_1_2
Grid Ref: 449435, 118079

Map Name: National Grid

Map date: 1975

Scale: 1:1,250

Printed at: 1:2,000



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PAVILION CLOSE, FAIR OAK,
SO50 7PS

Client Ref: LPO6844
Report Ref: GS-9237375_1250_1_2
Grid Ref: 449435, 118079

Map Name: National Grid

Map date: 1981-1985

Scale: 1:1,250

Printed at: 1:2,000



Surveyed N/A
Revised N/A
Edition N/A
Copyright 1981
Levelled 1959

Surveyed 1959
Revised 1985
Edition N/A
Copyright 1985
Levelled 1959

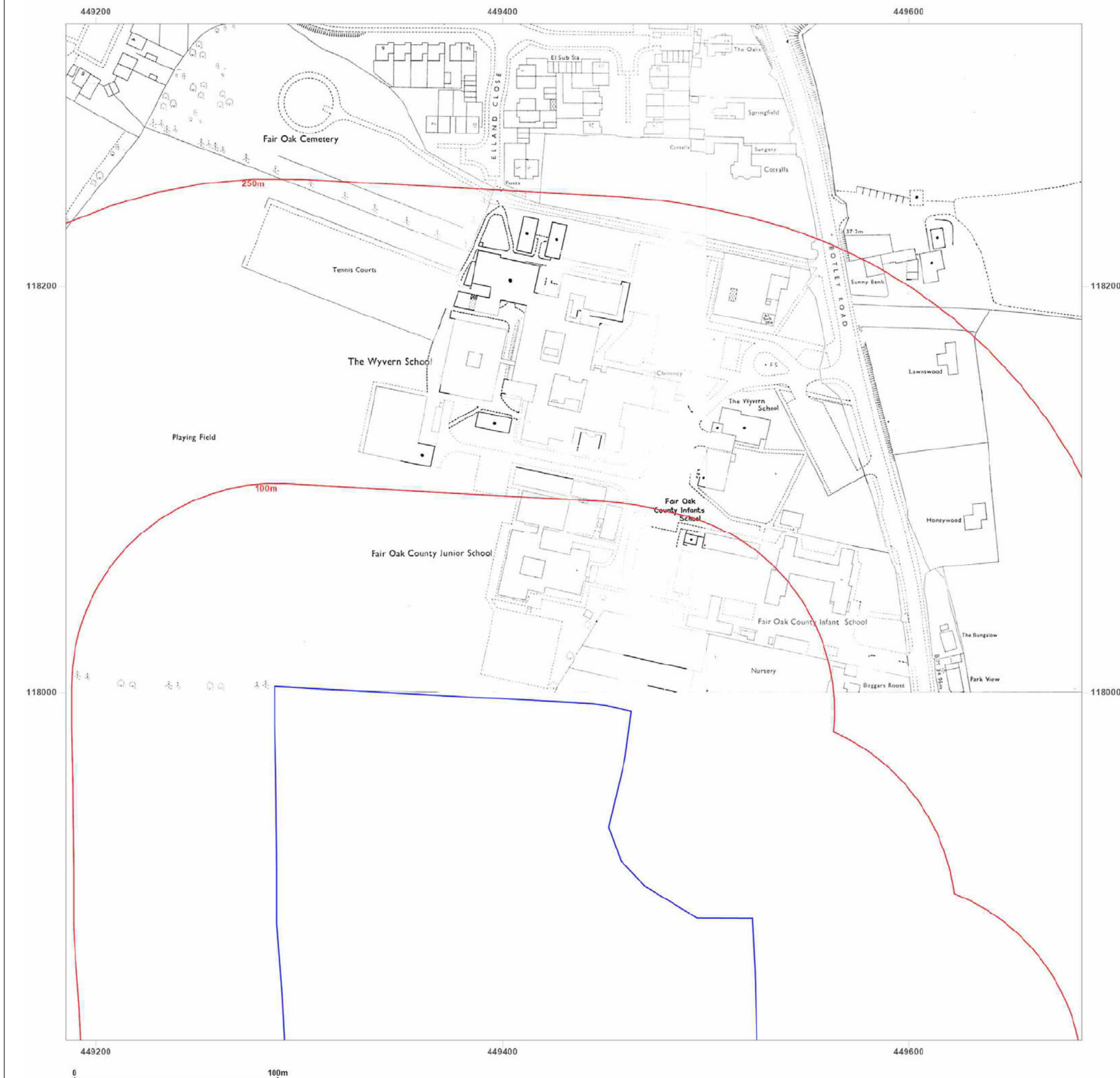


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SO50 7PS

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Report Ref: GS-9237375_1250_1_2
Grid Ref: 449435, 118079

Map Name: National Grid

Map date: 1988

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1959
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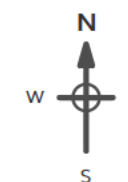
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Map Name: National Grid

Map date: 1989

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1974
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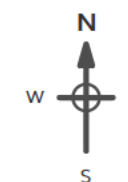
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Map Name: National Grid

Map date: 1987-1992

Scale: 1:1,250

Printed at: 1:2,000



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Edition N/A
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Surveyed 1959
Revised 1987
Edition N/A
Copyright 1987
Levelled 1959

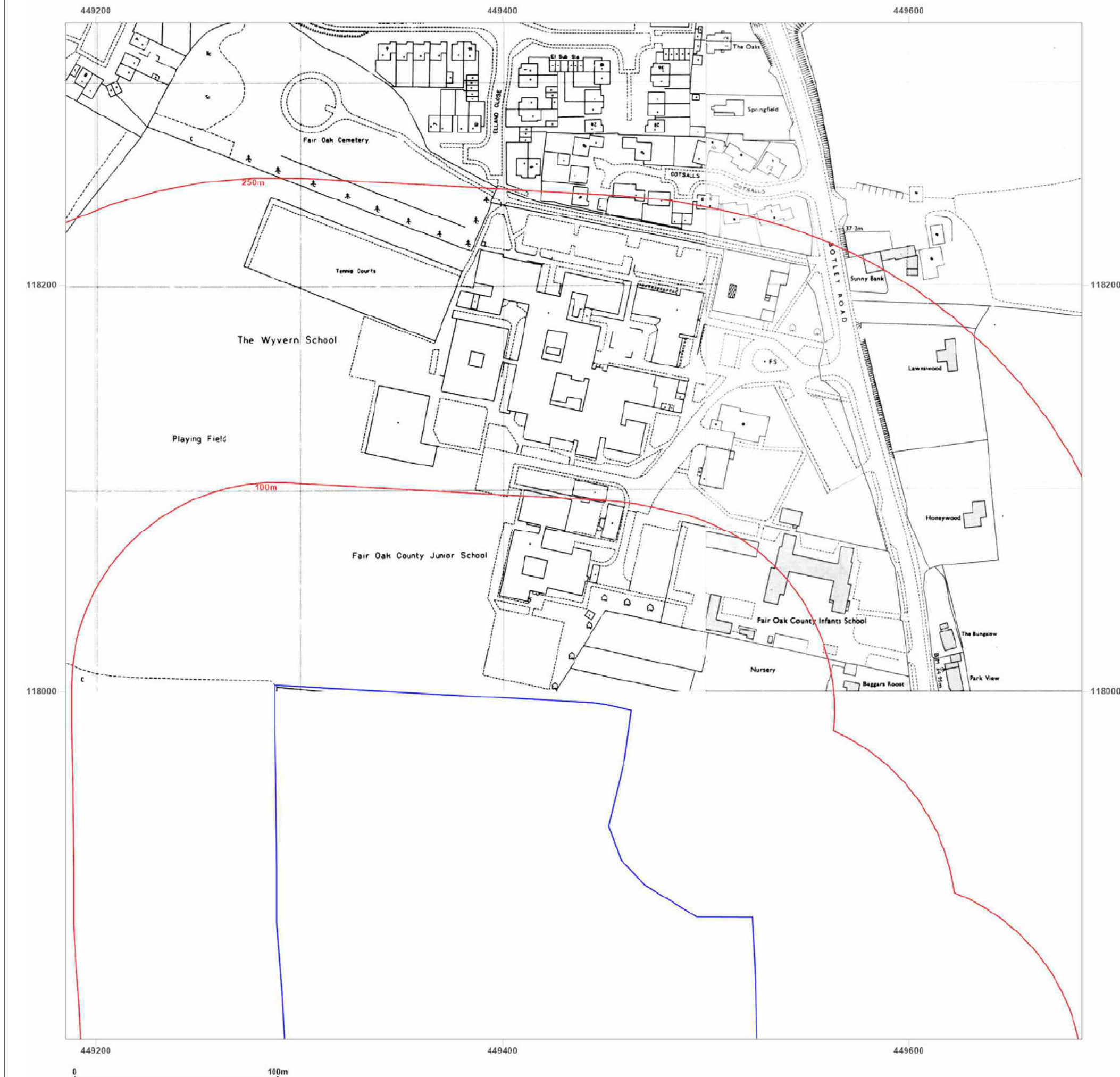


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PAVILION CLOSE, FAIR OAK,
SO50 7PS

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Grid Ref: 449435, 118079

Map Name: National Grid

Map date: 1992

Scale: 1:1,250

Printed at: 1:2,000



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Report Ref: GS-9237375_2500
Grid Ref: 449435, 117828

Map Name: County Series

Map date: 1868-1869

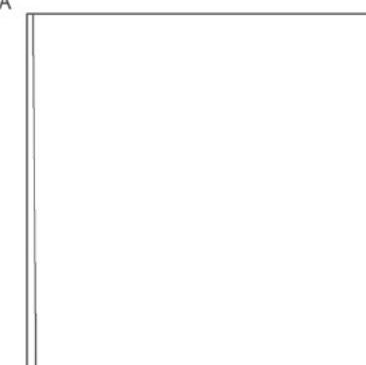
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Revised 1869
Edition N/A
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Levelled N/A

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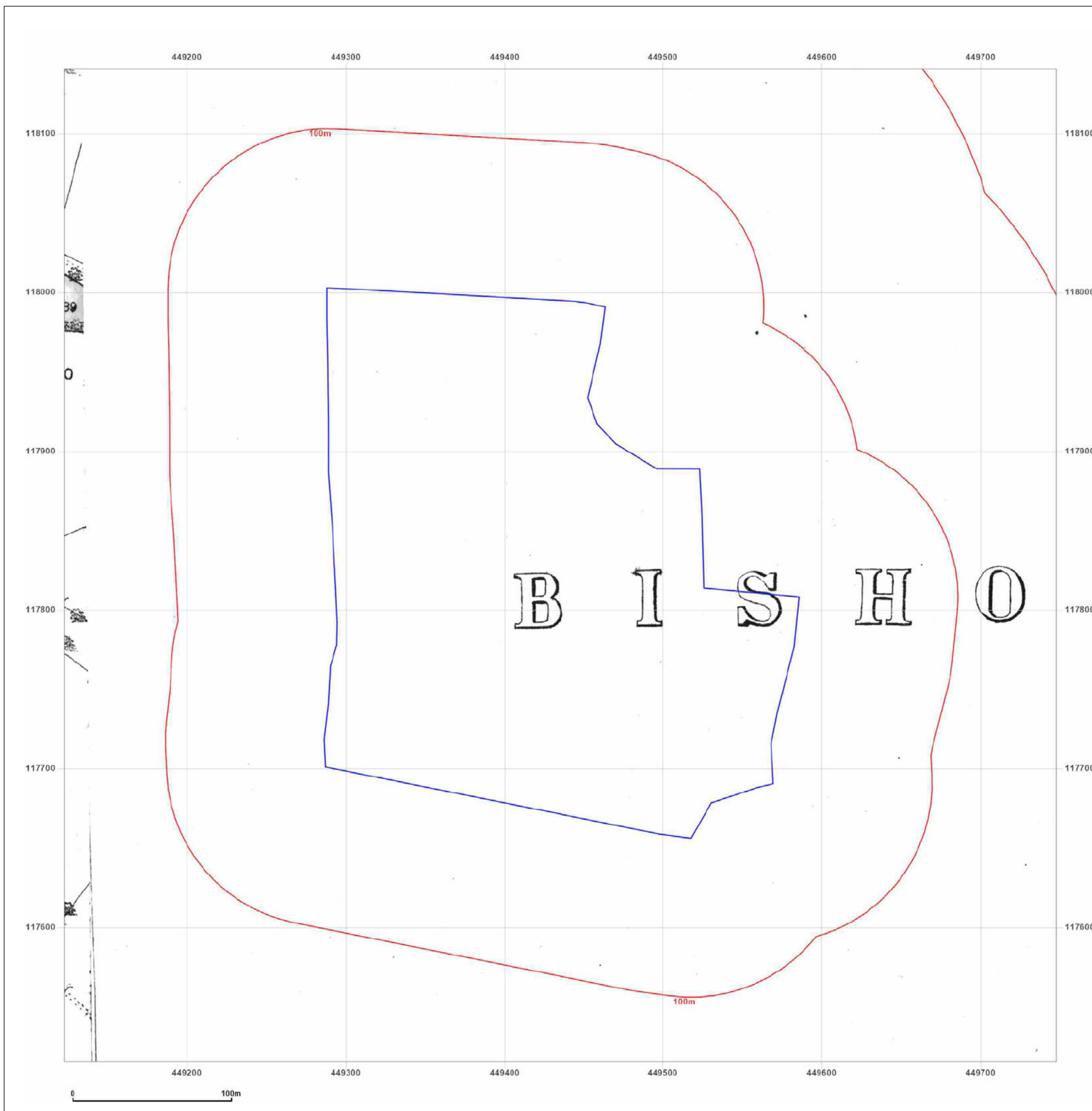


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Map Name: County Series

Map date: 1869

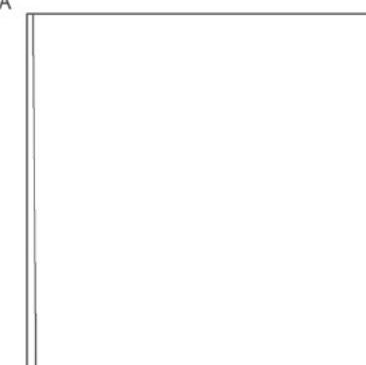
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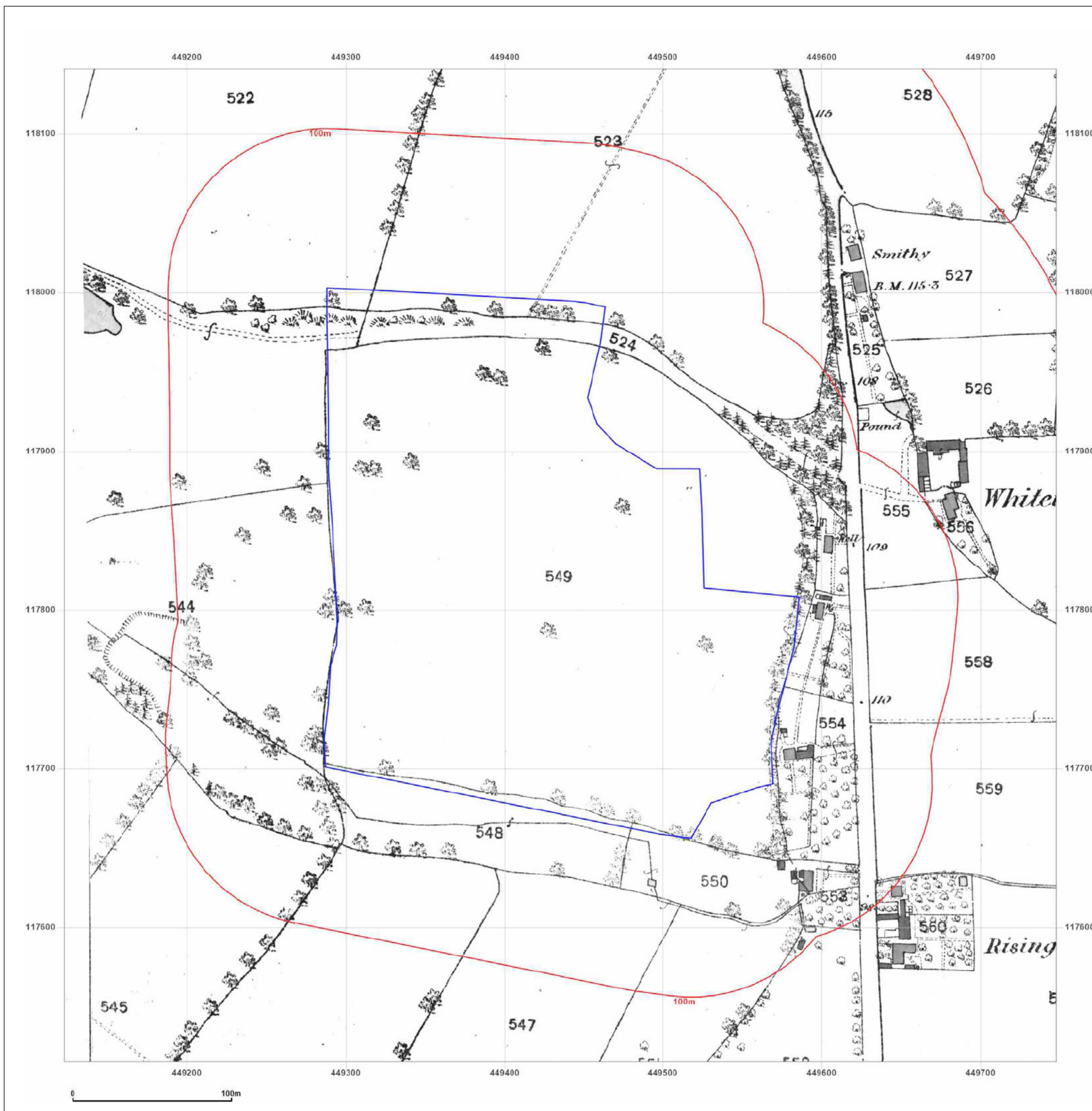


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SO50 7PS

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Report Ref: GS-9237375_2500
Grid Ref: 449435, 117828

Map Name: County Series

Map date: 1896

Scale: 1:2,500

Printed at: 1:2,500



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Revised 1896
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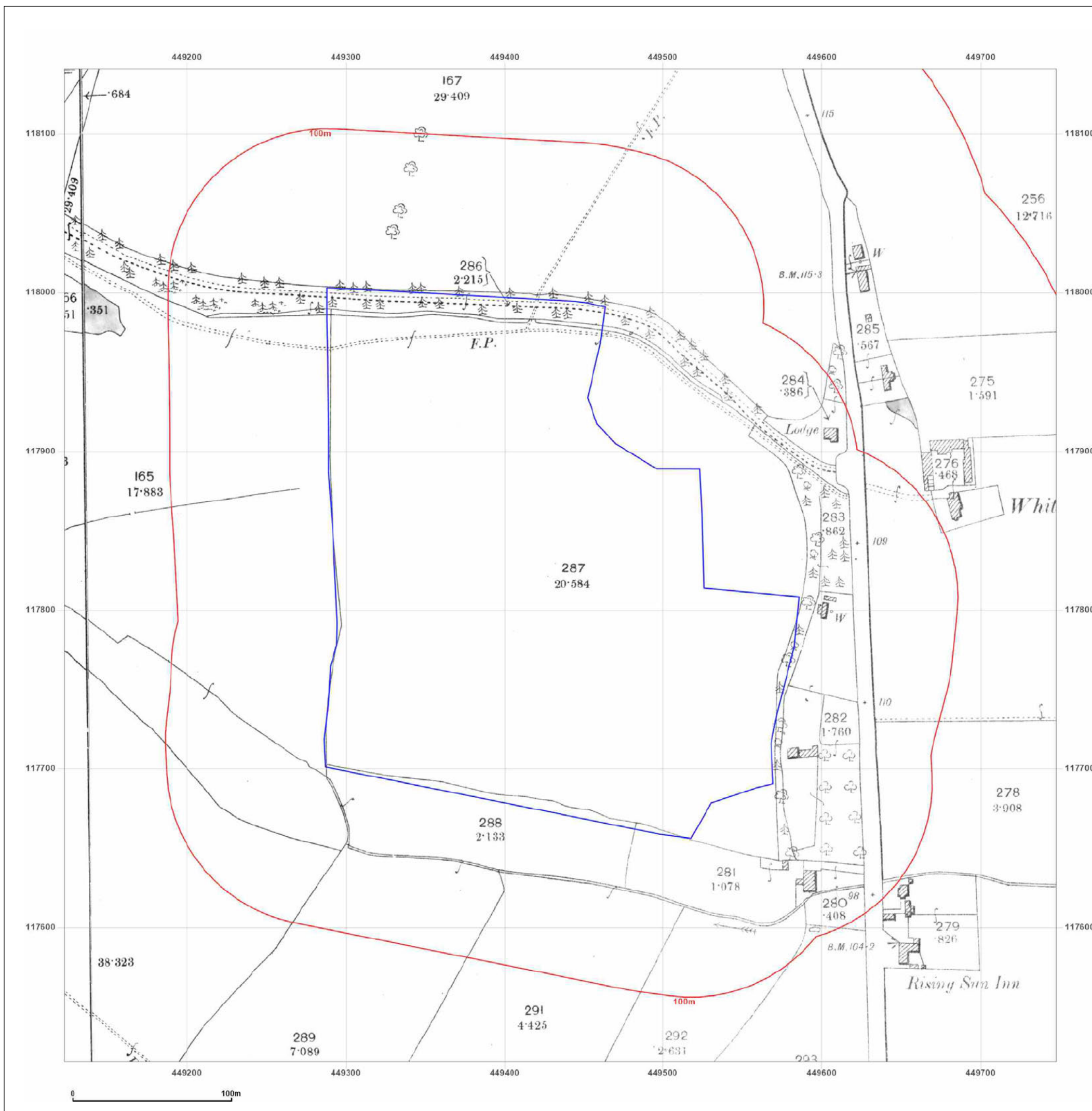


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SO50 7PS

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Report Ref: GS-9237375_2500
Grid Ref: 449435, 117828

Map Name: County Series

Map date: 1909

Scale: 1:2,500

Printed at: 1:2,500



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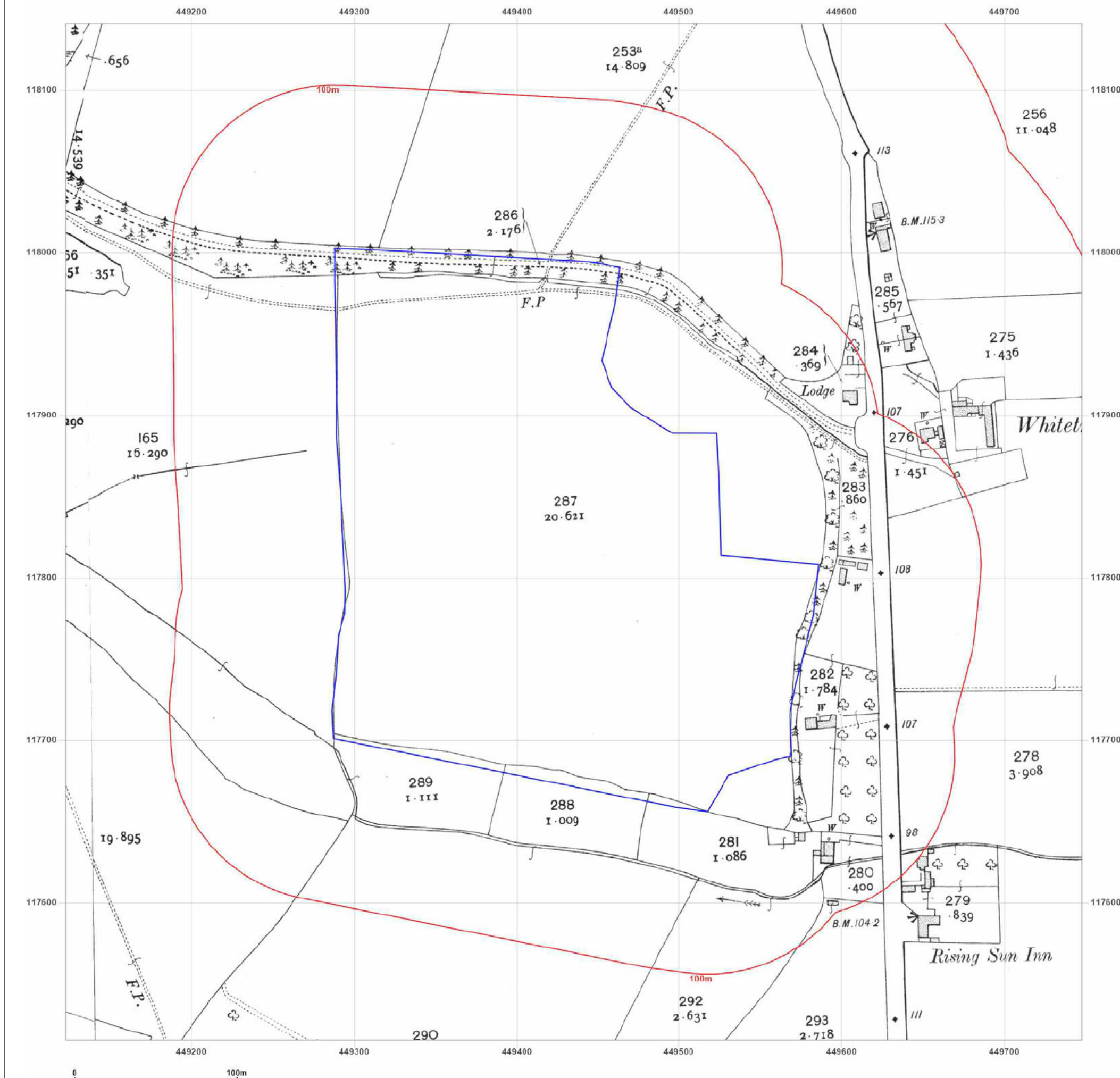


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Map Name: County Series

Map date: 1937-1939

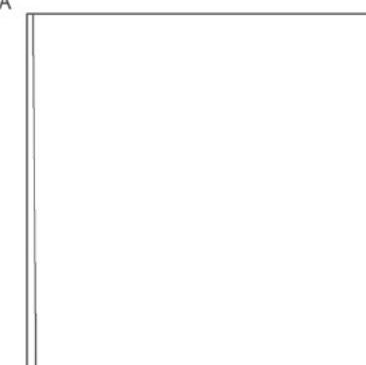
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Revised 1939
Edition N/A
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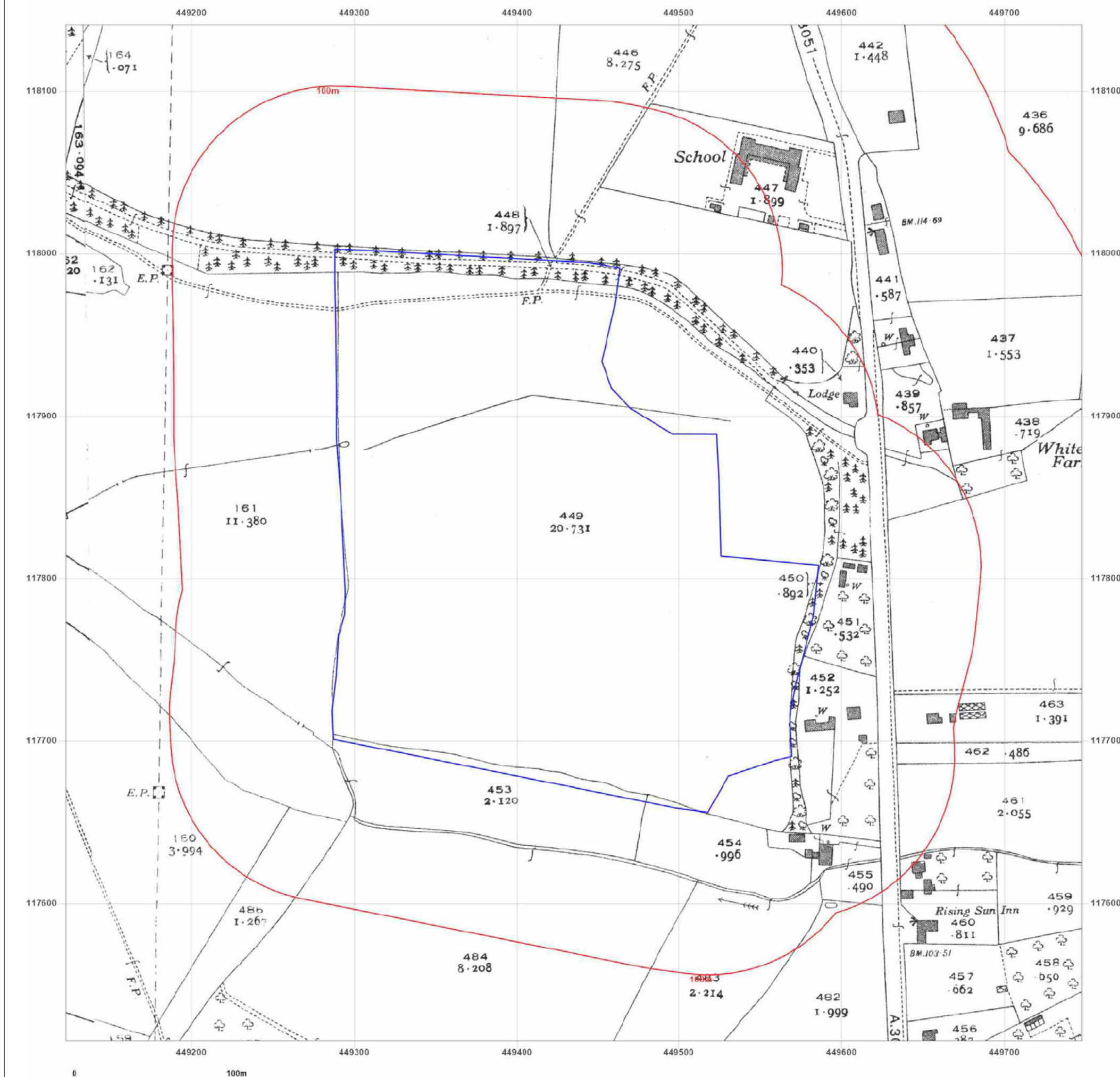


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Grid Ref: 449435, 117828

Map Name: National Grid

Map date: 1963-1964

Scale: 1:2,500

Printed at: 1:2,500



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Edition N/A
Copyright 1963
Levelled 1959

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

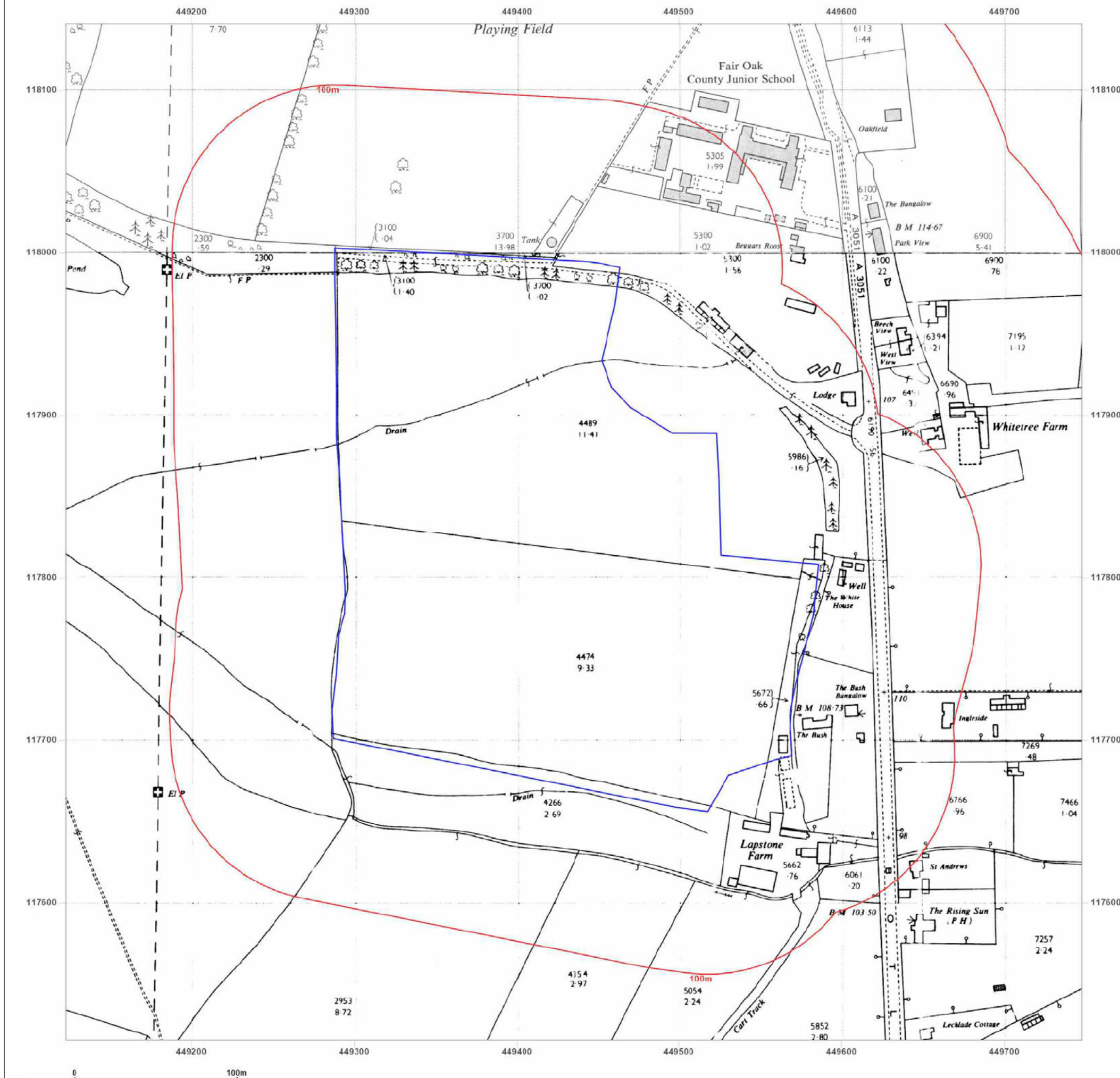


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SO50 7PS

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Report Ref: GS-9237375_2500
Grid Ref: 449435, 117828

Map Name: National Grid

Map date: 1989

Scale: 1:2,500

Printed at: 1:2,500



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Edition N/A
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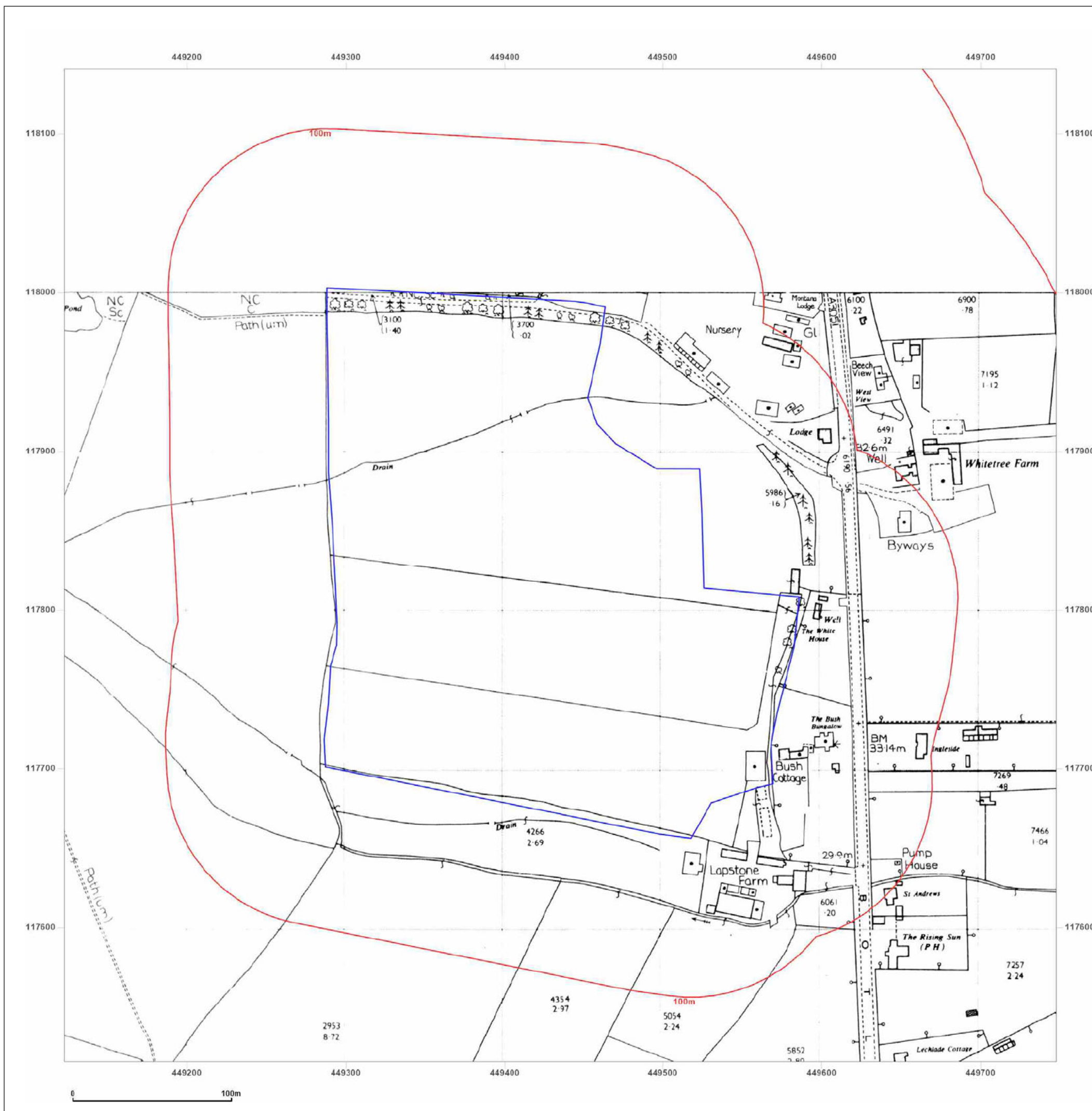


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Grid Ref: 449435, 117828

Map Name: National Grid

Map date: 1985-1990

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
Revised N/A
Edition N/A
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Surveyed 1959
Revised 1985
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Levelled 1959

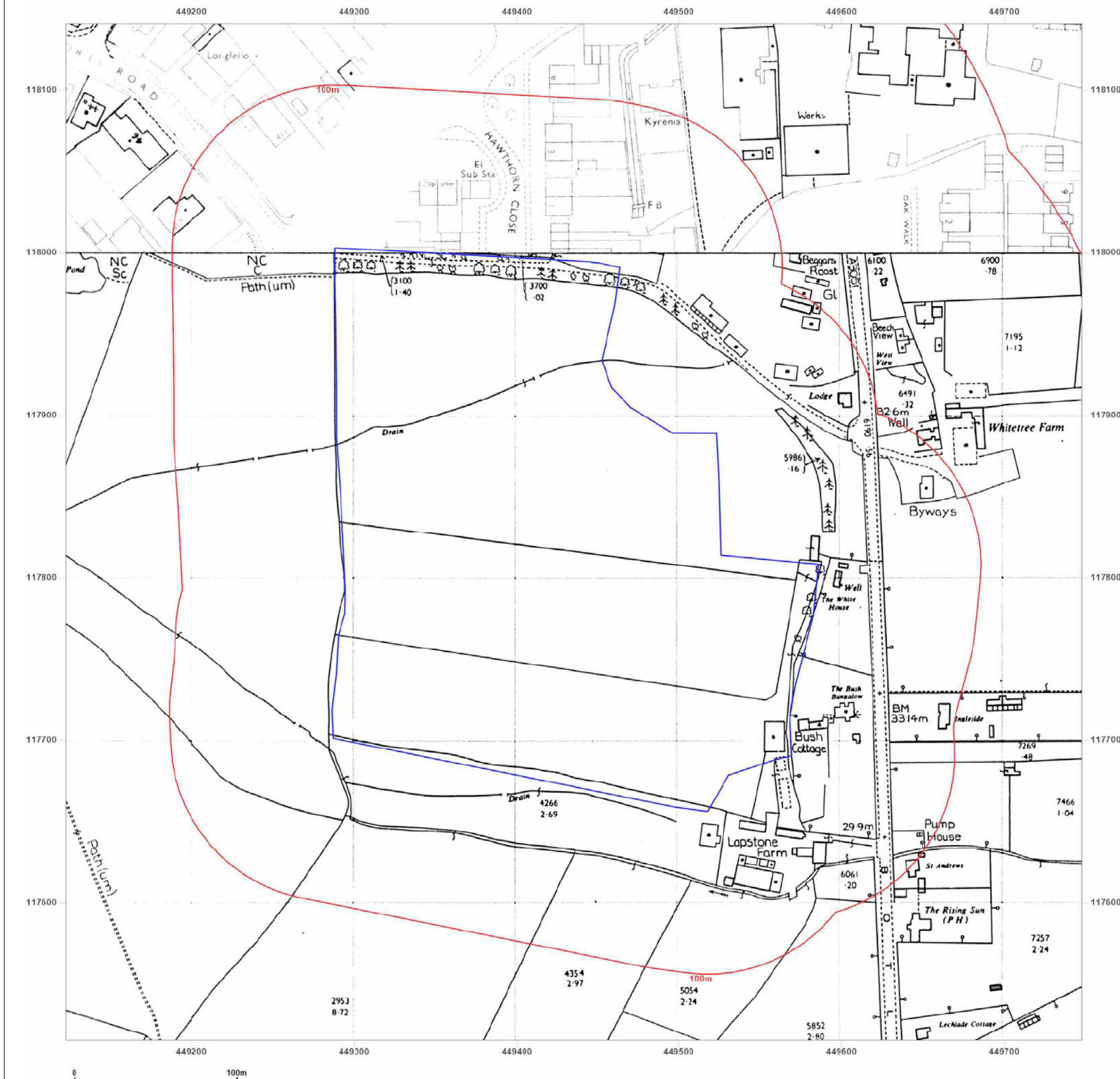


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SO50 7PS

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Report Ref: GS-9237375_2500
Grid Ref: 449435, 117828

Map Name: National Grid

Map date: 1992

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1961
Revised 1961
Edition N/A
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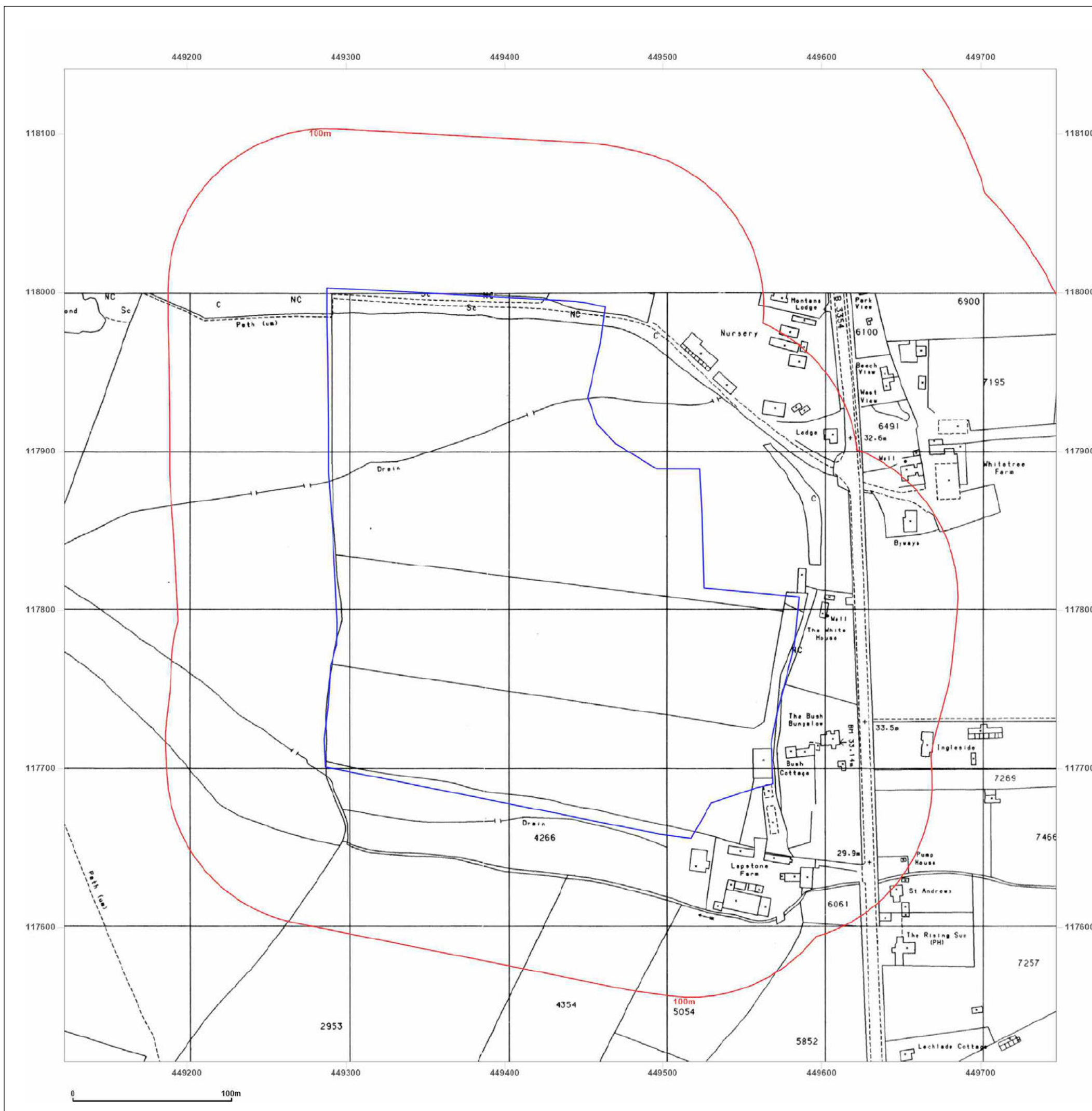


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SO50 7PS

Client Ref: LPO6844
Report Ref: GS-9237375_2500
Grid Ref: 449435, 117828

Map Name: National Grid

Map date: 1994

Scale: 1:2,500

Printed at: 1:2,500



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Grid Ref: 449435, 117828

Map Name: National Grid

Map date: 1994

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1994
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Edition N/A
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Map Name: National Grid

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Surveyed 1994
Revised N/A
Edition N/A
Copyright 1994
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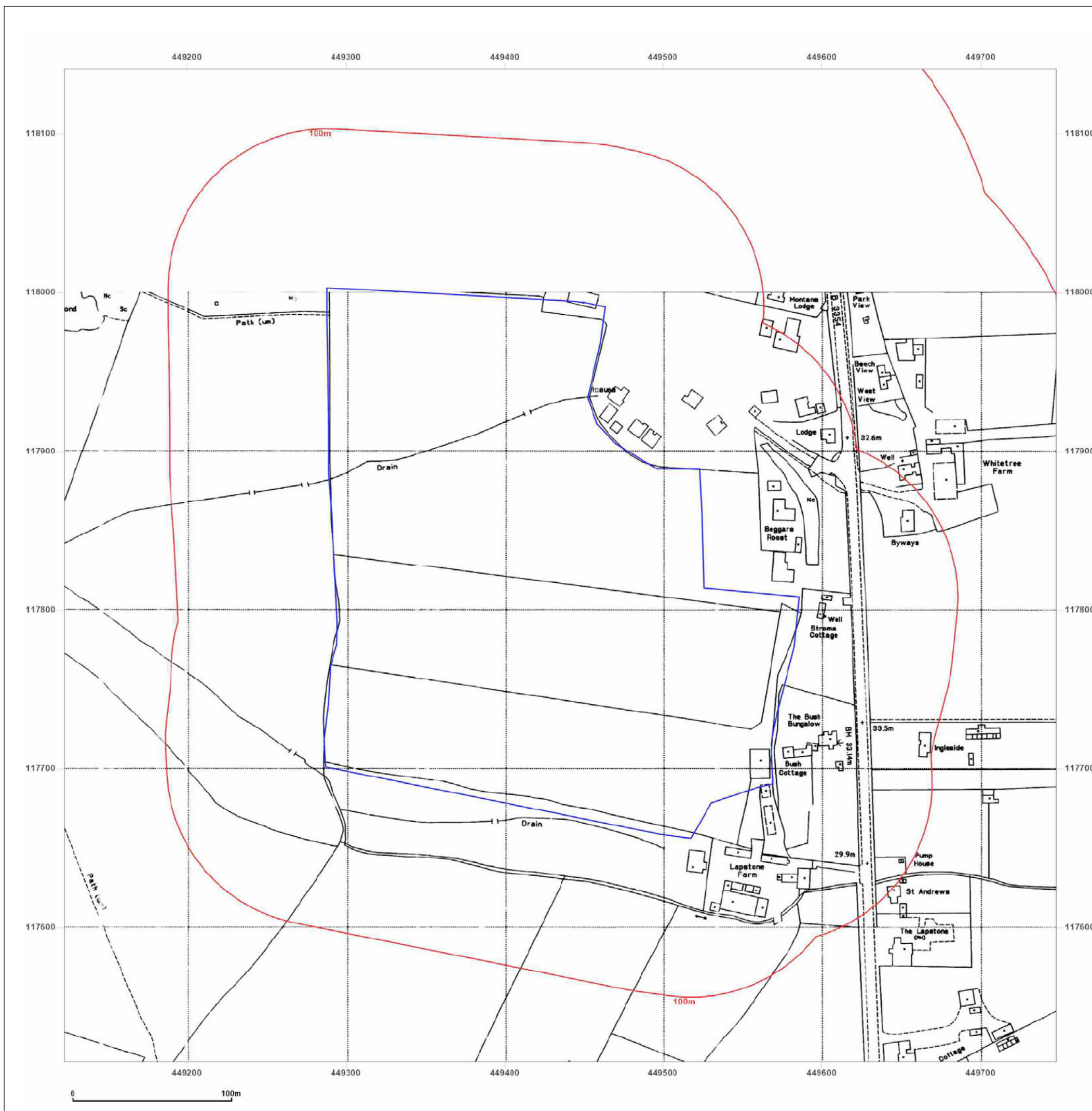


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Map Name: National Grid

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Surveyed 1994
Revised N/A
Edition N/A
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Levelled N/A

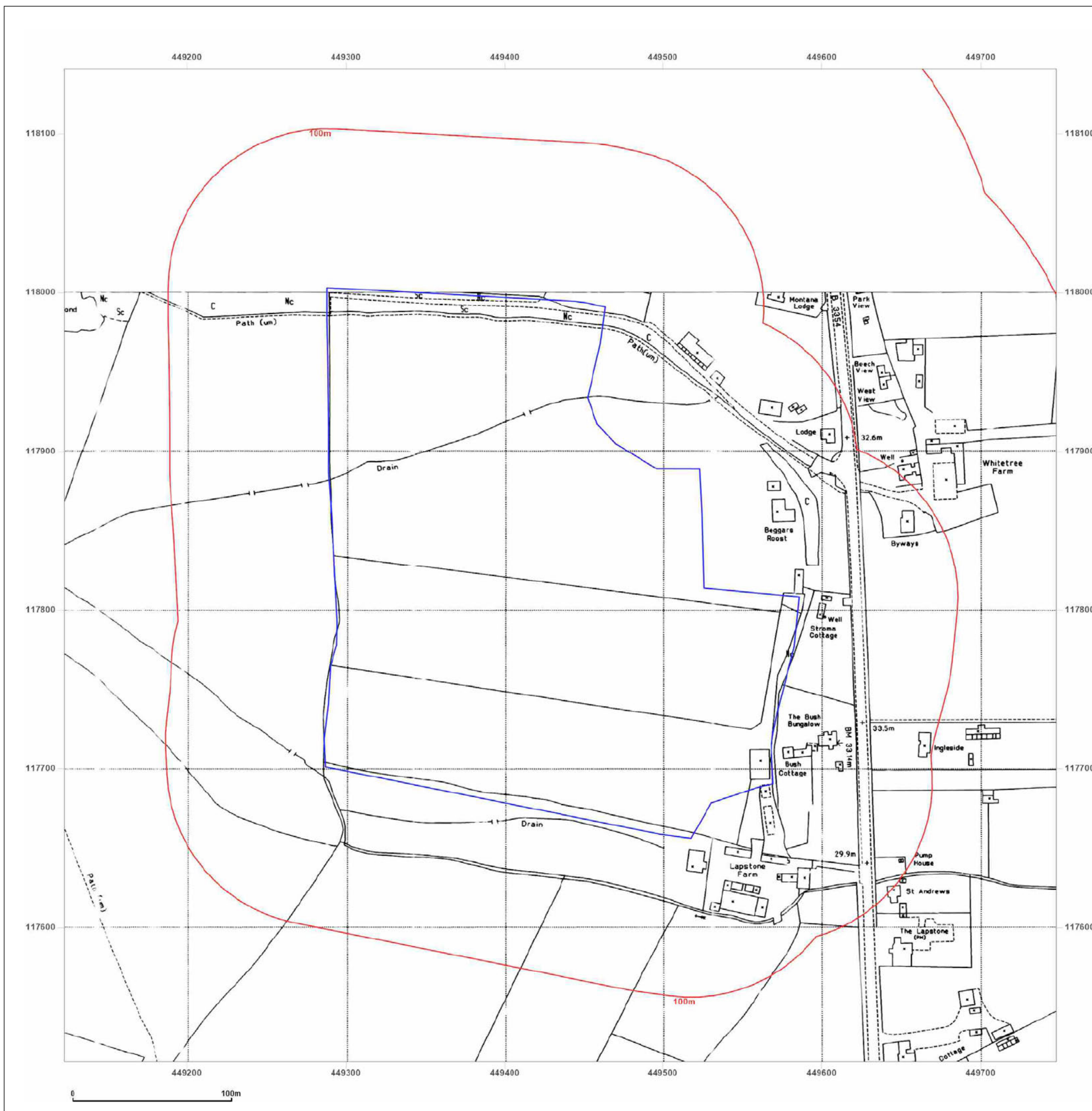


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APPENDIX E – Preliminary Risk Assessment & Geotechnical Risk Register Tables

Preliminary Risk
Assessment &
Geotechnical Risk
Register Tables

Contaminant	Receptor	Pathway ¹	Likelihood of Exposure	Severity of Exposure	Risk Classification	Notes
All contaminants in soils	Future and Current Site Users	Derma contact, ingestion and inhalation of soil particles	Unlikely	Minor	Very low risk	The proposed development does not feature houses, gardens or allotments as its future use is as a sports ground, so there is low potential for ingestion of soils. The made ground beneath the buildings, the main potential source of contamination, will not be disturbed as part of the proposed development and it is therefore very unlikely that future site users will come into contact with contaminants. There was also no evidence of leakages from the pumping station, so contamination derived from this is unlikely to be present in significant concentrations onsite.
	Construction workers	Derma contact, ingestion and inhalation of soil particles	Unlikely	Minor	Very low risk	No significant soil contamination is expected from the potential made ground and wastewater pumping station, and neither will be disturbed by the proposed works. Construction workers are also expected to wear adequate PPE which will exposure.
	Secondary A aquifer in underlying Wittering Formation and White Cliff Formation	Vertical infiltration and leaching from impacted on-site soils	Low likelihood	Mild	Low risk	The concentrations of contaminants of the potential onsite sources are anticipated to be low, so it is likely that significant vertical leaching will take place. There are also no local groundwater abstraction licenses that could be impacted by such leaching.
	Drains onsite and inland river 200m to the west, and proposed wetland	Surface water run-off	Low likelihood	Mild	Low risk	No significant contamination is anticipated to be present within the onsite sources, and therefore it is unlikely that the drainage ditches onsite and the inland river connected to them would be significantly impacted.

Contaminant	Receptor	Pathway ¹	Likelihood of Exposure	Severity of Exposure	Risk Classification	Notes
All contaminants in groundwater	Drains onsite and inland river 200m to the west, and proposed wetland	Subsequent lateral migration of impacted groundwater with contaminants derived from on-site sources.	Low likelihood	Mild	Low risk	No significant contamination is expected from the potential made ground, although the waste water pumping station may have potential to contaminate the groundwater. The Wittering Formation is expected to be sandy clay and have a moderate permeability for any contaminants to be able to travel and distribute.
Asbestos fibres in soils	Construction workers	Dermal contact and ingestion	Low likelihood	Mild	Low risk	Construction workers are expected to wear adequate PPE and have limited exposure.
	Future and Current Site Users	Inhalation of asbestos fibres	Unlikely	Mild	Very low risk	The buildings onsite were constructed between 2000 and 2010. The building itself and underlying made ground are therefore unlikely to contain asbestos. Furthermore neither will be disturbed by the proposed activities onsite so it is very unlikely that current and future site users will come into contact with any asbestos, in the unlikely situation that asbestos is present.
	Construction workers	Inhalation of asbestos fibres	Unlikely	Mild	Very low risk	As above, asbestos is unlikely to be present onsite, and neither the current buildings or made ground will be disturbed by the proposed development. Construction workers are also expected to wear adequate PPE which will further limit exposure.
Volatile contaminants in soils and groundwater	Future and Current Site Users	Inhalation of vapours migrating from on-site contamination (outdoors)	Unlikely	Minor	Very low risk	No significant volatile contaminants are expected based on the potential sources identified. Limited off-site sources are expected to be able to migrate onto site due to the sandy clay geology. Any vapours released outdoors will be further dispersed in the atmosphere.
		Inhalation of vapours migrating from on-site contamination (indoors)	Unlikely	Minor	Very low risk	
	Construction workers	Inhalation of vapours migrating from on-site contamination (outdoors)	Unlikely	Mild	Very low risk	Vapours released outdoors will be significantly dispersed in the atmosphere.

Contaminant	Receptor	Pathway ¹	Likelihood of Exposure	Severity of Exposure	Risk Classification	Notes
Non-aqueous phase liquids	Future and Current Site Users	Inhalation of vapours migrating from on-site contamination (outdoors)	Unlikely	Mild	Very low risk	No non-aqueous phase liquid contaminants are expected based on the potential sources identified.
		Inhalation of vapours migrating from on-site contamination (indoors)	Unlikely	Mild	Very low risk	
	Construction workers	Inhalation of vapours migrating from on-site contamination (outdoors)	Unlikely	Mild	Very low risk	No non-aqueous phase liquid contaminants are expected based on the potential sources identified.
	Secondary A aquifer in underlying Wittering Formation and White Cliff Formation	Intergranular flow of free product/NAPL and dissolution into groundwater	Unlikely	Mild	Very low risk	No non-aqueous phase liquid contaminants are expected based on the potential sources identified.
	Drains onsite and inland river 200m to the west, and proposed wetland	Lateral migration	Unlikely	Mild	Very low risk	No non-aqueous phase liquid contaminants are expected based on the potential sources identified.
Soil gases generated from fill materials	Future and Current Site Users Structures on or adjacent to the site	Vertical and lateral migration through unsaturated pore space. Ingress into buildings via service penetrations, floor construction and cracks, wall cavities, etc. resulting in accumulation in enclosed spaces within buildings. Migration via preferential pathways such as below ground service trenches.	Unlikely	Mild	Very low risk	Both the cemetery and historical landfill are considered to be a significant distance from the site and it is therefore unlikely that any ground gases will migrate to beneath the site in significant concentrations to generate a significant risk to the site. No further buildings will be constructed as part of the proposed works so any ground gases will be dispersed in the atmosphere. The made ground beneath the pavilion is also unlikely to be a source of ground gases, given the nature and age of the building, and therefore there is limited risk to current users of the clubhouse.
Aggressive contaminants	Below ground construction materials such as concrete and plastic water pipes	Contact with contaminated soils / groundwater	Low likelihood	Minor	Very low risk	Underlying geology unlikely to hold contaminants for extended periods of time.

Contaminant	Receptor	Pathway ¹	Likelihood of Exposure	Severity of Exposure	Risk Classification	Notes
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The classification is based upon the consideration of both the magnitude of consequence and the likelihood of exposure as follows:

Likelihood		Consequence			
		Severe	Medium	Mild	Minor
	High likelihood	Very high risk	High risk	Moderate risk	Low risk
	Likely	High risk	Moderate risk	Moderate/low risk	Low risk
	Low likelihood	Moderate risk	Moderate/low risk	Low risk	Very Low risk
	Unlikely	Moderate/low risk	Low risk	Very low risk	Very low risk

Derived from Annex 4 of NHBC, Environment Agency & CIEH 'Guidance for the Safe Development of Housing on Land Affected by Contamination' R&D66. 2008.

Preliminary Geotechnical Risk Register

Geotechnical risk is the risk to building and construction work created by the site ground conditions. The Preliminary Geotechnical Risk Register has been compiled to provide an assessment of the likely risks that may impact on the proposed development based on the results of the desk study, and should be used to specify the type and extent of the intrusive investigation and testing undertaken, and to identify potential mitigation measures to control the risk to an acceptable level.

The inclusion of a risk in the register does not indicate that the risk is present, rather the likelihood of mitigation measures being required due to that risk, based on the available data. Equally, a risk classified as low indicates that mitigation measures are unlikely to be required for the hazard identified based on the available data.

The risk register should be developed and refined throughout the design process such that it will enable the management of geotechnical risk.

The Geotechnical Risk Register has been developed in accordance with the guidance presented in ICE/DETR Document "Managing Geotechnical Risk" (2002). The degree of risk (R) is determined by assessing the likelihood of a hazard (L) occurring and the effect of the hazard (E) on the project ($R=L \times E$). The effect may be measured in one or more aspect e.g. increased cost, delays in the program, health and safety etc. The scale of the likelihood, effect and risk are determined as follows:-

Likelihood of Occurrence		
Scale	Likelihood	Chance
4	Probable	>1 in 2
3	Likely	1 in 10 to 1 in 2
2	Unlikely	1 in 100 to 1 in 10
1	Negligible	<1 in 100

Effect of Hazard		
Scale	Effect	Increase in cost or time
4	Very High	>10%
3	High	4-10%
2	Low	1-4%
1	Very Low	<1%

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Degree of Risk		
Degree of Risk	Risk Level	Action required
1-4	Trivial	None
5-8	Significant	Consider cost effective solutions or improvements at no extra cost
9-12	Substantial	Work must not start until risk has been reduced. Additional resource required
13-16	Intolerable	Work must not start until risk has been reduced. If risk can not be reduced, project should not proceed.

Hazard	Effect	Likelihood of Occurrence	Effect of Hazard	Risk Classification	Notes
Made Ground	Deepened foundations	Unlikely	Low	Trivial	Area where sports pitches are going to be built has not been previously developed and therefore no significant thickness of made ground is anticipated given the site history
	Unstable excavations	Unlikely	Low	Trivial	
Compressible Ground	Bearing capacity failure	Unlikely	Low	Trivial	Groundsure report indicates no hazard based on published geology. Strata on-site is not deemed excessively compressible
	Excessive settlement	Unlikely	Low	Trivial	
High Groundwater Table	Unstable excavations/ running sands	Unlikely	High	Significant	BGS borehole data from 235m southeast of the site indicated was not reached till approx. 20m bgl. Not anticipated to be excessively shallow across site. Perched water could be encountered in clayey horizons
	Dewatering	Unlikely	High	Significant	
	Contamination	Unlikely	Low	Trivial	
Deep Excavations	Deepened foundations	Unlikely	Low	Trivial	Deep excavations on-site not anticipated to be required
Working in highway	Traffic Management	Negligible	Very low	Trivial	No works anticipated within the highway
Shrinkable soils	Deepened foundations	Unlikely	High	Significant	Groundsure report indicates a very low risk based on published geology. Shallow foundations may require localised deepening in any clayey horizons adjacent to mature trees
	Heave	Unlikely	High	Significant	
Frost Susceptible soils	Road Design	Likely	Low	Significant	Soils on site may be deemed frost susceptible, due to the sandy clay composition of the Wittering Formation and Whitecliff Sand Member.
Aggressive ground conditions for Concrete	Concrete design	Unlikely	Low	Trivial	Naturally occurring soils on site not anticipated to contain elevated levels of sulphate based on published geology
Slope Stability/Retaining Structure	Local stability	Negligible	High	Trivial	Site slopes gently downwards from east to west by c. 5m.
	Global stability	Negligible	High	Trivial	
Mining	Suitability for development	Negligible	High	Trivial	Groundsure report indicates no on site history with no mining activities recorded within 750m of site.
Ground dissolution/ Natural cavities	Remedial measures	Negligible	High	Trivial	Groundsure report indicates no hazard based on published geology which is not susceptible to natural cavities

Landfill	Land gas	Unlikely	High	Significant	No landfill recorded on site. Historical landfills identified c. 250m north and 270m northeast. There is no record of them being infilled.
Contaminated land	Remedial measures	Negligible	High	Trivial	Given the site history and the lack of any significant potential offsite sources, the likelihood of contamination is considered to be low
Archaeological remains	Remedial measures	Negligible	High	Trivial	LEAP is not aware of any such features onsite.
UXO	UXO supervision	Unlikely	Very high	Significant	UXO risk has been deemed LOW based on Zetica mapping